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Report No: PAD00214

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF EUR 23.1 MILLION  
(US\$24.9 MILLION EQUIVALENT)

TO

BOSNIA AND HERZEGOVINA

FOR A

GEOSPATIAL INFRASTRUCTURE AND VALUATION ENHANCEMENT PROJECT  
(P180409)

APRIL 23, 2024

Urban, Resilience and Land  
Europe and Central Asia

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective Mar 31, 2024)

Currency Unit = EUR

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EUR 0.93 = US\$1

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US\$1.08 = EUR 1

### FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
AI	Artificial Intelligence
AM	Accountability Mechanism
APA	Alternative Procurement Arrangements
AVM	Automated Valuation Models
BiH	Bosnia and Herzegovina
CAMA	Computer Assisted Mass Appraisal
CD	Compact Disc
CERC	Contingent Emergency Response Component
CPF	Country Partnership Framework
CQS	Consultants' qualification Selection
CY	Calendar Year
DA	Designated Account
DELEF	Digital Enhancement of Land Management for the European Future of Bosnia and Herzegovina Project
DS	Direct Selection
ECA	Europe and Central Asia
ERR	Economic Rate of Return
ESCP	Environment and Social Commitment Plan
ESRS	Environmental and Social Review Summary
ESF	Environment and Social Framework
ESS	Environmental and Social Standard
EU	European Union
EUR	Euro
FBiH	Federation of Bosnia and Herzegovina
FBS	Fixed Budget Selection
FI	Financial Intermediaries
FGA	Federal Administration for Geodetic and Real Property Affairs
FM	Financial Management
FMoJ	Federal Ministry of Justice
FY	Fiscal Year
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIVE	Geospatial Infrastructure and Valuation Enhancement Project
GIS	Geographic Information System
GRS	Grievance Redress Service
HEIS	Hands-on Expanded Implementation Support
IAAO	International Association of Assessing Officers
IBRD	International Bank for Reconstruction and Development
ICR	implementation Completion Report
ICS	Individual Consultant Selection
ICT	Information and Communication Technology
IDA	International Development Association
IFC	International Finance Corporation
IGIF	Integrated Geospatial Information Framework
INSPIRE	INfrastructure for SPatial Information in Europe
IPA	Instrument for Pre-Accession Assistance
IPF	Investment Project Financing
IT	Information Technology
IUFR	Interim Unaudited Financial Report

IVSC	International Valuation Standards Council
LiDAR	Light Detection and Ranging
LSC	Least-Cost Selection
LMP	Labor Management Procedures
LRP	Land Registration Project
LSGU	Local Self-Governing Unit
M&E	Monitoring and Evaluation
MFD-e	Maximizing Finance for Development Enabling
MPA	Multiphase Programmatic Approach
NDC	National Determined Contribution
NPV	Net Present Value
PA	Project Agreement
PBCs	Performance-Based Conditions
PCE	Private Capital Enabling
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development
QA/QC	Quality Assurance/Quality Control
QBS	Quality-Based Selection
QCBS	Quality- and Cost-based Selection
REC	Real Estate Cadaster
RERP	Real Estate Registration Project
RFB	Request for Bids
RFQ	Request for Quotations
RGA	Republic Administration for Geodetic and Real Property Affairs
RICS	Royal Institution of Chartered Surveyors
RS	Republika Srpska
SAA	Stabilization and Association Agreement
SDI	Spatial Data Infrastructure
SEP	Stakeholder Engagement Plan
Sida	Swedish International Development Cooperation Agency
SOP	Series of Projects
SPR	Sales Price Register
STEP	Systematic Tracking of Exchanges in Procurement
TEGoVA	The European Group of Valuers' Associations
UN	United Nations
UNFCC	United Nations Framework Convention on Climate Change
US\$	United States Dollar
VAT	Value Added Taxes
WB	World Bank



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**DATASHEET**

**BASIC INFORMATION**

Project Beneficiary(ies) Bosnia and Herzegovina	Operation Name Geospatial Infrastructure and Valuation Enhancement Project (GIVE)		
Operation ID P180409	Financing Instrument Investment Project Financing (IPF)	Environmental and Social Risk Classification Low	

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternative Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date 15-May-2024	Expected Closing Date 31-Jan-2030
Bank/IFC Collaboration No	

**Proposed Development Objective(s)**

The development objective is to improve the accuracy and accessibility of land administration information in the Federation of Bosnia and Herzegovina.

**Components**



Component Name	Cost (US\$)
Component A: Support to the Establishment of Spatial Data Infrastructure	9,378,630.00
Component B: Building Register Development	9,751,230.00
Component C: Real Estate Valuation	2,310,030.00
Component D: Capacity Building and Project Management	3,397,860.00

**Organizations**

Borrower: Bosnia and Herzegovina  
 Implementing Agency: Federal Administration for Geodetic and Real Property Affairs of the Federation of BiH

**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**

<b>Total Operation Cost</b>	<b>24.90</b>
<b>Total Financing</b>	<b>24.90</b>
<b>of which IBRD/IDA</b>	<b>24.90</b>
<b>Financing Gap</b>	<b>0.00</b>

**DETAILS**

**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	24.90
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**Expected Disbursements (US\$, Millions)**

WB Fiscal Year	2024	2025	2026	2027	2028	2029	2030
Annual	0.00	0.00	1.40	3.00	7.50	7.00	6.00



Cumulative	0.00	0.00	1.40	4.40	11.90	18.90	24.90
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**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	● Low
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	● Low
8. Stakeholders	● Low
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**

**Conditions**

Type	Citation	Description	Financing Source
Effectiveness	Loan Agreement, Article IV, Section 4.01(a)	The Subsidiary Agreement has been executed on behalf of the Borrower and	IBRD/IDA



		the Project Implementing Entity under terms and conditions satisfactory to the Bank.	
Effectiveness	Loan Agreement, Article IV, Section 4.01(b)	The Project Implementing Entity, through FGA, has prepared and adopted the POM satisfactory to the Bank.	IBRD/IDA
Effectiveness	Loan Agreement, Article IV, Section 4.01(c)	The Project Implementing Entity, through FGA, has established the PIU with staff, terms of reference and competencies satisfactory to the Bank.	IBRD/IDA

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## I. STRATEGIC CONTEXT

### A. Country Context

1. **Despite a complex and strongly decentralized political setup Bosnia and Herzegovina (BiH) has achieved progress in its development trajectory.** The constitutional structure created through the 1995 Dayton Agreement includes a state-executive (Council of Ministers) and two largely autonomous entities, the Federation of Bosnia and Herzegovina (FBiH) and Republika Srpska (RS), and the Government of the Brčko District, which was added to the structure in 1999. Between the two entities, governance structures and budgetary arrangements are starkly asymmetric. While RS has a centralized governance structure and is subdivided only into local self-governing units (LSGUs; 64 in total), FBiH is subdivided into ten cantons, each with its own executive, legislative, and judicial branches of government. Each canton is further subdivided into LSGUs (79 in total). This unwieldy structure is superimposed on a country of only 3.2 million people. Traditionally, decision-making in BiH has been characterized by lengthy deliberative and legislative procedures fraught with bargaining and uncertainty. Some of the costliest consequences of this institutional structure have been insufficient progress in transforming the economy, slower progress towards European Union (EU) accession than BiH's neighbors, and an unfavorable environment for businesses. In 2015, the Stabilization and Association Agreement (SAA) established a close partnership between the EU and BiH to deepen the political, economic, and trade ties between the two parties, servicing as the main framework for preparing the country for future EU membership. BiH was granted EU candidate status in December 2022 on the condition that the country take the recommended steps to strengthen the rule of law, the fight against corruption and organized crime, migration management, and fundamental rights. Having made progress on these recommended steps, the EU opened accession negotiations for BiH in December 2023.

2. **Macroeconomic stability has been maintained over the past decade.** This stability was largely facilitated by three economic anchors: (i) the currency board linked to the euro; (ii) the state-wide collection of indirect taxes through the Indirect Taxation Authority with a single rate of 17 percent; and (iii) EU membership prospects. The COVID-19 pandemic, Russia's invasion of Ukraine, and persistent internal political tensions have inflicted a significant cost on BiH's economy. Still, real Gross Domestic Product (GDP) rebounded to 7.4 percent in 2021, and strong economic activity continued in 2022, with real output growing 4.1 percent. Real output growth in 2022 was supported by investments rising another 2.4 percent, after a surge of close to 23 percent the year before as part of pre-election spending, with general elections taking place end-2022. Meanwhile, private consumption remained robust, supported by remittances and credit growth. During the first half of 2023, real GDP further decelerated to 1.5 percent compared to the same period last year in response to no growth in private consumptions as the decline in real disposable income started to bite, and a decline in exports driven by the slowdown in the EU. Inflation jumped to 14 percent in 2022, from 2 percent the previous year. In the meantime, inflationary pressures eased, exhibiting a rate of 7 percent for the period January to October 2023 (year on year) as food prices continued decelerating to 12.3 percent and fuel prices declined 3.7 percent during the same period. At the same time, labor market data continued improving: the employment rate rose from 39.6 percent in 2021 to 41.2 percent in Q2 of 2023, while the unemployment rate declined from 17.4 percent in 2021 to 13.1 percent in Q2 of 2023 (according to labor force survey data). These movements have occurred against the background of broadly no change in the share of workers that are outside the labor force (52.6 percent).

3. **BiH is particularly vulnerable to the impacts of seismic and climate-related hazards, especially higher-frequency and higher-intensity floods, landslides, wildfires, droughts, and heat waves.** Heavy rainstorms can cause mudslides and flooding of large areas of agricultural land and real estate, as well as lead to other changes in the environment. BiH experiences, and is at high risk of, forest fires due to projected climate change trends and increasing temperatures. The country is ranked third globally regarding its vulnerability to intense rain and prolonged rainfall events. Increasingly variable weather conditions and projected long-term climate changes are anticipated across all seasons and include delayed traditional seasonal onsets and periods of extreme cold to warm weather, resulting in more intense periods of rainfall as well as extended droughts. This is expected to have serious economic consequences for BiH. Drought may also



become more frequent in some areas due to river runoff decrease or drying in the country's lowland areas as well as from increased demand and consumption from economic development and population growth. Moreover, BiH sits on a fault line that makes it vulnerable to earthquakes. Awareness about these risks has increased in recent years, and the BiH government is taking action towards climate change adaptation and mitigation as well as disaster response.<sup>1</sup>

4. **Concerning medium - to long-term growth and potential EU candidate prospects, BiH is best served by keeping to its reform path of addressing structural challenges in line with the SAA.** The continued reforms are necessary to address long-standing structural and institutional weakness and enhance competitiveness. BiH needs to continue promoting the potential of the private sector as it simultaneously reduces the footprint of a very large public sector that operates in the country. It also needs to shift its economy from a focus on local consumption and imports to one that recognizes the potential of international integration through investments and exports. To achieve this, BiH needs a business environment that allows companies to grow and expand output, employment, and exports. Advancing clarity in BiH's land and property sector as a means of increasing investor confidence is essential to the success of these private sector development initiatives.

## B. Sectoral and Institutional Context

5. **BiH's entities have distinct land administration systems.** In FBiH, the daily management of the cadaster and land register is split between the cadaster departments of LSGUs, cantonal geodetic authorities in four out of FBiH's ten cantons, and land registry offices in municipal courts. The Federal Ministry of Justice (FMoJ) is responsible for preparing the laws and adopting regulations pertaining to real estate registration. Land registry offices work under jurisdiction and supervision of municipal courts, while cadaster departments and cantonal geodetic authorities operate under the guidance and support of the Federal Administration for Geodetic and Real Property Affairs (FGA). FGA is also responsible for a wide range of tasks related to cadastral surveys, mapping, land consolidation, and the utility cadaster. By contrast, RS's cadaster and land registry are consolidated into the real estate cadaster (REC) under the Republic Administration for Geodetic and Real Property Affairs (RGA).<sup>2</sup> The RGA is currently considering joining the Project at a later date pending concurrence from the Republika Srpska Ministry of Finance. Under such a request, project activities benefitting the Republika Srpska could be added as Additional Financing (AF). RGA will also benefit from spillover knowledge from FGA on developing and implementing methodologies related to mass property valuation and building registers.

6. **Over a period of nearly 20 years, BiH has made major progress in establishing effective and professional land registration and cadaster services to facilitate land markets and provide tenure security.** Under the World Bank-financed Land Registration Project (LRP; P096200, approved in 2006 and closed in 2012), FGA/FMoJ and RGA adopted new business plans and standards, renovated land registry offices, addressed the backlog of registration requests, digitized part of the cadaster and land registry archives, and adopted information technology (IT) systems to allow for wider sharing of cadastral and land registry data. Another important achievement under LRP was the piloting of a methodology to update and harmonize cadaster and land registry records. Building on these achievements, since 2012, FGA/FMoJ and RGA have scaled up investments in the harmonization<sup>3</sup> of cadaster and land registry records under the ongoing World Bank-financed Real Estate Registration Project (RERP; P128950) and its AF. Concurrently, FGA and RGA continued to improve working conditions in the land administration sector through the renovation of offices, training of staff, and the acquisition of surveying and IT equipment, among other things. They also introduced address registers, sales-price registers, and digital

<sup>1</sup> Climate change risks identified in this paragraph were assessed using the World Bank *ThinkHazard!* Tool available at <https://thinkhazard.org/en/>.

<sup>2</sup> The registration of real property rights was once a function of the municipal courts, but this responsibility was transferred to RGA following the adoption of the Law on State Survey and Real Estate Cadaster in 2011.

<sup>3</sup> There are two separate processes for the harmonization of land registry and cadastral records in BiH. In RS, where the cadaster and land registry are managed by RGA, the information contained in the cadaster and land registry are harmonized, and new single record called Real Estate Cadaster is created. In FBiH, where the management of the cadaster and land registry is split between the cadaster departments of the LSGUs and land registry offices in municipal courts, FGA coordinates the harmonization of the information contained in the cadaster and land registry. At the end of the process, these records continue to be managed separately. In both entities, these activities are conducted systematically by cadastral municipality.



archive IT systems, and put greater emphasis on records digitization, IT systems interoperability and integration, and the development of e-services for land administration. On top of the land sector support provided by the World Bank, FGA and RGA have received past and/or ongoing support from the Swedish International Development Cooperation Agency (Sida), the Government of Norway, the Government of the Netherlands, and via the EU's Instrument for Pre-Accession Assistance (IPA), which have either synergized with, or built upon, RERP activities.<sup>4</sup>

7. **The results of the completed and ongoing World Bank-financed land administration projects for BiH are wide ranging with considerable benefits for citizens.** Over 2.5 million land parcels (constituting nearly 1.2 million hectares, or approximately 23 percent of BiH's territory) have had their use or ownership rights recorded as a result of RERP. Most of these parcels are located in areas of high economic activity and population concentrations. As such, more than 2.9 million citizens (35 percent of whom are women) have benefitted from land and property registration, representing nearly two-thirds of BiH's population. Concerning the mortgage market, under RERP, there have been 87,814 mortgages processed in RS (worth approximately US\$1.57 million) and 267,560 in FBiH (worth approximately US\$4.78 million). One hundred percent of cadastral municipalities now make data publicly accessible, and there are already more than 3 million data users. Starting at a baseline of zero, there are now 13 land sector services available as e-services, with over 12.6 million e-services already provided. In FBiH, data from the land register and cadaster are now shared digitally with 16 other government databases, and this number is expected to increase as additional Memorandums of Understanding with other government institutions are signed. As of December 2023, 978 cadastral municipalities throughout BiH have harmonized land registry and cadaster data or had REC established, and this number is expected to increase throughout the remainder of RERP's implementation prior to its scheduled closing in July 2024.

8. **Despite the multitude of improvements to land administration in BiH, key gaps remain concerning important information such as property valuation<sup>5</sup>.** Real estate values and pricing are directly related to the functioning of the entity's credit market and are critical for the stability of the banking sector (commercial banks and the Central Bank) to establish systematic and organized data on real estate values, real estate markets, and improving transparency to enhance the performance and security of real estate credits (i.e., mortgages), and to produce reliable data on the value of collateral taken by banks. The absence of reliable information makes it difficult for banks to meet Bank of International Settlements standards for regularly revising the value of mortgage collateral. The lack of real estate valuation standards increases market risk for foreign and domestic investment in FBiH. Banks and valuation experts are becoming increasingly cautious as a means of decreasing inherent risk exposure and frequently apply a significant percentage reduction in the value of real estate. As a result, credit values are often only one-third of the initial value of real estate submitted by owners. The introduction of standardized real estate valuation data would eliminate some of these reductions and contribute to credit injections into FBiH's mortgage market. While real estate transfer taxes are collected in FBiH via LSGUs, the current method of valuation follows an ad hoc, individual approach that does not guarantee the same decision-making criteria based on standard methodologies for real estate valuation and is often a very expensive process for public administration authorities. As a result, transfer tax collection is inefficient, and lacks needed fairness, equity, and transparency. FBiH recognizes the importance of resolving these issues as a means of systematizing the process of real estate valuation and seeks to do so in line with implementing the EU's Mortgage Credit Directive (2014/17/EU), which is considered a prerequisite for BiH's EU accession, as member states are required to introduce mass real estate valuation systems primarily for the purpose of fairer real estate taxation and real estate rights. Other spillover benefits of mass valuation in FBiH include enabling fiscal consolidation, fiscal deficit reduction, strengthening the capacities of LSGUs for transfer tax collection, and the potential for development of catastrophe insurance markets for households and businesses. Unless insurance companies have access to reliable data about the value of properties as well as the potential risks to which they

<sup>4</sup> See Section II.E "Rationale for Bank Involvement and Role of Partners" for information on ongoing initiatives by other development partners in the BiH land sector.

<sup>5</sup> Property valuation is the process that determines the economic value of real estate. Effective property valuation underwrites many aspects of a functioning market economy and is critical for all property-related decisions by individuals to purchase, by banks deciding to consider what is appropriate to lend against a property, by local governments for decisions to deal with land and buildings under their control. The benefits of valuation expertise to the functions of land use planning and the recording of land tenure cover the areas of insurance, compensation, property tax, compulsory purchase, and strategic advice to governments.



are exposed, they cannot price insurance products with confidence. Similarly, governments find it problematic to determine the cost effectiveness of disaster risk mitigation strategies in the absence of such information.

9. **Despite strides in data development and harmonization, interoperability with other government datasets that utilize geospatial information remains nascent.** Initial investments in spatial data infrastructure (SDI) at the entity level have been established via RERP, and foundational data layers for SDI are nearly complete.<sup>6</sup> In parallel, FGA financed the development of an SDI Strategy in FBiH with actionable steps for its improvement. Many institutions of all levels of government in BiH maintain their own geospatial datasets in both analogue and digital formats. These data are neither standardized nor interoperable, with many institutions often having geospatial datasets concerning the same subject area that are of different condition and quality. Consequently, geospatial information users in FBiH frequently operate in an uncertain environment and are unsure of which data is valid and whether they should be used in the implementation of projects within the scope of the users' needs. A well-developed and reliable "Single Source of Truth" is needed upon which all users can rely. Building on past investments, FBiH has great potential to unlock the benefits of SDI for the entity's further socio-economic development and has incorporated the guidance of multiple frameworks into its SDI Strategy. This includes the UN's Integrated Geospatial Information Framework (IGIF), which provides a basis and guide for developing, integrating, strengthening, and maximizing geospatial information management and related resources for all countries. Moreover, FGA is keen to align any further initiatives with the INfrastructure for SPatial Information in Europe (INSPIRE) Directive (2007/2/EC), which provides a framework for SDIs within both EU member states and countries aspiring to join the bloc. The INSPIRE Directive requires EU member states to establish SDIs and ensure access to spatial data for all EU citizens. In line with its SDI Strategy, FGA seeks to implement an SDI in accordance with the standards of the INSPIRE Directive as part of BiH's broader pre-accession initiatives. Adoption and implementation of INSPIRE Directive standards will also provide data to help FBiH assess the impacts of seismic and climate-induced disasters, particularly in cooperation with neighboring EU countries such as Croatia, for example, which sits on the same seismic fault lines and shares waterways and other natural resources that may impact the wellbeing of both Croatian and FBiH citizens should a disaster occur.

10. **FGA will establish a building register, pursuant to newly adopted FBiH government regulations, which will map out all buildings and parts of buildings in FBiH and provide location-based building data with associated market values for improved government decision-making.** Building registers contain foundational data required for the development and implementation of national housing and land use planning policies, territorial development, urban planning, infrastructure development, mass valuation and taxation of real estate, development of a risk register, and other tools as part of climate change adaptation and mitigation measures. Furthermore, the building register directly contributes to the development of SDI. In addition to the cadastral data maintained by FGA<sup>7</sup>, the development of a dataset for buildings will provide a more accurate portrayal of the ground realities for spatial data users and key decision-makers to consider. With the establishment of a building register, FBiH will have the opportunity to link it to the business register so that there is a better understanding of the economic activities that are taking place within the cadaster. It can also be linked to the population register so that there is a clearer idea of who is living there. This is important for planning the delivery of public services (e.g., where schools and healthcare facilities should be located). Moreover, building registers contribute to mass valuation by helping to construct an accurate portrayal of building values based on their location. As such, FGA's ambition to establish a building register is considered a cross-cutting benefit both to property valuation and geospatial information management in FBiH.

11. **Resolving these challenges concerning property valuation, geospatial information management, and building register establishment are essential for well-developed land administration systems and will have major benefits for**

<sup>6</sup> Cadastral and topographical datasets are considered foundational data layers for the successful implementation of SDI. In FBiH, FGA and land registration offices have benefitted from updated and harmonized cadastral and land registration records via RERP investments. Moreover, the EU, through the IPA, is financing LiDAR surveys to produce highly accurate point cloud data that can be processed and transposed onto the cadastral data layer.

<sup>7</sup> The cadastral data covers registered properties in FBiH, while the building register will aim to cover all existing buildings on the ground.



**FBiH's continued socio-economic development and will build upon the past achievements and outcomes of LRP and RERP in the entity.** In terms of property valuation, the development of reliable methodologies for estimating market values of individual property units and their subsequent rollout (i.e., mass valuation) would provide information for a variety of purposes and form a key dataset as part of SDI. Building upon the investments via RERP, the harmonization of land records data has contributed to clarity in ownership and use rights data, which is a key component in the development of valuation methodologies. As noted above, valuation information would also provide enhanced opportunities for own-source revenue generation for LSGUs as well as other applications such as (i) the identification of vulnerable areas for disaster prevention and recover plans; (ii) the improvement of disaster risk financing and insurance in the event of climate-related hazards; (iii) updating the value of collateral taken by the banking sector for asset-backed loans; and (iv) the development of catastrophe insurance for businesses and households. In terms of geospatial information management, advancing the interoperability of the cadastral data and associated e-services produced under RERP will be used to clarify the standards for public-sector provision of geospatial information, which is crucial for delivering authoritative geospatial services and products that meet the requirements of public and private sector users, academia, civil society organization, etc. These standards and associated quality assurance of geospatial information are also necessary for key FBiH initiatives pertaining to disaster risk management and response, climate-smart urban planning and development, quality infrastructure investments, and sustainability and conservation of natural capital. In this context, FBiH recognizes the importance of addressing these land sector challenges, and the proposed Geospatial Infrastructure and Valuation Enhancement (GIVE) Project would finance the required activities for bridging these gaps.

### C. Relevance to Higher Level Objectives

12. **The proposed GIVE project is closely aligned with the World Bank's Country Partnership Framework (CPF) for BiH for FY23-FY27 (Report No. 172387, discussed by the Board of Executive Directors on July 19, 2022).** The CPF sets out the overall objective of supporting BiH in achieving a sustained recovery from the impacts of the COVID-19 pandemic along with reforms in line with the country's ambition to join the EU and reach higher living standards. In particular, the proposed GIVE project will contribute towards the achievement of CPF Objectives 1<sup>8</sup> and 4<sup>9</sup>. Under Objective 1, the GIVE project will contribute to increasing the competitiveness of the FBiH economy by helping to clarify valuation to stimulate credit markets that will help increase access to finance for businesses. Moreover, 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. Objective 4 will be supported by helping public institutions improve their service delivery. The GIVE project will support the standardization and interoperability of geospatial information used by different FBiH government institutions for informed decision-making and public service provision. Additionally, investments into the establishment of the building register will help to provide vital data for infrastructure and utility planning and management.

13. **The GIVE 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, the GIVE project will support the continued digital transformation at FGA and the advancement of FBiH's SDI in line with international best practices and standards. The development of new applications and e-services as part of FBiH's SDI development for the public and businesses is also expected to leverage new technologies such as Artificial Intelligence (AI).

14. **The GIVE project's activities are also Maximizing Finance for Development enabling (MFD-e) and will set the stage for further unlocking private sector investment and activity in FBiH.** Investments in SDI and associated e-services will allow private sector actors to have clear, up-to-date, and accurate spatial information available for informed investments in FBiH. Moreover, the development of mass valuation methodologies will remove constraints in real estate

<sup>8</sup> Increased private sector growth.

<sup>9</sup> Improved performance of selected state-owned enterprises and public institutions for better service delivery.



markets by clarifying the values of land and property that restricted investor confidence in the entity’s land markets. The GIVE project’s activities are foundational to future private sector investments by helping to bridge the information gap that currently restricts investor appetite in FBiH’s real estate markets.

15. **The activities of the GIVE project are also fully aligned with multiple initiatives of the Government of FBiH.** In particular, the GIVE project’s activities will support the objectives of BiH’s Economic Reform Program for 2022-2024 (to which FBiH contributes), such as addressing challenges related to Main Obstacle No. 2: Improve the business environment through closer cooperation and coordination at all levels of government. Activities related to geospatial information management help with clear definitions of policies and associated knowledge distribution of authoritative geospatial information for innovative and competitive economic development. The GIVE project also supports the priorities of BiH’s Joint Socio-Economic Reform Program (to which FBiH also contributes), including enhancing the business environment and public sector reform initiatives. It is anticipated that the GIVE project activities will contribute to a more streamlined public administration in FBiH by helping to clarify fragmented datasets that may contradict each other and restrict decision-making while also helping FBiH government actors to have a more accurate representation of property valuation in the entity as a means of supporting revenue generation for improve public service provision. Moreover, the investments in data managed by public administration actors will contribute to up-to-date, networked, competently collected, and processed data that will form the basis for effective entity-level governance and evidence-based policy making in FBiH. This requires not only the arranging of public registers, but also ensuring optimal conditions and applying information management practices and adhering to shared standards.

16. **The GIVE project is consistent with BiH’s climate change adaptation and mitigation targets<sup>10</sup> as per its commitments under the Paris Alignment.** BiH is a party to the United Nations Framework Convention on Climate Change (UNFCCC). It submitted its updated National Determined Contribution (NDC) to the UNFCCC in 2021, pledging to cut greenhouse gas emissions by 33.2 percent by 2030 compared to 1990 levels leveraging its domestic resources (unconditional target), or by 36.8 percent international support (conditional target). BiH signed the Paris Agreement on Climate Change in 2016 and ratified it in 2017. Both FBiH and RS have also adopted energy efficiency laws on spatial planning. Most land administration activities, including the GIVE project’s, can be considered universally aligned and do not hinder the achievement of BiH’s low-greenhouse gas (GHG) emissions development pathways and climate-resilient development.

## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### PDO Statement

17. The Project Development Objective (PDO) is to improve the accuracy and accessibility of land administration information in the Federation of Bosnia and Herzegovina<sup>11</sup>.

#### PDO Level Indicators

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

- Mass Real Estate valuation methodologies that satisfy international best practice developed and adopted (Number)

<sup>10</sup> FGA also maintains a disaster recovery center that provides a back-up for the land records data it maintains, which helps to secure the continuity of services for citizens and businesses in FBiH in the event of a disaster such as a flood or wildfire that may cause outages affecting datacenter operations.

<sup>11</sup> As the request for a new project has only come from FBiH, GIVE will be implemented in this entity only. However, GIVE’s design fully allows for the expansion of project coverage to RS should the latter send an official request to the Bank to be included in the future.





- Key geospatial datasets harmonized with the adopted data standards and available via SDI digital platform (Percentage)
- Local Self-Governing Units with building register data established (Percentage)

19. The Results Framework will also include an Intermediate Results Indicator from the World Bank Group Scorecard<sup>12</sup> related to Outcome Area 11 “Digital Services”: People using digitally enabled services (Number).<sup>13</sup>

## B. Project Components

20. The GIVE project will include four components, as described below<sup>14</sup>. See Annex 2 for a detailed description of project activities.

21. **Component A: Support to the Establishment of Spatial Data Infrastructure (EUR 8,695,000)**. This component will finance activities that support increased geospatial data accessibility and usability through (i) the development of data standards in line with the technical specifications of the INSPIRE Directive<sup>15</sup> and other international standards; (ii) improvements to digital data quality and completeness through key dataset harmonization with the new standards; (iii) digitization of priority analogue datasets; (iv) the development of metadata standards and metadata creation and migration; (v) the establishment of an FBiH SDI data center and SDI Digital Platform that are interoperable with existing e-services; (vi) the development of new e-services and products; (vii) continued cadaster and land registry data harmonization for an additional 150 cadastral municipalities in FBiH; (viii) support to public display of cadastral data; and (ix) entity-wide rollout of the unified land administration information system developed under RERP. In addition to the INSPIRE Directive, FBiH will utilize best practices from other strategic documents such as the IGIF. Additionally, all activities will comply with FBiH’s Law on SDI that was adopted in June 2021 as well as the SDI Strategy and Action Plan for 2023 – 2027 that was developed by FGA. FGA is also responsible for SDI implementation coordination. The support of Component A activities for the scale-up of data on cadastral parcels, and the development of data quality standards and associated IT investments for SDI for ensuring interoperability of FBiH government datasets are essential for putting in place effective disaster risk planning and climate change adaptation policies. Otherwise, the latter two initiatives cannot be accurately developed or executed because they depend on knowing where and what types of activities, businesses, and people are located, and who the owners are whose behavior must be influenced.

22. In terms of climate change adaptation, the activities under Component A will support the tracking of trends in urbanization and urban sprawl that have contributed to strains on existing infrastructure and public utilities as well as the loss of carbon sinks in FBiH. Moreover, the information provided by the development of the SDI digital platform and the datasets it will house will be used by public agencies such as the Ministry of Security—the government ministry responsible for disaster response in BiH—that will directly access the SDI platform as part of its business operations to utilize this key tool and the cadaster and land registry information it contains to inform energy analysis, disaster and flood simulations, land use planning, resource management and overall climate-smart decision-making for green and sustainable development. In terms of MFD-e, investments in data harmonization for private land and property rights is linked to greater private sector investments in the economy because constrains such as insecurity of tenure are reduced or entirely removed, giving the private sector greater incentives to use the land and property resources available in FBiH. Moreover,

<sup>12</sup> <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099121223173511026/bosib1ab32eaff0051a2191da7db5542842>

<sup>13</sup> The number of people or businesses who use new or enhanced digitally enabled 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.

<sup>14</sup> The project’s front-end fee will be paid using loan funds. As such, the component costs add up to EUR 23,042,250.

<sup>15</sup> In terms of climate change adaptation and mitigation, the adoption of the INSPIRE Directive’s technical standards by FBiH are considered ambitious, as BiH is not an EU member state and, therefore, is not obliged to implement them. Nevertheless, in addition to boosting BiH’s EU accession prospects, the standards help FBiH to ensure geospatial data interoperability with multiple countries that will be used for better coordination in terms of disaster response with neighboring countries such as Croatia that are subject to similar climate-related hazards such as flood zones.



activities related to the development of SDI and the associated spatial information will increase investor confidence by providing a single point of accurate and reliable information that can be utilized to reduce investor risk.

23. **Component B: Building Register Development (EUR 9,040,000).** This component will finance activities for the establishment, scale-up, and maintenance of a building register pursuant to newly adopted F BiH government regulations<sup>16</sup> that will cover the entire territory of F BiH. Activities under the component include (i) the development of a methodology for the collection, processing, and quality control of data on buildings and parts of buildings (e.g., apartments, business premises) for creating a building register; (ii) creation of a mobile application for field data collection; and (iii) the development of an IT system for managing and maintaining the building register that is interoperable with other key systems and registers<sup>17</sup>. Upon its establishment, the building register will be scaled up to 40 of F BiH's 79 LSGUs. The selection of the LSGUs for Building Register rollout will be determined via selection criteria and procedures that will be defined in the Project Operational Manual (POM). The F BiH government is committed to implement the building register in the remaining LSGUs upon project completion with internal or external funding based on the processes developed under this activity. This would ensure full coverage of all municipalities in the territory of F BiH. Activities will include the production of new aerial orthophoto imagery or Light Detection and Ranging (LiDAR) data, their interpretation to obtain related products and approximate footprints of buildings and their 3D representation. The cadaster and selected datasets will be cross-overlaid with the geospatial data layer of buildings derived from aerial imagery. This initial data collection will be checked in the field, and additional information (e.g., age of the building) will be collected. The layout and identification of premises in the buildings will be defined based on the division plans and other sources. Data quality assurance/quality control (QA/QC) and public outreach to explain the benefits and the process of the establishment of the building register will also be carried out. This scale-up of the building register will require the financing of hardware and other IT equipment, office renovation and refurbishment, office furniture, and archive shelves for analogue records.

24. In terms of climate change adaptation and mitigation and disaster response efforts in F BiH, the development of a building register is a key tool that fills an important gap for government agencies such as the Ministry of Security that will use the information for informed decision making. With the rollout of the building register and the integration of its data with that of other key datasets such as the infrastructure cadaster, quality infrastructure investments and planning will benefit in F BiH, as they will help the entity assess the feasibility of various initiatives. Sustainability and conservation of natural capital (e.g., waterways, forests, carbon sinks) will also benefit from Component B's activities and will help F BiH's LSGU councils understand what areas under their jurisdictions are under threat from unregulated urbanization and urban sprawl, and how these challenges can be addressed as part of climate-smart decision-making.

25. **Component C: Real Estate Valuation (EUR 2,150,000).** This component will finance activities related to the introduction and rollout of mass valuation throughout F BiH pursuant to newly adopted F BiH government regulations<sup>18</sup> and consistent with international standards and best practices. Specifically, the component will support (i) the upgrade of the Sales Price Register system and the collection of data needed for property valuation<sup>19</sup>; (ii) real estate valuation system establishment, including standards, methodology and valuation model development; and (iii) development of a real estate valuation system and mass valuation information portal. The activities will build on previous support financed by the Sida that established the existing Sales Price Register and supported capacity building programs for mass valuation. Component C will also support the development and implementation of a set of automated systems and tools as part of the real estate valuation system and mass valuation information portal, including (i) a comprehensive Computer Assisted Mass Appraisal system; and (ii) advanced modelling and analysis tools using AI and GIS-based models; (iii) Automated Valuation Models (iv) integrated mapping analysis tools; and (v) advanced data visualization GIS tools. New e-services for professional users

<sup>16</sup> Regulation on the database of the real estate register (Official gazette of F BiH, No: 94/23).

<sup>17</sup> This will include, at a minimum, the unified system for cadaster and property registration, address register, Sales Price Register, the SDI platform developed under Component A, and the e-Government system.

<sup>18</sup> Regulation on the database of the real estate register (Official gazette of F BiH, No: 94/23).

<sup>19</sup> Under GIVE, the types of real estate intended to be valued are primarily apartments, individual houses, garages, business premises, and agricultural land.



and the general public will also be developed under this component. The activities under Component C will, in due course, help to inform the Government of FBiH about which properties are considered more prone to carbon emissions and incentivize emissions reductions by factoring carbon output into the valuation methodology. The connection between real estate valuation and reducing carbon emissions will be further explored and integrated as part of the capacity building activities to be financed via Component D. Component C activities will help to provide important market information for calculating the costs of resilient reconstruction and determine insurance premiums in support of crisis preparedness and disaster risk management efforts in FBiH that are led by government entities such as the Ministry of Security. In terms of MFD-e, Component C's activities will also improve investor confidence by clarifying land and property values. The absence of reliable valuation methodologies in the past created barriers for investors because it was difficult to ensure that land market transactions were in line with the actual value of the property given the absence of authoritative valuation mechanisms. As such, the activities under Component C will address this barrier to increased private sector investments in FBiH.

26. **Component D: Capacity Building and Project Management (EUR 3,157,250).** This component will support (i) strengthening institutional capacities, structures, and inter-institutional collaboration, with the aim of ensuring long-term sustainability of GIVE project investments as well as the development and implementation of policies, legal acts and technical guidelines; (ii) training and capacity building programs mainly in areas of SDI implementation, cadastral and land registration harmonization, building register creation and real estate mass valuation, awareness raising and information campaigns; and (iii) project management, including support to the Project Implementation Unit (PIU) in carrying out project management and implementation, including audits, training, environmental and social, and fiduciary management, and monitoring and evaluation. Specialized training will be organized under this component for the FBiH SDI Council and Working Groups, SDI stakeholders including government institutions, local authorities, other relevant entities, and FGA management and technical staff. Similarly, the capacity building programs will be designed and implemented for real estate registration and valuation institutions, including FGA, municipal authorities, and the FBiH Tax Administration.

27. **Gender.** Gender disparities remain in real estate ownership in FBiH. Available data from FGA suggest that only roughly 38 percent of the entity's real estate is recorded under the name of women. This persistent low rate for women can have broader impacts on their participation in the FBiH economy, as a lack of property documentation for land and property ownership negatively impacts one's ability to access public services and credit markets. FGA's ongoing efforts to record accurate parcel and land ownership information as part of its data harmonization activities is a key step in addressing this gap. Previous data harmonization initiatives have greatly benefitted women. During the implementation of RERP, for example, approximately 636,000 women (about 37 percent of total GIVE project beneficiaries) in FBiH benefitted from having their use or ownership rights to land and property accurately recorded (both single and joint ownership) as a result of the GIVE project's data harmonization activities.

28. Building on the successful process developed under RERP, the GIVE project will continue efforts to improve women's land and property rights through further investments under Component A activities, particularly to complete the data harmonization process for an additional 150 cadastral municipalities in FBiH. The GIVE project will actively target women through public awareness and information campaigns to ensure their access to fully harmonized and accurate land records. Efforts to reach out to female owners will be increased by ensuring that data harmonization staff are well trained on the importance of recognizing women's land rights. The trainings will be provided to the technical staff will include content for raising awareness of the importance of understanding specific concerns that women may face (e.g., concerns and/or misconceptions about loss of property upon marriage), and for surveying both male and female household members, where surveyors need to consult residents under the cadastral renovation exercises of field-based improvement of location and information accuracy. Component B's building register activities will also help to identify additional unregistered property ownership through the identification of informal buildings and via investments for developing a building inventory. **To track progress on the inclusion of women and bridge the gender gap identified**



**concerning property ownership rates in BiH**, the Intermediate Results indicator “Women with land rights confirmed as a result of cadastral and land registration data harmonization activities (Number)” is included in the Results Framework, which will measure the number of women benefitting from the cadastral and land registration data harmonization activities under the GIVE project.

29. **Climate Co-Benefits.** As mentioned in previous sections, improving the accuracy of recorded land rights and real estate valuation and developing a building register achieved through a combination of activities under Components A, B, and C is a fundamental investment without which policies to reduce the impact buildings have on climate change will not be effective. The development of a building register for FBiH provides a fundamental dataset needed for the identification of buildings, which is essential for controlling climatic impacts from the building stock. It will provide information to LSGUs to address issues with the construction of illegal buildings that fail to satisfy environmental standards. It will also enable investors and buyers to be able to check whether buildings meet environmental standards and for the development of targeted programs of retrofitting to improve emissions and water consumption. The current discrepancies between what is recorded in the land register and cadaster and reality on the ground, particularly in terms of buildings and the extent of informal development, undermines planning and policy measures. The GIVE project’s activities will enable the improvement of spatial planning tools to inform climate-related decision making and support FBiH in achieving its climate change adaptation and mitigation objectives.

30. Access to improved geospatial information, including additional harmonized land registry and cadastral data, will contribute to enhanced climate resilient and disaster risk management planning and recovery, and will enable government entities, non-governmental organizations, and academia to monitor climate change and plan for disaster recovery more effectively (including damage assessment, cost effectiveness of proposals, identification of compensation levels and eligibility, building back better efforts). Currently, the scale of unregistered development prevents these from being realized. The development of the building register should bring this to an end, as it will no longer be possible for buildings to remain hidden from the official record. Moreover, the further expansion of/updates to land registry and cadaster information (Component A), development of the building registry (Component B) and support to property valuation (Component C) will enable the consequences of exposure to natural hazard events and risks to be understood since the location of buildings will be known. The combination of building register data and harmonized land registry and cadastral data will improve land-use zoning and the siting of critical infrastructure to enhance resilience. Improved control over informal development will reduce the population in FBiH that is placed at higher risks and mitigate the risks from development of the wrong type and in the wrong location. To support the tracking of the benefits to climate change adaptation and mitigation as a result of improved geospatial information management, the GIVE project’s Results Framework includes an Intermediate Results Indicator that measures access of public institutions<sup>20</sup> to the new spatial data to improve forecasting and assessment of the consequences of disaster and climate hazard events that will inform climate-related decision making.

31. **Citizen Engagement.** Citizen engagement will build upon FGA’s existing procedures and mechanisms utilized under RERP, particularly the GIVE project’s data harmonization activities. The GIVE project’s public awareness campaign and related activities will accommodate for all FBiH citizens’ needs (elderly, women, etc.) and will use technology and dissemination methods to maximize citizen engagement. Regular customer surveys will collect gender disaggregated data to monitor women’s access to property as well as indicator of customers’ satisfaction and other issues. Stakeholder engagement as part of the GIVE project’s 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 of the Results Framework, including indicators on public awareness and perceptions, with the support of the relevant institutions. In addition to administrative data, the GIVE project will generate data on user experience and perceptions through a series of targeted surveys to end users that will

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<sup>20</sup> This will include, among others, the Ministry of Security, the Ministry of Spatial Planning, and the Entity Environmental Protection Fund.



be disaggregated by gender and target group. 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. FGA will also continue its practice of “Open Door Days” for customers to ask questions about services, receive feedback, and inform the public about new initiatives as a result of the GIVE project activities.

### C. Project Beneficiaries

32. The primary beneficiaries of the GIVE project will be FBiH’s citizens and businesses. Under the activities for harmonizing land registry and cadastral data, for example, it is estimated that combined with beneficiaries of RERP and other interventions approximately 1.97 million people will benefit from improved tenure security via complete and accurate land records. Moreover, updates to cadastral data will benefit real estate markets; it is anticipated that clarity of property ownership and improved data about property units will contribute to increased mortgages and reduced costs of asset-backed loans 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. The development of a building registry in parallel with SDI advancements will support the safety of citizens by helping to determine any potential hazard zones where homes and other buildings are located. The use of the building registry and other geospatial datasets for disaster risk management for initiatives such as (i) planning the provision of public services and utilities; (ii) developing zoning ordinances and regulations for construction; and (iii) identifying informal properties, can also benefit the quality of life for citizens throughout FBiH. Private sector decision-makers will benefit from better access to data about buildings and individual units and market values 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 the transparency of FBiH’s property market with corresponding benefits in terms of increased investment quality and reduced risk premiums.

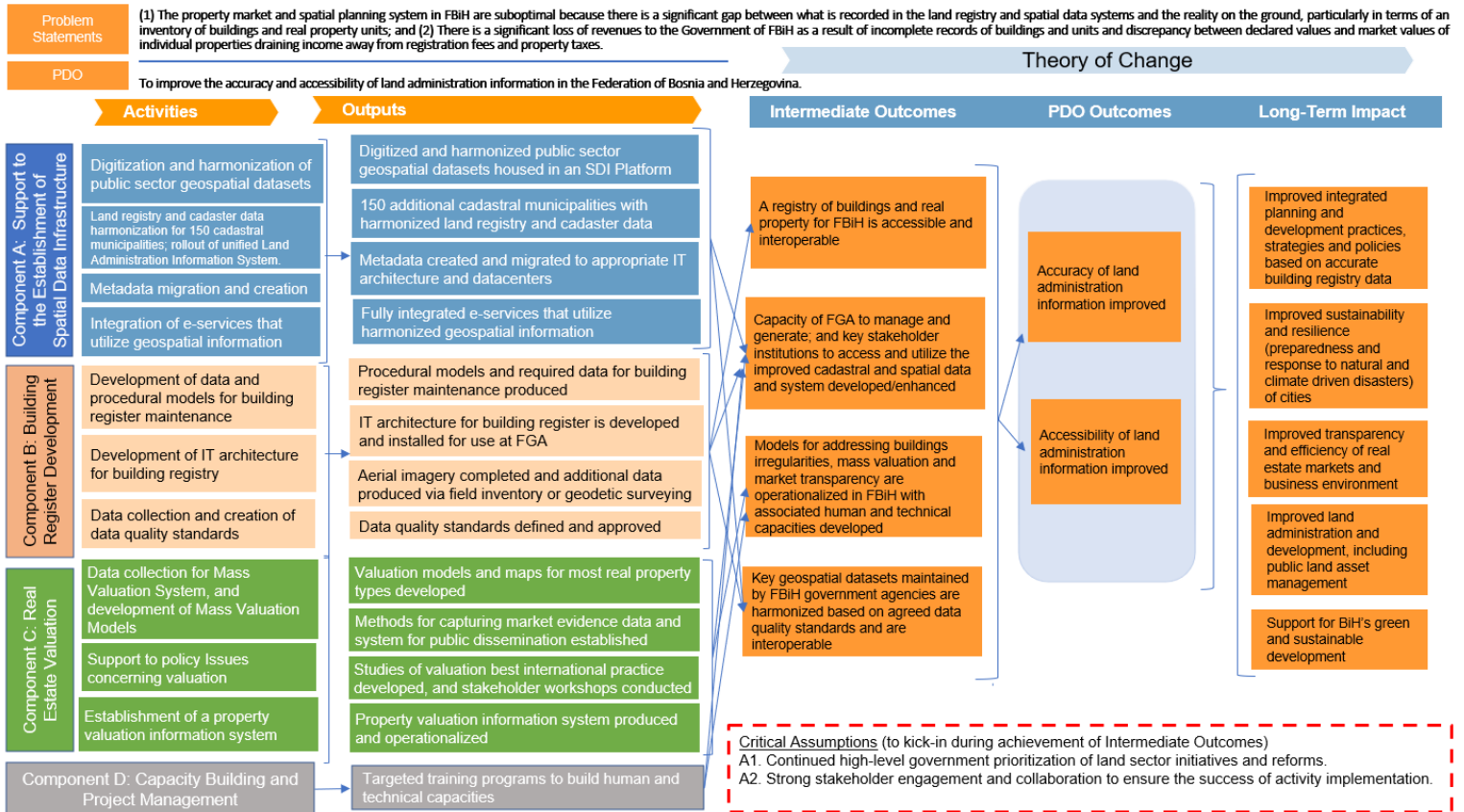
33. The GIVE project will also directly benefit decision-makers from all levels of government (local to central), as the breaking down of information silos will facilitate a more collaborative environment between government ministries and agencies that maintain key datasets. It is widely recognized that local government actors in FBiH 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 the building register and SDI development 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 Joint Socio-Economic Reform Program. The GIVE project’s capacity building initiatives will also build the technical expertise of government officials and staff, and municipal court staff to provide more effective public services throughout FBiH. Long-term sustainable growth in FBiH requires a reduction in the physical, social, and economic shocks associated with geophysical and climate change-induced disasters. More broadly, institutions responsible for disaster management and response plans will benefit from data on buildings and individual units that is not currently available so that urban and investments plans are better able to take hazard events into account.

### D. Results Chain

34. **Theory of Change.** The GIVE 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) continued efforts towards the harmonization of land registry and cadastral records; (ii) harmonization/standardization of available datasets on land, buildings, property units between key stakeholders (including but not limited to FMoJ, FGA, and other institutions that maintain geospatial datasets) and provision of data and e-services to stakeholders through SDI; (iii) establishment of the basis for a mass property valuation system and improved market evidence; and (iv) establishment and entity-wide rollout of a building register that accounts for all



buildings and parts of buildings (e.g., apartments) in FBIH. By doing so, the GIVE project will set the foundations for raising additional revenues, improving resilience of cities to natural disasters, improving spatial and investment planning, enhancing real estate markets, supporting BiH’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

35. The World Bank is uniquely placed to support FGA in executing the GIVE 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 RERP project as well as projects supporting cadaster modernization, mass valuation, and SDI in countries such as Türkiye, Croatia, Moldova, North Macedonia, and Serbia. These experiences, combined with the solid technical expertise of FGA developed over the course of RERP, provide an excellent opportunity for the World Bank to continue its support to FBIH’s land sector through this project. The Bank also brings to the GIVE project 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.<sup>21</sup>

36. The GIVE project activities will also build upon, or fully complement, past and ongoing initiatives financed by separate development partners. This includes the ongoing Digital Enhancement of Land Management for the European

<sup>21</sup> 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*.



Future of Bosnia and Herzegovina (DELEF) Project financed by the Sida, which is supporting comprehensive capacity building and analytic activities for the advance of SDI, geodetic infrastructure, and mass valuation in both FBiH and RS, in cooperation with FGA and RGA. The knowledge developed and technical capacities built via DELEF will directly contribute to the establishment and scale-up of SDI and mass valuation in FBiH under the GIVE project. Moreover, while the World Bank has extensively financed land registry and cadastral data harmonization via RERP and now the GIVE project, the EU, through the IPA, is financing the Surveying Project, which is conducting LiDAR surveys throughout BiH in cooperation with FGA and RGA. The data produced will provide a key topographical data layer that is one of two key data layers (the other being the cadaster) that are foundational for the establishment of SDI. Finally, Dutch Kadaster, through its Spatial II Project, is supporting FGA with improved data management, sharing and use 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 the forthcoming building register, as well as other key datasets maintained by other FBiH government institutions that will be part of SDI establishment.

37. The GIVE project also presents an opportunity for learning 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, the GIVE project will focus on FBiH federal level government and LSGU collaboration for data sharing as part of the development of FBiH's SDI, 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

38. The GIVE project design builds on the following key lessons drawn from previous efforts in BiH as well as from international best practice:

39. **The integration and interoperability of land and spatial information systems is a requirement for value addition of land and spatial information.** The GIVE project is designed to incorporate the global best practice concerning the need for full coverage by a digital seamless cadaster that inventories all lands (including public owned) and is maintained so that it reflects the best approximation of reality. The seamless cadaster with thematic information should also be fully interoperable with internal and external authoritative information systems, including addresses, zoning, spatial planning, civil and business registration, and real estate valuation. The development of this "Single source of Truth", which contains the true, current real-world version of spatial data will help enable spatial information systems to communicate and exchange data in an accurate, effective, and consistent manner, thereby helping to facilitate the advance of SDI. The GIVE project will build on this important lesson from past interventions concerning effective geospatial information management to ensure the successful development of SDI for FBiH.

40. **Investments in the advancement of SDI and the development of a building register set the stage for potential support to the advancement of property valuation for revenue generation, improvements in real estate market efficiency and transparency, and disaster risk management.** The GIVE project activities will not include reforms related to property taxation. However spatial and land valuation data could be used by external agencies to inform tax policies in the future. A comprehensive mass valuation of all types of property based on current market values, a tax register being interoperable with the cadaster and address register, and digitized building records will help to prevent loss of revenues from the evasion of property registration fees by enhancing LSGUs' own revenues 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 of all types of property based on current market values, with regular revaluations. Such a system should be unified, fairer, transparent, and more equitable than current systems.

41. **Continuation of land administration sector reform supports economic and social development of the country.** Recognizing the importance of accurate, reliable, and efficient land administration for the socio-economic development of BiH, responsible institutions of FBiH, with the support of the Council of Ministers and the Government of FBiH, have launched and—for the past eighteen years—implemented land administration sector reform. The aim of these reforms is to ensure accurate and reliable information on land, as well as its related property rights, with the goal of making land administration efficient, rational, and transparent, and ensuring it provides services with the function of socio-economic development. The World Bank has supported BiH’s land administration development with the LRP and RERP and will use them for the basis of continued excellent results achieved. Up-to-date data on real estate, ownership, restrictions, and other property rights provide security to local and foreign investors, foster business climate and competitiveness, which all contribute to the overall economic development of BiH.

### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

42. The GIVE project will be implemented by FGA and all project management costs will be financed via Component D. FGA has vast experience in implementing Bank-financed projects. A PIU will be housed at FGA and will manage implementation of project activities. The PIU will include civil servants and contracted consultants and will operate under the FGA sector for the management of projects from the Public Investment Program, providing day-to-day support for project implementation. The composition of the PIU will be informed by the expertise identified in the POM and will include specialists, including a Team Leader, Project Component Leaders, a Monitoring and Evaluation (M&E) Specialist, a QA/QC Specialist, a Procurement Specialist, a Financial Management (FM) Specialist, IT Specialist, Geospatial/SDI Specialist, Cadastral and Land Registration Specialist, Mass Valuation and Sales Price Register Experts, a Social and Environmental Specialist(s), and an Administrative Assistant. Adherence to the POM, 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 take care of equipment and logistics, all in coordination with FGA 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.

#### B. Results Monitoring and Evaluation Arrangements

43. Implementation progress towards the achievement of PDO will be monitored based on completed procurements, project disbursements, and achievement of the results indicators. Under RERP, 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 project PDO and intermediate results indicators and periodic reporting. In addition to implementation support missions conducted by the Bank as needed to support the GIVE project, but at least once per year, 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

44. FGA 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 RERP 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. Nevertheless, the introduction of new initiatives such





as a building register and property valuation will require capacity building efforts to ensure long-term sustainability. The GIVE project includes financing for capacity building programs for enhancing the knowledge of FGA management and technical staff, stakeholders, and data providers to effectively maintain these new initiatives after project completion.

45. The sustainability of the advances made under the GIVE project are also reinforced by two factors: (i) FBIH's strong high-level political commitment to land sector reform; and (ii) FBIH's ongoing efforts to further EU integration and compliance with key initiatives such as the INSPIRE Directive. FGA also continues to demonstrate commitment and ownership of the reforms. Throughout project preparation, FGA 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 (if applicable)

46. **Technical.** The land administration system in FBIH is dual, with separate but strongly linked land registration and cadastral operations. It is well functioning with a strategic legal framework in place, being constantly updated to follow modern and citizen-centric approaches, and to provide more security of property rights. 79 municipal cadastral offices as part of the municipal administration under guidance and supervision of the FGA, have the responsibility to manage and maintain the cadastral records. Maintenance of the land register falls under the competence of the land registries of 33 municipal courts with five branches. Land administration services have considerably improved with the digitization of records, implementation of tailor-made software solutions and systematic harmonization of real estate data between the cadaster and the land register under RERP and LRP. The reform of the land administration sector in FBIH aims to continue data harmonization between the cadaster and the land register followed by establishment of the building register, introduction of real estate mass valuation and alignment with the SDI global and European data standards. The cadastral and land registration software solutions enable a number of services to various users and are interoperable with internal and external information systems. There is strong Government of FBIH support for the GIVE project. The implementing agency (FGA) has also demonstrated its capacity to efficiently manage RERP, has strong ownership of the GIVE project, and works well with other key stakeholders in the land administration sector.

47. **The GIVE project is aligned with goals of the Paris Agreement on both mitigation and adaptation.** Mitigation risks are low. The majority of activities supported by this project are universally aligned under the ICT and digital technologies. The GIVE project does not include the construction of new datacenters. Equipment procured for datacenters and other ICT equipment will be energy efficient. The GIVE project does not pose a material risk of having a negative impact on the country's low-GHG emission development pathway. Adaptation risks are mainly linked to the risk of flooding. The GIVE project will not include construction of physical infrastructure. The data center will be hosted in an existing building that is assessed to be at low risk of flooding and other climatic events. A back-up data center (not financed by the GIVE project) has been identified to prevent data loss and ensure continuity of service.

48. **Economic and Financial** The economic analysis focuses on estimating the increase in tax revenues from real estate transaction duties, property-related income tax, and property taxes (applied to leased properties). All three 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 high 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. By focusing on these three revenue streams, the economic and financial analysis focuses on estimating a subset of the wider benefits that are likely to arise from the GIVE project.



49. The cost-benefit analysis designed by the Bank for information purposes for the GIVE project yields an estimated positive net present financial benefit of EUR 51.31 million. The total additional fiscal revenue over an operational period of 20 years is estimated at EUR 77.46 million. The estimated benefit assumes a EUR 31.84 million investment package, a 6 percent discount rate and a planning horizon of 20 years. Since the benefits of the GIVE project are expected to start once implementation has progressed to a level where the building registry and cadaster 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 created by increases to the real estate and land transaction duty, followed by increases to the rental income tax. The small revenue system is expected to be created by additional property taxes, resulting from overall low levels of property tax rates and the fact that only leased properties are subject to this tax.

50. Net benefits are expected to materialize soon after the operationalization of the new land administration systems. The financial analysis shows 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 GIVE project is expected to break even in 2033, only three years after the project implementation phase has ended.

## B. Fiduciary

51. **Financial Management.** An FM capacity assessment was carried out by the World Bank in January 2024. The assessment concluded that the FM arrangements in FGA's PIU are acceptable to the Bank. FM arrangements are adequate to support the operation. The fiduciary FM risk is Moderate.

52. FM implementation arrangements for the loan will use existing FM systems and accounting staff in FGA's PIU for RERP. There are no weaknesses identified in the current RERP implementation arrangements, which continue to be acceptable to the Bank. The loan funds will flow from the Bank to the Designated Account (DA) and further to contractors based on approved invoices.

53. *Financial Accountability and Reporting.* FGA's PIU will prepare quarterly, un-audited, interim financial reports (IUFs) in a form acceptable to the Bank and related to the use of loan proceeds that will be submitted to the Bank as part of client quarterly reports and uploaded into Client Connections within 45 days after the end of each calendar quarter, starting from the first disbursement and throughout the project lifecycle. The project financial statements, including Statement of Expenditures and DA statements, will be audited by independent auditors acceptable to the Bank and on Terms of Reference acceptable to the Bank. The annual audited project financial statements and the audit reports will be provided to the Bank within six months of the end of each fiscal year. There are currently no overdue IUFs or audits for RERP but also for the entire portfolio of projects in BiH.

54. **Procurement.** Procurement under the GIVE project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers "Procurement in Investment Project Financing for goods, works, non-consulting services and Consulting Services (July 2016, revised November 2017, August 2018, November 2020, and September 2023). Hiring of Individual Consultants under the GIVE project is to be conducted as per applicable selection methods (ICS) under the aforementioned Procurement Regulations. In addition, the Bank and Borrower have agreed that the Bank Procurement Regulations will also apply to procurement of contracts that are to be co-financed from both loan and entity budget funds in cases where larger portions of funds are paid from the loan (i.e., more than 50 percent). This is in line with the 2022 BiH Public Procurement Law Amendment. The GIVE project will also be subject to the World Bank's Anti-Corruption Guidelines, dated July 1, 2016, and will be further governed by the provisions stipulated in the Project Agreements (PAs) with respective entities. The PIU will use the Systematic Tracking of Exchanges in Procurement (STEP) system. STEP is a planning and tracking system, which will provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance.

55. The PIU has implemented several Bank-financed projects and has adequate implementation capacity with a dedicated and trained procurement specialist with moderate procurement experience. Based on the procurement



capacity assessment conducted for the PIU in charge of project implementation, the World Bank concluded that (i) procurement arrangements in the PIU at FGA are acceptable to the Bank; and (ii) the Procurement risk is Moderate.

56. The Project Procurement Strategy for Development (PPSD) has also been prepared by the PIU to outline the selection methods to be followed by the Borrower during project implementation in the procurement of goods, works, non-consulting and consulting services financed by the Bank. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity. The identified risks and the mitigation measures are also detailed in the PPSD.

**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**

57. The risk rating of the GIVE project is rated Low for both Environmental and Social. The GIVE project, at this stage, does not include any activities that may have a physical footprint or have direct or indirect environmental impacts. The main objective is to support (i) development of spatial data infrastructure; (ii) develop a building register; (iii) mass valuation of real estate; and (iv) building capacities in the areas of SDI implementation, cadastral and land registration harmonization, building register creation and real estate mass valuation in FBiH. New IT hardware will be bought without replacing old equipment and minor refurbishment works for a data center are foreseen. To mitigate potential carbon emission increase, the procurement of new IT hardware will take into account energy efficiency measures. These requirements will be aligned with the procurement procedures and set out in the POM for the GIVE project. With no activities that would pose direct or indirect environmental implications, the associated environmental risk is assessed as Low.

58. The GIVE project will focus on, inter alia, establishment of a building cadaster for government stakeholders. This activity will be for buildings/facilities (e.g., apartments, business building premises) and will not include individual houses or land, avoiding, therefore, private ownership issues that are much more prevalent concerning the latter. Formality will not be registered as part of the project activities. For activities under Components B and C, mostly existing data will be utilized. However, some data collection in the form of aerial imagery and LiDAR surveys will be financed. This initial data collection will be checked in the field, and additional information (e.g., age of the building) will be collected. Stakeholder engagement activities will be performed to explain the value of the activity and inform the communities about potential field data checking activities. Although the acquired data will not be publicly disclosed, provisions of digital data protection and security will be part of the POM as well as any systems/frameworks established under the GIVE project. Although no adverse risks and impacts to vulnerable groups are expected as result of the project activities, to ensure these groups benefit equally, the GIVE project will, through activities under Component D, conduct vulnerability mapping to identify land sector-specific needs of vulnerable and marginalized groups that reside in FBiH. The GIVE project will not finance any kind of major civil works but will finance some refurbishment of existing facilities. Project activities will cause neither land acquisition nor physical displacement to formal or informal occupants. Given the low risk of the GIVE project, no standalone Stakeholder Engagement Plan (SEP) or Labor Management Procedures (LMP) have been prepared. The Borrower has, however, prepared an Environment and Social Commitment Plan (ESCP) that outlines the measures and actions required to avoid, minimize, reduce or otherwise mitigate the potential environmental and social risks and impacts



of the GIVE project. The prepared ESCP entails provisions standard to the LMP and SEP to ensure requirements of Environment and Social Standards (ESSs) 2 and 10 are met and is disclosed and consulted prior to implementation.

## V. GRIEVANCE REDRESS SERVICES

59. **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

60. **The overall residual GIVE project risk is considered Moderate** based on adopted and planned mitigation measures. Upon review of risks pertaining to Political and Governance, Sector Strategies and Policies, Technical Design of Project or Program, and Institutional Capacity for Implementation and Sustainability, it was determined that they are inherently moderate risks. Macroeconomic and Stakeholder risks were assessed as inherently low.

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

62. **Environment & Social risk is rated Low.** The environmental risk is rated as Low, and the social risk is rated as Low. Therefore, the combined risk is rated as Low. A detailed explanation of the assessment of these risks and assigned rating is presented in the Environment & Social section above.



VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
<b>Accuracy of land administration information improved</b>	
<b>Mass Real Estate valuation methodologies that satisfy international best practice developed and adopted (Number)</b>	
Apr/2024	Jan/2030
0	3
<b>Key geospatial datasets harmonized with the adopted data standards and available via SDI digital platform (Percentage)</b>	
Apr/2024	Jan/2030
29	71
<b>Accessibility of land administration information improved</b>	
<b>Local Self-Governing Units with building register data established (Percentage)</b>	
Apr/2024	Jan/2030
0	51

Intermediate Indicators by Components

Baseline	Closing Period
<b>Component A: Support to the Establishment of Spatial Data Infrastructure</b>	
<b>Public institutions contributing to SDI Digital Platform (Number)</b>	
Apr/2024	Jan/2030
0	20
<b>Public institutions with digitized data as a result of the project according to SDI standards (Number)</b>	
Apr/2024	Jan/2030
0	3
<b>Public institutions with standardized metadata published on SDI Digital Platform (Number)</b>	
Apr/2024	Jan/2030
22	70



<b>Geospatial e-services available on SDI Digital Platform (Number)</b>	
Apr/2024	Jan/2030
20	50
<b>Cadastral municipalities with harmonized cadaster and land register data (Number)</b>	
Apr/2024	Jan/2030
450	600
<b>Cadastral and land registration data harmonization beneficiaries (Number)</b>	
Apr/2024	Jan/2030
1720000	1900000
<b>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)</b>	
Apr/2024	Jan/2030
0	4
<b>Women with land rights confirmed as a result of cadastral and land registration data harmonization activities (Number)</b>	
Apr/2024	Jan/2030
636400	705000
<b>People using digitally enabled services (Number)</b>	
Apr/2024	Jan/2030
8100000	13800000
<b>Component B: Building Register Development</b>	
<b>Public awareness campaigns completed for Building Register establishment (Number)</b>	
Apr/2024	Jan/2030
0	40
<b>LSGUs with established Building Register (Number)</b>	
Apr/2024	Jan/2030
0	40
<b>Building Register IT system is operational and generating statistical reports (Yes/No)</b>	
Apr/2024	Jan/2030
No	Yes
<b>Component C: Real Estate Valuation</b>	
<b>Sales Price Register upgraded (Text)</b>	
Apr/2024	Jan/2030
SPR with limited functionalities	e-Services for SPR system's various users developed
<b>Mass Real Estate Valuation system developed (Text)</b>	



Apr/2024	Jan/2030
No system	Mass Real Estate Valuation System for main property categories developed
<b>Mass valuation IT system developed and operational (Yes/No)</b>	
Apr/2024	Jan/2030
No	Yes
<b>Component D: Capacity Building and Project Management</b>	
<b>Persons who participate in training (Number)</b>	
Apr/2024	Jan/2030
0	2000
<b>Level of satisfaction of trainees with training (Percentage)</b>	
Apr/2024	Jan/2030
0	80
<b>&gt; Level of satisfaction of trainees with training (Female) (Percentage)</b>	
0	80
<b>Public perception surveys completed (Number)</b>	
Apr/2024	Jan/2030
0	3
<b>Improved level of awareness/knowledge of the benefits of establishing an SDI (Percentage)</b>	
Apr/2024	Jan/2030
TBD in CY1 or within implementation of FBiH IPP Strategy 2023-2027	5 percent improvement from the initially determined percentage
<b>Beneficiaries assisted through GIVE mechanisms (Number)</b>	
Apr/2024	Jan/2030
TBD	To be monitored without defined End Target
<b>&gt; Number of beneficiaries assisted through GIVE mechanisms (Female) (Number)</b>	
TBD	To be monitored without defined End Target



**Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes**

<b>Accuracy of land administration information improved</b>	
<b>Mass Real Estate valuation methodologies that satisfy international best practice developed and adopted (Number)</b>	
Description	This indicator measures the number of valuation methodologies that satisfy international best practice that are developed and adopted as a result of the GIVE project.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Key geospatial datasets harmonized with the adopted data standards and available via SDI digital platform (Percentage)</b>	
Description	This indicator will measure the percentage of harmonized key geospatial datasets as defined in the Law on SDI, Annexes 1 - 3 that comply with the adopted standards and are made available via the SDI digital platform that will be developed via the GIVE project financing.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Accessibility of land administration information improved</b>	
<b>Local Self-Governing Units with building register data established (Percentage)</b>	
Description	This indicator measures the percentage of coverage of FBiH's local self-governing units for which the building register to be financed via the GIVE project contains information.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>

**Monitoring & Evaluation Plan: Intermediate Results Indicators by Components**

<b>Component A: Support to the Establishment of Spatial Data Infrastructure</b>	
<b>Public institutions contributing to SDI Digital Platform (Number)</b>	
Description	This indicator measures the number of SDI stakeholders (Public institutions, private companies, private citizens, academia, etc.) at all levels of government (FBiH, Cantons, LSGUs) that contribute to geospatial data sharing by providing services to the SDI Digital Platform.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Public institutions with digitized data as a result of the project according to SDI standards (Number)</b>	
Description	This indicator will track the number of SDI stakeholders (Public institutions, private companies, private citizens, academia, etc.) at all levels of government (FBiH, Cantons, LSGUs) that will receive GIVE project support to convert data from analogue to digital format. This will enable data sharing via services within SDI collaboration.





Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Public institutions with standardized metadata published on SDI Digital Platform (Number)</b>	
Description	This indicator will track the number of SDI stakeholders (Public institutions, private companies, private citizens, academia, etc.) at all levels of government (FBIH, Cantons, LSGUs) that have published or migrated metadata records on the SDI Digital Platform.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Geospatial e-services available on SDI Digital Platform (Number)</b>	
Description	This indicator measures the increase in the number of services integrated on the SDI Digital Platform for searching, reviewing, downloading and transforming SDI geospatial data. The activity will be implemented in close cooperation and coordination between the SDI Coordinating Body and SDI Stakeholders that will act as project beneficiaries.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Cadastral municipalities with harmonized cadaster and land register data (Number)</b>	
Description	This indicator measures the number of cadastral municipalities with Real Estate data harmonized between the Cadaster and Land Registry. The baseline represents the number of cadastral municipalities with harmonized data in FBIH by the end of RERP implementation.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Cadastral and land registration data harmonization beneficiaries (Number)</b>	
Description	This indicator measures the number of direct data harmonization beneficiaries by using the same methodology that was used in RERP. Direct beneficiaries are people or groups who directly derive benefits from land register and cadaster data harmonization. The baseline represents the estimated number of beneficiaries as a result of RERP activities on data harmonization in FBIH.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Women with land rights confirmed as a result of cadastral and land registration data harmonization activities (Number)</b>	
Description	This indicator will measure the number of women with confirmed land ownership and/or use rights as a result of the GIVE project's cadastral and land registration data harmonization activities.



Frequency	FGA
Data source	Progress Reports
Methodology for Data Collection	FGA
Responsibility for Data Collection	Semi-annual
<b>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)</b>	
Description	In line with the World Bank’s climate change corporate commitment, this indicator measures the number of public institutions that will use the geospatial datasets produced under the GIVE project for improving forecasting and assessment of the consequences of disaster and climate hazard events and informing climate-related decision making.
Frequency	FGA
Data source	Progress Reports
Methodology for Data Collection	FGA
Responsibility for Data Collection	Semi-annual
<b>People using digitally enabled services (Number, Millions)</b>	
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	FGA
Data source	Progress Reports
Methodology for Data Collection	FGA
Responsibility for Data Collection	Semi-annual
<b>Component B: Building Register Development</b>	
<b>Public awareness campaigns completed for Building Register establishment (Number)</b>	
Description	This indicator measures the number of public awareness campaigns completed for Building Register establishment at the level of the LSGUs. In total, there are 79 LSGUs in FBiH.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>LSGUs with established Building Register (Number)</b>	
Description	This indicator measures the number of LSGUs in FBiH for which the Building Register is established. In total, there are 79 LSGUs in FBiH.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Building Register IT system is operational and generating statistical reports (Yes/No)</b>	
Description	This indicator measures the operability of the Building Register system and its ability to generate statistical reports.
Frequency	Semi-annual
Data source	FGA



Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Component C: Real Estate Valuation</b>	
<b>Sales Price Register upgraded (Text)</b>	
Description	This indicator measures the progress on development and interoperability of a Sales Price Register. With the support of the GIVE project, the SPR system will be interoperable with the Land Registry, Address Registry, and Cadastral System.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Mass Real Estate Valuation system developed (Text)</b>	
Description	This indicator measures the progress on the establishment of a mass real estate valuation system.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Mass valuation IT system developed and operational (Yes/No)</b>	
Description	This indicator measures the availability of the Mass Real Estate Valuation IT system in FBIH.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Component D: Capacity Building and Project Management</b>	
<b>Persons who participate in training (Number)</b>	
Description	The GIVE project will support capacity building through tailored training, workshops and study trips for institutions, stakeholders, professionals involved in the SDI and valuation sectors and field data collectors. This indicator measures the total number of people trained under the GIVE project.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Level of satisfaction of trainees with training (Percentage)</b>	
Description	This indicator measures the level of satisfaction of people trained via the GIVE project, disaggregated by gender.
Frequency	Semi-annual
Data source	FGA
Methodology for Data Collection	Progress Reports
Responsibility for Data Collection	FGA
<b>Level of satisfaction of trainees with training (Female) (Percentage)</b>	



Description	This indicator measures the level of satisfaction of female trainees who benefit from the GIVE project.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Public perception surveys completed (Number)</b>	
Description	This indicator measures the number of public perception surveys completed in regards to public perception of the GIVE project's key components, particularly the SDI and real estate valuation initiatives.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Improved level of awareness/knowledge of the benefits of establishing an SDI (Percentage)</b>	
Description	This indicator measures the increase in the level of knowledge of benefits of establishing the SDI. It will provide feedback from users, stakeholders, and relevant institutions.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Beneficiaries assisted through GIVE mechanisms (Number)</b>	
Description	This indicator measures the total number of beneficiaries benefitting from the project communication mechanisms such as emails, letters, phone calls and platform for citizen engagement to be developed during project implementation.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>
<b>Number of beneficiaries assisted through GIVE mechanisms (Female) (Number)</b>	
Description	This indicator measures the total number of female beneficiaries of project communication mechanisms such as emails, letters, phone calls and platform for citizen engagement to be developed during project implementation.
Frequency	<b>Semi-annual</b>
Data source	<b>FGA</b>
Methodology for Data Collection	<b>Progress Reports</b>
Responsibility for Data Collection	<b>FGA</b>



## ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Bosnia and Herzegovina

BiH Geospatial Infrastructure and Valuation Enhancement Project (GIVE)

### Institutional and Implementation Arrangements

1. The main institution responsible for implementing the GIVE project will be FGA. FGA has built significant implementation capacity over the years, and this will be an asset in implementing the GIVE project efficiently. The PIU will be in charge of the day-to-day management of the GIVE 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 be comprised of needed expertise as outlined in the Project Operation Manual (POM) and include a Team Leader, Project Component Leaders, an M&E Specialist, a QA/QC Specialist, a Procurement Specialist, an FM Specialist, IT Specialist, Geospatial/SDI Specialist, Cadastral and Land Registration Specialist, Mass Valuation and Sales Price Register Experts, a Social and Environmental Specialist(s), and an Administrative Assistant. 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/technical assistance financed outside of the GIVE project. 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. **Proposed Workplan.** Based on the information concerning agency prioritization, project assessments and financial audits, the project Procurement Plan will outline activities in line with practices developed under RERP.

### Financial Management Implementation Arrangements

3. The GIVE project will use existing FM systems available under RERP for fiduciary purposes. The strengths that provide a basis of reliance on the project FM arrangements include (i) use of experienced consultants; and (ii) existing accounting and reporting systems available via RERP.

### *Budgeting and Counterpart Funding Arrangements*

4. The GIVE project will finance items included in the project procurement plan. As the loan will finance up to 100 percent of the defined project expenditures including taxes, no counterpart funding is envisaged at this stage.

### *Accounting and Maintenance of Accounting Records*

5. FGA's PIU follows the cash-based accounting method. The PIU uses computerized accounting software (FMS.XP), which is also capable of generating the IUFRRs automatically. Budgeting and accounting capacity is Satisfactory. The budget is prepared by the project FM consultant and approved by FGA's PIU management. The project budgets are entered in the project accounting software.

6. Back-ups of project accounting data are done on a regular basis (weekly and monthly) and stored on an internal server and on a CD in FGA's PIU.



### *Internal Controls and Internal Audit*

7. The FM staff in FGA's PIU input codes on the invoices received and submit them to the Procurement Officer for verification that the related services were performed and/or goods/works were delivered. The FM staff check invoices for accuracy and prepare requests for payment. Requests for payment include a breakdown of the invoice against the undisbursed portion of the liability shown on the contract payment record. The FM staff check if the invoice was properly prepared, if the amount corresponds to the contracted amount (not being included under previous payments), and if the procedure in FGA's PIU was done in a prescribed manner. Thereafter, the FM consultant prepares the payment order.

8. Authorization of Payment. Authorization of a payment involves the following operations: (i) preparation of a payment order for the total amount to be paid to the contractor's/supplier's bank account as specified in the corresponding invoice; and (ii) recording of the payment in the contract payment record.

9. The value added taxes (VAT) can be refunded for all payments that included the VAT as per the established procedure with the BiH Indirect Taxation Authority. For FGA, the VAT refund is used to finance certain project expenditures previously approved by the FBiH Ministry of Finance, which will be carried out using the Single Treasury Account.

10. Payment Orders for FGA's PIU. Payment orders for the DA are signed by the Director of FGA (or Assistant Director of FGA if authorized by the Director) and the FBiH Minister of Finance (or the Deputy Minister)—one person from FGA and one person from FBiH's Ministry of Finance simultaneously have to sign a payment order. A photocopy of the approved invoices, if the signatory has been authorized to sign, the proxy itself, shall be attached to the payment order before the original invoice is placed in the file of the supporting accounting documentation kept by FGA's PIU as part of the audit trail. Payment orders are kept in a separate file; they are combined with a related copy of the invoice and related statement of account that shows that the payment was executed.

11. All withdrawal applications are being processed electronically and the only authorized signatory is the BiH Minister of Finance and Treasury or if his/her deputy is in possession of a valid token.

12. Register of Documentation. FGA's PIU established a register of all incoming/outgoing documents. The FM consultant has a stamp, and all incoming and outgoing documents have to be properly stamped with a proper reference number. Additionally, the FM consultant maintains a separate folder and each registered document must be copied and stored in separate folders, marked as incoming and outgoing. The coding system for reference numbers was agreed within FGA's PIU and the person in charge is the Director of FGA. If a document is not properly stamped and registered in the register book, it is not considered as an official document, and it does not have to be processed. Full responsibility of the Register of Documentation lies with the FM consultant.

13. The DA balances are reconciled at least monthly. Furthermore, regular monthly reconciliations (or when applications for withdrawal are prepared) of Statements of Expenditures with accounting records are conducted.

14. Monthly Disbursement Summaries Reconciliation. FGA's PIU has access to the Client Connection system and can download disbursement data from it for reconciliation purposes. Reconciliations are performed in Excel after each Withdrawal Application sent via Client Connection and disbursement data received.

### ***Periodic Financial Reporting***

15. FGA's PIU shall prepare and furnish to the Bank, as part of client quarterly reports and uploaded into Client Connections not later than forty-five (45) days after the end of each calendar quarter, IUFs for the GIVE project covering the quarter, in form and substance satisfactory to the Bank. The IUFs will include sources and uses of funds, uses of funds by project activity, a statement of financial position, and the DA reconciliation statement. The formats of the IUFs have been agreed and confirmed.



**External Audit**

16. FGA’s PIU will be responsible for the timely compilation of annual project financial statements for the independent external audit. Project financial statements (including Statements of Expenses and DA activities) will be audited by an independent auditor acceptable to the World Bank and contracted by the Ministry of Finance and Treasury of BiH. Each audit of the financial statements will cover one fiscal year of the borrower, commencing with the fiscal year in which the first withdrawal is made under the loan. Additionally, the auditors are expected to deliver management recommendation letters in related to the GIVE project, identifying any internal control deficiencies and accounting issues. Audit reports, audited financial statements, and management recommendation letters, will be delivered to the World Bank within six months after the end of each fiscal year. The GIVE project’s audited financial statements will be made publicly available in a timely fashion, and in a manner acceptable to the World Bank. There are no overdue reports for the World Bank-financed projects for the year ending December 31, 2022.

**Disbursements and Flow of Funds**

17. Disbursements from the Loan Account will follow the traditional method through reimbursements, direct payment to suppliers, and advances to the DA. The expenses will be documented with the use of Statements of Expenses. Supporting documents for Statements of Expenses, including completion reports and certificates, will be retained by FGA’s PIU and made available to the Bank during project supervision. The reimbursement of expenditures from the Das may be made on the basis of certified Statements of Expenses. The ceiling and authorized allocation for the International Bank for Reconstruction and Development (IBRD) DA will be defined in the project Disbursement and Financial Information Letter. The DA will be denominated in the currency of the loan as selected by the Borrower (EUR).

**Table 1: Withdrawal of the Proceeds of the Loans and Estimated Disbursements**

<i>Category</i>	<i>Amount of the Loan Allocated (expressed in EUR)</i>	<i>Percentage of Expenditures to be Financed (Inclusive of Taxes)</i>
(1) Goods, works, non-consulting services, consulting services, Operating Costs and Training for the GIVE project	23,042,250	100%
(2) Front-end Fee	57,750	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07(b) of the General Conditions)
(3) Interest Rate Cap or Interest Rate Collar premium <sup>22</sup>	0	Amount due pursuant to Section 4.05 (c) of the General Conditions
<b>TOTAL AMOUNT</b>	<b>23,100,000</b>	

**Procurement Arrangements**

*Procurement of Works*

18. Eligible works under the GIVE project will be procured via national open procedure using procedures and methods (Request for Bids, Request for Quotations) specified in further detail in the Procurement Plan and as per their estimated cost value. The threshold for prior review and procurement methods are set forth in the PPSD.

<sup>22</sup> To be determined based on Loan Choice Worksheet.



19. The civil works activities include improving working conditions in LSGUs. The scale of civil works is small, amounting up to EUR 680,000 and there are many national or local contractors that have the capacity to execute these kinds of works as demonstrated in the PPSD. The RFQ and RFB method may be envisaged for contracts less than US\$300,000 and the RFB method will be used for contracts with values equivalent to or above US\$300,000 using the national market approach of up to US\$7.5 million.

#### *Procurement of Consulting Services*

20. Consulting services under the GIVE project are of varying size and complexity. Selection of consulting firms will be done using the World Bank standard procurement documents, such as Requests for Proposals. The hiring of individual consultants will be conducted through the ICS selection method in accordance with the Procurement Regulations. In case a service is required from a consulting firm, the Quality- and Cost-based Selection (QCBS) method will be applied and other methods such as Least-Cost Selection (LCS), Fixed Budget Selection (FBS), or Quality-Based Selection (QBS) may also be used following provisions of Procurement Regulations. For contracts with values below US\$300,000, the Selection Based on Consultants' qualification (CQS) method may be used.

21. The consulting services under the GIVE project are comprised of consulting services related to the development of technical requirements, development of methodologies and models for data collection, processing and quality control, data development, technical consulting services for mass real estate valuation information system development, technical consulting services for SDI sustainability, etc.

22. Market research has shown that there are sufficient national consulting firms and individuals having the required qualifications and experience to provide the above-mentioned consulting services, thereby suggesting that the competitive selection method (CQS) should be used for firm assignment via the national market approach for contracts up to US\$300,000. The international market approach should also be considered for contracts that require international experience and where international consultants would be beneficials to project implementation using the QCBS method for contracts with a cost estimate of US\$300,000 or above.

#### *Procurement of Goods and Non-Consulting Services*

23. Goods will be procured using procedures and methods (Request for Bids, Request for Quotations, and Direct Selection), whereas for non-consulting services methods such as Requests for Proposals, Requests for Bids, and Requests for Quotations will be used—with further details for both outlined in the Procurement Plan—depending on their estimated cost value. The threshold for prior review and procurement methods are set forth in the PPSD.

24. Procurement of goods consists of various ICT equipment such as a datacenter and building register, servers and workstations for SDI stakeholders, and office equipment and furniture, which are of relatively simple nature and small size in value. Market research has shown that there is a sufficient number of potential suppliers in the country that have the capacity to supply these types of goods. Therefore, it is proposed to use the RfB method for the contracts with values of US\$150,000 equivalent or more, or the RfQ method for contracts with values below US\$150,000 using the national market approach for contracts up to US\$1.5 million.

25. Procurement of non-consulting services includes the harmonization of cadastral data, preparation and conversion of real estate cadaster data for handover to the land registry, providing support to the process of public display of cadastral data, development of a mobile application for field data collection, development of a prototype for the building register IT system and its implementation, etc. Depending on the estimated cost value and availability of qualified service providers, these activities will be advertised nationally or internationally. However, it is proposed to use RfP and RfB





methods for contracts with a value equivalent to or greater than US\$150,000 or the RfQ method for contracts with values below US\$150,000, with the national market approach being used for contracts worth up to US\$1.5 million.

#### *General Procurement Notice*

26. The General Procurement Notice will be prepared and submitted to the World Bank before Effectiveness. The World Bank will arrange for its publication in the United Nations Development Business online and on the World Bank's external website. The General Procurement Notice will contain information concerning the borrowers, amount, and purpose of the loan; scope of the procurement reflecting the Procurement Plan; the name, telephone (or fax) number, and address(es) of the borrower's agencies responsible for procurement; and the address of a widely used electronic portal with free national and international access or website where the subsequent Specific Procurement Notices will be posted.

27. The General Procurement Notice will be published tentatively in 2025. It will provide information on the scope of major procurements for the GIVE project and solicit expressions of interest from prospective bidders and/or consultants for this project.

#### *Procurement Plan*

28. The PIU at FGA has developed a Procurement Plan for the GIVE project that is consistent with the implementation plan, which provides information on procurement packages, potential selection processes with methods, and the World Bank review requirements. Since this will cover the entire project completion period, it will be tentative. However, a detailed Procurement Plan for the first 12 months of project implementation should be prepared by FGA. The Procurement Plan will be updated in agreement with the World Bank project team annually, at a minimum, or as required to reflect the actual project implementation needs and improvements in the PIU's institutional capacity. The recommended Procurement Plan for the GIVE project is described in Table 2:



**Table 2: Recommended GIVE Procurement Plan**

Item #	Activity #	COMPONENTS / ACTIVITIES IN FBIH	Cost estimation in EUR (IBRD)	Type	Proc Method	Peks	Prior/Post	Issue date	Bids received date	Ctr. Signed date	Ctr. Complete date
1	A	<i>Component A – Support to the Establishment of Spatial Data Infrastructure</i>	€ 8,695,000								
2	A.1	<b>Standardized Geospatial Infrastructure Development</b>	€ 1,405,000								
3	A.1.1	<b>SDI Data Centre</b>	€ 350,000								
4	A.1.1.1	Data Centre specification	€ 50,000	CS	IC/CQS	1	Post	2-Feb-26	22-Mar-26	27-Mar-26	30-Sep-26
5	A.1.1.2	Procurement and installation of ICT infrastructure of the data centre	€ 300,000	G	RFB	1	Post	20-Oct-26	20-Nov-26	3-Dec-26	30-Jun-27
6	A.1.2	<b>Data standards</b>	€ 100,000								
7	A.1.2.1	Development of FBIH SDI data standards and model	€ 100,000	CS	CQS	1	Post	10-Mar-25	29-Apr-25	5-May-25	30-Apr-26
8	A.1.3	<b>SDI Digital Platform</b>	€ 480,000								
9	A.1.3.1	SDI Digital Platform specifications	€ 60,000	CS	IC/CQS	1	Post	12-May-25	27-Jun-25	2-Jul-25	29-Dec-25
10	A.1.3.2	Digital Platform development	€ 400,000	NCS	RFP/RFB	1	Post	6-Jan-26	20-Feb-26	3-Mar-26	29-Dec-26
11	A.1.3.3	Technical training	€ 20,000	CS	IC/CQS	Multi	Post	8-Feb-27	25-Mar-27	30-Mar-27	31-Dec-28
12	A.1.4	<b>Standardization of SDI stakeholders' Data</b>	€ 400,000								
13	A.1.4.1	Digitization of SDI stakeholders' Data	€ 200,000	NCS	RFB	Multi	Post	18-Jan-28	3-Mar-28	8-Mar-28	31-Dec-29
14	A.1.4.2	SDI data harmonization according to standards	€ 200,000	NCS	RFB	Multi	Post	24-Jan-28	12-Mar-28	17-Mar-28	31-Dec-29



15	A.1.5	<b>SDI Quality Analysis and Quality Control</b>	€ 75,000	CS	IC	Multi	Post	25-Jan-28	1-Feb-28	4-Feb-28	31-Dec-29
16	A.2	<b>Support for Metadata and GIS Tools</b>	€ 400,000								
17	A.2.1.	<b>Creation/Migration of Metadata</b>	€ 100,000								
18	A.2.1.1	Support to Metadata creation for SDI stakeholders	€ 40,000	CS	IC/CQS	Multi	Post	7-Apr-25	25-May-25	28-May-25	31-Mar-27
19	A.2.1.2	Support to Metadata migration to SDI Digital Platform	€ 60,000	CS	IC/CQS	Multi	Post	8-Feb-27	28-Mar-27	31-Mar-27	31-Dec-28
20	A.2.2	<b>Spatial Data management tools</b>	€ 300,000								
21	A.2.2.1	Support to SDI stakeholders to use common GIS and database tools	€ 300,000	CS	IC/CQS	Multi	Post	9-Jul-26	17-Jul-26	20-Jul-26	30-Jun-28
22	A.3	<b>Integration of geospatial information e-services</b>	€ 600,000								
23	A.3.1	<b>Spatial Data e-services</b>	€ 150,000								
24	A.3.1.1	Development of e-services for data of SDI stakeholders	€ 100,000	NCS	RFQ/RFB	Multi	Post	5-Jun-27	23-Jul-27	31-Jul-27	31-Dec-28
25	A.3.1.2	Integration of e-services of the stakeholders on SDI Digital Platform	€ 50,000	NCS	RFQ	Multi	Post	5-Jan-27	22-Feb-27	2-Mar-27	31-Dec-28
26	A.3.2	<b>Provision of ICT equipment for FbiH SDI stakeholders</b>	€ 450,000								
27	A.3.2.1	Provision of ICT equipment (workstations, server equipment etc) – Phase I	€ 100,000	G	RFQ	1	Post	1-Jul-25	21-Jul-25	28-Jul-25	30-Jun-26
28	A.3.2.2	Provision of ICT equipment (workstations, server equipment etc) – Other Phases	€ 350,000	G	RFB/RFQ	Multi	Post	2-Jul-26	6-Aug-26	19-Aug-26	31-Dec-29
29	A.4	<b>Cadaster and Land Registry Data Harmonization</b>	€ 5,940,000								
30	A.4.1	<b>Establishing cadaster data for the harmonization with land register data</b>	€ 1,380,000								



31	A.4.1.1	Harmonization data on cadaster - Phase 1 (cm 60)	€ 690,000	NCS	RFB	1	Post	8-Jul-25	22-Aug-25	4-Sep-25	31-Dec-25
32	A.4.1.2	Harmonization data on cadaster – Phase 2 (cm 60)	€ 690,000	NCS	RFB	1	Post	14-Apr-26	29-May-26	11-Jun-26	30-Sep-26
33	<b>A.4.2</b>	<b>Completion of work related to establishment of real estate cadaster</b>	<b>€ 2,200,000</b>								
34	A.4.2.1	Preparation and conversion of real estate cadaster data for handover to land registry – Phase 1 (cm 15)	€ 150,000	NCS	RFB	1	Post	11-Jan-27	20-Feb-27	5-Mar-27	30-Jun-27
35	A.4.2.2	Preparation and conversion of real estate cadaster data for handover to land registry – Phase 2 (cm 15)	€ 150,000	NCS	RFB	1	Post	18-Oct-27	27-Nov-27	10-Dec-27	31-Mar-29
36	A.4.2.3	Providing support to the process of public display of cadastral data – multiple phases	€ 1,900,000	CS	IC/CQS	Multi	Post	1-Jul-25	11-Aug-25	26-Aug-25	31-Dec-29
37	<b>A.4.3</b>	<b>Establishment and/or renewal of land register data</b>	<b>€ 2,360,000</b>								
38	A.4.3.1	Temporary LR Assistants	€ 1,700,000	CS	IC	Multi	Post	19-Jan-26	3-Feb-26	23-Feb-26	31-Dec-29
39	A.4.3.2	Office supplies for LR offices (all phases)	€ 200,000	G	RFQ	Multi	Post	13-Jan-26	31-Jan-26	11-Feb-26	31-Mar-26
40	A.4.3.3	Local public information campaigns (all phases)	€ 80,000	CS	CQS	Multi	Post	5-Jan-26	14-Feb-26	19-Feb-26	31-Mar-26
41	A.4.3.4	Publishing Costs	€ 50,000	CS	DS	Multi	Prior	5-Jan-26	13-Jan-26	16-Jan-26	31-Mar-27
42	A.4.3.5	Delivery of Decisions on registrations	€ 130,000	CS	IC	Multi	Post	19-Jan-26	3-Feb-26	23-Feb-26	31-Dec-29
43	A.4.3.6	Cadastral scanning and indexing for digital archives (all phases)	€ 200,000	NCS	RFB/RFQ	Multi	Post	7-Apr-25	25-May-25	28-May-25	30-Sep-25
44	<b>A.5</b>	<b>Rollout of Land Administration Information System</b>	<b>€ 350,000</b>								



45	A.5.1	Roll-out of the upgraded Land Administration	€ 350,000	NCS	RFB/RFP	1	Post	2-Sep-25	7-Oct-25	20-Oct-25	31-Dec-27
46	<b>B</b>	<b>Component B – Building Register Development</b>	<b>€ 9,040,000</b>								
47	<b>B.1</b>	<b>Building Register establishment (phase 1)</b>	<b>€ 860,000</b>								
48	<b>B.1.1</b>	<b>Building Register Data Development and Methodology</b>	<b>€ 700,000</b>								
49	B.1.1.1	Development of Methodology and Model for data collection, processing and quality control - (all phases)	€ 250,000	CS	CQS	Multi	Post	1-Apr-25	12-May-25	26-May-25	31-Dec-25
50	B.1.1.2	Development of mobile Application for field data collection - (all phases)	€ 250,000	NCS	RFB/RFQ	Multi	Post	19-Jan-26	23-Feb-26	8-Mar-26	30-Sep-26
51	B.1.1.3	Prototype of Building Register IT system	€ 150,000	NCS	RFB/RFQ	1	Post	19-Jan-26	23-Feb-26	8-Mar-26	30-Sep-26
52	B.1.1.4	Drafting specifications for Building Register IT system development	€ 50,000	CS	ICS/CQS	1	Post	20-Jan-26	24-Feb-26	9-Mar-26	1-Oct-27
53	<b>B.1.2</b>	<b>Data Collection - pilot phase</b>	<b>€ 160,000</b>								
54	B.1.2.1	Data collection from digital sources	€ 50,000	CS	CQS	1	Post	12-Jan-27	2-Mar-27	9-Mar-27	30-Sep-27
55	B.1.2.2	Field Data Collection	€ 100,000	CS	CQS	1	Post	12-Jan-27	2-Mar-27	9-Mar-27	30-Sep-27
56	B.1.2.3	Technical training	€ 10,000	CS	IC	1	Post	7-Oct-26	20-Oct-26	27-Oct-26	28-Feb-27
57	<b>B.2</b>	<b>Scaling up Building Register (phase 2)</b>	<b>€ 6,620,000</b>								
58	<b>B.2.1</b>	<b>Data collection and Aerial based products</b>	<b>€ 6,470,000</b>								
59	B.2.1.1	Aerial survey based products	€ 1,700,000	CS	QCBS	1	Post	10-Apr-26	29-May-26	1-Jun-26	30-Sep-28
60	B.2.1.2	Technical training	€ 30,000	CS	IC	1	Post	13-Jan-28	20-Jan-28	23-Jan-28	31-Dec-28
61	B.2.1.3	Field data collection - roll out phases	€ 4,590,000	CS	QCBS/CQS	Multi	Post	10-Apr-28	29-May-28	1-Jun-28	31-Dec-29



62	B.2.1.4	Data quality control and supervision	€ 150,000	CS	IC	Multi	Post	1-Oct-26	9-Oct-26	16-Oct-26	31-Dec-29
63	<b>B.2.2</b>	<b>Promotion of Building Register Activities</b>	€ 150,000								
64	B.2.2.1	Promotion of Building Register Activities for piloting phase	€ 10,000	CS	CQS	1	Post	1-Oct-26	15-Nov-26	22-Nov-26	22-Dec-26
65	B.2.2.2	Promotion of Building Register Activities for roll out phase	€ 120,000	CS	CQS	Multi	Post	2-Apr-28	17-May-28	23-May-28	30-Jun-28
66	B.2.2.3	Provision of promotional material	€ 20,000	NCS	RFQ	Multi	Post	2-Jun-28	17-Jun-28	29-Jun-28	31-Dec-28
67	<b>B.3</b>	<b>Enabling environment for Building Register</b>	€ 1,560,000								
68	B.3.1	Building register IT system development and implementation	€ 250,000	NCS	RFB/RFQ	1	Post	1-Oct-27	15-Nov-27	28-Nov-27	31-Mar-28
69	B.3.2	Procurement of ICT system equipment for Systems and data collection - all phases	€ 500,000	G	RFB/RFQ	Multi	Post	1-Apr-26	2-May-26	15-May-26	30-Sep-26
70	B.3.3	Architect for civil works	€ 50,000	CS	IC	1	Post	15-Sep-25	23-Sep-25	8-Oct-25	31-Mar-29
71	B.3.4	Improving working conditions in LSGUs – all phases	€ 200,000	W/G	RFB/RFQ	1	Post	1-Apr-26	2-May-26	15-May-26	31-Mar-29
72	B.3.6	Adaptation of storage space to FGA archive space	€ 500,000	W	RFB	1	Post	19-Jan-26	23-Feb-26	24-Mar-26	20-Sep-26
73	B.3.7	Supervision of works on adaptation	€ 10,000	CS	DC	1	Post	2-Mar-26	13-Mar-26	24-Mar-26	20-Sep-26
74	B.3.8	Furniture for FGA archive	€ 50,000	G	RFQ	1	Post	3-Mar-27	26-Mar-26	4-Apr-26	1-Oct-26
75	<b>C</b>	<b>Component C – Real Estate Valuation</b>	€ 2,150,000								
76	<b>C.1</b>	<b>Sales Price Register system improvement</b>	€ 200,000								
77	C.1.1	Sales Price Register system upgrade	€ 200,000	NCS	RFB/RFP	1	Post	5-Jan-26	14-Feb-26	21-Feb-26	30-Jun-27



78	<b>C.2</b>	<b>Real estate valuation system development</b>	<b>€ 1,950,000</b>								
79	<b>C.2.1</b>	<b>Methodology and Models</b>	€ 400,000								
80	C.2.1.1	Mass valuation Standards and Methodology development	€ 300,000	CS	IC/CQS	Multi	Post	1-Jul-26	16-Jul-26	29-Jul-26	30-Jun-27
81	C.2.1.2	Mass Valuation Models consultations, testing and calibration in selected pilot locations	€ 100,000	CS	IC/CQS	Multi	Post	10-Jul-27	25-Jul-27	5-Aug-27	30-Jun-28
82	<b>C.2.2</b>	<b>Mass Real Estate Valuation Information System Development</b>	<b>€ 1,550,000</b>								
83	C.2.2.1	Valuation Information System Development	€ 1,000,000	NCS	RFB/RFP	1	Post	28-Jan-27	9-Mar-27	22-Mar-27	31-Dec-27
84	C.2.2.2	Mass valuation Web portal development	€ 100,000	NCS	RFB	1	Post	3-Jan-29	4-Feb-29	12-Feb-29	30-Sep-28
85	C.2.2.3	Procurement of ICT equipment for the functioning of IT systems	€ 200,000	G	RFB/RFQ	Multi	Post	5-Jan-26	5-Feb-26	18-Feb-26	24-May-26
86	C.2.2.4	Technical consulting services	€ 250,000	CS	IC/CQS	Multi	Post	5-Jul-25	12-Jul-25	15-Jul-25	31-Dec-29
87	<b>D</b>	<b>Component D – Capacity building and project management</b>	<b>€ 3,157,250</b>								
88	<b>D.1</b>	<b>Institutional development, sustainability and policy implementation</b>	<b>€ 475,000</b>								
89	<b>D.1.1</b>	<b>Policy implementation Support for the SDI</b>	€ 170,000								
90	D.1.1.1	Studies and legal framework for the SDI	€ 70,000	CS	IC/CQS	Multi	Post	5-Jul-25	20-Jul-25	2-Aug-25	31-Dec-25
91	D.1.1.2	Updating the SDI strategy	€ 50,000	CS	CQS	1	Post	22-Jan-27	11-Mar-27	16-Mar-27	31-Dec-27
92	D.1.1.3	Technical support for SDI	€ 50,000	CS	IC	Multi	Post	5-Jul-25	12-Jul-25	15-Jul-25	31-Dec-26
93	<b>D.1.2</b>	<b>Implementation Support for the Real Estate Valuation</b>	€ 130,000								



94	D.1.2.1	Study on development of the Real Estate Valuation System	€ 100,000	CS	CQS	1	Post	1-Apr-25	19-May-25	26-May-25	30-Sep-25
95	D.1.2.2	Implementation support for the Study on Real Estate Valuation	€ 30,000	OC		Multi	Post	1-Feb-25			31-Dec-29
96	<b>D.1.3</b>	<b>SDI Sustainability</b>	€ 175,000								
97	D.1.3.1	Development of SDI implementing documents	€ 80,000	CS	CQS	Multi	Post	12-Jan-26	1-Mar-26	5-Mar-26	30-Jun-26
98	D.1.3.2	Development of SDI communication plan	€ 25,000	CS	CQS	1	Post	9-Jun-25	27-Jul-25	31-Jul-25	31-Dec-25
99	D.1.3.3	Implementation support for SDI sustainability	€ 30,000	OC		Multi	Post	1-Jan-26			31-Dec-29
100	D.1.3.4	SDI promotional activities	€ 40,000	OC		Multi	Post	1-Jan-26			31-Dec-29
101	<b>D.2</b>	<b>Capacity Building and Awareness Raising</b>	<b>€ 644,400</b>								
102	<b>D.2.1</b>	<b>SDI Capacity Building</b>	€ 150,000								
103	D.2.1.1	SDI bodies: the Council and working groups	€ 40,000	OC/CS/TR		Multi	Post	2-Jul-25			31-Dec-29
104	D.2.1.2	SDI stakeholders	€ 60,000	OC/CS/TR		Multi	Post	2-Jul-25			31-Dec-29
105	D.2.1.3	FGA SDI management and staff	€ 30,000	OC/CS/TR		Multi	Post	2-Jul-25			31-Dec-29
106	D.2.1.4	SDI Study trips and workshops	€ 20,000	OC/CS/TR		Multi	Post	1-Oct-25			31-Dec-25
107	<b>D.2.2</b>	<b>Real Estate Valuation Capacity Building</b>	€ 120,000								
108	D.2.2.1	Real estate registration and valuation institutions (FGA, LSGU, TA)	€ 60,000	OC/CS/TR		Multi	Post	1-Jul-25			31-Dec-29
109	D.2.2.2	FGA Real Estate Valuation management and staff	€ 20,000	OC/CS/TR		Multi	Post	1-Oct-25			31-Dec-25
110	D.2.2.3	Real Estate Valuation Study trips and workshops	€ 40,000	OC/CS/TR		Multi	Post	1-Oct-25			31-Dec-25
111	<b>D.2.3</b>	<b>Awareness Raising and Beneficiaries relations</b>	€ 374,400								





112	D.2.3.1	Awareness raising campaign and promotion of SDI benefits (all phases)	€ 90,000	CS	CQS	Multi	Post	10-Jul-26	27-Aug-26	1-Sep-26	31-Dec-26
113	D.2.3.2	Public awareness campaign on GIVE project activities (all phases)	€ 150,000	CS	CQS	Multi	Post	12-Oct-26	29-Nov-26	4-Dec-26	31-Dec-26
114	D.2.3.3	Research/surveys to determine the level of awareness/knowledge of the benefits of establishing an SDI (all phases)	€ 60,000	CS	CQS	Multi	Post	2-Jul-25	11-Aug-25	14-Aug-25	30-Sep-25
115	D.2.3.4	Vulnerability Mapping and Social Monitoring Implementation	€ 74,400	CS	IC	1	Post	6-Oct-25	13-Oct-25	16-Oct-25	31-Dec-29
116	<b>D.3</b>	<b>Project management</b>	<b>€ 2,037,850</b>								
117	<b>D.3.1</b>	<b>PIU Staff</b>	<b>€ 1,800,000</b>								
118	D.3.1.1.	Engagement of IC for GIVE PIU	€ 1,800,000	CS	IC	Multi	Post	1-Feb-25	10-Feb-25	14-Feb-25	31-Dec-29
119	<b>D.3.2.</b>	<b>Project implementation costs</b>	<b>€ 225,850</b>								
120	D.3.2.1	Project Operating Cost	€ 166,850	OC		Multi	Post	1-Feb-25			31-Dec-29
121	D.3.2.2	Procurement of IT equipment (all phases)	€ 30,000	G	RFQ	Multi	Post	5-Feb-25	25-Feb-25	4-Mar-25	30-Jun-26
122	D.3.2.3	Office supply (all phases)	€ 29,000	G	RFQ	Multi	Post	5-Feb-25	25-Feb-25	4-Mar-25	31-Mar-26
123	<b>D.3.3.</b>	<b>Translation services</b>	<b>€ 12,000</b>								
124	D.3.3.1	Interpreter	€ 12,000	CS	IC	1	Post	6-Feb-25	18-Mar-25	26-Mar-25	31-Dec-29
		<b>Total FBiH GIVE Project Costs</b>	<b>€ 23,042,250</b>								
		<b>Front-End Fee 0.25%</b>	<b>€ 57,750</b>								
		<b>TOTAL FBiH GIVE LOAN</b>	<b>€ 23,100,000</b>								

**Implementation support plan and resource requirements**

29. The following implementation support plan reflects the preliminary estimates of the skill requirements, timing, and resource requirements over the life of the GIVE 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 GIVE project.

30. 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 GIVE project, it is foreseen that frequent missions will take place to essential areas to support FGA in its initiation of project activities. Table 3 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 3: Implementation Support Plan**

<b>Time</b>	<b>Focus</b>	<b>Skills Needed</b>	<b>Partner Role</b>
First 12 months	Support to: <ul style="list-style-type: none"> <li>- Successful start of GIVE project;</li> <li>- Establishment of the FM system, M&amp;E system and grievance mechanisms in line with World Bank standards</li> <li>- Launching Component activities</li> </ul>	All skills	<ul style="list-style-type: none"> <li>- Task team to support smooth start-up</li> <li>- Ensure E&amp;S commitments are on track</li> <li>- Support PIU</li> <li>- Ensure systems and processes in place to launch project activities</li> </ul>
12 to 48 months	<ul style="list-style-type: none"> <li>- Ensure adequate implementation support for all aspects of the GIVE project</li> <li>- Ensure M&amp;E measures are undertaken in accordance with planned activities</li> <li>- Monitor implementation of project activities, including site visits</li> <li>- Support to final evaluation of the ICR</li> </ul>	All skills	<ul style="list-style-type: none"> <li>- Ensure ESF is on track</li> <li>- Support PIU</li> <li>- Provide technical assistance</li> </ul>

**Table 4: Skills Mix Required**

<b>Skills Needed</b>	<b>Number of Staff Weeks</b>	<b>Number of Trips</b>	<b>Comments</b>
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 Activity Description

COUNTRY: Bosnia and Herzegovina

BiH Geospatial Infrastructure and Valuation Enhancement Project (GIVE)

1. **Component A: Support to the Establishment of Spatial Data Infrastructure (EUR 8,695,000).** This component will finance activities that support increased geospatial data availability and usability through (i) the development of data standards in line with the technical specifications of the INSPIRE Directive<sup>23</sup> and other international standards; (ii) improvements to digital data quality and completeness through key dataset harmonization with the new standards; (iii) digitization of priority analogue datasets; (iv) the development of metadata standards and metadata creation and migration; (v) the establishment of an FBiH SDI data center and SDI Digital Platform that are interoperable with existing e-services; (vi) the development of new e-services and products; (vii) continued cadaster and land registry data harmonization for an additional 150 cadastral municipalities in FBiH; and (viii) support to public display of cadastral data. In addition to the INSPIRE Directive, FBiH will utilize best practices from other strategic documents such as the IGIF. Additionally, all activities will comply with FBiH's Law on SDI that was adopted in June 2021 as well as the SDI Strategy and Action Plan for 2023 – 2027 that was developed by FGA. FGA is also responsible for SDI implementation coordination. The support of Component A activities for the scale-up of data on cadastral parcels, and the development of data quality standards and associated IT investments for SDI for ensuring interoperability of FBiH government datasets are essential for putting in place effective disaster risk planning and climate change adaptation policies. Otherwise, the latter two initiatives cannot be accurately developed or executed because they depend on knowing where and what types of activities, businesses, and people are located, and who the owners are whose behavior must be influenced. In terms of climate change adaptation, the activities under Component A will support the tracking of trends in urbanization and urban sprawl that have contributed to strains on existing infrastructure and public utilities as well as the loss of carbon sinks in FBiH. Moreover, the information provided by the development of the SDI digital platform and the datasets it will house will be used by public agencies such as the Ministry of Security—the government ministry responsible for disaster response in BiH—that will directly access the SDI platform as part of its business operations to utilize this key tool and the cadaster and land registry information it contains to inform energy analysis, disaster and flood simulations, land use planning, resource management and overall climate-smart decision-making for green and sustainable development.

2. *Sub-Component A.1: Standardized Geospatial Infrastructure Development (EUR 1,405,000).* This sub-component supports the development of data standards based on the EU INSPIRE Data Technical Specifications and other Open Geospatial Consortium and International Organization for Standards. Key datasets will be harmonized using new standards, including the digitization of priority analogue datasets. The subcomponent will also support (i) the use of technology and innovations to increase data accessibility and usability by establishing an SDI datacenter at FGA premises; (ii) developing a data repository to store, manage and maintain data of select institutions that do not have sufficient in-house capacity; (iii) development of an SDI Digital Platform that is interoperable with other systems that are already providing e-services; and (iv) development of new e-services and products. Technical assistance and quality assurance and quality control (QA/QC) expertise will be provided to strengthen FGA's specialized technical knowledge in geospatial data management, INSPIRE standards, Extract, Transform and Load (ETL) processes, and digitization techniques. The consultants will help FGA to establish QA/QC processes to validate the data standardization and digitization activities, ensuring that data complies with the new standards and maintains high quality. In terms of climate change adaptation and mitigation, BiH does not have official technical standards for geospatial information, which hinders government

<sup>23</sup> In terms of climate change adaptation and mitigation, the adoption of the INSPIRE Directive's technical standards by FBiH are considered ambitious, as BiH is not an EU member state and, therefore, is not obliged to implement them. Nevertheless, in addition to boosting BiH's EU accession prospects, the standards help FBiH to ensure geospatial data interoperability with multiple countries that will be used for better coordination in terms of disaster response with neighboring countries such as Croatia that are subject to similar climate-related hazards such as flood zones.



institutions' (such as the Ministry of Security) ability to access reliable spatial data for disaster response, relocation efforts in the event of a flood, wildfire, or other disaster, and limits transnational cooperation with neighboring countries such as Croatia given the absence of interoperability due to the lack of existing data standards. As such, the use of EU INSPIRE Directive standards as a foundational framework for BiH is considered ambitious, as the country is not an EU member state. However, their adoption is critical for improved cooperation and information sharing with neighboring EU countries such as Croatia, which shares a long national border with FBiH and is prone to the same climatic hazards such as flood zones due to shared waterways. The data to be produced and housed in the SDI Digital platform will be used and made interoperable with the spatial data used by institutions such as the Ministry of Security, which will also allow this ministry to cooperate more effectively with disaster response agencies in Croatia, as both countries will now use the same data standard for geospatial information. This will allow them to jointly address shared disaster risks such as flood zones, seismic fault lines, and wildfire areas more successfully. The GIVE project's Results Framework includes an Intermediate Results Indicator that will track the number of government agencies in BiH that will use the geospatial information produced via the activities under this sub-component in particular for climate change adaptation and mitigation purposes.

3. *Sub-Component A.2: Support for Metadata and Geographic Information System (GIS) Tools (EUR 400,000)*. FGA has developed a metadata catalogue, a register of SDI stakeholders and a metadata profile. This sub-component will support the development of (i) metadata standards; (ii) the creation of metadata using the new standard and metadata migration from the existing digital platforms into the SDI Digital Platform. The SDI Digital Platform will provide advanced capabilities for metadata management and a centralized, user-friendly environment for maintaining, updating and accessing metadata records. Sub-component A.2 will also support SDI stakeholders to make better use of the available free and open-source spatial data management tools to improve data accessibility and usability. By using such tools, the SDI stakeholders can streamline their data workflows, automate data maintenance, conduct data analyses, create maps, and make informed decisions. Those tools will be used to ensure interoperability of the stakeholders' databases with the central data repository and the SDI Digital Platform and will contribute to enhance data quality through data validation, quality control, and automated data maintenance processes. Similar to the activities described under Sub-Component A.1, the metadata to be produced will fully comply with the EU INSPIRE Directive, and will be the basis for the geospatial information used by government institutions such as the Ministry of Security for climate change adaptation and mitigation initiatives, disaster response, and enhanced transnational cooperation on shared climate risks with neighboring countries such as Croatia.

4. *Sub-Component A.3: Integration of Geospatial Information e-Services (EUR 600,000)*. This sub-component will support the integration of geospatial information e-services with the FBiH SDI Digital Platform. The establishment of geospatial information e-services based on SDI stakeholders' data, configured as OGC, ISO, and INSPIRE services, is a process designed to promote efficient data sharing and interoperability. Security measures will be implemented to protect sensitive data, and stakeholders will receive training and documentation for service usage. Under Sub-component A.3, hardware and other equipment will be delivered to key stakeholders, including FGA, which will be used for data standardization, metadata creation and migration, data management, and development of geospatial e-services and products. This includes, servers, data storages, workstations, communication, and other equipment that is tailored to the specific needs of SDI stakeholders. In terms of climate change adaptation, the Government of FBiH does not have an existing energy efficiency standard in place for IT hardware and equipment. As such, the GIVE project will use the best practice EU Energy Star Programme as the standard for ensuring optimal energy efficiency of all IT hardware and equipment to be financed under this sub-component as part of SDI Digital Platform development. A list of IT hardware and equipment that will be subject to the EU Energy Star Programme standard under Sub-Component A.3 can be found in the Procurement Plan described in Annex 1. Moreover, the establishment of geospatial information e-services under this sub-component will provide the tools necessary for government institutions responsible for climate change adaptation and mitigation (e.g., the Ministry of Security) to use the EU INSPIRE Directive-compliant geospatial information to be produced under Component A. The key stakeholder feedback to be obtained under this sub-component will allow



FGA to tailor the new e-services to the specific needs of the users, including any specific needs identified by government institutions responsible for climate change adaptation and mitigation efforts in BiH that will improve the effectiveness and delivery of their work.

5. *Sub-Component A.4: Cadaster and Land Registry Data Harmonization (EUR 5,940,000)*. This sub-component will provide support for the harmonization of cadastral and land registry data on land, objects and related rights based on the actual situation on the ground. It will build on the achievement of RERP, and the primary objective will be the creation of up-to-date, linked and reliable cadastral and land registry databases in two interoperable systems, managed by FGA and the Federation Ministry of Justice. The plan is to harmonize 150 cadastral municipalities in urban and peri-urban areas with about 250,000 benefitted owners and co-owners, which will bring the end target of completed cadastral municipalities in FBiH to 600, representing about 33 percent of all cadastral municipalities. Project activities will support (i) establishment of quality cadastral data for harmonization with the land register; (ii) completion of works related to the establishment of the real estate cadaster; and (iii) establishment and renewal of land registry data. Quality controls of all works will be performed by FGA and the PIU. Additionally, the PIU's Social consultant will work on vulnerability mapping and social monitoring (see Component D for more information). The updated land registry and cadaster data will be utilized by the Ministry of Security as a foundational dataset for accurate, location-based planning for climate change adaptation decision-making and measures by providing the ministry with up-to-date land parcel data for areas of FBiH most at risk of natural disaster and climatic events. These data will also feed into the information contained in the envisioned SDI Platform that will be used for the ministry's climate-related decision-making activities such as energy analysis, disaster and flood simulations, and resource management.

6. *Sub-Component A.5: Rollout of Land Administration Information System (EUR 350,000)*. This sub-component will support the implementation of the unified Land Administration Information System developed under RERP to all land registry and cadaster offices in FBiH through (i) the development/purchase of software and hardware; and (ii) conducting training for users. This system comprises a database of digitized land records including land title, cadaster, and mortgage documents. By introducing this new system, the GIVE project ensures the long-term consistency and accuracy of the data harmonized during RERP. This activity will also allow for the seamless launch of a joint information system that can be used by both cadastral and land registry offices in FBiH that will eliminate data silos and streamline land administration processes.

7. **Component B: Building Register Development (EUR 9,040,000)**. This component will finance activities for the establishment, scale-up, and maintenance of a building register consistent with newly adopted FBiH regulations<sup>24</sup> that will cover part of the territory of FBiH. Activities under the component include (i) the development of a methodology for the collection, processing, and quality control of data on buildings and parts of buildings (e.g., apartments, business premises) for creating a building register; (ii) creation of a mobile application for field data collection; and (iii) the development an IT system for managing and maintaining the building register that is interoperable with other key systems and registers<sup>25</sup>. Upon its establishment, the building register will be scaled up to 40 of FBiH's 79 LSGUs. Activities will include the production of new aerial orthophoto imagery or LiDAR data, and their interpretation to obtain related products and approximate footprints of buildings and their 3D representation. The cadaster and selected datasets will be cross-overlaid with the geospatial data layer of buildings derived from aerial imagery. This initial data collection will be checked in the field, and additional information (e.g., age of the building) will be collected. The layout and identification of premises in the buildings will be defined based on the division plans and other sources. Data quality assurance/quality control (QA/QC) and public outreach to explain the benefits and the process of the establishment of the building register will also be carried out. This scale-up of the building register will require the financing of hardware and other IT equipment, office

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<sup>24</sup> Regulation on the database of the real estate register (Official gazette of FBiH, No: 94/23).

<sup>25</sup> This will include, at a minimum, the unified system for cadaster and property registration, address register, Sales Price Register, the SDI platform developed under Component A, and the e-Government system.



renovation and refurbishment, office furniture, and archive shelves for analogue records. In terms of climate change adaptation and mitigation and disaster response efforts in FBiH, the development of a building register is a key tool that fills an important gap for government agencies such as the Ministry of Security that will use the information for informed decision making. With the rollout of the building register and the integration of its data with that of other key datasets such as the infrastructure cadaster, quality infrastructure investments and planning will benefit in FBiH, as they will help the entity assess the feasibility of various initiatives. Sustainability and conservation of natural capital (e.g., waterways, forests, carbon sinks) will also benefit from Component B's activities and will help FBiH's LSGU councils understand what areas under their jurisdictions are under threat from unregulated urbanization and urban sprawl, and how these challenges can be addressed as part of climate-smart decision-making.

8. *Sub-Component B.1: Building Register Establishment (Phase I) (EUR 860,000)*. This sub-component supports the development and piloting of (i) a methodology for the collection, processing, and quality control of data on buildings and parts of buildings (e.g., apartments, business premises) for the establishment of a Building Register; and a mobile application for field data collection; and (iii) a prototype of an Information Technology (IT) system for managing and maintaining the Building Register. The existing databases managed by the various IT systems will be used to keep the field data collection at the necessary cost-effective minimum. Various innovative approaches will be considered for the establishment and maintenance of the Building Register, such as (i) using aerial orthophoto imagery or LiDAR, elevation data and related products; (ii) big data analyses; and (iii) machine learning and AI to support data collection processes. After pilot completion, the methodology will be adjusted and finalized, the data model will be amended, and the mobile application for field data collection upgraded. To ensure good quality and consistency, a strong emphasis will be given to the training of the field data collection enumerators and the to the development of the QA/AC mechanisms. In terms of climate change adaptation and mitigation, Phase I of the Building Register will set the stage for helping government institutions such as the Ministry of Security identify buildings constructed in areas prone to natural disasters such as flood zones, seismic fault lines, and wildfire areas and will help to inform disaster risk planning as a result. Moreover, the Building Register's interoperability with the SDI Platform to be financed under Component A will allow its information to be combined with other key geospatial information such as the harmonized land registry and cadastral data to portray a real-time model to be used by government decision-makers for BiH's long-term climate change planning and more effective and tailored response efforts in the event of a disaster.

9. *Sub-Component B.2: Scaling Up the Building Register (Phase II) (EUR 6,620,000)*. This sub-component supports a multi-phased approach to scale up the Building Register for a total of 40 Local Self-Government Units<sup>26</sup> (LSGUs) structure. This includes obtaining new aerial imagery and related products, promotional activities to explain the benefits and the process of the establishment of the Building Register, field data collection, cross-overlay of existing databases, supervision, and QA/QC of the data transferred into the Building Register. A specialized technical training will be provided to the enumerators, covering data collection and management techniques, data quality control mechanisms, and users training for the mobile data collection application. Special attention will be dedicated to vulnerable communities with recognition of the importance of inclusivity and equal access. In this context, the sub-component emphasizes gender equality, ensuring that the promotion efforts consider the specific needs and perspectives of all members of the community (see Component D for more details). Similar to Sub-Component B.1, the Building Register scale-up's benefits to climate change adaptation and mitigation for BiH will include the rollout of the real-time model in 40 out of 79 of FBiH's LSGUs, thereby providing a new tool for institutions such as the Ministry of Security to use that did not exist prior to the implementation of the GIVE project.

10. *Sub-Component B.3: Enabling Environment for Building Register Establishment and Maintenance (EUR 1,560,000)*. This sub-component supports the development of an IT system for the Building Register, which builds upon the system

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<sup>26</sup> There are a total of 79 LSGUs in FBiH.



prototype developed under Sub-component B.1. The system will be interoperable with the key systems and registers, such as the unified system for cadaster and property registration, address register, sales price register, the SDI Digital Platform, e-Government system, the FGA Portal and systems in case they are ready to be linked with the Building Register. The system will provide a wide range of e-services for public institutions, specialized professional users, the private sector, and citizens. The sub-component will also support the improvement of working conditions of key implementing institutions, such as FGA, LSGUs, and Municipal Courts, with the objective of improving service delivery. The sub-component will also finance the supply of hardware and other equipment, office renovation and refurbishment, office furniture and archive shelves for analogue records. Similar to Sub-Component A.3, all IT hardware and equipment to be financed under this sub-component (see the Procurement Plan in Annex 1) will comply with the EU Energy Star Programme to ensure energy efficiency, as the Government of FBiH does not have an existing energy efficiency standard.

11. **Component C: Real Estate Valuation (EUR 2,150,000).** This component will finance activities related to the introduction and rollout of mass valuation throughout FBiH consistent with newly adopted FBiH regulations<sup>27</sup> and consistent with international standards and best practices. Specifically, the component will support (i) the upgrade of the Sales Price Register system and the collection of data needed for property valuation<sup>28</sup>; (ii) real estate valuation system establishment, including standards, methodology and valuation model development; and (iii) development of a real estate valuation system and mass valuation information portal. The activities will build on previous support financed by Sida that established the existing Sales Price Register and supported capacity building programs for mass valuation. Component C will also support the development and implementation of a set of automated systems and tools as part of the real estate valuation system and mass valuation information portal, including (i) a comprehensive Computer Assisted Mass Appraisal system; and (ii) advanced modelling and analysis tools using AI and GIS-based models; (iii) Automated Valuation Models (iv) integrated mapping analysis tools; and (v) advanced data visualization GIS tools. New e-services for professional users and the general public will also be developed under this component. The activities under Component C will, in due course, help to inform the Government of FBiH about which properties are considered more prone to carbon emissions and incentivize emissions reductions by factoring carbon output into the valuation methodology. The connection between real estate valuation and reducing carbon emissions will be further explored and integrated as part of the capacity building activities to be financed via Component D. Moreover, Component C activities will help to provide important market information for calculating the costs of resilient reconstruction and determine insurance premiums in support of crisis preparedness and disaster risk management efforts in FBiH that are led by government entities such as the Ministry of Security.

12. *Sub-Component C.1: Sales Price Register System Improvement (EUR 200,000).* This sub-component will support the upgrade and further development of the Sales Price Register, developed in 2018, which contains real estate price data from the sales-purchase contracts. Leasing and rental data of the rental market is not managed by the system. The Sales Price Register will be expanded with new e-services and products for professional users and the general public, including viewing and download services of controlled and credible market data. The system will be interoperable with key systems and registers, such as the cadastral system, Building Register, land register, address register, infrastructure cadaster, and SDI Digital Platform. The expansion of the Sales Price Register and development of new e-services will also provide a new tool that was non-existent prior to the GIVE project for government institutions such as the Ministry of Security to calculate damage assessments as a result of natural disasters such as floods, earthquakes and wildfires. These tools will be used for more effective disaster response and climate change adaptation and mitigation planning, particularly for buildings that are located in areas that are highly prone to these natural hazards, which will also inform insurance premiums in the event that citizens need to submit claims in the event that a disaster occurs.

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<sup>27</sup> Regulation on the database of the real estate register (Official gazette of FBiH, No: 94/23).

<sup>28</sup> Under GIVE, the types of real estate intended to be valued are primarily apartments, individual houses, garages, business premises, and agricultural land.



13. *Sub-Component C.2: Real Estate Valuation System Development (EUR 1,950,000)*. This sub-component will support the development and adoption of FBiH standards for real estate valuation and the measurement of land and property, codes of professional practice and ethical standards for valuers and standards for education and training, as well as the establishment of an independent appeals system for people to be able to appeal against the established real estate values. In FBiH, there is currently no regulatory framework in place for real estate valuation, and no adopted standards in the field, although there are BiH valuation professional bodies who are members of The European Group of Valuers' Associations and the International Valuation Standards Council and, as members, are committing to following their standards. It is anticipated that FBiH will be able to draw on international best practices, particularly on the standards published by the European Group of Valuers' Associations (TEGoVA), the International Valuation Standards Council (IVSC), International Association of Assessing Officers (IAAO), and the Royal Institution of Chartered Surveyors (RICS). The GIVE project will support the assessment of a large number of different types of real estate by using standardized procedures. The overall methodology will be developed, and the main element will be valuation models that explain rules determined by mass valuation methods. These methods define which characteristics of real estate affect its value on the market, the size of their influence, and enable systematic and uniform attribution of values to a large amount of real estate. Mass valuation methods will represent statistical and other mathematical methods of processing real estate market data.

14. Mass valuation models will sequentially value buildings and parts of buildings, land and special real estate. Creation of models for apartments, individual houses, garages, business premises, and agricultural land will be prioritized and tested in selected pilot areas. Emphasis will be on high-value apartments as well as residential and commercial real estate. Valuation models will be determined by real estate market data, mainly from the Sales Price Register, and by official real estate databases such as the cadaster and Building Register. Based on the results of consultations with professionals and the LSGUs, piloting and best practice, the final mass valuation methodology with valuation models will be adopted. For scaling up mass valuation, the relevant legal framework should be in place, preferably a new law on real estate mass valuation. Modern mass valuation methods and usage of digital technologies will require appropriate training of the staff involved, and recruitment of suitable specialists at FGA to deal with mass valuation. Capacity building programs will be supported by the GIVE project (see Component D) and Sida.

15. The sub-component will also support the development and implementation of a set of automated systems and tools as part of a main system for the purpose of mass valuation, including (i) a comprehensive Computer Assisted Mass Appraisal (CAMA) system; and (ii) advanced modelling and analysis tools using AI and GIS-based models, as well as Automated Valuation Models (AVMs), integrated mapping analysis tools and advance data visualization GIS tools, and (iii) property price indexes. The system will provide a number of e-services for professional users and the general public and will be interoperable with key systems and registers, such as the Building Register, Sales Price Register, cadaster and land registration systems, address register, and the SDI Digital Platform. A public mass valuation Web portal will be set up to increase transparency, providing relevant information on mass valuation such as the mass valuation legal framework, mass valuation methodologies, valuation models, valuation zones, calculated values, and links to e-services. The sub-component will also invest in the ICT equipment needed to support the sub-component processes (see the Procurement Plan in Annex 1 for more details), which will fully comply with the EU Energy Star Programme to ensure energy efficiency, as there is no existing energy efficiency standard in FBiH. Technical consulting services will be hired to support mass valuation implementation.

16. **Component D: Capacity Building and Project Management (EUR 3,157,250)**. This component will support (i) strengthening institutional capacities, structures, and inter-institutional collaboration, with the aim of ensuring long-term sustainability of project investments as well as the development and implementation of policies, legal acts and technical guidelines; (ii) training and capacity building programs mainly in areas of SDI implementation, cadastral and land registration harmonization, building register creation and real estate mass valuation, awareness raising and information campaigns; and (iii) project management. Specialized training will be organized under this component for the FBiH SDI





Council and Working Groups, SDI stakeholders including government institutions, local authorities, other relevant entities, and FGA management and technical staff. Similarly, the capacity building programs will be designed and implemented for real estate registration and valuation institutions, including FGA, municipal authorities, and the FBiH Tax Administration.

17. *Sub-Component D.1: Institutional Development, Sustainability, and Policy Implementation (EUR 475,000)*. This sub-component covers preparation of studies on SDI implementation and conceptualization of the real estate mass valuation system in FBiH. Various technical guides and legal acts related to SDI implementation and the introduction of real estate mass valuation, including a new draft law on real estate mass valuation, will be developed. The SDI Strategy for FBiH for 2023-2027 will be updated to reflect the progress and to define next steps. Technical support will be provided across all project components, with the goal of identifying opportunities for enhancement and alignment with international standards and best practices. Promotional activities on SDI and real estate mass valuation will also be carried out. The sub-component will also support the strengthening of the SDI key stakeholders' network by building upon partnerships and information and data sharing. Further support will be provided to ensure SDI sustainability. Institutional and stakeholder collaboration at the federal and local levels in real estate mass valuation will be defined. The role of private real estate valuers will be clarified, and codes and standards for operations developed. The institutional and human resource models to best implement real estate mass valuation will also be prepared.

18. *Sub-Component D.2: Capacity Building and Awareness Raising (EUR 644,400)*. This sub-component provides support to capacity building programs, knowledge transfer initiatives and awareness raising across all project components. Sida will support focused capacity building programs for SDI and real estate mass valuation, and both programs will be harmonized with the capacity building plans under the GIVE project. Specialized training and study visits will be organized for the FBiH SDI Council and Working Groups, SDI stakeholders including government institutions, local authorities, and other relevant entities, and FGA management and technical staff. Similarly, the capacity building program, training and study visits will be designed and implemented for real estate registration and valuation institutions, and bodies involved in activities. They will include FGA, LSGUs, and the FBiH Tax Administration, their management and key staff. Awareness raising campaigns will be organized by using various communication channels, including social and traditional media, public events and informative materials, with the aim to gain support, foster understanding, and to ensure an active participation of relevant stakeholders. The areas covered will be on the promotion of SDI benefits and the overall project activities and results. SDI beneficiaries' satisfaction surveys will be organized and results analyzed in order to take corrective measures, as needed. Special emphasis will be given on the inclusivity and equality, ensuring that the benefits and awareness campaigns reach all segments of the population, including gender equality, social and vulnerable groups, and minorities. Vulnerability mapping and social monitoring will be targeted in cadaster and land registry data harmonization and real estate mass valuation activities. Additionally, customer satisfaction surveys will be carried out periodically to measure the satisfaction of the professional users and public with the data and services offered by the GIVE project and, more widely, in land administration.

19. *Sub-Component D.3: Project Management (EUR 2,037,850)*. This sub-component will support the efficient implementation and achievement of all project objectives within the specified timelines. The PIU, comprising of civil servants and contracted consultants, will operate under the FGA sector the management of projects from the Public Investment Program, providing day-to-day support for project implementation. The PIU will, at a minimum, include specialists, a Team Leader, Project Component Leaders, an M&E Specialist, a QA/QC Specialist, a Procurement Specialist, a Financial Management Specialist, IT Specialists, Geospatial/SDI Specialists, Cadastral and Land Registration Specialists, Mass Valuation and Sales Price Register Experts, a Social Specialist, and an Administrative Assistant. Adherence to the Project Operations Manual (POM), approved by the World Bank, will govern the PIU's activities by detailing consultants' and civil servants' expert roles, their responsibilities, and internal processes. Additionally, the PIU will manage project operating costs, and take care of equipment and logistics, all including with FGA management.