

Appendix 12

Working Paper: Access to Finance for decarbonisation investment

For the GCF-FAO Project “Enhancing the resilience of Serbian forests to ensure energy security of the most vulnerable while contributing to their livelihoods and carbon sequestration (FOREST Invest)”

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Introduction

An Underlying Demand for Green Investment

Demand for investments in energy and resource efficiency, renewable energy sources and other green technologies is growing in Serbia. For instance, in a survey conducted by UNDP, nearly three-quarters of micro, small and medium enterprises (MSMEs) reported being interested in borrowing to finance “green” projects.¹ The government has also identified increasing investment in energy efficiency and renewable energy as a priority in various policy documents such as the Low Carbon Development Strategy and the National Energy and Climate Plan (NECP). In a survey of 365 firms in Serbia (with 6 or more years of work experience), over 95% of companies responded that companies need to provide an active response to environmental challenges.² Further, Serbia’s first green bond for EUR 1 billion – issued in September 2021 – has been oversubscribed three times as of December 2022.³ The green bond helped fund 34 projects under the areas of protection of environment, biodiversity and sustainable agriculture. Other areas of finance under the bond include energy efficiency, renewable energy, sustainable water and waste management and the circular economy.⁴

Despite growing demand, Serbian firms report facing challenges in accessing finance for investment, including for decarbonization. Access to finance was one of the top five most frequently cited business environment obstacles, according to the 2019 World Bank Enterprise Survey in Serbia. Only 52.3% of domestic firms included in the survey reported using bank loans and 50.7% reported using supplier credit.⁵ MSMEs face several barriers to investing in these areas including lack of access to capital, insufficient skills and information about green technologies and financial products, and not enough support from the regulatory environment.⁶ Large and medium-sized companies often lack appropriate corporate governance and are frequently over-indebted⁷ which limits their access to finance and thus their investment capacity.⁸

The technical assistance envisioned under this project around Access to Finance aims to help unlock additional private sector funds for decarbonization and increase their efficiency. Despite Serbia having a positive economic outlook and well-capitalized banking system, in general the disbursement of loans for “green” projects remains low.⁹ This, along with primary data collected from interviews highlights underlying gaps in capacity or insufficiency of the existing financial products and services. The EU and IFIs such as EBRD, EIB, World Bank and AFD already support Serbia with some financial instruments for Pre-

¹ UNDP and EU. Scaling up Green Finance for the Private Sector in Serbia in the Post Pandemic World. <https://www.undp.org/sites/g/files/zskgke326/files/migration/rs/Scaling-Up-Green-Finance-for-the-Private-Sector-in-Serbia-in-the-Post-Pandemic-World.pdf>

² PKS (Chamber of Commerce of Serbia), 2021-22. Survey on the Circular Economy in Serbia.

³ Republic of Serbia, Green Bond Reporting, December 2022. <https://javnidug.gov.rs/static/uploads/GREEN%20BOND%20REPORT.pdf>

⁴ Republic of Serbia, Green Bond Framework. August 2021.

https://javnidug.gov.rs/static/uploads/1438_Serbia%20Green%20Bond%20Framework_vf.pdf

⁵ World Bank Enterprise Survey 2019, Serbia. <https://www.enterprisesurveys.org/content/dam/enterprisesurveys/documents/country/Serbia-2019.pdf>

⁶ UNDP and EU. Scaling up Green Finance for the Private Sector in Serbia in the Post Pandemic World.

⁷ Long-term debt of over-indebted companies (defined as firms whose long-term debt is at least ten times higher than their EBITDA) and companies with negative EBITDA and equity stood at 25 per cent of GDP in 2015, the second highest in the CEE region.

⁸ EBRD Serbia Strategy

⁹ Broadly, Green finance encompasses investment and financing to achieve “economic growth while reducing pollution and greenhouse gas emissions, minimizing waste and improving efficiency in the use of natural resources.” (OECD Definition of Green Finance and Investment; <https://doi.org/10.1787/24090344>). Examples of this would include credit or long-term investment in energy efficient technologies, renewable energies and decarbonization.

Accession Assistance (IPA) to support energy efficiency and renewable energy.¹⁰ However, disbursement of these loans remains low. Technical assistance through the proposed Green Climate Fund project aims to help disburse funds to firms and provide further impetus to Serbia's decarbonization efforts.

Structure of the Document

The rest of this document is organized in four sections. *First*, it outlines the country context in Serbia, describing the macroeconomic environment and the financial sector. It zooms in on the existing financial product offerings of banks for energy efficiency and decarbonization and current sources of funds for banks such as credit lines. It also identifies challenges to financing decarbonization investments in Serbia. *Second*, it describes the agrifood sector in Serbia and demand (existing and potential) for decarbonization from firms. It also summarizes current financial support by the government and donor agencies for agriculture and agribusiness value chains. *Third*, it takes stock of the state of regulations around environmental and social criteria and banks' capacities in this regard. *Fourth*, it brings together the challenges and gaps and describes how the project activities are designed to address these gaps. *Finally*, the conclusion describes briefly the intended outcomes of the proposed activities in the short, medium and long term.

1. Country Context: Macroeconomic Conditions

Serbia has exhibited steady growth in its Gross Domestic Product (GDP), with a pandemic related decline and since then has picked up again. Prior to the COVID-19 pandemic in 2020, Serbia's economy had been growing steadily over the last five years: GDP growth between 2015 and 2019 was 3.20%, reversing the negative and slow growth it experienced in the aftermath of the 2008 Global Financial Crisis.¹¹ The strong pre-crisis growth, along with sizable fiscal and monetary policy support, likely contributed to limiting the economic fallout associated with the COVID-19 pandemic. In 2020, GDP growth fell by 0.95% but it is forecasted at 2.3% for 2023.¹² Inflation, however, in line with global trends, has continued to increase with core inflation at 9.5% in October 2022.

The external sector continues to play an important role in the economy, though investment and trade have declined during the pandemic. Both exports and imports of goods and services have accounted for increasing shares of GDP since 2015. In 2019, exports accounted for 51% of GDP and imports for 60.9% of the GDP.¹³ However, the volume of exports and imports of goods and services, which had exhibited double-digit year-on-year growth of 10.1% and 11.3% of GDP between 2018 and 2019, respectively, contracted sharply by 5.7% and 2.6% between 2019 and 2020. Over time, Serbia has managed to attract increasing amounts of foreign investment. Foreign Direct Investment (FDI) inflows have been rising over this period, from 5.9% in 2015 to 8.3% in 2019.¹⁴

Strong domestic investment and declining public debt have accompanied Serbia's steady economic growth from 2015 to 2019. First, overall investment, as a share of the GDP, rose sharply from 18.7% in

¹⁰ Serbia 2021 Article IV Consultation, p. 19: <https://www.imf.org/en/Publications/CR/Issues/2021/06/21/Republic-of-Serbia-2021-Article-IV-Consultation-and-Request-for-a-30-Month-Policy-461077>

¹¹ World Bank, World Development Indicators database. GDP growth (%): 2020: -9.45%, 2019: 4.3%, 2018: 4.5%, 2017: 2.1%, 2016: 3.3%, 2015: 1.8%.

¹² IMF, 2022. Republic of Serbia: Third Review Under the Policy Coordination Instrument, Staff Report.

¹³ World Bank, World Development Indicators database. Exports of Goods and Services (as a % of GDP) and Imports of Goods and Services (as a % of GDP)

¹⁴ World Bank, World Development Indicators database. FDI inflows, as a % of GDP.

2015 to 25.1% in 2019. It declined marginally to 23.2% in 2020.¹⁵ Second, public debt as a share of GDP has been declining steadily between 2015 and 2019, from 71.2% to 52.8%. Pandemic related borrowing has led to an increase in indebtedness to 58.4% in 2020.¹⁶

Unemployment has been declining. The unemployment rate has also been declining over the last five years, from 18.2% in 2015 to 10.9% in 2019. The declining trend has continued into the pandemic. The unemployment rate was 9.4% in 2020. As a caveat, this could also reflect a decline in the labor force or people dropping out of the workforce during the pandemic.

Serbia has made some progress on economic reforms, spurred by the EU accession process that has been underway since 2009. As of October 2020, Serbia opened 18 out of 35 chapters of the EU's Acquis Communautaire, two of which are provisionally closed. With respect to structural reforms, in particular, Serbia has achieved progress with respect to privatizing state-owned banks and reforming the tax administration. However, there is limited progress along other areas such as reforming fiscal policy, privatization of state-owned enterprises, competition rules and public administration. The government continues its efforts in these areas as well as to develop capital markets and spur domestic investment.

Financial Landscape around Decarbonization

A robust banking sector lays the groundwork for lending, despite global macroeconomic risks. The prolonged conflict in Ukraine and associated higher energy prices and energy supply disruptions and global inflation lead to uncertainty and downside risks for Serbia's near-term outlook. However, Serbia's adequate foreign exchange reserves, relatively low public debt level and a well-capitalized and liquid banking system provides significant buffers to withstand these risks.¹⁷ Overall, as of May 2023, capital and liquidity ratios in Serbia's banking sector were higher than the regulatory prescriptions. Asset quality remains strong, with nonperforming loans as a ratio of gross loans at an all-time low of 3.2% in September 2022. While banks anticipate credit quality to worsen at least in the immediate term (as of December 2022), due to the phasing out of policy support measures and monetary policy tightening,¹⁸ the solid fundamentals suggest lending to continue unabated.

Figure 1: Banks' Nonperforming Loans in Serbia, 2016 - 2022

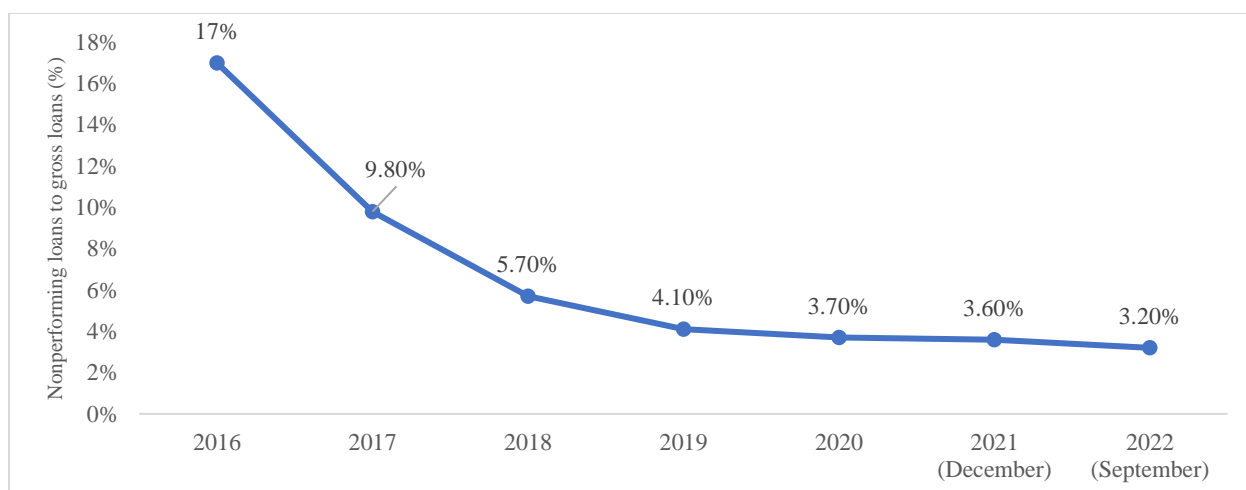
¹⁵ International Monetary Fund, World Economic Outlook Database, October 2021

¹⁶ Gross government debt as a percentage of GDP. Source: World Economic Outlook 2021, IMF.

¹⁷ IMF, 2022. Republic of Serbia: Third Review Under the Policy Coordination Instrument, Staff Report. December 20, 2022.

<https://www.imf.org/en/Publications/CR/Issues/2022/12/20/Republic-of-Serbia-Third-Review-Under-the-Policy-Coordination-Instrument-Request-for-a-527261>

¹⁸ EIB – CESEE Bank Lending Survey Autumn 2022.



Source : IMF Article IV Consultations, 2022.

Serbia's financial sector is dominated by banks and thus they offer a significant entry point for investments in the economy. There are 20 banks in total, of which 14 are foreign owned and 6 are domestically owned.¹⁹ Serbia's banking sector is characterized by a significant presence of foreign banks, representing 84% of total banking assets, as of Q2 2022.²⁰ Table 6 in Appendix 1 provides a full list of banks in Serbia. The six major commercial banks that dominate the banking sector in the country from the perspective of asset size include: UniCredit Bank Serbia, Raiffeisen Bank, Erste Bank, Komercijalna bank and Banca Intesa – Beograd. There is a wide range of interest rates, depending on whether the credit is for working capital or investment needs, and whether it is in Serbian dinar or EUR linked. There is also a wide range of repayment periods. For investment loans, the effective interest rate varies from 4% to 11% in the country depending on the institution, product and sector, though interest rates under Ministry of Agriculture subsidized loans can be as low as 1%. The most common repayment period is between 60 and 84 months (5 to 7 years), though during primary interviews banks cited a repayment of 5 years as typical. For working capital loans, the effective interest rate varies from 5% to 24%. The lending interest rate as of January 2022 was 7% and the deposit interest rate was 4.5%.²¹ At the individual level, financial inclusion is high with nearly 90% of people over the age of 15 reporting having a bank account or mobile money in 2021.²²

Micro, small and medium enterprises (MSMEs) receive a majority of bank lending in the amount of funds. According to data from the National Bank of Serbia, 83% of dinar-denominated loans went to MSMEs in 2022. Similarly, 68% of foreign currency and FX-indexed loans went to MSMEs, highlighting the importance of the sector in the economy.²³ Data were not available on bank lending to companies, disaggregated by sector. However, data on banks' outstanding loans to the corporate sector as of end-June 2023 shows that about 3.8% of dinar-denominated loans go to the agriculture, forestry and fishing sector and 5% of foreign-currency or FX-index loans went to the sector.²⁴

¹⁹ National Bank of Serbia, List of Financial Institutions. Accessed May 29, 2023.

²⁰ EIB – CESEE Bank Lending Survey Autumn 2022. https://www.eib.org/attachments/lucalli/20220190-economics_cesee_bls_2022_h2_en.pdf

²¹ National Bank of Serbia, Interest Rates. <https://nbs.rs/en/indeks/>

²² World Bank, Global Findex Database, 2021. Accessed May 30, 2023

²³ Statistics on Monetary Sector, National Bank of Serbia, Table 1.1.11: Bank Loans to Companies by Size of Enterprise. https://www.nbs.rs/en/drugi-nivo-navigacije/statistika/mon_stat/

²⁴ Statistics on Monetary Sector, National Bank of Serbia; Table 1.1.23: Bank Loans to Corporate Sector by Size of Enterprise and Sectors of Economic Activity; https://www.nbs.rs/en/drugi-nivo-navigacije/statistika/mon_stat/

Several banks offer tailored energy efficiency or sustainability products, many of which are funded through donor credit lines. For instance, Credit Agricole Serbia partner with KfW to provide loans for energy efficiency (projects with >20% emissions reduction) with repayment periods of 7 years. Komercijalna bank offers “EBRD Extended Energy Efficiency Loans.” UniCredit Serbia offers loan products for investments in high-performance energy efficiency technologies, to reduce energy intensity and improve energy efficiency, financed through the EBRD’s Green Economy Financing Facility for the Western Balkans. The loan products offer additional incentives upon production. Other individual banks do not advertise standalone loans for sustainable investments or energy efficiency (though Intesa bank offers special terms for energy efficient houses). Table 5 in Appendix 1 summarizes current credit lines for energy efficiency and decarbonization in the Serbian market.

Despite the presence of several credit lines for decarbonization, banks report that disbursement could be higher. Credit from financial institutions is critical to meet Serbia’s decarbonization goals in line with its NDC and other policy commitments. Yet, demand- and supply-side challenges create mismatches between firms and financial institutions. Table 1 describes the challenges to take-up of decarbonization loans, disaggregated by firms’ and financial institutions’ perspective. Overall, the gap in the market is due to limited information on both the demand and supply side, regulatory uncertainty and difficulties in identifying and matching financial institutions with firms. For instance, an interview with a development consulting firm working on decarbonization revealed that SMEs have low awareness on how to go about decarbonization. From the supply side, banks report that there is limited training and investment in dedicated staff to develop, assess and implement green projects of firms.

Table 1: Challenges to Disbursement of Decarbonization Loans

Demand-side (firms)	Supply Side (financial institutions)
<ul style="list-style-type: none"> • Limited information / awareness about financial products related to decarbonization, especially around leasing and factoring. • Lack of technical knowledge around how to approach decarbonization investments. • Limited knowledge on measuring and monitoring GHG emissions. • Limited knowledge about specific energy efficient technologies for investment. • Rising interest rates make credit more expensive. • High cost of technical due diligence due to limited supply of such services • High costs of energy efficient technology make it unaffordable from a short-term perspective, relative to conventional energy sources. • Perceived low level of subsidies for investing in the circular economy. 	<ul style="list-style-type: none"> • Limited client pool and outreach mechanisms, and high acquisition costs of new clients • Knowledge gaps with respect to assessing climate-related financial risks within the banks. • Limited instruments at the staff / loan officer level to assess the potential of decarbonization investments. • Banks’ due diligence currently only focuses on credit worthiness and not on technical evaluations related to decarbonization potential. • Regulatory uncertainty about compliance requirements.
Cross cutting challenges <ul style="list-style-type: none"> • Regulatory uncertainty for firm and financial institution compliance. 	

- Mismatch between repayment periods and longer-term nature of returns.
- Low demand from consumers for green products and technologies.

Source: Interviews with financial institutions, firms and industry associations held in Belgrade in May 2022; PKS and UNDP, Circular Economy Survey, 2021.

Financial institutions expressed interest in augmenting further their decarbonization portfolios. Despite these challenges, several banks expressed interest in expanding the volume and efficacy of their credit for decarbonization and sustainability in general. In particular, the foreign-owned banks that are part of broader European groups of institutions stressed that they would need to comply with European regulations, even ahead of EU accession, and expanding their disbursement and efficacy of loans for decarbonization will help them meet their goals. The Chamber of Commerce interviewed seven commercial banks, including Banca Intesa, Erste Bank, Komercijalna banka, Procredit Bank, Sberbank, Unicredit Bank and Vojvodjanska banka on their willingness to invest in “greening.” The banks all cited existing experience in renewable energy and infrastructure projects and the growing importance of further investing in greening.

2. Agrifood in Serbia and Firm-Level Demand for Decarbonization

The agrifood sector plays an important role in the economy of Serbia. In 2021, agriculture, forestry and fishing (AFF) accounted for 6.3% of value added to GDP and 14% of formal employment.²⁵ Over the last five years, employment in the AFF sector has been declining while its value added as a share of GDP has remained relatively stable, suggesting potential productivity increases over beyond. Agriculture and food production account for over 20% of Serbia’s exports. Serbia is the largest agricultural market in the Western Balkans, with global leadership in the production of non-GMO corn and raspberries. The food processing industry accounts for approximately one-third of Serbia’s entire processing industry.²⁶

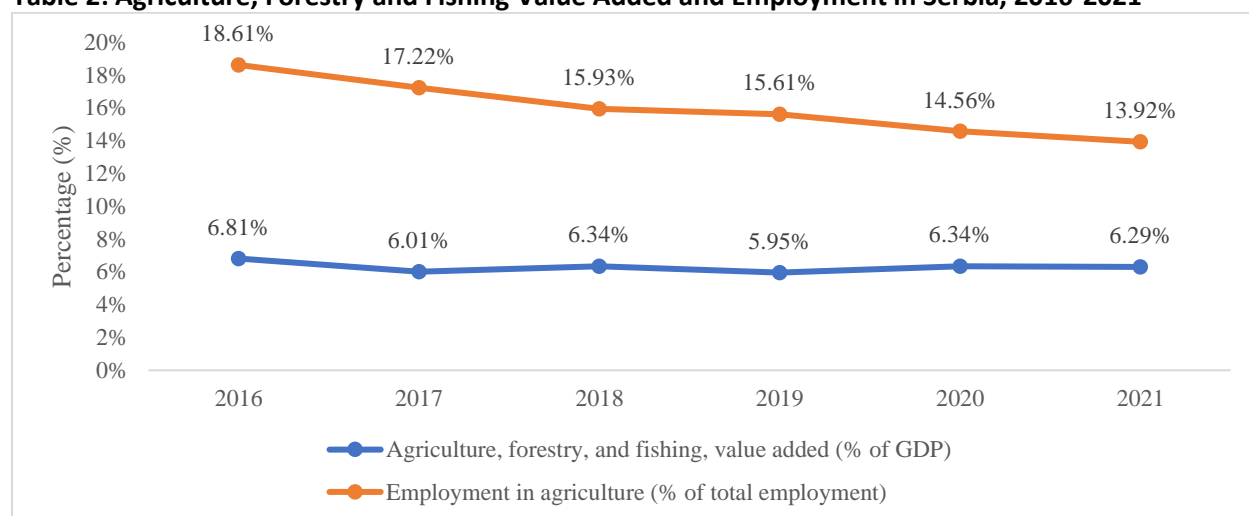
About 45% of agrifood exports are destined for the EU, where planned carbon taxes may create incentives to decarbonize. In 2022, Serbia exported USD 18.7 billion globally in the agrifood sector, of which USD 8.43 billion or 45% went to the EU 27 countries.²⁷ Given the upcoming imposition of the Carbon Border Adjustment Mechanism (CBAM), a tax on the carbon content of goods, this suggests that these goods might potentially incur a cost implication associated with their carbon activity going forward, highlighting an incentive for exporting firms in this sector to decarbonize. However, it is important to note that the agriculture sector will be exempt from CBAM, at least in the first phase of its rollout though fertilizers will be included.²⁸

²⁵ World Bank, World Development Indicators database. Accessed May 30, 2023.

²⁶ US ITA, Serbia – Country Commercial Guide, published 2022-08-05 <https://www.trade.gov/country-commercial-guides/serbia-agricultural-sectors>

²⁷ Authors calculations using data from the WITS database, World Bank. We define the agrifood sector as consisting of SITC Revision 4 codes: 0 (food and live animals), 1 (beverages and tobacco), 22 (oil seeds and oleaginous foods), 24 (cork and wood), 25 (pulp and waste paper), 261 (silk), 263 (cotton), 264 (jute), 265 (vegetable textile fibres), 268 (wool and other animal hair), 27 (crude fertilizers) and 4 (animal and vegetable oils, fats and waxes).

²⁸ [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2022\)698889#:~:text=The%20CBAM%20initially%20applies%20to,aluminium%2C%20fertilisers%2C%20and%20electricity.](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2022)698889#:~:text=The%20CBAM%20initially%20applies%20to,aluminium%2C%20fertilisers%2C%20and%20electricity.)

Table 2: Agriculture, Forestry and Fishing Value Added and Employment in Serbia, 2016-2021

Source: World Development Indicators, World Bank.

Most firms in the agrifood sector are small in terms of number of employees, reflecting the overall firm size in the country. Currently, out of 403,872 enterprises in Serbia, over **15,000 food businesses** are operational as of 2022, most of which are micro, small and medium enterprises (MSMEs).²⁹ This reflects the firm size trends in the economy overall where over 90% of formal firms remain MSMEs. Further, 96.2% of *all* firms in Serbia have less than 10 employees (micro). Sector-specific data from 2020 indicates that most SMEs belong to the trade sector (23.9%), followed by the manufacturing sector (15.1%), professional, scientific and innovative activities (13.7%), and transportation and storage (9.7%).³⁰ Agrifood enterprises are included in trade, manufacturing and transportation and storage, though we do not have exact estimates.

Table 3: Distribution of All Enterprises by Size in Serbia, 2020 (Number and Percentage)

Type of firm (Number of employees)	Number of firms	Share of all firms (%)	Number of employees	Share of employment (%)
Micro (0-9)	388,385	96.2%	439,762	29.6%
Small (10-49)	12,187	3.0%	246,883	16.6%
Medium (50-249)	2,716	0.7%	278,816	18.9%
Large	584	0.1%	518,409	34.9%
Total	403,872	100%	1,483,870	100%

Source: OECD 2022

Note: The above table reflects the firm size distribution across all sectors and is intended to provide an illustration of the typical distribution. Corresponding data for the agrifood sector only are not available.

²⁹ US ITA, Serbia – Country Commercial Guide, published 2022-08-05. <https://www.trade.gov/country-commercial-guides/serbia-agricultural-sectors#:~:text=The%20Serbian%20products%20with%20the,%2C%20water%2C%20and%20confectionary%20products.>

³⁰ OECD, 2022. Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard. March 2022.

Within Serbia, there are regional disparities in agricultural growth. The disparities stem from sector performance and composition of crops. Overall, Vojvodina is a driver of Serbia's agricultural output, contributing 43% to national agricultural GDP (2014), mainly because of large scale production of agricultural commodities. Between 2003 and 2013, increased crop and livestock output in Vojvodina was the main driver of national agricultural growth.^{31,32}

Current Support and Benefits for Firms to Agrifood Firms in Serbia

The Serbian government and various donors provide different subsidies and incentives for agribusinesses. These include funds under the Rural Development Program for Serbia (IPARD), non-refundable incentives for agriculture in cooperation with the World Bank, incentive measures of the Ministry of Agriculture, and incentives of the AP of Vojvodina.

The Serbian government and EU provide EUR 230 million under IPARD. The IPARD programs aims to improve the competitiveness of the agri-food sector and help Serbia align with EU standards. The funding will be offered in the form of grants to co-finance appropriate investments up to a maximum public contribution of 70%, or potentially a total investment in the sector of almost USD 500 million.³³ The funds support farmers and firms in purchasing new equipment, machinery, mechanization, construction, extension, reconstruction, and reparation of facilities. Priority sectors include meat, milk, fruits, vegetables, eggs, grapes, and other crops.

The Ministry of Agriculture and the World Bank also give incentives for agriculture under the Serbia Competitive Agriculture Project (SCAP) since 2019. The project supports startup costs, capital investments, human resources, professional and technical assistance, and grant beneficiaries' training for agricultural producers, and in particular SMEs. Support includes incentives for agricultural products, sown crops, livestock breeding, purchase of new machines, equipment, and construction for various facilities, including credit support. The ongoing SCAP project aims to identify and support companies along value chains through upstream activities, enhance the sector's competitiveness in the sector by developing and modernizing retail. support processing, sector transformation and innovation, promote local production and enable cross-border transactions and digital tools to reduce costs and boost flows.³⁴ Further, the IFC's Western-Balkans Manufacturing Value Chains Project (2021-24) supports the connection of Serbian companies – including in agribusiness -- with global and regional value chains.³⁵ There are also specific incentives for agricultural production and processing in Vojvodina.

Opportunities and Barriers to Decarbonization: Policies and Firm Willingness

Greening the agriculture sector is a priority for the government. For instance, the Serbian Circular Economy Roadmap adopted in September 2020 by the Ministry of Environmental Protection included

³¹ World Bank Serbia Competitive Agriculture Project (SCAP)

³² Serbia's livestock production represents about 34% of total agricultural production in the country, as of 2016. The corresponding figure is not available for Vojvodina alone. Source: <https://www.export.gov/apex/article2?id=Serbia-Agribusiness#:~:text=Serbia's%20livestock%20production%20represents%20approximately,value%20of%20Serbia's%20agricultural%20product on.>

³³ <https://www.export.gov/apex/article2?id=Serbia-Agribusiness>

³⁴ World Bank Country Partnership Strategy for Serbia 2022-26.

<https://documents1.worldbank.org/curated/en/654401653594256925/pdf/Serbia-Country-Partnership-Framework-for-the-Period-FY22-FY26.pdf>

³⁵ <https://disclosures.ifc.org/project-detail/AS/604496/western-balkans-manufacturing-value-chains>

agriculture and food as one of four priority sectors.³⁶ However, regulatory uncertainty prevents SMEs in all sectors, including agribusiness from greening. For instance, the expiration and overdue reintroduction of feed-in-tariffs for renewable energy sources is associated with cost increases for businesses consuming energy, affecting their bottom line. Policy uncertainty may translate into risks such as technological success, market demand and risk of repayment.³⁷

MSMEs face additional challenges to decarbonization, particularly in access to finance. A survey on greening firms by UNEP and the EU in 2021 identifies that from the perspective of MSMEs the absence of sufficient capital and financial instruments targeted to MSMEs as “the most significant obstacle” to adopting green technologies.³⁸ In particular, MSMEs may face difficulties in defining their financing needs for decarbonization and developing a clear business plan with respect to the adoption of new decarbonization investments. This does not imply that there is not sufficient liquidity in the system – in fact, qualitative interviews with banks highlight the presence of dedicated funds for decarbonization – but rather than the funds are not getting to MSMEs.

Firms mention a willingness to increase energy efficiency in operations. In a survey conducted by the Serbian Chamber of Commerce, over 40% of responding firms said they planned to increase the energy efficiency of their operations going forward.³⁹ They specified that investments in energy efficiency focus primarily on replacing inventory or machines and reducing energy consumption. These firms cited lower operational costs associated with energy and resource savings as the main motivation behind investing in decarbonization. In particular, while energy prices are currently relatively low in Serbia, expected increases in future prices add to firms’ desire to switch to more efficient technologies.

Firms cite lack of technical expertise as a constraint to investing in decarbonization. In the same firm survey conducted by the Chamber of Commerce, 49% of respondents reported needing technical support for the implementation of green projects, in particular, regarding financial forecasts, legal requirements, feasibility studies, environmental and social compliance, as well as training in emerging technologies or technological processes relevant to the green economy. Further, they also cited needing support to report on environmental performance indicators such as GHG emissions, pollution levels, resource use and waste generation. Finally, at the global level, a recent study by FAO found that the lack of technical assistance to initiate the process of addressing climate change and reduce the costs of assessing and planning emission reductions was a key constraint for firms in investing in decarbonization.⁴⁰

3. Assessing Climate-Related Risks in Lending Decisions

Regulatory requirements around assessing climate impact of investment are increasing. Financial institutions are increasingly required to abide to international standards on climate risks, such as the new Basel III principles on effectively managing climate-related financial risks, in particular risks related to adaptation.⁴¹ Serbia is no exception. According to interviews by the Chamber of Commerce with seven commercial banks, there is a high level of awareness that the importance of green finance will increase in

³⁶ Republic of Serbia – Ministry of Environmental Protection, circular economy, UNDP (2020), Roadmap for circular economy in Serbia, available at <https://circulareconomy.europa.eu/platform/sites/default/files/roadmap-for-circular-economy-in-serbia.pdf>

³⁷ UNDP and EU, 2021. Scaling up Green Finance for the Private Sector in Serbia in the Post Pandemic World.

³⁸ UNDP and EU, 2021. Scaling up Green Finance for the Private Sector in Serbia in the Post Pandemic World.

³⁹ PKS and UNDP. Circular Economy Survey 2021.

⁴⁰ FAO, 2022. Investing in carbon neutrality: Utopia or the new green wave?

<https://www.fao.org/documents/card/fr/c/cc0011en/>

⁴¹ Basel Committee on Banking Supervision. November 2021. Principles for the effective management and supervision of climate-related financial risks. <https://www.bis.org/bcbs/publ/d530.pdf>

the coming years. A few banks already have internal regulations prohibiting “brown” investments, e.g., in fossil fuel industries but do not have adequate capacity to ensure compliance with Environmental, Social and corporate Governance (ESG) regulations⁴² or awareness in this area.

Banks have internal tools to assess climate impact though internal capacity remains low. Only one out of six Serbian banks interviewed by the project team in May 2022 mentioned they were developing their own ESG tool. In general, banks give clients a “climate and environment questionnaire to analyze the bank’s risk exposure to a firm’s proposed activities along three dimensions: level of exposure, vulnerability, and economic impact.”⁴³ Questions include if a firm reported on its emissions in the past year, its energy and water consumption, rating (if any) and target emissions. There are also industry-specific questions. For example, specific questions for Agriculture, Forestry-Farming and Meat Production include those around the use of pesticides.

4. Analysis: Proposed Activities and How they Address Existing Challenges

The project aims to reduce barriers for firms to access finance from banks for decarbonization. It will provide them with the technical tools and information to engage with decarbonization during and beyond its lifecycle. As discussed in previous sections, several commercial banks – often through IFI-financed credit lines – offer credit products earmarked for decarbonization investments across sectors. Beyond the availability of funds however, the existing level of knowledge and capacities that are critical to the take-up of funding and support to strengthen the capacity of the firm (client) are not widely available at the requisite scale in Serbia.

To address this gap, the project aims to reduce barriers to private investment in decarbonization, including through offsetting and insetting opportunities. From the demand side, given the market analysis and project’s comparative advantage, the project will target Serbian firms, including (but not exclusively) in the agrifood sector, that express interest in investing in decarbonization through the circular economy platform established by the Serbian Chamber of Commerce. From the supply side, it will help develop the capacity of financial institutions to assess decarbonization-related investments.

Group of Activities 3.2. Technical assistance to firms to design climate-related investment plans.

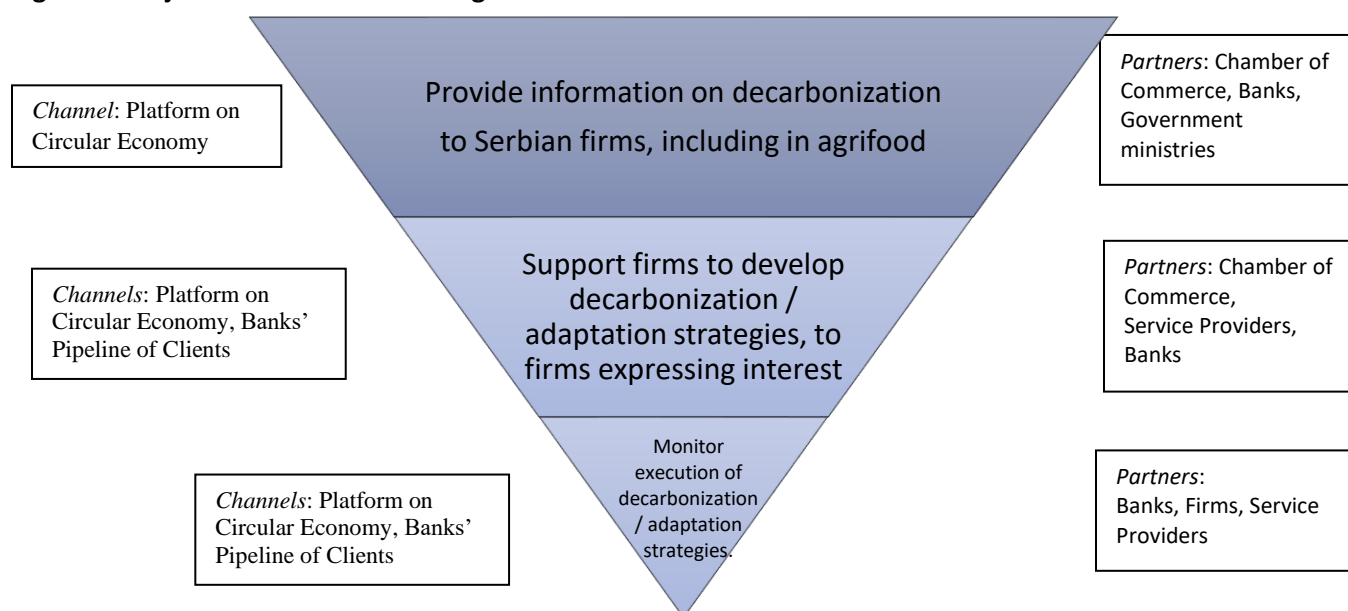
The proposed group of activities aims to increase agribusiness firms’ capacities to assess the potential for decarbonization, to incorporate climate-related risks in their production decisions, assist them in defining their decarbonization strategies and facilitate linkages with financial institutions to meet their eventual funding requirements.

To this end, the project will provide technical assistance and develop firms’ capacity to formulate and execute their decarbonization strategies and climate related investment plans. Figure 2 describes the project’s approach, in particular, with respect to the groups of activities 3.2 and 3.3 to support firms, including channels of entry and implementation partners.

⁴² <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/tech-forward/esg-data-governance-a-growing-imperative-for-banks>

⁴³ Based on an example (confidential) internal questionnaire shared by a Serbian financial institution with the project design team in June 2022.

Figure 2: Project Activities on Reducing Barriers to Decarbonization Investments for Firms



For each step of the approach, the project will target firms based on certain pre-defined selection criteria. Table 4 describes the selection criteria for firms for each project sub-activity. A caveat is necessary. While the project will not exclude firms from any sector, it will prioritize agrifood (for e.g., farms, dairy and meat producers, food processors), including forest-related companies such as (e.g., forest owners, wood processing companies, saw mills), that express interest in decarbonizing their processes, including through using forests to offset the emissions that cannot be avoided and/or engaging in insetting projects to climate proof their operations and reduce net emissions. Firms in this sector will likely not be included in any future ETS scheme (as generally agriculture and allied sectors are exempt) and therefore will not be incentivized through carbon pricing to lower emissions. Together, the three sub-activities aim to create a longer-term change in doing business, such that firms incorporate decarbonization in their activities and processes beyond the project life cycle.

Table 4: Firm Selection Criteria for the Steps under Group of Activities 3.2

	Steps	Selection Criteria
3.2.1	Provide firms information about decarbonization investments, existing financial product offerings	<ul style="list-style-type: none"> All firms
3.2.2	Support firms to develop decarbonization strategies (assess climate risk, measure emissions and environmental footprint) and financial plans	<ul style="list-style-type: none"> All firms, with a priority on agrifood and forestry sector firms and with specific attention to gender considerations in firm ownership / management. No size criteria: all firms will be included. The firm's activity is in line with the firm's abatement potential, particularly with respect to the Scope 1 and 2 emission implications of its investments. Exclusion criteria: sectors will be excluded based on GCF / FAO / financial institution / national safeguards exclusionary criteria⁴⁴ A

⁴⁴ https://www.greenclimate.fund/sites/default/files/document/gcf-brief-safeguards_0.pdf

		<p>subset of firms that express interest in investing in decarbonization in the near-term, through the platform</p> <ul style="list-style-type: none"> • The maximum value of Technical Assistance per firm will be fixed and firms will agree to finance 25 to 50 percent of the actual cost. Beyond the maximum amount, firms will contribute any additional funds through their own contribution. Firms requiring support beyond this ceiling will be excluded. • The project will provide a basic level of due diligence for decarbonization technologies and investments in key sectors, in line with the Green Technology Selector.⁴⁵
3.2.3	Assist firms to execute their decarbonization strategies	<ul style="list-style-type: none"> • A subset of firms (row above) that formulate complete decarbonization plans and express interest in implementing them.

The activities are described below, along with embedded targets, as applicable.

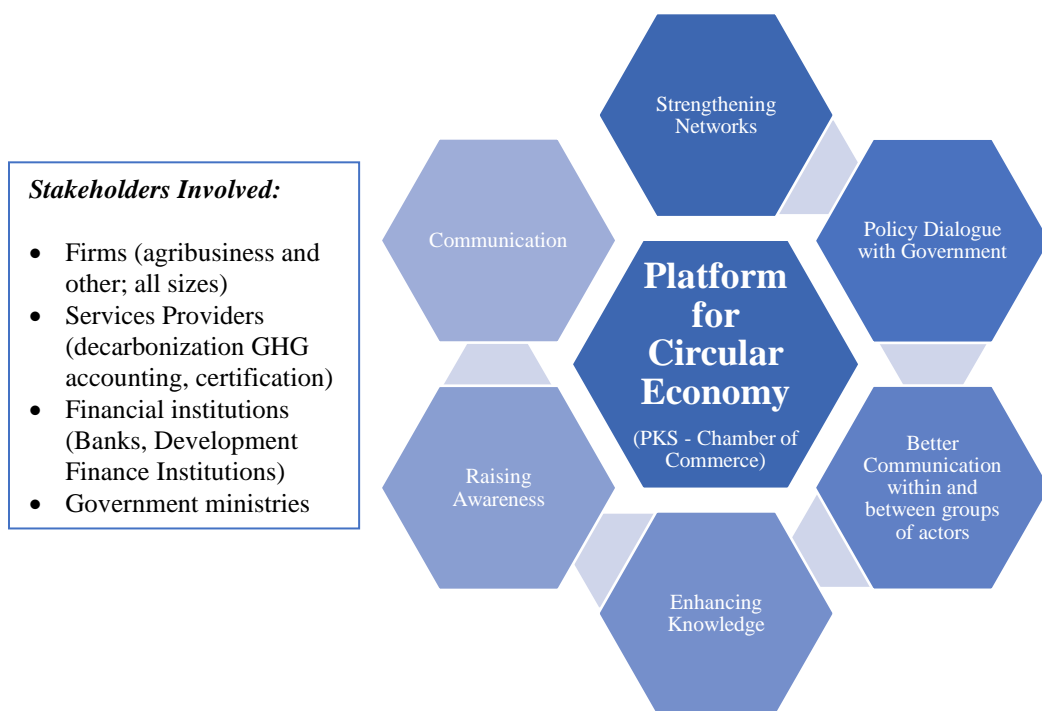
Activity 3.2.1: Involve agribusiness and other companies in the decarbonization process of the private sector. This represents the first step of project outreach, addressed to agribusiness firms, but not excluding firms in other sectors. The project will raise awareness and create linkages between firms, sector associations, financial institutions, service providers and government ministries. The entry point for this activity will be the existing outreach mechanism, including the already-operational Digital Platform on Circular Economy, operated and managed by the Chamber of Commerce (PKS).⁴⁶ Through the Platform or other outreach mechanisms, the project will provide information about decarbonization practices and technologies, different banks' financial product offerings around decarbonization and greening, compliance and regulatory issues from different ministries and other relevant information. Using an existing platform rather than building a new one will facilitate implementation and lower costs to the project. In addition to information provision, the platform will also serve to match or to bring together diverse actors and help banks expand their potential pool of borrowers, cited as a costly activity and challenge by banks. Using an existing platform rather than building a new one will facilitate implementation and lower costs to the project and will strengthen national ownership.

The project's collaboration with the Digital Platform for Circular Economy will enrich its technical content and help expand its scope for decarbonization. This activity will augment and build upon the platform's outreach and communication activities and produce and disseminate technical materials. Through technical discussions, it will contribute to the identification of policy/ regulatory bottlenecks, and it will facilitate policy dialogue between stakeholders to identify solutions. The activity's results will include a strengthened network of stakeholder, knowledge dissemination to raise awareness and ultimately support to the identification of decarbonization investment opportunities (**Figure 3**).

Figure 3: Project Collaboration with the Digital Platform for Circular Economy

⁴⁵ <https://techselector.com/serbia-en/>

⁴⁶ Digital Platform for Circular Economy (CE-HUB), Chamber of Commerce and Industry of Serbia. <https://circulareconomy-serbia.com/>



Activity 3.2.2: De-constraining access to credit for agribusiness and other companies. Within this activity, the project will work with a shortlist of companies provided by the financial institutions partnering with the project. The participation of the selected firms will be upon confirmation of their interest to carry out decarbonization investment, once the bank has shortlisted them.⁴⁷ The project will provide free-of-charge technical assistance, mobilized and managed by the project based on an agreement with each firm. The value of technical assistance per firm will not exceed a set ceiling, depending on the firm size, (15,000-50,000 USD per firm),⁴⁸ in line with the average cost of decarbonization strategy preparation⁴⁹, and will require a minimum contribution of the firm ranging between 25 and 50 percent of the costs (self-financed technical assistance). Firms requiring support beyond this ceiling will be excluded (Table 4). The expertise mobilized by the project could include specialists in agri-food sector, energy, GHG accounting and certification, depending on requirements needs, and the cost of preparing a decarbonization strategy.

This activity is structured in two sub-activities.

- **Sub-activity 3.2.2.1: Support agribusiness companies baseline for the decarbonization strategies.** The project will help agribusiness firms to develop decarbonization strategies and financial plans to achieve them. Commercial banks operating in Serbia expressing interest in green or decarbonization portfolio cited lack of firm-level capacity to develop business plans for decarbonization as a key constraint to disbursing credit. The project will provide technical assistance to firms to assess climate risk, measure and monitor emissions or potential carbon sequestration from their activities, and the cost of ESG compliance. It will also help firms identify a pool of viable decarbonization investments, such as through investing in more energy efficient technologies in their sectors. The project will suggest technologies that maximize benefits while reducing the greenhouse gas (GHG) emissions associated with the firm's activities.

⁴⁷ The selection of clients has a direct bearing on the success of the decarbonization investment.

⁴⁸ Average amount of USD 17,500 assumed in the budget, given this wide range.

⁴⁹ Based on an assessment carried out by FAO via interaction with companies.

- *Sub-Activity 3.2.2.2: Support firms in preparing their decarbonization strategies.* The project will assist firms in completing their decarbonization plans (including the financing requirements and technologies identified) in an easily accessible format and provide technical support to execute these plans. The plan will identify specific decarbonization (offsetting and or insetting) investments for the firms that can be financed by the Financial Institution to maximize benefits and reduce the company's GHG's emissions. The plan will include an investment cost, that will support the firms in defining the financial need, including if they require additional financing in the form of loans to implement their decarbonization plans. Given the participation of financial institutions in the Circular Economy Platform, firms will be able to assess which financial products are suitable for their circumstances and requirements. Firms will directly approach financial institutions, the connection facilitated through engagement in the platform, to apply for loans for decarbonization, if applicable. It is important to note that the project will not assist the banks in client selection, it will simply support the removal of information barriers and reduce costs of client outreach through the platform. The ultimate decision on clients' creditworthiness and decarbonization potential of the clients remains with the bank disbursing the loan.

Group of Activities 3.3. Financial institutions, consultancy service providers, and academia capacitated on climate-related challenges and opportunities

This group of activities aims to enhance national financial institutions' capacity on climate change and service providers to support agribusiness investment adhering to international standards on climate risks and decarbonization.

Banks express willingness to increase decarbonization investments but require capacity development and client outreach support. As discussed in Section 2, interviews with financial institutions, literature and data highlight that banks recognize the potential benefits of decarbonization investments, including lower costs in the longer term as the prices of conventional fuels continue to rise, and lower compliance costs in the future. As Serbia needs to achieve its NDC targets or comply with the Carbon Border Adjustment Mechanism (CBAM), banks recognize that the demand for green investments will likely increase. Despite their willingness to enhance decarbonization investment, they face several challenges including lack of information and technical know-how around assessing climate risks and decarbonization strategies and low awareness around compliance with new and evolving international climate standards. Table 1 above summarizes these supply side challenges.

Activity 3.3.1: Capacity Development to financial institutions on climate-proofing their portfolio.

The project will provide technical assistance to banks on climate adaptation and decarbonization, adhering to international standards on climate risks, such as the new Basel III principles on effectively managing climate-related financial risks, in particular risks related to climate change adaptation.⁵⁰ In the absence of large green finance departments in most commercial banks, the project's technical assistance will play an important role in enabling banks to deal with the demand of their clients for credit, guarantee schemes and other services, identify investment opportunities and assess the decarbonization potential of projects. The intended outcome of this support is to augment banks' capacity to assess decarbonization investments, increase their decarbonization lending and its effectiveness and remain compliant with EU and financial-group wide regulations as they evolve. The project will finance a capacity-needs assessment

⁵⁰ Basel Committee on Banking Supervision. November 2021. Principles for the effective management and supervision of climate-related financial risks. <https://www.bis.org/bcbs/publ/d530.pdf>

and curriculum development for training to financial institutions on assessing and incorporating climate-related risks in their lending activities. It will also provide technical assistance to the financial institutions in the form of training to their staff to support their assessment of climate-related risks in their portfolios, in line with climate-change adaptation and mitigation goals. This technical assistance to financial institutions will help augment their capacity as climate finance channeling agents.

All banks can potentially receive technical assistance and credit disbursement decisions remain solely with the banks. Technical assistance will be available to all banks registered with the Central Bank (Table 6), that express interest in the support. As an initial check, the project will reach out to all registered banks on the Central Bank list. Further, banks will conduct their own due diligence processes as per their internal criteria, including through its assessment of various risks (environment, climate-related, reputational etc.). The project's activity will enhance the capacity of the banks to assess certain types of climate-related risks, but the ultimate assessment and associated risks will be done by the bank itself.

*Activity 3.3.2: Technical assistance to decarbonization service providers and academia.*⁵¹ In addition, and to support a longer-term and sustained capacity in the country for private firms decarbonization investment plan, the project will also provide training to service providers in the decarbonization space providing engineering, GHG accounting and ESG compliance support as well as efforts to institutionalize this knowledge through academia. Building the capacity of local service providers will ensure that this constraint is addressed beyond the project implementation cycle. This activity will comprise capacity needs assessment and curriculum development for training to for decarbonization strategic advisory service providers and subsequent provision of capacity development, in the form of training or coaching. The project will also help integrate the curricula developed through this activity to academic institutions, including at the national level, such that the knowledge on decarbonization is institutionalized and in the future, is accessible to students at local universities.

5. Conclusion

The project's interventions aim to reduce barriers to access to finance for decarbonization. In the short-term, the project directly supports firms in developing their decarbonization strategies, creates a pipeline of clients for financial institutions and assists firms in identifying viable decarbonization investments. In the medium term, through building the capacity of service providers to provide consulting services on carbon accounting, ESG-related compliance and certification and other technical skills, the project increases the supply of these services in the economy. From a long-term perspective, the project activities develop capacity of both lenders (banks) and borrowers (firms) while also raising awareness for green projects among a larger audience.

The project activities build on past and ongoing initiatives to strengthen the private sector's capacity to invest in decarbonization. For example, for the selection of energy efficient technologies, the EBRD and Austrian Ministry of Finance have developed an existing "green technology selector" tool.⁵² For selected countries – including Serbia – users can view different categories of technologies according to their technical needs and compare prices, emissions and other parameters. To the extent possible, the project's support on decarbonization strategies and investments will utilize such existing tools. The project will also cover in its outreach activities all financial institutions, including ones with existing credit lines and guarantee schemes identified in Appendix 1. Finally, it will build upon the Chamber of Commerce's existing

⁵¹ E.g. GHG accounting firm, auditors, etc.

⁵² <https://techselector.com/serbia-en/>

platform on the Circular Economy for its activities related to raising awareness and matching firms with financial institutions.

Appendix 1: Existing Support Schemes for Agriculture, Agribusiness and Decarbonization

This appendix summarizes the existing support by financial institutions for agriculture and agribusiness, with a particular focus on agribusiness, and to energy efficiency in general. Table 5 summarizes the existing credit lines and loans for energy efficiency or decarbonization purposes. These are not agriculture or agribusiness specific. Finally, Table 6 includes a list of the 20 banks registered with the National Bank of Serbia (the Central Bank), by their ownership status.

Table 5: Existing Credits Lines in Serbia on Decarbonization and their Features

No.	Name of Credit Line	Donor	Partner Financial Institution	Amount (up to), EUR million	Duration / Start Date
1	Low Carbon Energy Facility Project ⁵³	KfW	3 Partner Financial Institutions (TBD)	100	September 2022 - August 2025
2	Energy Efficiency Loan ⁵⁴	EIB, KfW, Green for Growth Fund	Čačanska banka a.d. Čačak	5	2023
3	Renewable Energy Loans	EIB, KfW, Green for Growth Fund ⁵⁵	Halkbank RS	5	
			ProCredit Bank RS	20	
			UniCredit Bank RS	65	
4	Promotion of Investments in Energy Efficiency and Renewable Energy in the Banking Sector / Eco Loans	KfW	Erste Bank	15	2017 -
6	Green Economy Financing Facility (GEFF) I-III, Western Balkans Sustainable Energy Financing Facility (WebSEFF) ^{56,57}	EBRD, GCF, ⁵⁸ Government of Luxembourg	ProCredit Bank RS	5	
			UniCredit Leasing	40	June 2023 -
			Banca Intesa, ⁵⁹ Komercijalna banka, Addiko Bank Serbia, UniCredit Bank, Société Generale Bank, Raiffeisen Bank, UniCredit Bank, Halkbank, Erste Bank	Different amounts	2018 - 2033
6	Credit to SMEs in Serbia under Western Balkans GEFF III ⁶⁰	EBRD	3Bank (microfinance)	10.2	May 2022
7	Loan portfolio guarantee for food	USAID	ProCredit Bank, Addiko Bank, and Banca Intesa	USD 90 million	2019 -

⁵³ <https://www.gtai.de/en/trade/serbia/tenders/consulting-services-credit-lines-for-ee-investments-low-carbon-energy-facility--786144>

⁵⁴ https://www.energy-community.org/regionalinitiatives/donors/municipal/GGF_SERBIA_EE2.html

⁵⁵ https://www.ggf.lu/fileadmin/user_upload/Publications/Country_Fact_Sheets/Serbia_Fact_Sheet_GGF_Q4_2022.pdf

⁵⁶ <https://www.ebrd.com/downloads/research/factsheets/wbff.pdf>

⁵⁷ <https://ebrdgeff.com/serbialeasing/the-programme/geff-srbija-lizing/>

⁵⁸ <https://www.greenclimate.fund/project/fp025>

⁵⁹ <https://www.ebrd.com/news/2023/ebd-and-banca-intesa-support-smes-in-serbia.html>

⁶⁰ <https://www.ebrd.com/work-with-us/projects/psd/53393.html>

No.	Name of Credit Line	Donor	Partner Financial Institution	Amount (up to), EUR million	Duration / Start Date
	processors and farmers ⁶¹				

As of May 2022, there are about nine available guarantee schemes in Serbia for “greening” implemented through commercial banks. Of these, six are financed through EU programs, two are national schemes, and one is financed by the United States Agency for International Development (USAID). Under these schemes, guarantees range from 30% to 70% of the contract value and cover loans for investment and working capital. They mainly target industry, including but not exclusive to agriculture and agribusiness. More guarantee schemes are expected to be established in the future.⁶²

Table 6: List of Banks in Serbia (as of May 2023)

No.	Name Of Bank	Foreign Or Domestic (Based On Main Shareholder)
1	Addiko Bank Ad Beograd	Foreign
2	Agroindustrijsko Komercijalna Banka Aik Banka Akcionarsko Društvo, Beograd	Domestic
3	Alta Bank A.D. Belgrade	Domestic
4	Api Bank Akcionarsko Društvo Beograd	Domestic
5	Banca Intesa Akcionarsko Društvo Beograd (Novi Beograd)	International
6	Banka Poštanska Štedionica Akcionarsko Društvo, Beograd (Palilula)	Domestic
7	Bank Of China Srbija Akcionarsko Društvo Beograd - Novi Beograd	Foreign
8	Expobank Akcionarsko Društvo Beograd	Domestic
9	Erste Bank Akcionarsko Društvo, Novi Sad	Foreign
10	Eurobank Direktna Akcionarsko Društvo Beograd	Foreign
11	Halkbank Akcionarsko Društvo Beograd	Foreign
12	NIb Komercijalna Banka Ad Beograd	Foreign
13	Mirabank Akcionarsko Društvo Beograd-Novu Beograd	Foreign
14	Mobi Banka Ad Beograd (Novi Beograd)	Foreign
15	3 Banka Akcionarsko Društvo Novi Sad	Foreign
16	Otp Banka Srbija Akcionarsko Društvo Novi Sad	Foreign
17	Procredit Bank Ad Beograd (Novi Beograd)	Foreign
18	Raiffeisen Banka Ad Beograd	Foreign
19	Srpska Banka Ad Beograd (Savski Venac)	Domestic
20	Unicredit Bank Srbija A.D. Beograd (Stari Grad)	Foreign

Source: National Bank of Serbia; <https://nbs.rs/en/finansijske-institucije/banke/spisak-banaka/>

Note: In addition to the above banks, three other foreign banks have offices in Serbia: Citibank, Deutsche Bank and Exim Bank Zrt.

⁶¹ <https://2017-2020.usaid.gov/serbia/news-information/press-releases/usaaid-and-ministry-agriculture-facilitate-access-loans>

⁶² Chamber of Commerce and Industry in Serbia (2020), Guarantee Schemes Available in Serbia, Belgrade