# Serbia Competitive Agriculture Project (SCAP) Terms of Reference

**Progress Data Analysis (PDA-C)**

**Short Term Consultancy**

# Background

The Serbia Competitive Agriculture Project (SCAP), a US$50 million investment, was approved by the World Bank in December 2019 and ratified by the National Assembly of the Republic of Serbia in February 2020. The objective of the Project is to improve access to markets and information systems for agricultural producers in Serbia. This will be achieved through a) improving productivity of small and medium scale farmers by strengthening advisory and technical support; b) supporting market access of small and medium scale farmers (including finance and business planning capacity); c) improving government systems to strengthen the enabling environment for all agricultural producers (including capacity building for the Ministry, information systems, and data platform).

The Project will provide financial and technical support to all productive investments in agriculture in Serbia through the national rural development program[[1]](#footnote-1) and will not finance direct payments (subsidies). This delimits the scope of Project interventions outside of all IPARD measures that the country has been accredited for or plans to be accredited for and puts it in the center of national rural development program.

Beneficiaries: Small and medium scale agricultural production units (including producers, producer groups, agribusinesses/agro-processors that can provide direct link to smallholder farmers) that has or can have commercial focus and are not covered by accredited IPARD measures. Although large producers will not be directly targeted, the project will also benefit them with the enabling environment it will create through the improvements in information systems and the financial services provided. Small and medium size producers are defined by the economic size of holding expressed in euros of standard output. For the purposes of this project and the context of Serbia, small producers are those with an economic size of up to EUR 8,000; medium producers are those with an economic size between EUR 8,000 and 25,000.

Project Description: The Project activities are structured into three Components. Component 1) will focus on improving the productive and entrepreneurial capacity of small and medium farmers by supporting business and financial planning for productive investments, as well as supporting market access and strengthening sector competitiveness. Component 2) will focus on improving the capacity of the Ministry of Agriculture, Forestry and Water Management (MAFWM) to provide core public goods for improving sector performance. This includes establishing and information system aligned with EU CAP requirements to enable evidence- based policy making and monitoring of results, enhance market information for stakeholders and build capacity for regulatory roles aligned with EU CAP. Component 3) will focus on project management.

By addressing sector needs at the level of producers (Component 1) and the MAFWM (Component 2), the Project will support a broader policy reform process in the agriculture sector through: i) improved targeting of policy instruments to different typologies of producers, ii) strengthened enabling environment for investment for small and medium agricultural producers, by improving the delivery of services to these productive segments (advisory, financial, information, etc.), iii) improving the monitoring of public resources and their utilization, as well as sector performance. It is expected that this will bring about a significant shift in the utilization of public resources in agriculture from subsidies (direct payments) to rural development investments.

# Objective of the Assignment

# In this ToR, the Ministry of Agriculture, Forestry and Water Management is looking to contract an individual consultant specialized in data analysis. The consultant will play a pivotal role in aiding the preparation, development, and execution of SCAP-financed sub-projects. These sub-projects are designed to boost the competitiveness and sustainability of the Serbian agriculture sector for the benefit of both individual farmers and agribusinesses. Through a series of deliverables, the consultant will establish a robust framework for monitoring and analyzing progress indicators that not only track production efficiency and value but also offer a comprehensive view of each sub-project's effectiveness and broader implications for agricultural development in Serbia.

# Main objective of this assignment is to establish a comprehensive framework for monitoring PDO indicators, primarily indicators related to the increase of production and financial volume of SCAP beneficiaries, as they are the ones detected by the World Bank during the Mid-Term review Mission, in order to provide a detailed analysis of project advancement and reaching the targets set in the Loan Agreement.

# Scope of Services

# Specific functions and responsibilities of the Progress Data Analysis Consultant (“PDA-C”) will be as follows:

# Develop a comprehensive and cohesive methodology for collecting, processing, and analyzing data related to the progress of subprojects funded by SCAP. This includes defining data sources, designing data collection forms, and establishing data quality control measures,

# Enhance and streamline data collection procedures to ensure the accuracy, consistency, and relevance of the collected information. Collaborate with relevant stakeholders to identify key data points that reflect the true progress of each subproject,

# Systematize and standardize the data management process to ensure that data is efficiently organized, stored, and retrievable. Implement data validation procedures to verify data accuracy and integrity,

# Oversee the end-to-end data monitoring process, monitoring the workflow from data collection to analysis. Identify bottlenecks, inefficiencies, or discrepancies in the process and take proactive steps to address them,

# Collaborate closely with the project management team (PMT), field teams, and technical experts to review and refine existing PDO indicators. Propose new and supplementary indicators that provide a comprehensive view of subproject progress and impact,

* Regularly conduct in-depth analysis of collected data to assess the effectiveness of individual subprojects. Identify patterns, trends, and insights that can guide decision-making and contribute to project refinement;
* Generate insightful reports and impactful presentations that effectively communicate the progress of subprojects. Include actionable recommendations based on data-driven insights to help stakeholders make informed decisions;
* Maintain a strong understanding of the project's objectives, ensuring that the selected indicators align with these goals;

# Foster an environment of collaboration and knowledge sharing, providing guidance and training to project team and colleagues to ensure a clear understanding of data-related processes and expectations.

PDA-C will be a driving force in establishing a robust and data-driven approach to tracking the progress of SCAP-funded subprojects.

# Deliverables

The Consultant shall prepare and deliver the following in the corresponding stages of the assignment.

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| **Deliverables** | **Due dates** |
| Deliverable 1:Methodology for Subproject Progress Indicator Calculation | Up to 30 days after signing the project engagement contract |
| Deliverable 2: Development of Input Data Entry Forms | Up to 60 days after signing the project engagement contract |
| Deliverable 3: Field Consultants Training for Data Entry and Progress Monitoring  | Up to 90 days after signing the project engagement contract |
| Deliverable 4: Calculation of Subproject Progress Indicators & Final report Creation | Up to 120 days after signing the project engagement contract |

The selected Consultant shall be paid the lump sum contract amount linked to the deliverables.

**Deliverable 1** should be prepared and submitted to the PMT no later than 30 days after the signing of the contract. The objective of this methodology is to establish a comprehensive framework for monitoring PDO indicators, providing a detailed analysis of project advancement and its contribution to agricultural development in Serbia. The methodology entails the development of calculation formulas for each adopted progress indicator, accompanied by thorough explanations of their significance and their role in contributing to agricultural growth in the country. The primary focus of this methodology centers on indicators that track the efficiency and value of production as outcomes of implemented investments. These indicators serve as essential tools to gauge the efficacy of the project's interventions and their potential impact on agricultural development. The methodology further encompasses the scenario where conducting an analysis across the entire subproject population may not be feasible due to valid reasons. In such cases, a sample extraction methodology will be devised, allowing conclusions to be drawn about subproject progress based on a representative subset of projects. In addition to existing indicators, this methodology proposes the introduction of new indicators that offer a more in-depth analysis of investment effects. These novel indicators aim to provide stakeholders with enhanced insights and facilitate a broader understanding of the investment outcomes. This approach may also lead to the expansion of input data to encompass the calculation of the suggested indicators. By implementing this methodology, a robust system for tracking progress indicators will be established, providing valuable insights into project effectiveness and its broader implications for agricultural development in Serbia.

**Deliverable 2** consists of two key sub-processes: 1) analysis of existing data sources and identification of data to be collected through the new data entry form, 2) proposal of technology and development of the data entry form itself for necessary data input. During the analysis of existing data sources, the focus will be on data quality analysis and their relevance for calculating essential progress indicators based on the methodology proposed in Deliverable 1. The process will address the identification of essential data required for indicator calculation that are not present within the existing datasets, followed by their integration into the data entry form. After identifying the data form should contain, the consultant will work on structuring the form to facilitate the collection of all pertinent data. Within the scope of the second sub-process, the consultant will recommend the technology upon which the adopted form will be built. This technology aims to bolster process digitalization, optimize the data collection endeavors of field consultants, and mitigate errors, all with the goal of attaining pertinent information for analysis. The data entry form will be accompanied by a document providing a comprehensive description of each input field, along with supplementary notes specifying the intended content, data type, and available options in cases of predefined value fields. The Deliverable 2 will be finalized up to 30 days after acceptance of the proposed methodology in Deliverable 1.

**Deliverable 3**, after the development of the data entry form and preparation of the user instruction document, the consultant will conduct training sessions for field consultants on the application's usage. Moreover, the consultant will provide ongoing support throughout the data collection process in the field. Based on the specified timeframe, a detailed fieldwork plan will be formulated and presented to the field consultants. This plan will outline the number of farmers each field consultant is required to visit within defined periods to ensure project completion within the stipulated time frame. The PDA consultant will monitor the dynamics of farmers visits and data entry progress, offering recommendations for adjustments as needed; this proactive engagement aims to ensure the quality and completeness of the collected data while also identifying and resolving potential bottlenecks in a timely manner. Considering the necessity of covering a significant number of farmers within a relatively short time frame, this aspect can be identified as a critical risk point affecting the overall success of the project in meeting the analysis result timeline specified in this ToR. Anticipated timeframe should be up to 30 days after the development of the data entry form.

**Deliverable 4**, after the confirmation of the completed data collection process described in Deliverable 3, the consultant will import all submitted data and perform an analysis of the quality and completeness of the provided forms. If necessary, for forms identified as unsatisfactory, the consultant will request revisits to the field for data correction and supplementation. Subsequently, the consultant will proceed to the phase of calculating all indicators based on the methodology approved within Deliverable 1. In addition to indicator computation, the consultant will conduct descriptive statistics on input data to obtain supplementary parameters that facilitate a deeper analysis of the project's contribution to agricultural enhancement in Serbia. As the project's final objective, the consultant will not only generate a detailed report but also implement a modern data visualization tool, equipping SCAP with the capability to easily view and manipulate these analyses and results for future project applications. This tool will offer stakeholders interactive reporting features, permitting the customization of various parameters for graphical representation of desired outcomes.

# Reporting

The PDA-C will report to the SCAP Project Coordinator, who oversees the Project Management Team (PMT) that has been established to support project implementation. The PDA-C shall be responsible for providing information (inputs) and advice as requested by the SCAP Project Coordinator for the satisfactory implementation of project activities related to this Consultancy.

All deliverables shall be submitted to and approved by the Project coordinator. Approval of these deliverables will allow payment for each of the Deliverables.

All written submissions are to be made in English, typed and delivered in two (2) hard copies and one (1) electronic copy (using MS Office or fully compatible software,) to the Contracting Authority. The approved Final report and supporting documents will be submitted in electronic copy to the SCAP Project coordinator, for approval. All reports should have a title page, which should include: project name, project code or reference, report title, date issued, period covered and name and address of the consultant.

The reports should be well structured, contain an executive summary, a table of contents, a table for acronyms. The reports will summarize the main achievements and leave detailed and in-depth subject matter for Annexes. Recommendations will be clearly highlighted. Facts in text and data in tables should be consistent with each other, with cross-references of information/data sources if necessary. Precise sources of information must be critically assessed prior to being considered. A list of essential contact persons is to be included.

Further copies may be requested if necessary. The consultant shall provide the PMT with electronic and hard copies of all the material prepared under this assignment, which should be annexed to the reports. All reports will be checked prior to the approval and certification of payments (‘certified correct” and “passed for payment”) to verify compliance with the terms and conditions of the contract – timeliness and quality of execution of services.

# Other requirements

The Consultant is obliged to perform consulting services in accordance with the applicable Serbian legislation and wide-known technical norms and rules of the profession and in accordance with the requirements defined in this ToR.

Intellectual property rights policy will be applied in accordance to the proper sections of the Contract.

# Engagement

The intended start date is September 2023 and the period of contract implementation will be up to 4 months.

# Experience and Qualifications Requirements

# Mandatory:

# University Degree in economics, business analytics, statistics, information technology, or related fields;

1. At least 5 (five) years of relevant work experience in data analysis, particularly within projects related to progress monitoring or performance evaluation ;
2. Proficiency in working with various data types and databases, encompassing data extracting, data cleansing, transformation and data normalization;
3. Experience in applying statistical methods and techniques to analyze data for identifying trends, patterns, and anomalies;
4. Proficiency in analytical tools and software such as Excel or other data analysis tools. Ability to work with large datasets and extract meaningful insights;
5. Proficiency in using advanced visualization tools such as Power BI to communicate data findings effectively, enhancing understanding and decision-making among stakeholders;
6. Excellent oral and written communication skills in English and in Serbian.

# Confidentiality Statement

# All data and information received from MAFWM/DAP/PMT/WB for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference.

# All intellectual property rights arising from the execution of these Terms of Reference are assigned to MAFWM/DAP. The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written authorization of MAFWM/DAP.

# Selection

Selection procedure will be conducted in accordance with the World Bank’s Procurement Regulations for IPF Borrowers – Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services, July 2016, revised November 2017, August 2018 and November 2020, as given in articles 7.36 and 7.37 “Open Competitive Selection of Individual Consultants”.

The candidates will be evaluated applying the following evaluation criteria:

* Qualifications and General experience                      ( 40 Points)
* Specific Experience relevant to the Assignment        ( 60 Points)

1. In 2018, the program received 8,000 applications from small and medium scale producers. [↑](#footnote-ref-1)