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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 25-May-2023 | Report No: PIDA35107

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Kosovo	P179737	Improvement and Rehabilitation of Irrigation Systems Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EUROPE AND CENTRAL ASIA	04-May-2023	31-May-2023	Agriculture and Food
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Republic of Kosovo	Ministry of Agriculture, Forestry and Rural Development	

Proposed Development Objective(s)

The proposed development objective is to increase the efficiency of water utilization and boost agricultural productivity in the project area.

Components

Component 1: Rehabilitation and Modernization of the RDIS
Component 2: Capacity Building to Increase Water Use Efficiency and Agricultural Productivity
Component 3: Project Management, Coordination, Monitoring and Evaluation

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	9.71
Total Financing	9.71
of which IBRD/IDA	0.00
Financing Gap	0.00

DETAILS

Non-World Bank Group Financing

Trust Funds	9.71

European Commission Development Fund - TF	9.71

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Kosovo has experienced steady economic progress since independence, allowing its transition to upper-middle-income status in 2018.** The gross domestic product (GDP) averaged 4.6 percent growth between 2010 and 2019, translating into a nearly 50 percent increase in per-capita income and a 35 percent reduction in the poverty rate. Over the past decade, the country successfully transitioned away from a growth model based on high dependence on foreign aid inflows, outperforming peer countries of similar per-capita income thanks to a steady expansion in consumption and investment, with a strong impetus from diaspora inflows, public investment in infrastructure, and financial deepening, amid a stable fiscal stance and an environment of low inflation.

2. **In 2022, GDP growth moderated to an estimated 3.1 percent, after reaching a record of almost 11 percent in 2021.** After contracting by 5.3 percent in 2020, the economy rebounded quickly from the COVID-19 shock. However, the negative terms-of-trade shock driven by Russia's invasion of Ukraine constrained the growth momentum during 2022. Growth resulted at 3.5 percent for 2022, driven by exports and private consumption. As a net importer of food and energy, Kosovo remains highly vulnerable to imported inflation. Consumer inflation peaked at over 14 percent in July 2022 and averaged 11.6 percent for 2022, and price pressures remained elevated thereafter. At the same time, the external current account deficit deteriorated to -10.1 percent of GDP from -8.2 percent in 2021.

3. **Medium-term growth is expected to converge towards the potential of over 4 percent but is subject to significant risks.** Growth in 2023 is expected to moderately accelerate to 3.7 percent and return on the potential growth trajectory over the medium term. Continued uncertainties related to the wider impact of Russia's invasion of Ukraine, including on international food and energy prices, entail significant downside risks. A rebound in energy prices could lead to significant fiscal and external sector pressures, negatively impacting growth. A further slowdown in EU growth could erodes the incomes of the diaspora, with detrimental impacts on remittances, investment, and diaspora inflows.

Sectoral and Institutional Context

4. **The agriculture sector is an important and strong contributor to Kosovo's economy, employment, and development of its rural areas.** Kosovo's agriculture sector contributes 7 percent to GDP and provides employment to approximately 25-35 percent of the population. Agriculture land amounts to about 39 percent of

the total area, followed by forest and forest land (44 percent), urban land (4 percent) and other (13 percent). About 60 percent of the population lives in rural areas where the agriculture sector is an important income source. The sector is characterized by a high proportion of small-scale farming with about 70 percent of famers operating on less than 2 hectares (ha), 93 percent operating on less than 5 ha, and only 1.6 percent of farms being 10 ha or larger[1]. Many farms operate at subsistence or semi-subsistence levels and commercial farmers face obstacles to expansion. Agri-business, especially food processing, has grown steadily in terms of number of firms, annual turnover, and employment, and agricultural exports as a share of total exports increased in absolute and relative terms.

5. **Agricultural productivity in Kosovo remains relatively low compared to Albania and European Union (EU) average.** Impediments to higher productivity include limited use of modern technology, land fragmentation, low financial liquidity, shortage of capital for investment (especially for smallholders), outdated production management practices, and limited product aggregators, storage facilities, and modern irrigation infrastructure. While the country has made some progress in expanding its product aggregators and storage facilities, modern irrigation infrastructure and technology remains a major limiting factor for increased productivity.

6. **Given Kosovo's vulnerability to climate change, irrigation infrastructure is an important and critical contributor for increased resilience of the sector.** Kosovo has about 1,900 m^3 per capita of renewable fresh water available per year. This identifies Kosovo as a "water-stressed" country, ranking it among those countries with the lowest level of water resources development and storage. Kosovo's potential for arable land under irrigation is much larger than what is currently being irrigated. This not only opens opportunities to increase agriculture productivity but also for further diversification of the crops grown. Kosovo's irrigated area was estimated to be less than 5 percent of all agricultural land[2] in 2020. The total arable land area that could be under irrigation is estimated at 280,000 ha, out of the total utilized area of agricultural land (420,210 ha). Nevertheless, currently there are only about 21,000 ha irrigated of which about 14,000 in formal irrigation and 7,000 ha in informal irrigation.

7. **Irrigation improvements and rehabilitation of irrigation schemes support the agriculture sector in three important areas:** (i) to minimize climatic risks affecting water resources; (ii) to ensure quality of products essential to commercial agriculture; and (iii) to provide adequate incomes and living standards in the rural areas. Irrigation in Kosovo is provided through various channels such as formal irrigation organized through irrigation providers (i.e. water/irrigation companies), informal irrigation, unorganized irrigation, and individual irrigation from water sources including rivers, wells, etc. Irrigation is mainly used to irrigate cereals, fruits, and vegetables.

8. **Kosovo needs to improve the sustainable development and management of the irrigation system.** Along with increasing water use efficiency, expanding sustainable irrigation is needed for increasing the commercialization and value addition of the agriculture sector. This includes the revitalization and improvement of the current irrigated area and the expansion of equipped areas for irrigation, as well as introduction of a modern management system that will allow to remotely enable the operation of the irrigation structures and reducing the operational costs and water losses. The modernization of the management of irrigation schemes would also require capacity building of irrigation providers to improve their reliability, adequacy of service, and

[1] World Bank 2021 Kosovo Country Economic Memorandum.
[2] The calculation is based on data from the Kosovo Green Report 2021, Ministry of Agriculture, Forestry and Rural Development.

cost recovery. Introduction of adequate, modern irrigation in critical production areas in Kosovo has led to many opportunities for uptake of higher value production and value chain integration.

9. **The Kosovo Irrigation Master Plan and Investment Framework, developed under the support of the World Bank funded Agriculture and Rural Development Project (ARDP), guides future investments and managements measures for the irrigation sector**. The Master Plan and Investment Framework for the irrigation sector, endorsed by the Inter-Ministerial Water Council (IMWC), provides recommendation for infrastructure and technical assistance measures for the short, medium, and long-term to increase water/agricultural productivity. The Irrigation Master Plan and Investment Framework highlights for improvement of water/agriculture productivity investments in irrigation infrastructure, building on successful experiences, and complemented with capacity building activities. Kosovo would benefit greatly from prompt application of the irrigation master plan to assure the country's readiness for addressing its water-stressed situation and assure efficient and productive use of the available water.

10. **To support candidate countries in preparing for EU accession, the EU provides significant funds under the Instrument of Pre-accession Assistance (IPA).** The IPA 2020 program for Kosovo aims at fostering rural economic development through improved management of the natural resources and increased income generation opportunities related to cultural tourism and improved capacities and alignment to standards in the agriculture sector. Under this program, EUR 10 million have been allocated to support the further development of irrigation systems based on the Kosovo Irrigation Master Plan and Investment Framework. This EU funded Trust Fund will be administered by the World Bank and will finance both Bank Executed and Recipient Executed activities.

11. **The rehabilitation and modernization of the Radoniqi-Dukagjini Irrigation Scheme (RDIS) is ranked among the key priority irrigation investments identified in the Master Plan and Investment Framework.** The RDIS covers two separate irrigation infrastructures, which together represent the Regional Irrigation Scheme "Radoniqi-Dukagjini" as one integral irrigation system. The Radoniqi irrigation scheme is located in the territory of Gjakova and Rahovec municipalities and the intake structure is Radoniqi Dam in the municipalities of Gjakova and Rahovec with an irrigated area of 8,600 ha. The Dukagjini irrigation scheme is located in the Municipality of Prizren with an area of 5,000 ha and the water is captured directly from the river Lumbardhi i Prizrenit. Currently, the RDIS is the best performing scheme in the country in terms of service provided to the farmers and percentage of fee collected for the service. RDIS has secure water resource for future expansion and represents the largest share of the country's current actual irrigated area comprising most of its high value crop production (e.g., peppers, tomatoes, cucumber, etc.). Based on the assessment carried out under ARDP, the total estimated investment needed for the rehabilitation and modernization of RDIS is EUR 13.2 million. While about EUR 4 million were provided under the ARDP for the rehabilitation of part of the RDIS, additional funds are needed for the rehabilitation of the remaining part of the scheme and its modernization, introduction of a Supervisory Control and Data Acquisition (SCADA) system to ensure better water use efficiency, and institutional and financial sustainability of the irrigation system.

12. **Capacity building of key stakeholders needs to be an integral and essential part to improve the sustainability and efficiency of infrastructure investments**. The Master Plan identifies a number of capacity constraints of the Kosovo irrigation sector. These include the uneven performance of irrigation providers in terms of governance and management, the weak capacity of the MAFRD and the municipalities to provide advice on irrigation and drainage, and the limited knowledge of farmers in terms of modern and climate resilient irrigation

technology. Technical assistance and capacity building activities are needed together with the rehabilitation investment for the improvement of overall corporate governance, introduction of management best practices, provision of irrigation and drainage advisory services and to strengthen farmers knowledge on efficient on-farm water management. The technical assistance and capacity building proposed under the project for irrigation providers, MAFRD, municipalities, and farmers groups aim to ensure sustainability and proper maintenance of irrigation schemes implemented under the project.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The proposed development objective is to increase the efficiency of water utilization and boost agricultural productivity in the project area.

Key Results

13. Key indicators to measure the achievement of the PDO are:

(i) Area provided with new/improved irrigation or drainage services. (CRI, Hectare (Ha))
(ii) Area rehabilitated by the project where high value crops are introduced. (Percentage)

D. Project Description

14. The proposed project would include the following three components:

15. **Component 1: Rehabilitation and Modernization of the RDIS (EUR 8.35 million).** This component will finance the rehabilitation and modernization of the RDIS, aiming to improve and modernize irrigation services, reduce water losses and production costs, and introduce higher value crops in the project areas to increase agriculture productivity. RDIS operates two independent irrigation schemes, namely the Radoniqi scheme with an originally designed area of 9,350 ha supplied by the Radoniqi dam with its seven irrigation sub-systems and the Dukagjini irrigation scheme with an originally designed area of 4,500 ha with its six sub-irrigation systems. Currently each scheme is managed respectively by Radoniqi and Dukagjini unit both under RDIS.

16. **Sub-component 1.1: Rehabilitation of the RDIS.** This sub-component would support (i) rehabilitation works to modernize and upgrade the RDIS, and (ii) supervision of the progress and quality of works. Works for the scheme's rehabilitation include inter alia: (i) rehabilitation and upgrade of the regulating structure, aiming at regulating water flow and water use to ensure efficient water management for a total surface of an improved irrigated area of 11,750 ha[3] and (ii) rehabilitation of three irrigation sub-systems (for a total of 4,000 ha): Qerim with 1,800 ha, Janosh with 1,400 ha, and sector "D" in Dukagjini with 800 ha that have not functioned since the establishment of the irrigation scheme. The detailed design of the rehabilitation works has been completed, e.g., specific activities and the estimated costs, indicating a high implementation readiness.

17. **Sub-component 1.2: Modernization of the RDIS.** This sub-component would support the development and establishment of the Supervisory Control and Data Acquisition (SCADA) for the whole RDIS. Supporting

[3] This include the 4,000 ha which would be rehabilitated in Qerim, Janosh and sector "D" in Dukagjini.

SCADA allows to take a broad modernization approach to ensure better water use efficiency, and institutional and financial sustainability of the irrigation system. SCADA will allow to remotely enable the operation of the irrigation structures and reducing the operational costs and water losses. Hence, through the SCADA the Radoniqi-Dukagjini Irrigation Company (RDIC) will be able to manage the Radoniqi dam and regulating reservoirs (reservoirs B9, B10, B11), operate the pump stations and maintain water pressure, as required, in a remote manner. SCADA will allow centralized monitoring and control and detect irregularities in the network in real-time. In case of an emergency, including any potential flooding of the dam, SCADA will allow safer and faster operation of the valves in outlet structures and will avoid the manual operation which is very risky in emergency circumstances. SCADA operation would allow for better planning and water release with the ultimate goal of more efficient use of the stored water in the Radoniqi dam.

18. **Component 2: Capacity Building to Increase Water Use Efficiency and Agriculture Productivity (EUR 0.4 million).** This component aims to improve the sustainability and efficiency of infrastructure investments supported under component 1 and increase the capacities of the MAFRD, municipalities, irrigation providers and farmers. It would provide technical assistance (i) to the irrigation providers on improving the overall corporate governance and best practices in management; (ii) to the farmers on introducing modern on-farm irrigation technologies and good practices for an efficient on-farm water management; (iii) to the MAFRD and municipalities to strengthen the capacities for the provision of irrigation and drainage advice to the farmers in an effective and sustainable manner; and support for knowledge exchanges in the irrigation sector.

19. Technical assistance to existing irrigation providers will be aimed at improving the overall corporate governance and best practices in management, and to prepare quality business plans.

20. Technical assistance to farmers will be aimed to: (i) support on-farm irrigation development, including activities to develop and operate a pilot farm in the RDIC area, promote several modernized on-farm irrigation technologies and display good practices for an efficient on-farm water management, and organize training programs for on-farm irrigation to group of farmers addressing the topics of technologies, costs, maintenance, financing mechanism, etc.; and (ii) support farmers agriculture practices, including activities to increase the added value produced by farmers and optimize production costs, ensure the transition to a more productive agriculture while introducing agro-ecological practices, develop value chains and support marketing, and empower farmer groups.

21. Technical assistance to the MAFRD and municipalities would focus on the provision of irrigation and drainage advisory services to the farmers on irrigation technologies, water use management depending on the crop production and increase of crop productivity. The activities would include training and coaching of MAFRD and municipal officials.

22. Knowledge exchanges will be carried out through study tours and site visits to relevant countries with advanced and automatized irrigation systems to enable farmers, irrigation providers and municipality staff to learn and benefit from the knowledge and experiences of other irrigation providers and on-farm water users. These exchanges will focus on introducing the beneficiaries to advanced practices and efficient use of water for irrigation for improving productivity, profitability and sustainability of their operations and on increasing their competitive potential in the sector. The project will support an average of two of such knowledge exchanges per year for about ten participants each, with particular attention given to the participation of women in each visit.

23. **Component 3: Project Management, Coordination, Monitoring and Evaluation (EUR 0.4 million).** This component will support the establishment of a Project Implementation Unit (PIU) which will build on the experience in implementation of the ARDP and will be tailored to the needs of the project activities. The PIU will provide overall project management and coordination, technical support, including on capacity building, engineering, procurement, financial management, monitoring and evaluation (M&E), safeguards, and public awareness of project activities. Project staff will also be trained in capacity building on climate resilient irrigation, sustainable irrigation and climate adaptation solutions. The PIU will also manage the project's grievance redress mechanism (GRM), citizen engagement activities and participatory monitoring of the irrigation rehabilitation works. The latter will be implemented through one or more Local Monitoring Group(s) to be established in the areas where rehabilitation works will be implemented and will ensure the engagement of the project beneficiaries in monitoring of the works aiming at ensuring ownership and sustainability of the investment.

Legal Operational Policies

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

Summary of Assessment of Environmental and Social Risks and Impacts

Project-related risks and impacts will mainly come from the rehabilitation and modernization of irrigation canals, and the installment of flow meter valves and poles for carrying electricity for the SCADA. As such, the anticipated key issues are related to (i) consumption of water and raw materials for civil works; (ii) potential generation of asbestos waste (iii) generation of construction-related wastes; (iv) nuisance related to traffic, dust generation, vibration, and noise; (v) occupational health and safety hazards for the workforce. Additional project-related risks are those of social nature and could be land acquisition impacts-though minor ones, labor and working conditions, and much less those related to the communities.

Environment and Social risks are rated moderate. The client will establish an organizational structure with qualified staff, with a full-time Environmental and Social Specialist within the PIU at MARD to oversee social and environmental issues and mitigate potential social and environmental risks in line with the ESF. For the activities that might require temporary/permanent land acquisition for small-scale construction works, the Resettlement Action Plans (RAP) will be prepared in accordance with Resettlement Policy Framework (RPF). It is anticipated that the risks will be mitigated and managed through adequate due diligence documents prepared prior to the appraisal and by screening out activities with potentially high risk.

E. Implementation

Institutional and Implementation Arrangements

24. The MAFRD will have the primary responsibility for overall project implementation. The project will be implemented by a PIU to be established under the MAFRD and which could benefit from the expertise and the assets of the well-functioning and experienced PIU which has been implementing the ARDP and its subsequent additional financing provided by the Bank, and other donors, since 2011 and closed in December 2022. The PIU

will include professional staff (local consultants to be hired under the project) who will provide support to the Ministry in general project management and oversight, irrigation, capacity building, procurement, financial management, environmental and social aspects, monitoring and evaluation and communication. The PIU will be headed by the General Secretary and its main responsibilities will include: (i) day-to-day project management; (ii) coordination and cooperation among various government agencies and institutions; (iii) preparation of annual work plans and budgets; (iv) preparation and regular update of the Procurement Plan; (v) preparation of quarterly unaudited financial reports and annual audited financial statements; (vi) M&E of project activities, including measuring and updating of the results framework indicators, and monitoring and reporting on ESF compliance; (vii) management of the project's GRM and citizen engagement activities; (viii) preparation of semi-annual and annual progress reports; (ix) briefing of MARD on the status of project implementation; and (x) systematic filing of all project-related documents, including procurement and financial management.

25. The existing ARDP Project Operational Manual will be revised by the MAFRD to reflect the project activities and any update required.

26. A Monitoring Committee will be established by the MAFRD to monitor the irrigation rehabilitation works. The Monitoring Committee will be composed of representatives of MAFRD in charge of the irrigation sector, of the RDIC and of the irrigation engineer hired under the PIU to oversees the irrigation rehabilitation works.

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