



1. Project Data

Project ID P121186	Project Name WATER RESOURCES AND IRRIGATION	
Country Albania	Practice Area(Lead) Water	
L/C/TF Number(s) IBRD-82110,IBRD-88170,TF-14255	Closing Date (Original) 31-May-2018	Total Project Cost (USD) 66,106,326.38
Bank Approval Date 29-Nov-2012	Closing Date (Actual) 31-May-2021	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	40,000,000.00	5,094,000.00
Revised Commitment	70,657,641.37	4,293,546.54
Actual	66,106,326.38	4,293,546.54

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2. Project Objectives and Components

a. Objectives

The Project Development Objective (PDO) of the Water Resources and Irrigation Project (WRIP) as articulated in the in the Loan Agreement (LA, page 5) was almost identical (except where underlined) to the one in the Project Appraisal Document (PAD, paragraph 19) and aimed at:



"establishing the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins; and (2) improving, in a sustainable manner, the performance of Selected Irrigation Systems" (LA, page 5); and to:

"(i) establish the strategic framework to manage water resources at the national level and in the Drin-Buna and Semani river basins and (ii) improve, in a sustainable manner, the performance of irrigation systems in the project area" (PAD, paragraph 19).

The project was restructured in 2018 and the PDO was revised to:

"(a) establish the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins and (b) improve irrigation service delivery in selected irrigation systems."

Parsing the original PDO. The PDO will be parsed according to the PDO statement in the Loan Agreement into two objectives as follows:

Objective 1: to establish the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins.

Objective 2: to improve, in a sustainable manner, the performance of Selected Irrigation Systems.

Parsing the revised PDO. The revised PDO will be parsed according to the PDO statement in the Restructuring Paper into two objectives as follows:

Objective 1: to establish the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins.

Objective 2: to improve irrigation service delivery in selected irrigation systems.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

22-Feb-2018

c. Will a split evaluation be undertaken?

Yes



d. Components

The PDO was supported by the following four components:

1. Dam and Irrigation and Drainage System Rehabilitation (appraisal cost: US\$59.54 million, actual cost: US\$57.67 million). This component aimed to rehabilitate (and, where possible, modernize) irrigation and drainage (I&D) systems and dam infrastructure. The component would finance the following two sub-components:

1.1. Rehabilitation and modernization of selected dams and I&D systems. This sub-component would finance preparation of all feasibility and detailed design studies, and all rehabilitation and modernization works of 14 dams and 15 I&D systems, as well as the supervision of the works. Investments would be mostly located in the Drin-Buna and Semani river basins, and would be undertaken in a comprehensive way (i.e., investments would be done as much as possible in dams and in associated I&D systems) to maximize the returns on investments. Pre-feasibility studies have been conducted for the 13 irrigation systems associated with these dams (including one Public-Private Partnership (PPP) pilot site), and for two additional PPP pilots.

1.2. Preparation and implementation of safeguard instruments and measures. For the rehabilitation and modernization activities under component 1.1, this would include Environment (and Social) Management Plans (ESMPs) and Resettlement Action Plans (RAPs), and strengthening the framework governing safety of agricultural dams, including capacity strengthening and awareness raising, and preparation of emergency preparedness plans, supervision and quality assurance plans, and dam safety O&M plans, including an instrumentation plan.

2. Institutional Support for Irrigation and Drainage (appraisal cost: US\$1.70 million, actual cost: US\$2.83 million). This component aimed to improve the performance of organizations that provide irrigation services. This included institutional reforms and capacity strengthening of Local Governments (LGs), Drainage Board (DBs) and Water Users' Association/Organization (WUOs), and piloting Public-Private Partnership (PPP) in I&D service delivery through recruitment of third party operators to deliver irrigation services in three I&D pilot schemes. The component would also finance preparation of a National I&D strategy. The project would finance the following two sub-components:

2.1. Institutional reforms of I&D sector. The project would define the responsibilities for O&M of I&D systems among stakeholders (including Ministry, DBs, LGs, WUOs and private operators) through, inter alia, (i) preparation of a National I&D strategy; (ii) development of cooperation arrangements (including contractual arrangements) among agencies including through provision of consultants services; (iii) development and formalization of I&D service delivery standards; and (iv) development and carrying out of small scale pilots in public-private partnership, including outsourcing O&M of I&D schemes to private operators.

2.2. Strengthening the capacity of organizations that provide I&D services and the capacity of stakeholders. This would include Ministry, DBs, LGs, WUOs and private operators inter alia, through provision of goods and training in areas, including contract management and outsourcing, administration, financial management and procurement, and water management and O&M. The project would train an estimated 10 civil servants from Ministry of Agriculture, Food and Consumer Protection (MAFCP), 15 civil servants from five DBs, staff from 15 LGs, and office bearers from 15 WUOs. Decentralized WUO support staff from DBs and LGs would be trained in strengthening capacities of WUOs. Some goods would be procured for DBs and LGs.



3. Institutional Support for Integrated Water Resources Management (appraisal cost: US\$9.57 million, actual cost: US\$4.55 million). This component aimed to establish the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins. Capacity strengthening activities, critical for satisfactory water sector performance, would be fully integrated into each of the subcomponents to ensure their relevance and applicability.

The project would finance the following three sub-components:

3.1. Preparation of a National Integrated Water Resources Management (IWRM) Strategy. This would include the establishment of a stakeholder forum for cross-sectoral dialogue and decision making under the aegis of the National Water Council (NWC), and strengthening capacities of institutions responsible for IWRM, such as the NWC, Technical Secretariat (TS), and the River Basin Councils (RBCs) and River Basin Agency (RBAs) of Drin-Buna and Semani basins. In view of EU candidate status, the strategy would incorporate the EU's Water Framework Directive (WFD), as reflected in the Law on Water Resources (LWR, currently under revision). The project would ensure inclusiveness of the preparation process by involving all stakeholders involved in the management of water resources. A communications strategy would be prepared and implemented to accompany the investments and the preparation of the strategy.

3.2. Preparation of River Basin Management Plans for the Drin-Buna and Semani river basins. This would include identification of structural and non-structural measures to improve the quality of IWRM and strengthening capacity to implement said plans through provision of training and goods to River Basin Agencies and minor rehabilitation of their offices. The project would work closely with the United Nations Economic Commission for Europe (UNECE) supported Drin dialogue and would take advantage of the river characterization that is undertaken in that context.

3.3. Establishment of a consolidated Water Resources Database. This would be used as basis for national water resources planning and programming. The database would be established within the General Directorate of Water Administration (GDWA). The proposed water resources database would be populated through the coordinated acquisition of monitoring data from all relevant organizations involved with water resources monitoring.

4. Implementation Support (appraisal cost: US\$0.98 million, actual cost: US\$1.06 million). This component aimed to manage project resources in accordance with the project's objectives and procedures as outlined in the POM. The project would provide support for the implementation of the project, including provision of technical assistance, training and goods, and establishment and implementation of a performance based management information system.

Revised Components

Component 1. The number of irrigation schemes and dams to be rehabilitated or improved changed before and after the 2015 restructuring and the additional financing (AF). In early February 2015, prior to the restructuring, about €8.4 million originally planned for the I&D schemes were reallocated to finance critical flood mitigation activities outside of the project area, resulting in extensive agricultural damage and need for urgent flood control investments. Under the 2015 restructuring, the area with improved irrigation service was reduced from 35,000 hectares to 20,000 hectares due to this reallocation of project funds and an increased focus on system improvement rather than on rehabilitation/restoration, to attain more sustainable solutions. The number of



schemes to be improved was reduced from 15 (original number at appraisal) to 6. The number of rehabilitated dams was reduced from 14 to 11 following priority setting on the basis of cost effectiveness. One dam was not considered a priority, and another one was not feasible given the small size of the dam, which served only a few hectares and farmers, and the service area's high emigration rate. Under the AF, the project added Janjari and Mursi dams. Thus, the project included 13 dams. Another change in Component 1 was the elimination of the PPP schemes.

Component 2. The AF expanded institutional support to address needs resulting from the new law decentralizing irrigation management to municipalities. The AF would allocate €6 million to finance (a) technical assistance for M&E of irrigation performance and benchmarking; (b) technical assistance for sustainable and performance-based management improvements for irrigation and drainage units (IDUs), financing, and investment planning at the municipal level; and (c) limited targeted specialized and just-in-time support to implement the new law on I&D at the national level and in support of institutional performance strengthening at the scheme and municipal level (for example, irrigation service fee setting mechanisms).

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost. The total project cost was US\$77.29 million. This amount was revised downwards to US\$70.66 million. According to the ICR Data sheet (page 2) the total amount disbursed was US\$66.11 million.

Financing. The project was financed through an IBRD loan in the amount of US\$40.00 million and US\$5.09 million from Swedish International Development Cooperation Agency (SIDA) trust fund (TF014255). The project also received an additional financing in 2018 through IBRD loan in the amount of US\$27.20 million. The total financing amount was US\$72.29 million, which was revised downwards to US\$70.66 million. The actual disbursed amounts were: US\$35.80 million, US\$4.29 million, and US\$26.01 million for the original IBRD loan, the SIDA Trust Fund and the AF, respectively. The total IBRD disbursed amount was US\$66.11 million. The project was expected to receive US\$5.00 million as co-financing from (SIDA) to finance integrated water resource management (IWRM) and project management, which would be separate from the activities that the Loan will finance. According to the ICR Data Sheet (page 2) the project did not receive any co-financing from SIDA.

Borrower Contribution. This project was fully financed through IBRD and SIDA with no borrower contribution.

Dates. The project was approved on November 12, 2012 and became effective six months later on May 13, 2013. The Mid-Term Review (MTR) was conducted on January 31, 2017. While the PAD did not specify a date for the MTR, conducting the MTR 3.5 years into effectiveness was reasonable for this project. The project closed on May 31, 2021 which was three years later than the original closing date on May 31, 2018. According to the ICR (paragraph 30), the extension in the closing date was to accommodate the increase in scale under the AF and "to allow time for completing the final I&D scheme."



The project was restructured four times, all of which were Level 2 except the second-which was a Level 1 restructuring, as follows:

1. On December 23, 2015, when the amount disbursed was US\$9.50 million, in order to introduce a change in Implementing Agency, change in Results Framework, change in components and cost, change in the financing plan, reallocate funds between disbursement categories, change in disbursements arrangements, change in institutional arrangements, change in financial management, and change in implementation schedule.
2. On February 22, 2018, when the amount disbursed was US\$29.88 million, in order to approve an Additional Financing, revise the PDO, revise the Results Framework (RF), change in components and cost, extend the Loan closing date from May 31, 2018 to May 31, 2020, reallocate funds between disbursement categories, change in disbursements arrangements, change in procurement, and change in implementation schedule.
3. On December 3, 2018, when the amount disbursed was US\$36.67 million, in order to extend the closing date for the SIDA trust fund (TF014255) to May 31, 2020, to ensure completion of activities aimed at establishing the strategic framework to manage water resources at the national level and in the two river basins.
4. On February 12, 2021, when the amount disbursed was US\$44.09 million, in order to extend the loan closing date from May 31, 2020 to May 31, 2021.

Rationale for Changes and Implication for Theory of Change (ToC). The introduction of a new law by the Government (Law No. 24/2017) which transferred water resources management (WRM) responsibility from the Ministry of Environment (MOE) to the Ministry of Agriculture and Rural Development (MARD), and later devolved responsibility for Irrigation and Drainage (I&D) operation and maintenance (O&M) to the MARD Drainage Boards (DBs) and Local Governments (LGs) meant that sustainability could no longer be attributed to project activities. This prompted the changes in the PDO and outcome indicators relating to sustainable I&D services (ICR, paragraph 32). This Review is in agreement with the ICR (paragraph 33) that "the changes in the PDO and outcome indicators had no significant implications for the ToC."

3. Relevance of Objectives

Rationale

Context at Appraisal. In Albania, flooding has worsened in recent decades as a result of deforestation, overgrazing, and erosion, combined with a lack of maintenance of drainage canals and pumping stations. In addition, river erosion programs were discontinued and water levels in reservoirs were lowered in response to dam safety concerns, worsening the risk of flooding. Drought in summer and flooding in winter is expected to be exacerbated as a result of climate change (PAD, paragraph 7). Also, Albania's recent rapid economic growth, increase in population and urbanization, seasonal water shortages and water



abundance have magnified serious weaknesses in the management of Albania's water resources. The main weaknesses in IWRM include the high level of fragmentation of water resources management in Albania, with responsibilities for IWRM not clearly divided, duplicative and sometimes contradicting (PAD, paragraph 8). This project aimed to lay the foundations for more rational and accountable water resources management, and to improve the performance and financial viability of I&D.

Previous Bank Experience. According to the PAD (paragraph 11) "the Bank has been the main partner of the GoA in modernizing the I&D systems and institutions, with three consecutive projects between 1994-2009, amounting to US\$112.4 million." These were: the Irrigation Rehabilitation Project (P008270; Board Date: September 1994; Closing Date: June 2001; US\$38.1 million), the Second Irrigation and Drainage Rehabilitation Project (P043178; Board Date: June 1999; Closing Date: March, 2005; US\$40.3 million), and the Water Resources Management Project (P082128; Board Date: June 2004; Closing Date: December 2009; US\$34.0 million) (PAD, paragraph 35). In addition, during the project preparation, the Bank conducted a Public Expenditure and Institutional Review (PEIR) of the I&D sector in Albania. In southeastern Europe, the Bank-funded IWRM projects were undertaken in Macedonia, Romania, Turkey, Bulgaria and Serbia (PAD, paragraph 34).

Consistency with Bank Strategies. At appraisal, the original and revised PDOs were both in line with Bank's Country Partnership Strategy (CPS, FY2011-FY2014) for Albania. Specifically, under Strategic Objective 1: Accelerating the recovery in Albania's economic growth through improved competitiveness, the CPS identified the need to improve infrastructure services in irrigation, and to make these more sustainable. The CPS refers to the Water Resources and Irrigation Project (WRIP) to support rehabilitation of the national irrigation network, to address upstream safety and efficiency of irrigation reservoirs, to introduce more efficient water distribution mechanisms and consolidate recent reforms in irrigation system management and cost recovery. The PDO was also in line with the Bank's "Europe and Central Asia (ECA) I&D Strategy" that recommended prioritizing future Bank engagement to improve the financial viability of I&D.

At completion, both the original and revised PDOs were in line with the Bank's Country Partnership Framework for Albania (CPF, FY2015-2019). The overall goal of the CPF was to support Albania's aspiration to achieve equitable growth and integration into the EU. The CPF identified five priorities grouped into three main focal areas. The PDOs were consistent with two focal areas. Specifically, under Focal Area 2, the PDOs were directly relevant to Objective 2e (Contribute to Increased Productivity and Sustainability of Land Use). The CPF also emphasized Albania's need to increase farm income to contribute to economic growth. In this regard, the project was an important mechanism for irrigation rehabilitation, and modernization. Also, under Focal Area 3 (Strengthening Public Sector Management and Service Delivery), the PDOs were consistent with Objective 3a, which aimed to increase the efficiency of public service delivery.

Consistency with Government Strategies. At appraisal, the original PDO was in line with Albania's National Strategy for Development and Integration (NSDI, 2007) by contributing to two of its strategic goals, first, integration in the EU and second, achieving sustainable economic development. The project would assist the GoA in fulfilling conditions for EU accession, especially the EU WFD, and in supporting investments that would increase agricultural productivity and economic recovery and reduce the country's vulnerability to severe flooding.

At completion, both the original and revised PDOs were in line with Albania's Inter-Sectoral Strategy for Agricultural and Rural Development (ISARD 2014-2020). The strategy



highlighted interventions for the development of agriculture and rural areas to meet the challenges of the EU single market requirements and to adapt Albanian agricultural and rural development policies to the Common Agriculture Policy. The project complemented these objectives by restoring the productive value of land and improving irrigation performance (ICR, paragraph 35).

The original statement of objectives included the term "in a sustainable manner" for improving the performance of irrigation systems was confusing as it was not clear how this would be achieved. Furthermore, after the institutional changes by the Albanian Government in 2015, the second objective of the original PDO was not relevant at completion because sustainability was not attributable to the project anymore. The revised PDO was more focused and clear relative to the original specifically in terms of the wording of the second objective.

Overall, Relevance of Objectives is rated Substantial. While, the original and revised PDOs were in line with the Bank strategies and Government priorities, the link to water resource management in the current CPF was not particularly strong, as water resources were barely mentioned, unlike other areas such as energy or private sector development.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To establish the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani River basins.

Rationale

Theory of Change (ToC). To achieve the stated objective, the project would support developing national and basin-wide IWRM strategies, strengthen institutional capacities for IWRM, and establish a national water resources database to facilitate rational IWRM planning and programming. Addressing weak governance and institutions in the water resources & irrigation sector, as well as the deteriorating I&D infrastructure, would help remove some of the obstacles to growth of the agricultural sector. These activities were expected to result in establishing the water resource database and the strategic framework to manage water resources at the national level and at the level of the Drin-Buna and Semani river basins. Anticipated long-term outcomes included EU accession.

The ICR did not reflect the critical assumptions that underpinned the achievement of the stated objective. Nevertheless, the activities reflected in the ToC were directly linked to the PDO in a plausible causal chain.

Outputs



The following outputs were reported in the ICR (Annex 1, unless referenced otherwise):

Capacity Building in IWRM

1. National IWRM Strategy was prepared and approved by GoA (target achieved). The strategy includes: GoA's long-term vision, mission, goals, and objectives for IWRM in Albania; analysis of the legal and institutional framework for IWRM; a clear long-term strategy for achieving sustainable management and development of water resources; and descriptions of medium-term priority actions with responsible institutions, timelines, and financing requirements (ICR, paragraph 43).

2. Two River Basin Management Plans (RBMPs) are important strategic documents that describe the current situation in each basin regarding surface and ground water and detail proposals for implementing a WRD-compliant monitoring program (ICR, paragraph 46) for Drin-Buna and Semani River basins were prepared and approved by GoA (target achieved). The Semani RBMP was adopted by the Council of Minister (CoM) on June 10, 2020, and the Drin- Buna RBMP was adopted by the CoM on November 4, 2020. The RBMPs were important strategic documents that described the current situation in each basin regarding surface and ground water and detail proposals for implementing a WRD-compliant monitoring program. The plans included analyses of the physical status of water resources as well as an inventory of water resources in the basin. The plans proposed an action plan for implementing a WFD-compliant monitoring program for the Programs of Measurement (PoMs) for 2021-2027 (ICR, paragraph 45).

The afore mentioned two outputs/intermediate outcomes were actually listed as outcome indicators in the results matrix.

3. Water Cadastre was established (target achieved). The national water cadastre was established in 2017, and was approved in December 20, 2020 by the Council of Ministers (CoMs). However, by project completion the NWRC was not fully populated because the various water management entities did not have sufficient funds for water monitoring (ICR, paragraph 61).

4. Training was provided to central AMWR and river basin level staff in the use of Water Cadastre (no target provided).

5. The project also supported the establishment of two river basin authorities (Office for the Management of River Basins, OARBs) and provided capacity building for the OARBs in RBMP implementation. The project provided on-the-job training to build capacity of the OARB staff by the end of the project (ICR, paragraph 48).

Outcome

The first PDO remained the same throughout the project period. The project completed two river basin management plans (RBMPs) that were prepared through a consultative process (target achieved). The two RBMPs were approved by the Council of Ministers (CoM) and the National Water Council (NWC).

The GoA through the CoM approved the National Integrated Water Resource Management Strategy (NSIWRM) in 2018 (target achieved). According to the ICR (paragraph 43) the NSIWRM "currently guides all actions and investments in Albania's WRM sector." As indicated in the ICR (paragraph 43), the NSIWRM led to an increased GoA budgetary support for IWRM, however, no evidence was provided on the IWRM budget prior to the approval of the NSIWRM. The ICR (paragraph 44) claimed that strategic planning process strengthened the capacity and commitment of participating agencies and stakeholders in IWRM.



Overall, the project achieved its objective with the establishment of the strategic framework to manage water resources at the level of the Drin-Buna and Semani River basins. This was expected to improve governance and intra-sectoral and inter-sectoral co-operation. Supporting NSIWRM and establishing RBMPs were important elements so that Albania could meet the EU Water Framework Directive requirements (ICR, paragraph 47). Achieving the stated objective was expected to facilitate EU accession and also demonstrated GoA's commitment to involving stakeholder participation in the strategic planning process.

Therefore, and based on the above-mentioned assessment and the evidence provided in the ICR, the efficacy with which this objective was achieved was Substantial, with minor shortcomings.

Rating

Substantial

OBJECTIVE 1 REVISION 1

Revised Objective

Unchanged. As above.

Revised Rationale

See description and ratings as above.

Revised Rating

Substantial

OBJECTIVE 2

Objective

To improve, in a sustainable manner, the performance of Selected Irrigation Systems.

Rationale

Theory of Change (ToC). To achieve the stated objective, the project would support the preparation of a national I&D strategy, rehabilitation or modernization of I&D systems in areas having intensive irrigated agriculture, improvement in dam safety, and capacity building in managing I&D to ensure their financial sustainability. These activities were expected to result in sustainable improvement in irrigation and drainage (I&D) systems in the project area, increase the percentage of compliance to agreed seasonal water distribution schedule, and to an increase in recovery of O&M costs as percentage of O&M chargers invoiced. Anticipated long-term outcomes included: sustainable improvement in irrigation and drainage (I&D) systems nationwide, reduced vulnerability to the impacts of climate change, and accelerated recovery in the the national economy through improvements in agricultural productivity.



Most activities reflected in the ToC were directly linked to the PDO in a plausible causal chain. However, the it was not clear how sustainability would be achieved. Also, the ICR did not reflect the critical assumptions that underpinned the achievement of the stated objective.

Outputs

The ICR did not report outputs under the original Objective 2. In a further communication the project team explained that the original objective 2 did not fundamentally change during the successive restructurings including Additional Financing.

Outcome

As part of the 2015 restructuring, and following GoA's devolving responsibility for I&D to the local government units (LGUs), both outcome indicators under the original PDO 2 were dropped (ICR, paragraph 62). The ICR (paragraph 62) reported anecdotal evidence through interviews with 54 farmers in four project areas which revealed that the improvements in irrigation allowed them to meet their seasonal needs for water. This was not possible prior to the project. Also, discussions with the mayors from four project municipalities in December 2021 (virtual) and January 2022 (field) revealed that the tariff charged to farmers had collection rates ranging from 80% to 90%. However, these encouraging collection rates did not reflect sustainability of the improved performance of the irrigation systems because the tariff accounted only for one part of the cost-sharing arrangement for O&M (ICR, paragraph 62).

Based on the above-mentioned information, the efficacy with which Objective 2 was achieved is rated Modest.

Rating

Modest

OBJECTIVE 2 REVISION 1

Revised Objective

To improve irrigation service delivery in selected irrigation systems.

Revised Rationale

Theory of Change (ToC). To achieve the stated objective, the project would support the the preparation of a national I&D strategy, strengthen capacity at the municipal level for I&D management, rehabilitate dams to meet international standards, and rehabilitate and modernize I&D schemes in the project area. These activities were expected to increase the number of users provided with improved I&D services including females, and increase the project area that benefits from establishing sustainable O&M arrangements. Anticipated long-term outcomes included: sustainable improvement in irrigation and drainage (I&D) systems nationwide, reduced vulnerability to the impacts of climate change, and accelerated recovery in the the national economy through improvements in agricultural productivity.

The activities reflected in the ToC were directly linked to the PDO in a plausible causal chain. However, the ICR did not reflect the critical assumptions that underpinned the achievement of the stated objective.



Outputs

The following outputs were reported in the ICR (Annex 1, unless referenced otherwise):

In a further communication, the project team explained that the majority of the outputs were completed on time. However, the key outputs that were delayed included the rehabilitation and modernization of Janjari irrigation scheme, which was the main activity added at the time of additional financing and the establishment of the new National Agency-the Water Resources Management Authority (WRMA).

Infrastructure Rehabilitation:

1. Rehabilitation of 13 I&D schemes was completed (target achieved mostly on time). These include the rehabilitation and modernization of 13 I&D systems covering an area of 40,000 hectares, thus reaching the project target (ICR, paragraph 50). The schemes included improved water level control through duckbill weirs and improved measurement capacity, with flume reorientation of canal layouts in specific cases. In one scheme (Divjaka), there was a wholesale shift from surface irrigation to pressurized irrigation, which substantially improves the system's delivery efficiency and water productivity. In another scheme (Janjari), the original design was modified to address farmers' requests for more efficient storage to allow progressive elimination of pumped water from the drainage canals (ICR, paragraph 50).
2. Rehabilitation of 13 dams meeting international safety standards was completed (target achieved mostly on time). The project rehabilitated 13 dams to meet international dam safety standards. The T'Plan dam was dropped due to the low population and high out-migration rate in the service area. All of the dams were single purpose (irrigation). For each dam, the project improved its capacity or safety, installed a piezometer (measures seepage), and secured spillways and outlets (ICR, paragraph 53). The investments resulted in improved dam safety and lowered the risk of severe flooding.
3. Supply and installation of dam safety instrumentation and associated training was completed mostly on time.
4. Drin Riverbank rehabilitation was completed mostly on time.
5. Detailed designs and ESMPs for infrastructure investments were prepared mostly on time.

Institutional Reform and Capacity building in I&D

1. I&D Strategy was prepared and approved by GoA (target achieved). The strategy specified the policy objectives and strategic measures for four subsectors (irrigation and drainage, dams, reservoirs, and flood protection) in line with the sector's mission, guiding principles, and goals as well as GoA's strategic objectives defined in the NSDI and ISARD. As part of the I&D strategy, an action plan specified what should be done in each subsector, identified the implementing institutions, estimates the costs of each action item in the implementation schedule, and described the expected results. The strategy also had a dedicated section explaining how the main responsible parties would be held accountable for performing their tasks (ICR, paragraph 54).
2. Municipal I&D Unit staff training in I&D (no target). The assistance centered on the development of an Irrigation and Drainage Management Information System (IDMIS) provided to 35 "agriculture intensive" municipalities. The IDMIS supports integrated management of data related to I&D infrastructure, facilitates communications among different entities, and provides access to I&D system reporting (ICR, paragraph 56).
3. On-the-job training and workshops on I&D were provided (no target).
4. Study tour (no target). In a further communication the project team explained that the study tour included 26 participants in total, of which 13 were from Ministry of Agriculture and Rural Development (MoARD) Head Office, 6 from Drainage and Irrigation Boards and 7 from municipalities.



Outcome

By project completion, 47,980 water users received an improved irrigation service (target: 35,000, target exceeded) including 13,715 women (target: 4,000, target exceeded). The total number of direct project beneficiaries reached 105,942 exceeding the target of 80,000. Among them, 50% were women (target: 50%). According to the ICR (paragraph 50), "almost all project-financed I&D works, goods, and services were successfully delivered."

Rehabilitation and modernization of the I&D systems restored the operation of reservoirs and irrigation canals that were nonoperational or substantially damaged before the project (ICR, paragraph 51). While the project monitoring system did not collect data on specific parameters that reflect improvements, the ICR (paragraph 51) mentioned that "the Ministry of Agriculture and Rural Development (MARD) reported that the investments in all 13 schemes resulted in reduced water losses, improved water pressure, and reduced time required for farmers to irrigate their farms." The project also rehabilitated 13 dams to meet international dam safety standards. These investments resulted in improved dam safety and lowered the risk of severe flooding (ICR, paragraph 53).

As indicated in the ICR (paragraph 51), improved reliability of irrigation water had a positive impact on crop quality and productivity, which was plausible. This also led farmers in 7 I&D schemes to switch to higher value crops (HVCs) such as fruits and vegetables. By the end of the project, the farmers' net family incomes had increased by an estimated 35 to 63%, on average, depending on farm size and degree of diversification into HVCs (ICR annex 4, table A4.3). According to the ICR (paragraph 52) 100% of 54 farmers in four schemes interviewed by the project expressed satisfaction with the project and highlighted the increase in water security and reliability during the dry season and reported some increase in production and productivity.

A National I&D Strategy was completed and approved by the Council of Ministers on May 22, 2019. The implementation of the I&D strategy was well-harmonized with the Intersectoral Strategy for Agriculture and Rural Development (ISARD), Albania's main strategic document for the agriculture and rural development sector (ICR, paragraph 55). The ICR also noted that the GoA's new law on I&D was fully aligned with the I&D strategy (ICR, paragraph 55).

The project also provided capacity building to municipalities for managing I&D infrastructure and related services. By project completion, the Irrigation and Drainage Management Information System (IDMIS) became the municipalities' main tool for I&D system management and M&E (ICR, paragraph 56). The project also financed a centralized GIS with I&D spatial information installed in each municipality and uploaded into the IDMIS.

Sustainable arrangements for sharing O&M costs were introduced in 67% (target: 80%, substantially achieved) of the area that received improved irrigation service. According to the ICR (paragraph 57), only 9% of the project area was covered by such arrangements in 2019. It is worth noting that the irrigation tariff only partially covered the cost of the I&D's O&M. Other sources that contribute to the cost of I&D O&M included transfers to municipalities from MARD and local municipal sources (land tax and permits). The share of O&M costs paid by farmers was expected to increase with improvements in productivity and income. However, the ICR did not detail the anticipated increments that farmers would incur in the future. Currently, the tariff covers between 25% and 50% of the costs for irrigation O&M (ICR, paragraph 59).



Finally, the project piloted institutional arrangements for sustainable O&M of irrigation schemes in project municipalities. The national irrigation law stipulated that the farmers should be responsible for the tertiary canals or pay the municipality to do the maintenance, while the municipality is responsible for maintaining the primary and secondary canals. According to the ICR (paragraph 58) clear rules were designed regarding the responsibilities of the different stakeholders, including the water masters, administrative units, and a municipal I&D unit (IDU). Each municipality established the water tariff in agreement with the farmers. The tariff was a factor of the service provided, area covered, and farm income, and must be approved by the Municipal Council. According to the ICR (paragraph 59) "mayors of the four main project municipalities confirmed significant improvement in tariff collection performance due to the new arrangement with water masters."

Based on the above-mentioned assessment the efficacy with which this objective was achieved is rated Substantial. The project succeeded in improving irrigation service delivery and met or exceeded all of its outcome targets, except for the target on O&M costs which was substantially achieved.

Revised Rating
Substantial

OVERALL EFFICACY

Rationale

Overall efficacy of the original objectives is rated Modest. The project achieved its objective with the establishment of the strategic framework to manage water resources at the level of the Drin-Buna and Semani River basins. Achieving the stated objective was expected to facilitate EU accession and demonstrated GoA's commitment to involving stakeholder participation in the strategic planning process. However, the objective of improving, in a sustainable manner, the performance of selected irrigation systems was only modestly achieved.

Overall Efficacy Rating
Modest

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale

Overall efficacy is rated Substantial. The project achieved its first objective with the establishment of the strategic framework to manage water resources at the level of the Drin-Buna and Semani River



basins. Achieving the stated objective was expected to facilitate EU accession and demonstrated GoA's commitment to involving stakeholder participation in the strategic planning process. The second objective which aimed to improve irrigation service delivery in selected irrigation systems was substantially achieved. The project succeeded in completing the rehabilitation of irrigation infrastructure for 13 irrigation schemes, and 13 dams were rehabilitated to meet international safety standards. The project also piloted a new approach for irrigation management and substantially achieved its target on O&M cost recovery.

Overall Efficacy Revision 1 Rating

Substantial

5. Efficiency

Economic and Financial Analysis (EFA)

ex-ante

- The overall economic rate of return (ERR) of the project was estimated at 23.7% at appraisal. The NPV was estimated at US\$63.2 million, at a discount rate of 10%.
- Three out of the four project components (excluding the institutional support for IWRM, component 3) were included in the costs of each of the assessed schemes, weighted by their relative importance in the direct rehabilitation costs. O&M of the irrigation systems after rehabilitation or modernization was assumed to be 2% of the rehabilitation or modernization costs.
- The analysis assumed that: improvements in production to be achieved by 2017 and will continue to improve; only 70% of the command area in the project schemes were assumed to take advantage of the improved irrigation system; and diversification towards high value crops (HVCs) like vegetables, vineries and fruit trees were assumed to increase from 22 to 31% of the area in summer, while wheat and alfalfa areas would be reduced from about 88 to 78% in winter as orchards expand.
- Sensitivity analysis was conducted under different scenarios: a 20% increase in construction costs; a 20 and 30% decrease in food prices given the current high prices of food in comparison to long term averages; a 20% reduction in the number of farms adjusting their farming practices in response to the improved availability of irrigation; and several combinations of the afore mentioned situations. The analysis concluded that in all cases the ERR remained above 12%, which suggested that the project was generally robust against most probable risk factors.

ex-post

- The economic analysis was based on a cost-benefit analysis approach similar to that used at appraisal. The overall ERR at completion was estimated at 28.8%. The net present value (NPV) was \$109.2 million, and the benefit to cost (B/C) ratio was 1.72, calculated at a 6% discount rate. The calculations of the ERR, NPV, and B/C ratios were based on net incremental benefits. Net benefits were calculated as the



difference between benefits in the scenarios with and without the project. The analysis considered 20 years for the stream of benefits.

- The ICR (paragraph 66) claimed that "the rehabilitation and modernization works were cost-effective." However, there was no direct evidence provided to support this claim such a comparison of the project costs to costs of similar projects. It is also worth noting that the project received an additional financing in 2018 through IBRD in the amount of US\$27.20 million because the cost of rehabilitation of irrigation infrastructure was grossly underestimated at appraisal (see below).
- The financial impact of the project on farmers' revenues was assessed using crop and farm models that show average farming situations. Similar to those used at appraisal, the models and budgets used for the analysis were developed using FARMOD software. The return to family labor was estimated to have increased with the project from about US\$29–US\$42 to US\$45–US\$55 per day.
- A sensitivity analysis assessed the exposure of the project to risks and opportunities under different scenarios including: a smaller production growth throughout the years by 10–13%; no new benefits after the first years following project completion (by schemes); a 10% reduction of production and 10% increase in production costs; a 20% reduction in production and 20% increase in production costs, and an increase in production by 10%. In the worst-case scenario, the ERR was 10.6%, still above the 6% discount rate, suggesting that the project was robust under different scenarios.
- Implementation efficiency suffered from several operational (procurement related delays and inaccurate cost estimates of schemes) combined with other external factors (flooding in 2015, institutional reform and COVID- 19 among others) caused implementation delays and a slight negative impact on overall efficiency (ICR, paragraph 68). This prolonged the project implementation, and benefits materialized at a later stage than originally planned and affected the time of incidence of benefits and cost. This resulted in a lower overall NPV and ERR than at the AF stage (ERR of original project +AF was estimated at 30%).

Summary of Efficiency Assessment. The ex-post ERR was estimated at 28.3% which was higher than the 23.7% for the ERR at appraisal. However, the ex-post ERR was slightly below the original project + the AF ERR which was estimated at 30%. According to the ICR (paragraph 68) this slight drop was attributed to implementation delays. It is also worth noting that some delays were due to external factors beyond the project control. Based on the implementation delays, the under-estimation of costs that eventually necessitated an additional financing to make up the gap, and the fact that the estimated ex-post ERR was actually lower than ex-ante, and the absence of any evidence of cost-effectiveness of the rehabilitation/modernization works, Efficiency is rated Modest.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	23.70	88.00 <input type="checkbox"/> Not Applicable



ICR Estimate	✓	28.80	93.00 <input type="checkbox"/> Not Applicable
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* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Pre-restructuring

Relevance of Objectives was rated Substantial. Overall Efficacy was rated Modest. While the project achieved its objective to establish a strategic framework to manage water resources at the level of the Drin-Buna and Semani River basins, the objective aiming to improve, in a sustainable manner, the performance of selected irrigation systems was modestly achieved. Efficiency was rated Modest. The ex-post ERR was estimated at 28.3% which was lower than the 30% for the ERR at appraisal, taking into account the Additional Financing.

Based on the above-mentioned ratings, Outcome is rated Moderately Unsatisfactory.

Post Restructuring

Relevance of Objectives was rated Substantial. Overall Efficacy was rated Substantial. The project achieved its objective to establish a strategic framework to manage water resources at the level of the Drin-Buna and Semani River basins. The project also succeeded in improving irrigation service delivery in selected irrigation systems. The rehabilitation of irrigation infrastructure for 13 irrigation schemes was completed and 13 dams were rehabilitated to meet international safety standards. Efficiency was rated Substantial despite implementation delays. The ex-post ERR was estimated at 28.3% which was higher than the 23.7% for the ERR at appraisal.

Based on the above-mentioned ratings, Outcome is rated Moderately Satisfactory.

Split Rating

	Pre-restructuring	Post restructuring (AF)
Relevance of Objectives	Substantial	Substantial
Efficacy	Modest	Substantial
Efficiency	Modest	Modest
Outcome	Moderately Unsatisfactory	Moderately Satisfactory
Numerical Value of Outcome Rating	3	4
Disbursement (US\$ million)	US\$29.88	US\$36.22
Share of disbursement	45%	55%



Weighted Value of Outcome Rating	1.35	2.2
Final Outcome Rating		Moderately Satisfactory 1.35+2.20=3.55, rounds to 4

Note: Highly Unsatisfactory (1); Unsatisfactory (2); Moderately Unsatisfactory (3) Moderately Satisfactory (4); Satisfactory (5); Highly Satisfactory (6).

Therefore, the final outcome based on a split rating is Moderately Satisfactory

- a. **Outcome Rating**
Moderately Satisfactory

7. Risk to Development Outcome

The ICR discussed two main risks as follows:

1. The risk related to the Government approval and implementation of the national strategies for IWRM and I&D. According to the ICR (paragraph 104) the client's satisfaction with the this project led the GoA to assign a higher priority to the WRM and I&D sectors than it has in the past. The Government is seeking EU or other bilateral assistance to support implementation of the new strategy and basin plans. In addition, the GoA has initiated a follow-up Bank-financed project, the Albania-Climate Resilience and Agricultural Development Project (P178715), to be jointly implemented by the Water Global Practice and Agriculture and Food Global Practice, and has requested continued Bank support in applying for a grant from the Western Balkan Investment Fund to undertake prefeasibility studies for 431 dams and associated I&D networks. The Albanian government already secured €1.5 million for these studies, which will include assessment and evaluation of dam safety and potential for existing reservoirs to improve irrigation to enhance resilience to climate change.

2. The risk related to cost recovery for O&M needs. Cost recovery for O&M needs continued attention for the future of the I&D investments under the WRIP. According to the ICR (paragraph 105) "there is a low risk that the positive performance during the past three years will not continue." By the end of the project, 67% of the area that received improved I&D service was covered by sustainable cost-recovery arrangements for O&M. Arrangements for cost recovery included: transfers from the national budget to LGs; municipal revenues, especially the land tax and permit fees; and farmers' annual irrigation fees. Farmers' share of O&M costs is expected to increase as their productivity and incomes increase due to better accessibility to a properly functioning irrigation system. This review is in agreement with the ICR (para 105) that further financial support to the municipalities is needed till water users could assume a larger share of O&M costs.



8. Assessment of Bank Performance

a. Quality-at-Entry

The PDO of the WRIP was in line with the Bank strategies and reflected the Government priorities for integrated water resource management (see section 3 for more details). The project design benefited from the Bank's long history in financing I&D projects, and from the earlier projects in Albania.

Notable lessons reflected in the project design included: the critical need to involve a range of stakeholders in project design and implementation to ensure success; the need to address continued deterioration of hydraulic infrastructure through structural and non-structural measures; and the need to take climate change and hydrological variability into account in designing sectoral support. However, design could have benefited from incorporating lessons to implement measures to improve O&M cost recovery (ICR, paragraph 78). Recommendations from a study on climate change in Albania (2012) were also reflected in the project the project design. These included: improved institutional framework and enhanced capacities for managing water resources, investments in dam safety, and investments to improve the reliability of I&D schemes (ICR, paragraph 77).

The project design was comprehensive and featured the rehabilitation of irrigation infrastructure, including dams, combined with institutional reforms and capacity building activities. The design of the institutional strengthening components incorporated the priorities of the country in the water sector and reflected its aim to achieve EU status. A notable design shortcoming was the gross underestimation of infrastructure costs, which consequently affected the scope of the original project (see section 5 for more details). The original cost for rehabilitating 15 I&D schemes and 13 dams was estimated at US\$29.38 million. Only 6 I&D schemes could be financed with the available funds under the original project. At the end of the project, the cost increased to US\$60 million minus the cost of mitigating the flood damage (€8.4 million). According to the ICR (paragraph 79) "this substantial increase complicated the procurement process by having to relaunch the tender and led to the need for the AF and time to achieve project objectives."

Seven risks were identified at appraisal with an overall rating of Substantial. Key risks related to project design, implementation capacity, governance and stakeholders. According to the (ICR, paragraph 98) "risk assessment was realistic and included appropriate measures for reducing or managing risks." The project design emphasized addressing gender, with measures to be taken to facilitate women's participation in consultations on the strategies, providing feedback on proposed I&D investments, and project-related training (ICR, paragraph 98).

Finally, the original results framework suffered from shortcomings that undermined project monitoring and reporting, specifically, some of the outcome indicators could have been better aligned with the PDO (ICR, paragraph 99) (see section 9 a for more details).

Overall, Quality at Entry is rated Moderately Unsatisfactory. The Bank should have been more diligent in estimating the costs for the rehabilitation of irrigation infrastructure, and more attention should have been given to M&E to ensure that the indicators were better aligned with the PDO.



Quality-at-Entry Rating

Moderately Unsatisfactory

b. Quality of supervision

Over the nine years of project implementation, four Task Team Leaders supervised the project. Supervision missions included multidisciplinary teams for the field visits (including the SIDA team). Special technical missions helped resolve technical issues that arose during implementation. Missions also included environmental and social safeguard specialists to follow up on any safeguard requirements. TTLs also monitored the work of the M&E consultants. During the COVID pandemic, weekly missions were held virtually with the client and contractors. Also, two virtual supervision missions were organized to ensure successful project completion (ICR, paragraph 101).

The ICR (paragraph 102) noted however that "the Bank team could have been more diligent in revising the results framework during project restructuring." Also, the PDO could have been modified at the time of the 2015 restructuring because the main outcome indicator addressing sustainability was dropped.

Overall, Quality of Supervision is rated Moderately Satisfactory. The Bank team managed to overcome implementation delays and the underestimation of project costs through approving an additional financing to avail enough funds to successfully complete the envisioned activities.

Bank Performance is rated Moderately Satisfactory. While Quality at Entry had significant shortcomings, Bank Supervision managed to steer the project towards a successful outcome after the AF despite the delays.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

- The PAD did not include a Theory of Change (ToC) or results chain. Nevertheless, the ICR (Annex 7a & 7b) included an ex-post ToC for the original and revised PDO that was constructed based on the PDO, the project activities and the results indicators as reported in the PAD and the Restructuring Paper. Overall, the two ToCs in the ICR were sound and reflected the relation between the project inputs, outputs, outcomes and long-term outcomes. However, both ToCs did not reflect the critical assumptions that underpinned the achievement of the stated objectives.
- The original PDO was to be assessed through five PDO outcome indicators: 1. Preparation of a National IWRM strategy; 2. Preparation of two agreed River Basin Management Plans (RBMPs) for



the Drin-Buna and Semani River basins; 3. Establishment of a Water Resources Database (National Water Resources Cadastre); 4. Compliance with agreed seasonal water distribution schedules (target: 75%); and 5. Increase in recovery of O&M costs as percentage of O&M charges invoiced (target: 70%). These outcome indicators were not comprehensive enough to capture the project achievements. Specifically, the impact of the project investments on irrigation improvements, crop yields and cropping patterns were relevant elements that should have been monitored. The ICR (paragraph 84) acknowledged that "shortcomings in the original results framework undermined project monitoring and reporting."

- The original RF included 21 intermediate outcome indicators. Most of which were quantitative. However, the RF lacked critical intermediate outcome indicators that could measure improvements in the irrigation service, for example, improved conveyance, improved delivery to tail ends, and improvements in the time needed by farmers to irrigate their fields.
- **Restructuring and changes to the RF.** Outcome indicators and targets were revised as a result of both the 2015 restructuring and the 2018 restructuring/AF. Also, 12 intermediate outcome indicators were dropped as a result of GoA's new irrigation law, lack of causality, or redundancy (ICR, paragraph 28). The PDO was also revised as part of restructuring and the AF in 2018. The change in wording for Objective 2 namely, dropping the reference to sustainable improvements in performance, provided a closer connection between the objective and indicator. Also, the AF added one new PDO outcome indicator.
- While the changes in the PDO and outcome indicators under the AF were improvements over those in the original project, these changes fell short as the RF remained deficient and did not comprehensively capture the project achievements in terms of specific improvements in irrigation services.
- Overall, M&E design was deficient and undermined the project monitoring and reporting.

b. M&E Implementation

- Each ministry PMT had one dedicated staff for the M&E system. According to the ICR (paragraph 84) "the arrangements for M&E were appropriate for a project with two implementing agencies."
- A project-financed consultancy set up the MIS and consultants monitored the progress in project implementation and safeguard compliance. M&E consultants also coordinated their reporting with the dam safety and I&D supervision consultants to consolidate on a semi-annual basis the safeguards-related data documented by the supervision consultants.
- Inputs from baseline surveys were completed during project preparation and additional surveys carried out for the mid-term and end-of-project reporting. The data collected were presented in semiannual progress reports shared with the Bank and SIDA prior to their joint implementation support missions (ICR, paragraph 86).

c. M&E Utilization

- According to the ICR (paragraph 88) "Bi-yearly progress reports formed the basis for discussion during supervision missions, the MTR, and end-of- project assessments." M&E reports provided information on the project implementation status and achievement of project objectives.



- M&E reports were used by the Bank and SIDA team as a basis for discussion with MARD on progress in achieving project objectives, and where to focus attention. No specific example were provided in the ICR on how M&E guided the project management.

Summary of M&E Quality. Overall, M&E Quality is rated Modest. M&E design suffered from significant shortcomings relating to the original RF, which according to the ICR (paragraph 84) "undermined project monitoring and reporting." Despite restructuring the project twice during implementation, the RF remained deficient and lacked critical indicators to measure improvements in the irrigation service. The ICR (paragraph 89) acknowledged that M&E design was deficient and that the ICR relied on "additional evidence to better justify some of the outcomes." Finally, M&E utilization relied on the project monitoring reports. While M&E monitoring reports could have been comprehensive, utilization could have benefitted from a more focused M&E design.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was classified as environmental category B (partial assessment) due to the nature of project activities and the fact that there would be no new dams or expansion of the irrigation schemes, compared to the originally designed schemes. It triggered five safeguard policies at the appraisal of the original project as follows: Environmental Assessment (OP/BP 4.01), Pest Management (OP 4.09), Involuntary Resettlement (OP/BP 4.12), Safety of Dams (OP/BP 4.37), and Projects in International Waterways (OP/BP 7.75). The Borrower prepared an Environmental and Social Framework Document (ESFD) and a number of draft site specific Environment and Social Management Plan (ESMPs) for the first year of project implementation, which involved rehabilitation of dams and the immediate ancillary works around the reservoirs. A Resettlement Policy Framework was also prepared on October 9, 2012.

According to the ICR (paragraph 91) "all project works complied with the Environmental and Social Management Framework dated October 1, 2012."

Compliance with environmental safeguards. Construction was in the footprint of existing canals and no construction was near residential areas or national roads. Throughout project implementation, there were no major environmental issues of concern (ICR, paragraph 91).

Compliance with social safeguards. According to the ICR (paragraph 92) "there was no land acquisition during implementation of either the original project or AF." A social development/safeguard specialist joined missions to ensure that there were no other potential issues that could pose a social risk.

Compliance with OP/BP 4.37 (Dam Safety). According to the ICR (paragraph 93) "the project met all requirements under this policy."



Compliance with OP/BP 7.75 (Projects in International Waterways). According to the ICR (paragraph 94) "the project met the exception conditions under OP/BP 7.75", since the project would not adversely affect the quality or quantity of water flowing to other riparians and would not be adversely affected by other riparians' water use.

b. Fiduciary Compliance

Financial Management (FM). Both implementation agencies had qualified staff to handle FM in accordance with the Bank's requirements. Financial audits were contracted on time, with few exceptions, and the Bank's approval of the final audits was unqualified. According to the ICR (paragraph 97) "Fiduciary management was carried out in full compliance with the World Bank rules."

Procurement. The two implementing agencies had experienced procurement specialists familiar with the Bank's procurement rules and regulations. While, there were some delays with contract processing, the ICR (paragraph 96) noted that "there were no serious problems." According to the ICR (paragraph 96) "procurement management was carried out in accordance with World Bank rules."

c. Unintended impacts (Positive or Negative)

d. Other

During implementation, the management of irrigation at the municipal level changed as water masters replaced Water User Organizations (WUOs). As a result, water masters became the primary beneficiary of the project financed capacity building activities. This ultimately strengthened the water master system and dramatically reduced, or unintentionally eliminated, the role of the WUOs in the project areas (ICR, paragraph 76).

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	



12. Lessons

The ICR included five lessons. The following three are emphasized with some adaptation of language:

1. To avoid cost overruns during implementation, it is important that projects involving infrastructure activities use robust and realistic cost estimates for civil works that reflect market prices at the time of appraisal. The World Bank appraisal team should be responsible for ensuring that appraisal costs reflect market prices within the country, regionally, and internationally with appropriate levels of price and physical contingencies. A difference of 20% is acceptable and can be covered by contingencies. In the case of the WRIP, the failure to obtain reasonable cost estimates led to the relaunching of several contracts, not having sufficient funds for implementation of more than half of the schemes, and subsequent implementation delays and processing of additional finance and time to implement the original project.

2. Irrigation projects designed to increase agricultural productivity must include support to farmers in agricultural marketing to avoid price declines due to increased productivity. Interviews with the men and women who own small farms and sell their products along national roads expressed satisfaction with the newly improved irrigation. However, they are now concerned about how and where to sell the increased volume of products they are now able to grow. The experience of WRIP emphasizes the importance of including agricultural marketing to enable farmers to sell their increased volume of products otherwise project areas might experience excess supply and depressed prices.

The following lesson is emphasized by IEG:

3. To ensure a satisfactory outcome of a complex irrigation project, design and preparation need to include a sound analysis of the implementation environment and realistic cost estimates. The project faced two critical challenges during implementation, first, the Government changed the irrigation law which deemed some aspects of the project irrelevant. A transparent dialogue with the Government during the preparation stage would have allowed the team to foresee such changes. Second, the cost estimates of the rehabilitation of irrigation infrastructure were highly underestimated at appraisal, despite the project-financed feasibility studies. This necessitated additional financing to complete the envisioned activities. To accommodate price increases within contracts, cost estimates need to be realistic and account for domestic, regional, and global estimates with traditional physical and price contingencies, including projected rates of foreign and domestic inflation.

13. Assessment Recommended?

Yes

Please Explain



The project had a deficient M&E design that did not comprehensively capture the achievement of the PDO. Also, the project introduced institutional changes and replaced Water Users Organizations (WUOs) with water masters in managing irrigation at the municipal level. Therefore, an assessment is warranted to further verify the project results and assess the performance of water masters as an alternative to WUOs in managing irrigation at the municipal level. An assessment will also provide an opportunity to generate more lessons from the project experience that could be useful for future similar operations.

14. Comments on Quality of ICR

Quality of Evidence. The ICR acknowledged that the Results Framework was deficient (see section 9a). The ICR relied on external data, which at times was anecdotal, to assess the project outcomes.

Quality of Analysis: The ICR provided clear linking to the extent possible between evidence and findings and used the evidence base to serve the arguments under the different sections, in particular the discussion on outcomes. However, the impact of the project on improving service delivery was not fully captured due to the absence of relevant indicators in the RF.

Results Orientation: The ICR included a comprehensive discussion on the achievement of the PDO. However, discussion on outcomes could have been more balance between reporting on the achievement of outcome indicators and what the project actually achieved on the ground. The reversed order of discussing the achievement of outcomes was not helpful.

Consistency with guidelines. The ICR used the available data to justify most of the assigned ratings. Discussion of outcomes was undermined by a poor M&E design. efficiency analysis provided an acceptable justification for the robustness of the project investments. The ICR reported some costs in Euros and others in US dollars, which created needless confusion.

Conciseness. The ICR provided comprehensive coverage of the implementation experience and candidly reported on shortcomings. The reporting on safeguards included an explicit statement on compliance. The ICR commented on the status of the final audit reports for the project. However, the discussion of M&E design could have benefited from further details with regards to the RF shortcomings, and the ToC could have benefited from including the critical assumptions that underpinned the achievement of the objectives. The ICR could have benefitted from including an Annex with a map to reflect the project areas and dam locations. Finally, the ICR did not discuss the risks that materialized during implementation and the no targets were provided for the reported outputs in Annex 1.

Overall, the Quality of the ICR is rated Substantial despite some shortcomings.

a. Quality of ICR Rating Substantial

