

Project Concept Note

Project Information

Project name	Irrigation System Modernization and Institutional Capacity Building Project
The sector, in which the Project will be implemented	Agriculture
Project type	upgrading, rehabilitation.
States, on whose territory the Project will be implemented, including Fund member states	Republic of Armenia
Investment site location and place of registration	Grant activities would take place through plain (Ararat, Armavir), pre-mountain (Aragatsotn, Kotayk) and in mountain areas (Gegharkunik, Tavush) of Armenia.
Rationale for ACF financing	<p>Long-term national program of the Republic of Armenia after emergency situation has entered a stage of development when building a solid foundation to ensure the smooth operation of the system becomes a major task. The experience of other countries, the process of institutional reform is a long and can last for decades. In addition, the need to restore / upgrade the infrastructure is not yet satisfied. However, both current programs end in less than a year. The situation was exacerbated by the fact that the program of the Corporation "Millennium Challenge" will not be able to fund all planned activities: instead of 200 km of main canals rehabilitated 36 km, instead of the 18 transfer of mechanical systems in gravity flow irrigation was built only 5, instead of 68 pumping stations restored only 17, instead of 500 km of farm canals rehabilitated 250 km.</p>
Project's objectives	<ul style="list-style-type: none">• • to provide reliable water supply for water users by:<ul style="list-style-type: none">o reduction in operating and maintenance costs;o reduction in the current high water losses in irrigation systems;o energy efficiency;• modernize part of the distribution network in such a way as to conform to the existing land use patterns;• to ensure the continuity of institutional reforms and capacity building of Water Users Associations (WUAs).
Project components	<p>I. <i>Replacement of Mechanical Irrigation with Flow Irrigation (US \$ 14 million);</i></p> <p>The objective of this component is to reduce the costs related to supply of irrigation water by replacing mechanical irrigation (using pumps) with flow irrigation: Argichi, Amrakits, Akunk, Norabats, Masis, Nor Kharberd, Spitak, Tsav Shikaog, Sarashen, Artamet, Ptghni.</p> <p>As a result of this component implementation, mechanical irrigation systems will be replaced with flow ones for 4,250 ha of land that will generate annual</p>

savings of 16 million kWh of electricity or US \$ 1.1 million.

II. Rehabilitation of Main and Secondary Canals (US \$ 5 million);

As a result of this component implementation, canals of total length of around 31 km will be restored in Aragatsotn, Armavir, and Kotaik irrigation systems. 9,239 ha of land will be connected to reliable water supply. Implementation of this component will generate annual savings of operating costs (US \$ 0.15 million) and 11.8 million m³ of water (US \$ 0.52 million).

III. Rehabilitation of WUAs On-Farm Distribution Network (US \$ 25 million)

In some cases, on-farm distribution system is not consistent with existing agricultural needs. Some of these systems can be modified by the introduction of drip irrigation or rain. Under this component, such options will be fully explored and developed for certain areas of the main and inter-farm canals in Ararat, Aragatsotn, Armavir, Syunik, Vayots Dzor, Kotayk and Shirak irrigation systems and Yerevan.

As a result of implementing this component, 27,000 ha of land will be connected to reliable water supply. Implementation of this component will annually generate savings of operating costs (US \$ 0.30 million), 3.0 million kWh of electricity (US \$ 0.21 million), and 38.0 million m³ of water.

IV. Building WUAs Institutional Capacity and Pilot Creation of WUAs Federatio (US \$4 million);

Programs implemented in the sector previously had positive results, but the interruption of the process of institutional reforms in the irrigation sector will have irreversible consequences for the entire industry.

Currently, there are the following important unsolved problems :

- WUA staff operates inefficiently ;
- Farmers are still not properly informed about their rights and responsibilities as members of WUA and do not take an active part in the management of WUA;
- Representatives of the farmers do not represent the interests of their members properly;
- The work of the Governing Body is not consistent, which adversely affects the normal functioning of WUA;
- The Audit Committee and the Dispute Resolution Commission are not active, and in some cases, do not function ;
- WUA are not equipped to operations and maintenance of irrigation infrastructure.

This component mainly affects the development of the management capacity of WUAs and WUA and technical re-equipment of a federation of WUAs :

- 1) Engaging farmers to WUA management , by raising awareness among members about the role of the WUA , refine the rights and obligations of members , the development of mechanisms for ensuring transparency and accountability in governance, as well as practical ways to resolve conflicts;
- 2) Providing general assistance to pilot WUA federation on institutional development : strengthening institutional capacity , provide technical support , training and organization of training programs among the members , formation of the legal framework for the federation.

Marked the issues will help maintain the results achieved in the implementation of previous programs , and will increase the responsibility of water users and WUA management.

V. *Project management (US \$ 2 million).*

Project Financing Scheme

Preliminary Project Financing Scheme:

	US \$ million
Armenia	10
ACF	40
Total	50

The overall amount of financing needs for the Project is around US \$ 50 million. The Project financing is planned to come from two sources: the budget of the Republic of Armenia in the amount of 20 % of its total cost and ACF in the amount of 80 %. Since Armenia has not yet borrowed ACF loans, the Project is within Armenia's access limit for ACF funds (US \$ 1,106.69 million).

Preliminary loan terms:

- Currency: US dollars
- Interest rate: 1.65 %
- Maturity, including the grace period: 20 years.
- Grace period for loan principal repayment: 5 years.

The proposed collateral

Source of debt service on loans - the budget of the Republic of Armenia.

Government Support of the Project

RA Government Resolution No. 730-A (of June 18, 2012) approved RA Government Programme for 2012-2017, specifying (paragraph 3.1.7.2.) priority areas for investment:

- introduction of new water supply systems in rural areas;
- construction of water reservoirs, irrigation infrastructure rehabilitation;
- repair and reinforcement of key hydraulic engineering structures; and
- proper operation and technical maintenance of existing facilities.

RA Government Resolution No. 1207-H of October 30, 2008), namely irrigation system rehabilitation, water supply improvement, and application of WUAs joint management principles (paragraph 8.2, 369-370)

To this end, RA Government has initiated a number of improvements in the institutional framework and implementation of projects aimed at creation and development of a modern infrastructure, ensuring conditions for sustainable and efficient agriculture regulated by market mechanisms. The proposed Project will further the efforts of RA Government in this direction.

Letter of the Minister of Finance in support of the application for the grant for the preparation of this project of the Trust Fund of Institutional Development of the Europe and Central Asia.

Economic and

financial indicators of the project

Financial performance		
The economic rate of return	28.80%	
Net present value	US \$ 42589 thousand	
The economic payback period	3,5 years	
Sensitivity analysis of financial indicators:		
With the reduction in income of 30%	20.02%	US \$15888 thousand
With an increase of 30%	22.22%	US \$28664 thousand
With the reduction of revenues by 30% and the parallel increase of 30%	14.4%	US \$1963 thousand
With a 2-year delay in the implementation	16.46%	US \$1140 thousand
Macroeconomic performance		
Growth of agricultural production	US \$50 million	
Growth of added value in agricultural sector	US \$38 million	
Growth of GDP through agricultural sector development	US \$121 million	
Growth of GDP through investments	7 US \$9 million	
Total GDP growth	US \$200 million	
Project ICOR ¹	1,38	
Country ICOR	5,5	

Project impact on the environment

In accordance with the World Bank's classification (Operational policies 4.01. Environmental assessment) the Project is classified under category "B" as one with potentially significant environmental and social impact of local nature, which is usually reversible and/or can be prevented. The program does not contain any risk of destruction of biodiversity, forest damage, changes of water channels and in the ecosystem.

Project readiness

The readiness of the project is high, as most selected for the construction and rehabilitation of facilities were originally included in the Armenian program of Millennium Challenge Corporation (USA) and these objects have pre-finished projects with selected technical solutions and resolutions. Preliminary calculations by ERR and NPV Are also available.

Monitoring

The tentative list of performance indicators includes:

- reduced water losses in irrigation systems;
- lower operating and maintenance costs;
- larger area of irrigated land;
- eliminated earth leakages posing a threat for inhabited localities;
- better water management.

¹ ICOR (Incremental Capital Output Ratio) - соотношение между инвестициями и увеличением реального производства.

Project Company Description

Project company

Organization that oversees the implementation of the project is the State Committee for Water Management of the Republic of Armenia (SCWS).

SCWS was established by the Government of the Republic of Armenia N92 on February 9, 2001. May 19, 2005 by the Government of the Republic of Armenia N663-N GKVR was transferred from the Office of the Ministry of Agriculture to the Ministry of Territorial unit.

Activities: water supply and irrigation infrastructure in Armenia.

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Project operator

As part of the project Water Sector Project implementation unit (PIU) at the SCWS is in charge of the supervision of the work undertaken by various organizations and stakeholders, the coordination of training and technical assistance (created by the Government of the Republic of Armenia N577, December 15, 1994).

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For more than 17 years of implementation of the programs of the water sector financial and procurement departments PIU gained a lot of experience and are fully compliant with the World Bank requirements.

The financial statements of the projects are prepared in accordance with international financial reporting standards. Financial audits revealed no problems, the auditors were unqualified, and the ability to implement continuous improvement in purchasing.

All the technological and manufacturing processes will be described in the Operational Guidelines of the program with the approval of this application form.