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Sovereign Financing in Eurasia: Water Sector and Hydropower Generation



A. Levenkov



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Artem Levenkov, Head of Socioeconomic Analysis and IFIs, Chief Economist Group, EFSD: alevenkov@efsd.org

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This Report uses materials of the EFSD Sovereign Financing Database as of July 1st, 2023.

The data presented in the Report are taken from the official websites of international financial institutions (IFIs) and their reports. The data are provided for information purposes only and cannot be considered exhaustive. Estimates of sovereign financing are conservative as only publicly available data from a limited number of IFIs and development agencies have been collected for the purposes of this Report.

The EFSD Sovereign Financing Database is publicly available at https://efsd.org/en/research/sfd/

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List of Acronyms and Abbreviations

ADB Asian Development Bank

AFD French Development Agency

AIIB Asian Infrastructure Investment Bank

CAREC Central Asia Regional Economic Cooperation Programme

DAC Development Assistance Committee

EBRD European Bank for Reconstruction and Development

EDB Eurasian Development Bank

EEAS European External Action Service

EFSD Eurasian Fund for Stabilization and Development

EIB European Investment Bank

GCF UN Green Climate Fund

GDP gross domestic product

GEF Global Environment Facility

GIZ German Agency for International Cooperation

IFI international financial institution

Islamic Development Bank

MDB multilateral development bank

NDB New Development Bank

OECD Organisation for Economic Cooperation and Development

SDC Swiss Agency for Development and Cooperation

SDG Sustainable Development Goal

TA technical assistance

UN United Nations

UNDP United Nations Development ProgrammeUSAID US Agency for International Development

WB World Bank

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Key Facts and Figures

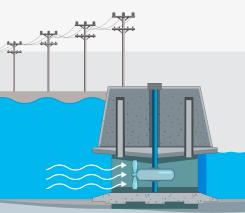
The region's water and HPP sector gets considerable financial support

11% or US \$11 billion of the total approved sovereign financing from 2008-1h 2023 in the region goes to the water and HPP sector



162 worth US \$7.8 billion

ARE IN ACTIVE PHASE





Uzbekistan is the leader in terms of approved financing for the water and HPP sector in the region (55 operations worth US \$4.1 billion)

LEADERS IN TERMS OF APPROVED FINANCING FOR THE WATER AND HPP SECTOR



32% of the total approved financing or US \$3.5 billion



26% of the total approved financing or US \$2.8 billion

THE FINANCING IS HIGHLY CONCESSIONAL



INTEREST RATE OF 1% for the grace period and then **1.5%** or fixed **1%**



GRACE PERIOD 5 to 8 years



DURATION from 20 to 32 years

TRENDS IN WATER AND HPP SECTOR **FINANCING**



The financing of the water and HPP sector in the region is comparable to the total financing of such sectors as education, health, and social protection (about US \$11 billion) and is second only to the financing of the transport sector (~US \$17 billion).



The financing of the water and HPP sector is cross-sectoral in nature; therefore, investment in this sector is key to achieving most of the Sustainable Development Goals.



Grant financing plays a significant role (US \$0.9 billion), and we expect this situation to continue in the near future due to the rise in the cost of borrowing from IFIs.



OOO The financing of the water and HPP sector is provided as a package (a mix of loans, grants, and technical assistance throughout the project).



TA projects account for a third of all operations in the water and HPP sector.



Co-financing is actively used by IFIs to support highly capital-intensive water and HPP sector projects (US \$2.5 billion, or 22% of total financing).



The "new" MDBs, such as AIIB and the NDB, play a prominent role (ranked in the top 5 according to the volume of financing).



The financing provided by global climate funds and development agencies (about US \$0.8 billion) is growing, green bonds are issued.

Based on an analysis of international experience in financing the water and HPP sector, we have identified key challenges facing the sector and propose several recommendations for IFIs to address them.

Challenges	Recommendations for IFIs
The financing of the water and HPP sector is insufficient	Use new innovative mechanisms: create special funds similar to the IMF RST; apply regulatory exemptions (a higher minimum loan-to-equity-ratio) for MDBs
Rising costs of borrowing for certain countries	A transition period used by IFIs for the states, namely mixed financing in the early years with a certain concessional component
Insufficient private capital participation	Use PPP mechanisms in the water and HPP sector financing
Lack of well-developed projects with a viable business model	Engage IFIs in the preparation of project pre-feasibility and feasibility studies through the provision of TA for these purposes

Introduction

Water is one of the most valuable resources in Eurasia, supporting the development of many industries, especially agriculture. This development comes at a high price and calls into question long-term sustainability, both environmentally in terms of degraded aquatic ecosystems and financially due to high pump irrigation costs and low cost recovery.

Eurasia is a region of developing economies where economic progress and population growth lead to increasing demand for water. The potential future demand for water is expected to increase by 2050 as a result of population growth, improved water supply and sanitation standards, increased urbanisation, growing industrial demand, and the impact of expanded hydropower use.

The region's water management and HPP systems are inextricably linked and together form the water and HPP sector.

The availability of water in the region affects its social and economic development. Water is a transboundary resource that is in high demand for food production, energy, and life safety. Population growth and climate change will continue to drive increased demand for water across all economic sectors. This requires effective management and upgrading of infrastructure for the future management of water resources in the region.

There will be a large gap between potential demand and available supply unless the region modernises its water and HPP sector. The current level of financing is insufficient to achieve the goal of universal access to water and sanitation and their sustainable management.

Water infrastructure is typically funded by a mix of public and private sources. Tariffs are the main funding source available to fund capital and operation and maintenance expenditures. Since water is an essential public good, water tariffs are socially sensitive. So, water tariffs are still limited to covering the O&M costs of water utility operators.

Private sector financing cannot substitute public funding, but unlocking it can help governments narrow the sector's largest investment gaps. This can be done by, amongst others, reducing operating and maintenance costs inefficiencies, revising water tariffs, developing PPP projects by mobilising commercial lenders, raising the creditworthiness of service providers, and mobilising market-based repayable finance to address water infrastructure rehabilitation and construction costs.

Given the insufficient investment attractiveness of the countries in the region and the low profitability of projects for private capital and foreign investors, International financial institutions (IFIs), development agencies, and climate funds act as an important source of financial resources for the implementation of government initiatives to develop the sector.

The purpose of this Report is to analyse operations of IFIs, climate funds, and development agencies in the water and HPP sector between 2008 and H1 2023 in 11 countries of the Eurasian region, including six Eurasian Fund for Stabilization and Development (EFSD)

member states, as well as Azerbaijan, Georgia, Mongolia, Turkmenistan and Uzbekistan. It is important for the EFSD to assess how the number of projects, their themes and objectives have changed over time, how countries have worked with different IFIs to implement water and HPP sector projects, and to better understand the sector to support it through sovereign financing.

The source of information for this sectoral review of sovereign financing operations in the water, irrigation, and hydropower generation sectors in the region was the **EFSD Sovereign Financing Database (SFD)**. The database is available online here (Box 1).

Box 1. About the SFD Project

The SFD contains information on operations funded by 24 different donors from 2008 to 2023. **SFD objectives:**



To compile a comprehensive regional database of sovereign financing, including investment loans, stabilisation loans, grants, and TA projects



To provide a regular quantitative and qualitative assessment of sovereign financing and make the data open to the public



To benefit government authorities as a source of systemic information by country/sector/etc.



To benefit the donor community in order to ensure better coordination among IFIs

More information on the SFD methodology is available here.

The SFD covers sovereign financing approved by IFIs, development agencies, and climate funds in the Eurasian countries, namely: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Russia, Tajikistan, Turkmenistan, and Uzbekistan. The data are collected based on information presented on official websites of IFIs: the Asian Infrastructure Investment Bank (AIIB), the Asian Development Bank (ADB), the World Bank (WB), the Eurasian Development Bank (EDB), the Eurasian Fund for Stabilization and Development (EFSD), the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), the International Monetary Fund (IMF), the New Development Bank (NDB), and the Islamic Development Bank (IsDB). The review also contains information on the operations of the following development agencies: GIZ (Germany), JICA (Japan), SDC (Switzerland), TIKA (Turkey), USAID (USA), AFD (France), UNDP, Abu Dhabi Fund for Development, UN Women, United Nations Environment Programme (UNEP), Global Environment Facility (GEF), UN Green Climate Fund (GCF), Swedish International Development Cooperation Agency (SIDA), European External Action Service (EEAS). The approved financing analysed in the framework of the monitoring exercise is grouped into three types: stabilisation financing, investment financing, and technical assistance projects.

This Reportis structured in the following way. Section 1 presents the general principles of IFIs' engagement in the water and HPP sector. Section 2 offers a review of the total approved financing and its forms, as well as its country and institutional context. Section 3 describes the trends and challenges for the financing of the water and HPP sector. The annex contains information on water and HPP sector development strategies in the countries, as well as relevant policies of IFIs and development agencies in the sector.

General Principles of IFIs' Engagement in the Water and HPP Sector

The Eurasian countries face the issue of ageing water and HPP infrastructure, most of which was built several decades ago. The problem of water losses is becoming increasingly grave. The water management sector is also faced with new and growing challenges, such as increasing negative impacts of climate change, unproductive agricultural practices and water scarcity. The countries of the region therefore need to expand and accelerate financing for the water management sector to rehabilitate existing infrastructure, improve its efficiency, and build new facilities to meet growing demand. Thus, the water sector needs investment in infrastructure, as well as institutional development and transformation, as the demand for water continues to grow while water resources are limited.

The state plays an important role in the development of the water and HPP sector. The importance of the state is evident at the level of preparing long-term conceptual frameworks for the development of the water and HPP sector, defining tariff policies, finding sources of financing, implementing projects, etc. (see the list of country programmes in the Annex 1). Despite the depletion of water resources, all the countries in the region envisage further increases in water consumption for irrigation and hydropower generation in their national strategies and programmes.

International financial institutions (IFIs), development agencies, and climate funds are important sources of finance for water and HPP sector projects. Financing of projects in the water and HPP sector requires project preparation and technical assistance (TA) throughout the entire project. The advantage of IFIs is their ability to guarantee protection against risks, as well as provide assistance in becoming a project participant, leveraging additional public and private finance in infrastructure projects, etc.

The leading role of IFIs in the water and HPP sector is also explained by the availability of a grant or highly concessional financing component as the project cycle is long and the costs are high. A specific feature of such financing is the inability to leverage market financing to fully implement a project on terms commensurate with the project's needs and at an acceptable level of risk.

The activities of IFIs in the water and HPP sector are based on the 2030 Agenda for Sustainable Development (Sustainable Development Goal (SDG) 6 and SDG 7), the 2015–2030 Sendai Framework for Disaster Risk Reduction, the Addis Ababa Action Agenda of the Third International Conference on Financing for Development, and the Paris Agreement on climate change (Box 2).

Box 2. Global Water and Energy Sector Initiatives



In December 2016, the UN General Assembly adopted Resolution 71/222, proclaiming the period from 2018 to 2028 **the International Decade for Action "Water for Sustainable Development"**. The objectives of the Decade should be a greater focus on the sustainable development and integrated management of water resources for the achievement of social, economic, and environmental objectives and on the implementation and promotion of related programmes and projects, as well as on the further cooperation and partnership at all levels in order to help to achieve internationally agreed water-related goals and targets, including those contained in the 2030 Agenda for Sustainable Development.





The 2030 Agenda for Sustainable Development is a set of 17 goals that were adopted by all UN member states in 2015 and a 15-year plan to achieve the goals. SDG 6 is to ensure availability and sustainable management of water and sanitation for all. Achieving this goal involves strengthening international cooperation and supporting capacity-building in developing countries to implement activities and programmes related to water and sanitation. These activities include the collection and desalination of water, the improvement of water use efficiency and the treatment of wastewater, as well as the application of water recycling and reuse technologies. SDG 7 is to ensure universal access to affordable, reliable, sustainable, and modern energy for all by 2030.



The Paris Agreement regulates actions to reduce carbon dioxide in the atmosphere. The purpose of the Agreement (according to Article 2) is to enhance the implementation of the UN Framework Convention on Climate Change, in particular to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

2. Financing the Water and HPP Sector in Eurasia

11% or US \$11 billion of the total approved sovereign financing in the region goes to the water and HPP sector.

The Sovereign Financing Database contains information on 306 sovereign financing operations in the water and HPP sector worth about US \$11 billion. Of these, water use and irrigation account for US \$8.8 billion (265 operations), and hydropower generation for US \$2.2 billion (41 operations) (Figure 1).

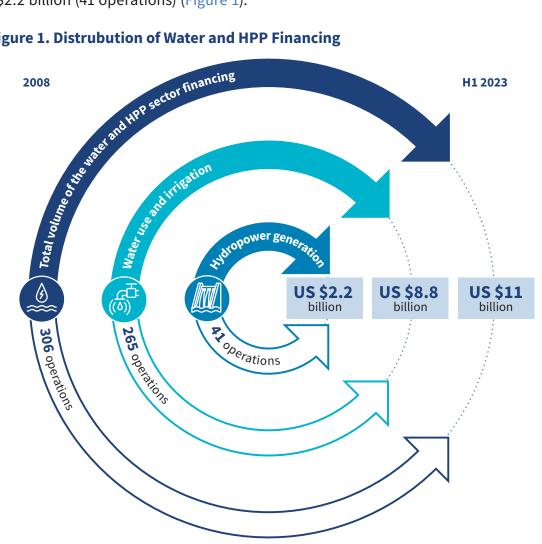


Figure 1. Distrubution of Water and HPP Financing

Projects in the water and HPP sector account for 11% of the total sovereign financing recorded in the SFD — US \$11 billion out of US \$100 billion. At the same time, projects in the area of water use were implemented in all 11 countries of the sample, while projects in the area of hydropower generation — in 5 countries (Azerbaijan, Georgia, Kyrgyzstan, Tajikistan, and Uzbekistan).

Among water use projects, water supply and sewerage projects amount to US \$4.9 billion, or 55.9%, followed by multisector projects¹ worth US \$1.7 billion, or 19%, and then projects related to improving the efficiency of public administration worth US \$683 million, or 7.8% (Figure 2).

water supply and sewerage irrigation multisector public administraand 4,897 1,659.4 tion drainage 683.2 615.3 agriculture environment and natural 460 resources 435.1

Figure 2. Distribution of Water Use Projects, US \$ millions

Source: EFSD Sovereign Financing Database

More than half of all water and HPP sector projects worth US \$7.8 billion are currently in active phase (162 out of 306). Majority of the projects have an implementation period from 5 to 10 years. Approved financing peaked in 2018 (Figure 3).

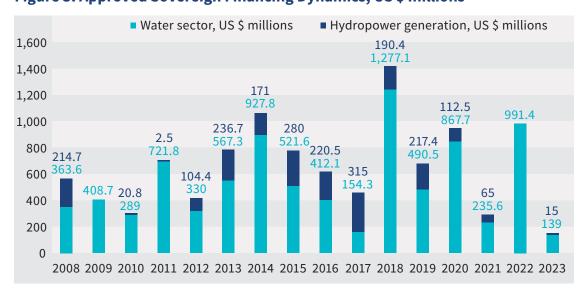


Figure 3. Approved Sovereign Financing Dynamics, US \$ millions

Source: EFSD Sovereign Financing Database

¹ Multisector projects are those at the intersection of different activities within water use.

Almost all financing in the water and HPP sector was investment financing in the form of loans. There was also investment financing in the form of grants and TA projects (103 operations) (Figure 4).

IFG 545.9 378.7

IFL 8,029 1,753.8

TA 125.8 33.3

0 2,000 4,000 6,000 8,000 10,000

• Water sector • Hydropower generation

Figure 4. Forms of Financing in the Water and HPP Sector, US \$ millions

Note: IFL — investment financing in the form of a loan, IFG — investment financing in the form of a grant, TA — technical assistance.

Source: EFSD Sovereign Financing Database

Water and HPP sector projects are often financed with grants (US \$0.9 billion). These grants were provided by ADB, WB, as well as the Global Environment Facility (GEF) and the UN Green Climate Fund (GCF).

Financing projects in the water and HPP sector requires thorough project preparation and TA throughout the entire project. Among IFIs, ADB is the leader in providing TA to the states.

2.1. Sovereign Financing by Country

Uzbekistan is the leader in mobilising IFI resources in the water and HPP sector
 in Eurasia. The amount of approved financing for the period from 2008 to H1 2023 under 55 projects was US \$4.1 billion.

Uzbekistan is the third largest economy in Eurasia (after Russia and Kazakhstan) with a GDP of US \$92.3 billion. Industry and agriculture in Uzbekistan are highly energy-intensive, however the country faces a high level of depreciation of its irrigation infrastructure, resulting in large water losses and a need for significant investment to rehabilitate the water and HPP sector. Given the lack of attractiveness of the water and HPP sector to investors and the low profitability of projects for private capital and foreign investors, IFIs are an important source of finance for the implementation of projects in the water and HPP sector.

Tajikistan, Kyrgyzstan, and Georgia got US \$1.3 billion of financing approved over the same period, and Azerbaijan got US \$1.2 billion (Figure 5).

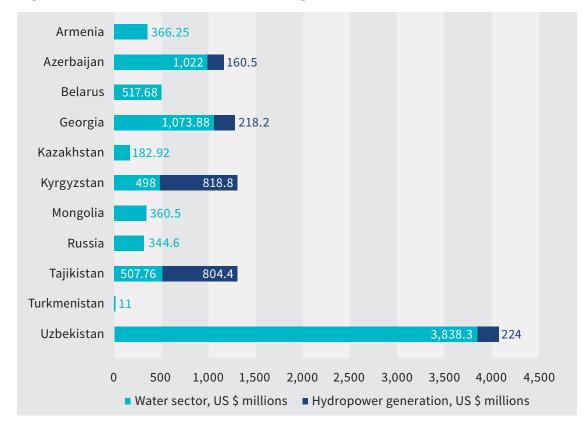


Figure 5. Water and HPP Sector Financing by Country, US \$ millions

Source: EFSD Sovereign Financing Database

EFSD member states account for 36.1% of the total approved financing, or US \$3.9 billion. 82 projects worth US \$1.8 billion are in the active implementation phase. (Figure 6).

The table below shows the largest water and HPP sector projects in the region.

Table 1. Major Ongoing Projects in the Water and HPP Sector

Country	Project title	Creditor	Amount, US \$ millions	Imple- mentation time frame	Link to the project
Water use and i	rrigation				
	Western Uzbekistan Water Supply System Development Project	ADB	145	2018-2025	
Uzbekistan	Bukhara Region Water Supply and Sewerage	AIIB	385.1	2020– present	
	South Karakalpakstan Water Resources	WB	261	2014-2023	
Kyrgyzstan	Climate Resilient Water Services Project	WB	100	2022-2028	
Hydropower ge	neration				
Kyrgyzstan	Toktogul Hydropower Plant Rehabilitation, Phase II	ADB, EFSD	210	2014– present	
Tajikistan	Nurek Hydropower Plant Rehabilitation, Phase I	EFSD, WB, and AIIB	350	2017– present	
Kyrgyzstan	Commissioning of the Second Hydro Generation Unit of Kambarata Hydropower Plant-2	EFSD	110	2019– present	
Tajikistan	Golovnaya 240-Megawatt Hydropower Plant Rehabilitation Project	ADB	136	2013-2024	

Source: EFSD Sovereign Financing Database

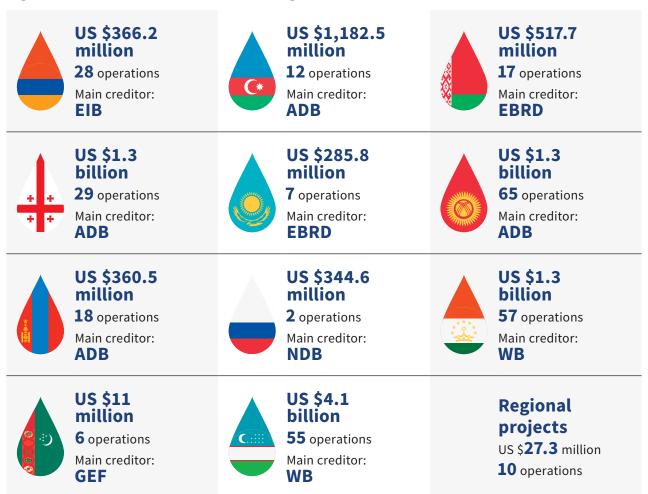
Tajikistan and Kyrgyzstan are leaders among the EFSD member states in terms of financing approved for the water and HPP sector. For instance, the financing approved for Tajikistan was US \$1.3 billion (57 operations) and that approved for Kyrgyzstan was US \$1.3 billion (65 operations). TA projects accounted for a quarter of operations in these countries.

Armenia recorded 28 operations in the area of water use alone worth US \$366.2 million. Half of all operations are TA projects, mainly supported by ADB and USAID. Seven projects worth US \$107.8 million are active.

The largest ongoing project in the area of water use in Armenia is the EFSD project worth US \$40 million to modernise irrigation systems.

Kazakhstan is implementing two major water use projects supported by the WB worth US \$102.9 million and the EBRD worth US \$180 million. The EBRD project also involves cofinancing from the Government of Kazakhstan in the amount of about US \$21 million.

Figure 6. Water and HPP Sector Financing Profiles in the Countries



2.2. Sovereign Financing by Institution

The leading positions among the IFIs in terms of approved financing in the water and HPP sector are held by **ADB with approved financing of US \$3.5 billion and the WB with US \$2.8 billion.**

Multilateral and bilateral cooperation in the region is mainly based on regional initiatives. In each of the areas, in addition to financing projects, these institutions share knowledge and global expertise, build systems and approaches to sector development, introduce technological solutions, and improve management methods.

The most prominent regional initiative is CAREC, the Central Asia Regional Economic Cooperation Programme. The goal of the Programme is to promote the economic development of the countries of the region, as well as poverty reduction. The partner IFIs of the Programme are ADB (acting as the CAREC Secretariat), the WB, the EBRD, the IMF, the ISDB, and the UNDP.

The WB is the leading institution under the Central Asia Water and Energy Programme (CAWEP). CAWEP is a partnership among the WB, the EU, Switzerland (through the State Secretariat for Economic Affairs [SECO]), and the United Kingdom (through the UK Department for International Development [DFID]) to strengthen the enabling environment to promote energy and water security at the regional level and in the beneficiary countries. The programme is structured with three pillars: (1) energy security; (2) the energy-water nexus; and (3) water security. The Programme has pursued three components since its inception in 2009: (a) data and diagnostic analysis; (b) institutions, capacity, and dialogue; and (c) supporting investment. Another World Bank instrument is the CAEWDP (Central Asia Energy and Water Development Programme) initiative aimed at providing TA in the area of energy and water resources for Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan and facilitates the involvement of Turkmenistan and Afghanistan in regional projects.

The goals of these global initiatives are reflected in the principles and priorities of international institutions. In particular, the key priorities of their activities in the water and HPP sector include: ensuring the availability and sustainable management of water and sanitation for all in accordance with the SDGs; developing and improving countries' energy infrastructure; and transition to low-carbon energy structure (see the table in Annex 2).

Institutionally, the leaders among IFIs are **ADB with approved financing of US \$3.5 billion** and the **WB with US \$2.8 billion.** These are followed by the EIB — US \$1.3 billion, the EBRD — US \$1 billion, and AIIB — US \$638 million.

ADB and the WB together account for more than half of total approved sovereign financing for the water and HPP sector in the region. This is explained by the strong specialisation of these institutions in water and HPP sector development, as well as the high demand for water and HPP sector projects in Eurasia (Figure 7).

Figure 7. Approved Financing in the Water and HPP Sector in Eurasia

Approved financing, US \$ millions		Institution	Share of total approved financing, %
	3,504.3	ADB ASIAN DEVELOPMENT BANK	31.93
	2,844.2	THE WORLD BANK IBRD - IDA WORLD BANKGROUP	25.91
	1,264.1	European Investment Bank	11.52
	1,039	European Bank for Reconstruction and Development	9.47
	698.2	ASIAN INFRASTRUCTURE INVESTMENT BANK	6.36
	320	New Development Bank	2.92
	300	سندوق ابوظمین للتندمین د سندوق ابوظمین للتندمین د AMI DIMAN TUND TO MONOTO VIOLOGIAN	2.73
	290	E O C P	2.64
	254	AFD AGRIC RANGASE OF BEYLDOPPHENT	2.31
	233	ISDB البنك الإسلامي للتتمية Islamic Development Bank	2.12
	62.2	GREEN CLIMATE EUND	0.57
	48.8	SWISS AGENCY FOR DEPELOMENT AND COOPERATION SDC	0.44
	44.6	European Commission	0.41
	41.1	global environment facility INVESTING IN COURT PLANET	0.37
	10.9	Sida	0.1
	10.4	giz Deutsche Gesellschaft für Internationale Zusammenarbeit (BIZ) 6mbH	0.09
	7.1		0.06
	3.6	jica	0.03
	0.1	FIGHT THE AMERICAN PEOPLE	0
	10,975.6	Total:	100

Source: EFSD Sovereign Financing Database

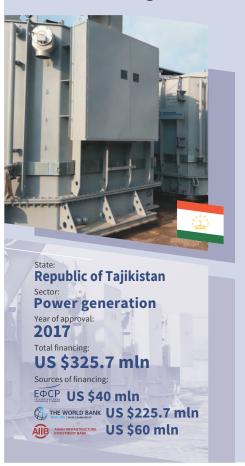
It is worth mentioning that in terms of hydropower financing, the EFSD is one of the leaders, along with the ADB and the WB

Being a new development institution, AIIB has actively started to invest in water and HPP sector projects in terms of water use in Uzbekistan and hydropower generation in Tajikistan.

Project financing by development agencies and climate funds amounted to about US \$800 million. The lower amount of financing is due to their smaller budgets. The leader among them was the Abu Dhabi Fund for Development with approved financing in the amount of US \$300 million.

Major capital-intensive projects, especially in the hydropower generation sector, require co-financing with other IFIs. An example of successful co-financing is presented in Box 3.

Box 3. Co-Financing the Nurek Hydropower Plant Rehabilitation, Tajikistan (Phase I)



- The Nurek Hydropower Plant is the largest electricity producer in the Republic of Tajikistan
- The Nurek Hydropower Plant plays a key role in regulating the long-term flow in the Amu Darya River, which is critical for irrigation in Uzbekistan and Turkmenistan
- More than 10 million people use water from the Nurek Reservoir

Key effects and results of the project:

- Improved economic security and independence of the country from external supplies of fuel and electricity
- Improved reliability and stability of electricity supply to consumers
- Reduced operating and maintenance costs



Project description:

Rehabilitation of 3 power units and key components

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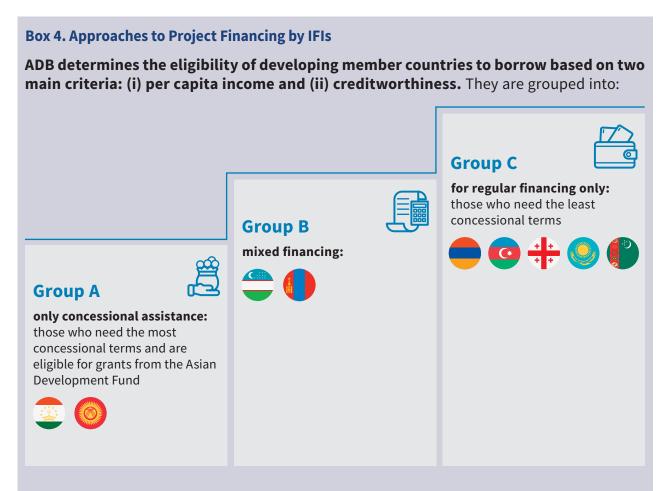


2.3. Terms of Financing Provided by IFIs

The Eurasian countries are recipients (with the exception of Russia) of financial support provided by IFIs. Financing of projects by IFIs is highly concessional and long-term.

Water and HPP sector financing is provided as a package. This is the case when different IFI instruments are used to finance a project, for example a mix of loans, grants, and TA throughout the project.

Not all IFIs and development agencies disclose the parameters of their loan agreements, which makes it difficult to analyse such projects and the features of their financing. The SFD contains data on the terms of financing provided by certain institutions, in particular major donors such as ADB and the WB, as well as the EFSD (Box 4).



In the Eurasian region, in 2023, Group A includes: Tajikistan (grant support), Kyrgyzstan (mixed financing with a 50% grant component); Group B includes: Uzbekistan and Mongolia; Group C includes: Armenia, Azerbaijan, Georgia, Kazakhstan, and Turkmenistan.

The WB provides financial resources to the countries through the International Development Association (IDA) and the International Bank for Reconstruction and Development (IBRD).

IDA is the largest source of concessional financing for the world's poorest countries. The eligibility for IDA support depends primarily on the country's level of prosperity, defined as the gross national income per capita below a specified threshold, which is updated annually (US \$1,315 in the current fiscal year). In the Eurasian region, IDA recipients are Kyrgyzstan and Tajikistan, while Uzbekistan has access to mixed financing. The remaining eight countries have access to IBRD resources.

IBRD loans are subject to different maturity premiums based on income and other factors. Countries are classified into one of four pricing groups: A, B, C, or D. The lending rate is SOFR plus an additional charge depending on the country group.

The EFSD, in turn, has four borrowing countries, which also receive concessional financing based on their debt sustainability and sovereign ratings.

Based on data collected in the SFD, we have identified typical terms of lending to water and HPP sector projects (Figure 8).

Figure 8. Terms of Financing Water and HPP Sector Projects

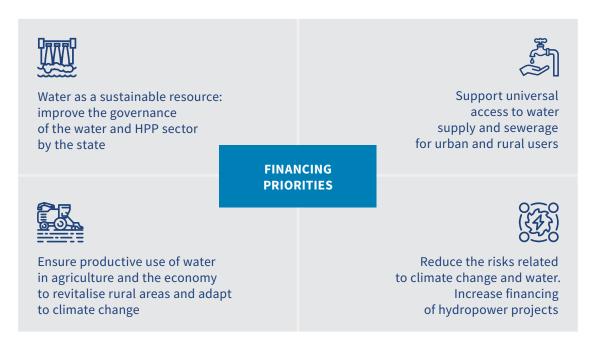


3. Trends and Challenges to Financing the Water and HPP Sector

The financing of the water and HPP sector in the region is significant and comparable to the total financing of such sectors as education, health, and social protection (about US \$11 billion), and is second only to the financing of the transport sector (~US \$17 billion).

The role of IFIs in financing the water and HPP sector is to provide (i) long-term concessional loans; (ii) grant support; (iii) expert support for projects and build the capacity of the recipient state; (iv) TA in project management (Figure 9).

Figure 9. Key areas of financing the water and HPP sector in the region by IFIs:



Water and HPP sector investments are cross-sectoral, addressing climate, biodiversity, agriculture, energy and urban development issues. Given their cross-cutting nature, investments in the water and energy sector are key to achieving the Sustainable Development Goals.

Financing in the amount of US \$0.9 billion was approved in the form of grants. The bulk of the approved grants were allocated to three countries: Tajikistan, the Kyrgyz Republic, and Mongolia. It is also worth noting that this instrument was used only by three IFIs: ADB, the WB, and AIIB, as well as by such climate funds as GCF and GEF.

The financing of the water and HPP sector is provided as a package (a mix of loans, grants, and TA throughout the project).

A third of water and HPP sector operations are TA projects. TA complements and often aims at supporting IFIs' operations, in particular investment financing. Investment projects financed with loans provided by IFIs are often implemented by dedicated project implementation units (PIUs). This approach is used where a borrowing state lacks the capacity for procurement and financial management. The costs associated with PIUs can be part of TA in the water and HPP sector aimed at building the capacity of sector institutions.

Major capital-intensive projects, especially in the hydropower generation sector, require co-financing with other IFIs. Co-financing accounts for about US \$2.5 billion, or 22% of the total approved financing in the water and HPP sector. Finance partners pool their financial resources, share risks, and combine their knowledge when planning and implementing a development programme or project.

The current financing of the water and HPP sector is insufficient to cover the growing shortage of investments in water infrastructure. The Eurasian countries that lack financing can invest in water infrastructure mainly through grants and concessional loans provided by donors and IFIs. The private sector, in turn, does not tend to join water and HPP sector projects due to high macroeconomic risks in many countries.

The lack of water and HPP sector projects eligible for IFI financing and ready for investment is the main obstacle to leveraging private capital. Countries in the region face shortage of such prepared projects. National authorities often lack the capacity, experience, and understanding of the private sector's needs to prepare projects suitable for IFIs. In many cases, governments are unable to bear the costs of preparing such projects.

This emphasises the important role of IFIs in preparing pre-feasibility and feasibility studies for such projects. This kind of assistance would help to structure projects for subsequent financing by IFIs.

Project financing by development agencies and climate funds amounted to about US \$800 million. Over the past 10–15 years, climate funds and green bond issuance, along with IFIs and development agencies, have begun to play an important role in financing water and HPP sector projects. Green bonds are designed to attract financing for projects that support transition to low-carbon and climate-resilient development.

The use of public-private partnership (PPP) mechanisms in the water and HPP sector may have prospects. Compared to traditional arrangements, PPPs significantly increase the level of private capital participation, which affects the efficiency and effectiveness of a project throughout its entire life cycle. Moreover, given the specifics of the region, the introduction of cross-border PPP projects is quite possible with proper coordination at the national level.

The period of ultra-low interest rates in the world is over. The increased cost of resources for IFIs could potentially create problems for further concessional financing for low-income countries. Driven by the need to ensure a positive margin, IFIs will have to significantly revise their interest rates for new loans upwards. Therefore, the sustainability of future water and HPP sector projects is a matter of concern.

For countries such as **Kyrgyzstan**, **Tajikistan**, **and Uzbekistan**, **the tightening monetary conditions do not pose risks at the moment** as they meet the criteria for highly concessional financing from IFIs.

However, the risks of rising interest rates on IFI loans significantly affect the so-called "IDA graduates", which have moved from the category of recipients of deeply concessional financing. In our region, such countries include Armenia, Georgia, and Mongolia.

To mitigate these risks, IFIs offer countries a transition period using mixed financing, including that from concessional sources.

In the medium term, IFIs could make **greater use of innovative mechanisms** to strengthen assistance to low- and middle-income countries to finance projects in the water and HPP sector. These may include:

- creating special funds similar to the IMF RST;
- regulatory exemptions (a higher minimum loan-to-equity-ratio) for MDBs financing long-term capital-intensive projects;
- creating infrastructure investment funds that enable combining resources of different investors to finance infrastructure projects. MDBs can establish and manage such funds, offering investors an additional platform to help develop infrastructure;
- issue of innovative outcome bonds, which use mixed financing to combine concessional and non-concessional financing from the private sector to make projects in the water and HPP sector and sustainable development projects more attractive to private investors and share project risks.

The database is available via the QR link and at efsd.org



Annex 1

Country Strategies in the Water and HPP Sector

Country	Ongoing programme	Years of imple-mentation	Priorities
Azerbaijan	National Strategy for Sustainable Use of Water Resources	2022	
Armenia	Water Code	Since 2002, ongoing	 establish appropriate mechanisms for water management; protect and safeguard water resources, ensuring the reduction of pollution, compliance with water standards and the national water reserve level, and control thereof; prevent adverse impacts of water; ensure water accounting; supply water to households and the economy in the required quantity and of the relevant quality at regulated tariffs; ensure the safe and uninterrupted operation of water supply and wastewater disposal systems, normal conditions for their use and protection, and monitoring of their use and protection; ensure conditions for the safe and uninterrupted use and protection of hydraulic structures and monitoring of their use and protection; organise the management, protection, and development of water systems
Belarus	National Strategy for Water Management in the Context of Climate Change until 2030	2022-2030	 ensure guaranteed supply of water of standard quality to households; supply water to sectors of the economy, taking into account the efficiency of its use; ensure safe discharge of all types of wastewater into the environment, improving the quality of its treatment; ensure the protection of the life and property of households and sectors of the economy from natural emergencies caused by adverse impacts of water
Georgia	Law on Water	ongoing	 ensure the implementation of unified government policies in the area of water protection and use; ensure the protection of water bodies (including waters of Georgia) and sustainable water use, taking into account the interests of present and future generations and the principles of sustainable development;

Country	Ongoing programme	Years of imple-mentation	Priorities
			 meet the needs of households for clean drinking water as a priority; ensure the sustainability and sustainable use of aquatic wildlife; prevent adverse impacts of water and effectively eliminate their consequences; safeguard Georgia's state interests in the area of water protection, use, and international water trade; produce commercial aquatic products in compliance with international principles and standards; protect the legal rights and interests of individuals or legal entities in the area of water protection and use
Kazakhstan	Concept Document for the Development of the Water Management System of the Republic of Kazakhstan for 2023–2029	2023-2029	 upgrade and develop the water management infrastructure; improve the efficiency of water use, enhance the information and analytical support for the water management system; improve the environmental status; develop transboundary cooperation; improve the legal framework; provide scientific and methodological documentation; ensure staffing support of the water sector
Kyrgyz Republic	National Energy Sector Programme of the Kyrgyz Republic for 2008–2010 and Strategy for the Development of the Fuel and Energy Complex until 2025	2008–2010 2008–2025	efficient and effective use of natural fuel and energy resources, the existing technical, research and human potential of the fuel and energy complex to ensure the country's energy security, sustainable economic development, and improve the quality of life of the population
	National Development Programme of the Kyrgyz Republic until 2026	2021–2026	 reduce the country's dependence on hydrocarbon energy sources through broader development of the hydropower generation sector; create new electricity markets; upgrade the power generation infrastructure
	National Water Strategy of the Kyrgyz Republic until 2040	2023–2040	 protect water resources from depletion and pollution; ensure sustainable water use; reform the water management system
Mongolia	Mongolia Sustainable Development Vision 2030	2016-2030	 protect water resources and prevent water shortages; expand drinking water supply that meets sanitation and hygiene standards

Country	Ongoing programme	Years of imple-mentation	Priorities
	Water Code	Since 2004, ongoing	
Tajikistan	Water Sector Reform Programme of the Republic of Tajikistan for 2016–2025	2016-2025	
	Government Programme for the Improvement of Land Amelioration in the Republic of Tajikistan for 2019–2023.	2019-2023	
	National Development Strategy of the Republic of Tajikistan until 2030	2015-2030	 diversify power generating sources, including the development of hydropower resources on large and small rivers; develop existing facilities of the oil and coal industries; develop new fossil fuel deposits; create technical capabilities for the use of alternative (renewable) energy sources (solar, wind, biofuel, geothermal); upgrade the existing hydropower plants and thermal power plants and build new ones; ensure integrated water resource management
Turkmenistan	Water Code of Turkmenistan	Since 2017, ongoing	achieve and maintain an environmentally safe and economically optimal level of water use and ensure water protection to improve the living conditions of households, and preserve the environment
Uzbekistan	Water Resource Management and Irrigation Sector Development Strategy of Uzbekistan for 2021–2023	2021–2023	 improve the forecasting and accounting system and create databases for water resources; upgrade water facilities, organise the management of large water facilities based on digital technologies; ensure the safety and reliable operation of reservoirs, mudflow and water storage reservoirs, and other water management facilities; improve the water management system, introduce the Smart Water and similar digital technologies in the areas the water use and water consumption metering; encourage further expansion of the introduction of water-saving irrigation technologies in crop cultivation, attract foreign investment and grants in this area

Country	Ongoing programme	Years of imple-mentation	Priorities
	Concept Document for Water Management Sector Development in the Republic of Uzbekistan for 2020– 2030	2020-2030	 improve the forecasting and accounting for water resources, the system for forming and ensuring the transparency of the database; upgrade and develop water management facilities (with the exception of drinking water and wastewater systems); ensure the safety and reliable operation of reservoirs, flood water storage reservoirs, and other water management facilities; improve the water management system, introduce the Smart Water and similar digital technologies in the areas of water consumption metering and water use; further expand the introduction of water-saving irrigation technologies in crop cultivation, ensure their promotion by the state, attract foreign investment and grants in this area; improve the ameliorative status and ensure the sustainability of irrigated land, assist in improving land fertility, use effective technologies to reduce and prevent soil salinisation; introduce market principles in the water management sector; introduce public-private partnerships and outsourcing in the water management sector, transfer certain water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade water facilities for use by farms, clusters, and other organisations, using the savings to upgrade

Source: information from government websites

Annex 2

Key Priorities and Documents of IFIs for the Water and HPP Sector

Institution	Ongoing programme	Years of implementation	Priorities
ADB	Strategy 2030 Water Sector	2022–2030	 water security and sustainability; water supply and wastewater disposal; promotion of inclusive water policy reforms, etc.
AIIB	Water Sector Strategy	Adopted in May 2020	 ensure the availability and sustainable management of water and sanitation for all; promote sustainable infrastructure; integrated resource management; mobilise private capital; adopt innovative technology
WB	Water Resources Sector Strategy: Strategic Directions for World Bank Engagement	Adopted in 2019	management and development of water resources as a central element for sustainable growth and eradication of poverty
	Global Water Security and Sanitation Partnership (GWSP)	Since 2017, ongoing	 resilience to shocks and resilience to climate change; increased social inclusion -development of institutions; increased financing for the water sector
EBRD	Municipal and Environmental Infrastructure Sector Strategy	Since 2012, ongoing	 protection of water resources; management of their distribution and environmental protection; improved water supply and sanitation in urban areas, etc.
EIB	EIB Water Sector Orientation	2023-2030	 water supply; wastewater; flood protection; agricultural water; cross-sectoral developments

Institution	Ongoing programme	Years of implementation	Priorities
NDB	General Strategy for 2022–2026	2022-2026	 water and sanitation: facilitate universal access to clean drinking water and adequate sanitation; promote equitable and sustainable management of water resources; reduce vulnerability and exposure to water-related disasters, particularly those triggered by climate change, such as droughts and floods
IsDB	Water Sector Policy	Since 2020, ongoing	 ensure effective water resources management; efficient water use, adopting new approaches and funding mechanisms
EEAS	Conclusions on EU Water Diplomacy	Adopted in 2021	 the impact of water access issues on international peace and security; the importance of transboundary water cooperation and governance; commitment to the human right to safe drinking water and sanitation
UN	Guided by the Sustainable Development Goals. SDG 6: Clean water and sanitation		 access to water is a human right;. water is critical for sustainable development and the eradication of poverty and hunger; water is essential for human development and human health and well-being and is vital for achieving the Sustainable Development Goals
	International Decade for Action "Water for Sustainable Development"	2018-2028	
GEF	International Waters focal area	ongoing	The GEF International Waters focal area addresses very complex sustainable development challenges faced by states sharing transboundary surface, groundwater, and marine systems. The range of the challenges is very wide: from pollution, loss of habitat to intensive and conflicting uses of surface and groundwater, over-harvesting of fisheries, and adaptation to climate change. As part of its activities in the International Waters focal area, the GEF serves a unique role in building trust and confidence among states catalysing collective management of large water systems while ensuring sustainable use of water bodies and providing benefits for environment preservation, health, community safety, and regional stability.
SDC	Global Programme Water Programme Framework 2021–2024	2021–2024	 human development through universal access to water, sanitation, and hygiene; economic development through ensuring sustainable access to water for economic activities; environment protection through responsible use of water resources; peace and governance through collective management of transboundary resources with a special focus on supporting the participation of women and young people

Institution	Ongoing programme	Years of implementation	Priorities
USAID	US 2022–2027 Global Water Strategy	2022–2027	 strengthen sector governance, financing, institutions, and markets; increase equitable access to safe, sustainable, and climate-resilient water and sanitation services, and the adoption of key hygiene behaviours;
			 improve climate-resilient conservation and management of freshwater resources and associated ecosystems; anticipate and reduce conflict and fragility related to water

Source: information from IFI websites



Working Paper WP/23/1 (RU/EN)

Introduction to the EFSD Sovereign Financing Database.

In this Working Paper
the Sovereign Financing Database (SFD)
Methodology is presented
and also quantitative
and qualitative analysis of
sovereign financing operations
in 11 countries of the region
from 2008 to 2022 is carried out



Working Paper WP/22/1 (RU/EN)

Technical Assistance of International Financial Institutions and Development Agencies in Eurasia.

The purpose of this analytical document is to review technical assistance projects implemented by international financial institutions and development agencies in 2009–2021 in 11 Eurasian countries with a detailed thematic and institutional breakdown.



Working Paper WP/21/2

(RU/EN)

Total Debt Is So Much More Than Just Sovereign Debt. Contingent Liabilities in Armenia, Belarus, Kyrgyz Republic and Tajikistan

The study aims to contribute to understanding the potential risks and impacts of both explicit and implicit contingent liability shocks on government fiscal and debt positions in the EFSD recipient countries. Special attention is paid to the significance of state-owned enterprises and their role in countries' debt positions.



Working Paper WP/21/1 (RU/EN)

Evolution of Tools and Approaches within the Enlarged Global Financial Safety Net in Response to the COVID-19 Crisis

This working paper provides the analysis how the GFSN responded to pandemic on global level and on regional level (in the EFSD countries).



Working Paper WP/20/4 (RU/EN)

Optimal Debt and the Quality of Institutions

Amid the COVID-19 pandemic policymakers now face the dilemma of whether to stimulate infrastructure development by raising debt, which may reduce future flexibility, or to strengthen their fiscal positions.



Working Paper WP/20/3

(RU/EN)

Tajikistan and the Kyrgyz Republic Post-COVID-19: Debt Sustainability, Financing Needs, and Resilience to Shocks

The COVID-19 outbreak has revealed the sensitivity of economies and their debt positions to a wide range of disruptions.



Working Paper WP/20/2

(RU/EN)

Global Financial Safety Net in Eurasia: Accessibility of Macroeconomic Stabilization Financing in Armenia, Belarus, Kyrgyzstan, and Tajikistan

The document estimates the availability of stabilization financing for Armenia, Belarus, the Kyrgyz Republic, and Tajikistan based on three approaches.



Working Paper WP/20/1 (RU/EN)

Kyrgyz Republic Debt Sustainability and External Shocks

The document examines the resilience of the Kyrgyz debt under three stress-scenarios: (1) a global recession, (2) a financial crisis, and (3) the combination of a global recession and a financial crisis.



Working Paper WP/19/2

(EN)

Achieving Stabilization and Development Objectives in a Single Agenda: The Experience of the Eurasian Fund for Stabilization and Development

This working paper analyses the experience of the EFSD, which suggests that in the context of low-income countries, the RFA's stabilisation mandate may benefit from complementing it with developmental agenda.



Working Paper WP/19/1 (RU/EN)

The Eurasian Fund for Stabilization and Development: A Regional Financing Arrangement and Its Place in the Global Financial Safety Net

The objective of the first working paper is to bridge the gap in understanding the dynamics of EFSD development and its place in the Global Financial Safety Net (GFSN) and the region's financial architecture.



A. Levenkov

Sovereign Financing in Eurasia: Water Sector and Hydropower Generation

The **Eurasian Fund for Stabilization and Development (EFSD)** amounting to US\$8.513 billion was established on June 9th, 2009 by the governments of the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic, the Russian Federation, and the Republic of Tajikistan. The objectives of the EFSD are to assist its member countries in overcoming the consequences of the global financial crisis, ensure their economic and financial stability, and foster integration in the region. More information about the EFSD is available at: efsd.org/en/.

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Address:

Moscow Chistoprudny Boulevard, 17 b. 1 101000, Russian Federation

Tel: +7 (495) 645 04 45 Fax: +7 (495) 645 04 41 Web: efsd.org/en/



www.efsd.org