

Financing Instruments for Climate Change Adaptation in Agriculture in Armenia

Stocktaking report for Output IV



Paris, 2025



Published within the framework of the regional project PROGRESS – Promoting Green Deal Readiness in the Eastern Partnership Countries

Consortium Members:

- European Business Association (EBA) Moldova
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (Consortium Lead)
- Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF)
- Organisation for Economic Co-operation and Development (OECD)
- Regional Environmental Centre for the Caucasus (REC Caucasus)

Consortium Lead Registered office:

Bonn and Eschborn, Germany

Address:

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH
42 Rustaveli Ave. / 31a Gribodov Str.
0108 Tbilisi, Georgia

E martina.kolb@giz.de

I www.giz.de/en

The project 'Promoting Green Deal Readiness in the Eastern Partnership Countries' (PROGRESS) is funded by the International Climate Initiative (IKI) of the German Federal Government and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as the lead agency, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF).

Author/Responsible/Editor, etc.:

Isabella Neuweg	OECD Environment Directorate
Krzysztof Michalak	OECD Environment Directorate
Fernando Antúnez García	OECD Environment Directorate

The Authors would like to express their gratitude for valuable contributions and excellent cooperation to the Ministry of Economy of Armenia, in particular Ira Panosyan, and GIZ colleagues (especially Levon Movsisyan) and Vahe Mambreyan from AMPERA LLC.

This report contains links to external websites. The responsibility for the content of the listed external sites always lies with their respective publishers. When the links to these sites were first posted, consortium checked the third-party content to establish whether it could give rise to civil or criminal liability. However, the constant review of the links to external sites cannot be reasonably expected without concrete indication of a violation of rights. If consortium itself becomes aware of or is notified by a third party that an external site that it has provided a link to gives a rise to civil or criminal liability, it will remove the link to this site immediately. Consortium expressly dissociates itself from such content.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Member countries of the OECD. This document, as well as any data and map included herein, do not imply the expression of any opinion whatsoever on the part of the OECD concerning the status of or sovereignty over any territory, the delimitation of international frontiers and boundaries and the name of any territory, city or area and are without prejudice thereto.

Photo Credits: Levon Movsisyan

Paris, 2025

Background and acknowledgements

This report was prepared within the framework of the project on “Promoting Green Deal Readiness in the Eastern Partnership (PROGRESS)”.

The project “Promoting Green Deal Readiness in the Eastern Partnership Countries” (PROGRESS) is funded by the International Climate Initiative (IKI) of the German Federal Government and is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, as the lead agency, in partnership with the Organisation for Economic Co-operation and Development (OECD), the Regional Environmental Centre for the Caucasus (REC), the European Business Association (EBA) Moldova and the Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine (IEF).

PROGRESS aims to support the EU Eastern Partnership countries (Armenia, Azerbaijan, Georgia, Moldova, Ukraine) with achieving long-term mitigation, adaptation and sustainable development consistent with the EU Green Deal objectives and 1.5°C pathways of the Paris Agreement. Another project objective is to promote the competitiveness of fruits, nuts and berries from the Eastern Partnership countries on the EU market, with two specific products selected in each country based on a value chain analysis (apricot and raspberry in Armenia). PROGRESS lasts during 2023-2028 and has a total budget of EUR 20 million (Euro).

The GIZ selected apricot and raspberry as two subsectors of particular focus for the PROGRESS project in Armenia based on selection criteria and following consultations with the Ministry of Economy, sector experts and specialists. The selection was based on six criteria: economic potential, environmental impact, social inclusion, institutional development, opportunities for the value chain development, and processing potential.

The OECD leads implementation of two out of the Project’s five Outputs:

- Output I on evidence-based national policies and frameworks for climate change adaptation and resilience in agriculture, and
- Output IV on access to and mobilization of green finance in agriculture.

This report was developed as part of Output IV on financing mechanisms. The purpose of this report is to take stock of Armenia’s financial mechanisms for climate change adaptation and resilience in agriculture (as of June 2025) to inform future project activities. It focuses on mapping current financial flows, identifying key actors and financial instruments (public, private, domestic, and international), and assessing the enabling environment for climate-related investments in Armenia’s agriculture sector.

Following the **Introduction**, **Chapter 2** outlines key economic trends and trade dynamics relevant to Armenia’s agriculture. **Chapter 3** reviews Armenia’s main policy frameworks for climate change adaptation and mitigation in agriculture, including institutional roles and policy gaps. **Chapter 4** analyses public financing mechanisms supporting adaptation in agriculture, while **Chapter 5** focuses on private financing instruments and initiatives. **Chapter 6** explores the role of international cooperation and donor engagement in supporting Armenia’s adaptation efforts. **Chapter 7** concludes with key takeaways and outlines possible areas for future project focus. The report was prepared based on secondary research and findings from an in-country stocktaking mission to Yerevan in September 2024.

Isabella Neuweg, OECD Environment Directorate, managed the report preparation under the supervision of Krzysztof Michalak, OECD Environment Directorate. The main author is Isabella Neuweg; Fernando Antunez, OECD Environment Directorate, provided valuable research assistance. AMPERA consulting, particularly Vahe Mambreyan, provided additional research inputs.

The authors are grateful to representatives of the Ministry of Economy and the Ministry of Environment of Armenia as well as to representatives of public institutions, the private sector and international organisations that met with the OECD during the in-country stocktaking mission to Armenia in September 2024. The following organizations participated in the discussions held during the in-country stocktaking mission to Armenia in September 2024: the Ministry of Economy of the Republic of Armenia, the Ministry of Finance of the Republic of Armenia, the Ministry of Environment of the Republic of Armenia, the Central Bank of Armenia, Ameriabank, the Agricultural Insurers' National Agency (AINA), SIL Insurance CJSC, the European Bank for Reconstruction and Development (EBRD), Enterprise Armenia, ACBA Bank, the German-Armenian Fund, the United Nations Development Programme (UNDP) Armenia, the Agricultural Cooperative "Lukashin," and the World Bank.:

All financial figures in this report are presented in Armenian drams (AMD) and, where applicable, converted to US dollars (USD) at an estimated exchange rate of USD 1 = AMD 389.5 (2 May 2025 average exchange rate). Conversions are approximate and intended for illustrative purposes only.

Table of contents

Background and acknowledgements	2
Abbreviations	6
Executive Summary	7
Purpose and Scope	7
Key Findings	7
1 Introduction	9
2 Key economic trends and trade dynamics	10
Agriculture's role in the economy	11
Agriculture and climate change	13
Trade integration and market access for agricultural products	14
Financial sector overview and digital banking	15
Summary	16
High-level recommendations	16
3 Policy frameworks for adaptation and mitigation in agriculture	17
Summary	22
High-level recommendations	22
4 Public financing mechanisms for agriculture and its adaptation to climate change	24
Financial support to the agricultural sector	24
Summary	30
High-level recommendations	30
5 Private financing mechanisms for adaptation in agriculture in Armenia	32
Summary	34
High-level recommendations	34
6 International cooperation to support financing for adaptation in agriculture in Armenia	36
Key Areas of Support and Achievements	36
Summary	38
High-level recommendations	38

7 Conclusions and possible areas of future project focus	39
Suggested recommendations	40
Bibliography	42
Annex A. International Support for Climate Adaptation in Agriculture	52

FIGURES

Figure 1. Share of selected fruits and vegetables exports 2023 (USD)	12
Figure 2. Agricultural Expenditure and Share of Total Government Spending in 2019–2024	26

TABLES

Table 1. Share of selected fruits and vegetables exports 2023 (USD)	12
Table 2: Timeline of policies supporting adaptation in agriculture	21
Table 3. Breakdown of Budget Allocations under the Agriculture Modernisation Programme in 2024	27
Table 4. Overview of government financing schemes for climate-resilient agriculture with a focus on horticulture	28
Table 5. Examples of international funding for climate adaptation in agriculture	54

Abbreviations

ACBA	Agricultural Cooperative Bank of Armenia
ADB	Asian Development Bank
AMD	Armenian Dram
BMUKN	German Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety
CAP	Common Agricultural Policy
CEPA	Comprehensive and Enhanced Partnership Agreement
EBA	European Business Association
EBRD	European Bank for Reconstruction and Development
EU	European Union
EUR	Euro
FAO	Food and Agriculture Organization (of the UN)
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Co-operation)
ha	Hectares
IEF	Institute for Economics and Forecasting of the National Academy of Sciences of Ukraine
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International Financial Institution
IKI	International Climate Initiative
IPCC	Intergovernmental Panel on Climate Change
MTEF	Medium-Term Expenditure Framework
NAP	National Adaptation Plan
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
PROGRESS	Promoting Green Deal Readiness in the Eastern Partnership
RA	Republic of Armenia
REC	Regional Environmental Centre for the Caucasus
SDGs	Sustainable Development Goals
SME / SMEs	Small and Medium-sized Enterprise(s)
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
WFP	World Food Programme
WTO	World Trade Organization

Executive Summary

Purpose and Scope

This stocktaking report, developed under the OECD-led Output IV of the PROGRESS project, provides a comprehensive mapping of public, private, and international financing instruments supporting climate change adaptation in Armenia's agricultural sector. It aims to inform future policy and investment decisions by identifying key actors, financial flows, and gaps in the enabling environment for climate-resilient agriculture.

Key Findings

1. Public financing: Expanding but fragmented

Armenia has significantly increased its agricultural budget - from around AMD 7 billion in 2019 to AMD 45 billion in 2024 - reflecting a strategic prioritization of the sector.

Major public programmes include:

- The Agriculture Modernisation Programme (AMP), which receives nearly 60 percent of the agricultural budget.
- Subsidised leasing and credit schemes for machinery, irrigation, and greenhouses.
- A national agricultural insurance programme, co-financed by the state and international partners.

However, public support remains fragmented, with limited coordination between the Ministry of Economy (implementing financial tools) and the Ministry of Environment (climate policy lead).

Many programmes lack robust monitoring, climate conditionality, or targeting mechanisms to reach the most vulnerable farmers.

2. Private finance: Growing but risk-averse

Commercial banks and Universal Credit Organizations (UCOs) have expanded agricultural lending, with total credit nearly doubling between 2019 and 2023.

Most private finance is channelled through public subsidy schemes or concessional donor funds. Few institutions deploy their own capital for climate adaptation.

High interest rates, collateral requirements, and limited financial literacy continue to exclude smallholders, women, and youth from accessing finance.

Green bonds and sustainability-linked finance are emerging but remain marginal in agriculture.

3. International finance: Diverse but disconnected

Armenia has benefited from a wide range of international support, including:

- Grants from the Green Climate Fund, Adaptation Fund, and GEF.
- Loans and technical assistance from KfW, EBRD, ADB, IFC, and others.
- Bilateral programmes (e.g. EU-GAIA, SIGMA, RED-NEO) supporting value chains, irrigation, and institutional reform.

While impactful, these initiatives are often project-based, lack alignment with national strategies, and do not systematically scale successful pilots.

Systemic Challenges

- Policy-implementation gap: Strong national strategies (NAP, NDCs, Agricultural Sector Strategy) are not fully translated into budgeted, monitored, and climate-aligned financial instruments.
- Equity and access: Current financing mechanisms disproportionately benefit larger agribusinesses, while over 300,000 smallholders remain underserved.
- Climate conditionality: Few public or private instruments explicitly link financial support to measurable adaptation outcomes.
- Insurance vulnerability: The national insurance scheme remains fragile, as shown by the 2024 withdrawal of Swiss Re, requiring temporary state reinsurance.

Strategic Recommendations

1. Strengthen Institutional Coordination

Establish a permanent inter-ministerial working group to align financial instruments with climate risk assessments and adaptation priorities.

2. Embed Climate Conditionality

- Link all public support (loans, grants, leasing) to verified climate-smart practices (e.g. drip irrigation, drought-resistant crops).
- Integrate adaptation outcomes into the Medium-Term Expenditure Framework (MTEF).

3. Scale Inclusive Finance

- Expand blended finance models to de-risk lending to smallholders, women, and cooperatives.
- Incentivize banks to develop inclusive green products through regulatory and fiscal tools.

4. Stabilize Agricultural Insurance

- Establish a national climate risk pool or catastrophe fund to reduce dependence on external reinsurers.
- Reward risk-reducing behaviour (e.g. anti-hail nets) through premium discounts.

5. Leverage International Finance Strategically

- Align donor support with national green finance roadmaps.
- Use concessional funds to catalyse systemic reforms (e.g. irrigation governance, land consolidation, contract enforcement).

6. Invest in Knowledge and Extension

Scale up technical assistance and farmer education to ensure financial tools translate into real adaptation on the ground.

1 Introduction

Agriculture is one of the sectors most affected by the impacts of climate change. Financing adaptation measures in this sector is an important tool to help farmers adapt their practices and make food systems more resilient to risks from climate change.

The need for adaptation in developing countries is estimated at around USD 200 to 400 billion per year (around AMD 80 to 150 trillion), but only around USD 30 billion (around AMD 10 trillion) is currently flowing (CPI, 2025^[1]). To close this significant funding gap, it is vital to clearly map and understand the roles of both public and private finance—focusing on how public resources can be allocated more efficiently and effectively, where private investment is already successfully contributing, and identifying future opportunities to scale private sector involvement in financing agricultural adaptation.

This report presents the public and private financing mechanisms available to farmers in the Republic of Armenia (hereafter RA or Armenia). It provides a comprehensive overview of the financial landscape that supports farmers in adopting climate adaptation practices, improving resilience and ensuring financial stability in times of increasingly frequent and severe climate impacts. It also forms the basis for the next phase of the project, which will explore possible adaptations of selected financial instruments in cooperation with the RA Ministry of Economy.

2 Key economic trends and trade dynamics

Economic trends and export dynamics

Armenia is a small, landlocked emerging economy with strong trade ties to Russia. Armenia's economy is primarily service-oriented, but agriculture plays a significant role in terms of employment and rural development.

Armenia's GDP has grown at an average rate of more than 6 percent annually between 2000 and 2023¹. However, the 2020 COVID-19 pandemic and the military conflict with Azerbaijan severely disrupted the economy, resulting in contractions in many sectors. This reversed in 2022, when large numbers of companies and non-residents relocated to Armenia following Russia's invasion of Ukraine resulting in double-digit (12.6 percent) growth—the highest in the region—followed by around 8 and 6 growth respectively in 2023 and 2024 (World Bank Group, 2024^[2]) (Economist Intelligence Unit, 2025^[3]) (ARMSTAT, 2025^[4]).

Recently, this growth momentum has slowed due to a gradual outflow of funds and migrants and a decline in net exports, but is expected to remain robust in the period 2025 to 2029 (The World Bank Group, 2025^[5]; The Economist, 2025^[6]). Armenia remains vulnerable to risks stemming from tensions with Azerbaijan (the 2025 state budget foresees a 21 percent increase in defence spending) (The Economist, 2025^[6]) and the RA Law on the State Budget 2024 and 2025). The sizeable informal sector hampers economic development. According to the IMF (2025^[7]), around 40 percent of Armenia's labour force is employed in the informal economy (which contributes around 35 percent to GDP), affecting tax collection and the efficiency of public finances.

Armenia exports 90 percent of its agricultural produce to Russia. Russia imposed a ban on Armenian agriculture and produce in July 2024 in retaliation for Armenia's westward political shift, and exports decreased significantly in the third quarter of 2024 (Economist Intelligence Unit, 2025^[3]).

As Armenia strengthens its partnerships with the EU, especially France, and as Russia shifts supply chains away from Europe, this will create opportunities for Armenia to trade more with European countries. Although Russia remains Armenia's main trading partner, trade declined between the two nations between 2022 and 2023, and the UAE has emerged as the second most important export destination, with exports more than doubling over the same period (Economist Intelligence Unit, 2025^[3]). Armenian exports to the UAE primarily consist of gold, jewelry, and diamonds (Economist Intelligence Unit, 2025^[3]).

Overall, however, a lower-value-added export base will keep export potential constrained (Economist Intelligence Unit, 2025^[3]). Owing to limited borders and distance from major markets, Armenia will benefit less from the Middle Corridor (a trade route connecting Central Asia and the Mediterranean) than its

¹ Calculations based on World Bank national accounts data, and OECD National Accounts data files.

neighbors, and remain less integrated in regional trade (Economist Intelligence Unit, 2025^[3]). If progress is made on opening the border with Turkey, it could open new east-west routes making Armenia an attractive transit option within the Middle Corridor (ibid.).

Agriculture's role in the economy

Agriculture has been a key sector of Armenia's economy, contributing around 8.1 percent in 2023 and 7.8 percent of GDP in 2024² (ARMSTAT, 2024^[8]). The total value of food production represented around AMD 700 billion (USD 1.80 billion) in 2024, an increase from AMD 660 billion (USD 1.69 billion) in 2023. Armenia is a net exporter of tomatoes, grapes, and apricots (FAO, 2022^[9]). Tomatoes have become a particularly important export commodity in terms of value, accounting for USD 26.2 million (AMD 10.2 billion) in 2023 and are almost exclusively exported to the Russian Federation (FAO, 2022^[9]). Fruits and nuts make up a significant share of Armenia's exports, amounting to approximately USD 50 million (AMD 19.5 billion) in 2023. Within this category, apricots and grapes are main export commodities, contributing USD 6.3 million (AMD 2.5 billion) and USD 6.9 million (AMD 2.7 billion) respectively, with the Russian Federation as the primary destination (ARMSTAT, 2023^[10]; FAO, 2022^[9]).

Processed food products are Armenia's other leading agricultural exports, making up more than a fifth of Armenia's total goods exports annually (U.S. Department of Agriculture, 2023^[11]). Important segments include processed food and alcoholic beverage production, especially wine and brandy made from locally grown grapes. Some exporters also ship frozen fruits and vegetables. The fruit and vegetable processing sub-sector, though a relatively small segment of overall food production, showed modest growth from roughly AMD 36.9 billion (USD 94.7 million) in 2023 to AMD 41.5 billion (USD 106.5 million) in 2024 (ARMSTAT, 2024^[12]). The food processing sector includes prominent companies such as Fruit Food, Aregi, Spayka, Beer of Yerevan, and Karas, primarily based in Yerevan, Artashat, and other regions like Aragatsotn, Kotayk, and Armavir. Key product categories are dried fruits, juices, canned foods, wines, brandies, and fruit vodkas.

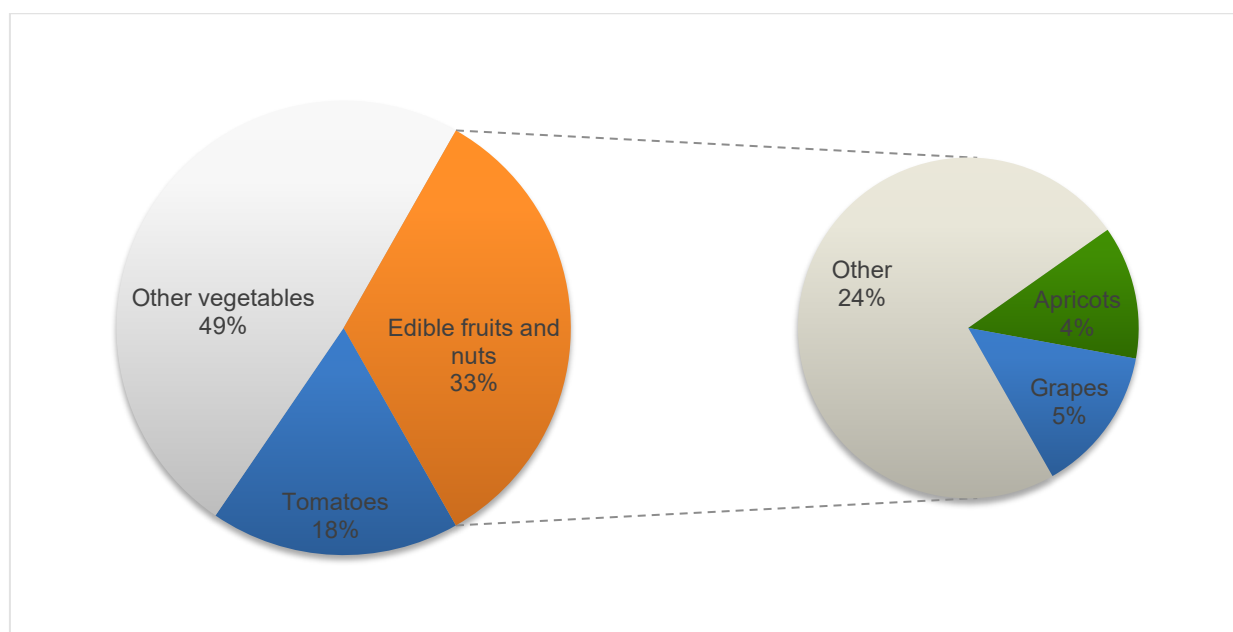
During the period 2015–2019, Armenia was a net importer of key commodities such as wheat, milk, pig meat, bovine meat, potatoes, and apples. A significant portion of wheat imports (97 percent) came from the Russian Federation. Armenia's entry into the Eurasian Economic Union (EAEU) in 2015 is leading to a gradual increase in tariffs on imports from non-EAEU countries (as further explained below).

² Includes forestry and fishing.

Table 1. Share of selected fruits and vegetables exports 2023 (USD)

	Value	Percent of Parent Category	Percent of Total
II. Total of Products of Vegetable Origin	147,699,155	-	100.0 percent
a. Tomatoes, fresh or chilled	26,243,545	-	17.8 percent
b. Edible fruit and nuts; peel of melons or citrus	49,543,607	-	33.5 percent
• Apricots	6,267,649	12.6 percent	4.2 percent
• Grapes, fresh or dried	6,880,912	13.9 percent	4.7 percent

Source: ARMSTAT, 2023

Figure 1. Share of selected fruits and vegetables exports 2023 (USD)

Source: ARMSTAT, 2023

Figures from the Labour Force Survey for 2022 show a sharp decrease in the **share of employment in agriculture (22 percent)** compared to almost 40 percent in 2010). However, it should be noted that in 2018 this indicator stood at 26 percent, and during 2019–2021 it remained relatively stable at around 22 percent. According to the FAO (2025^[13]) slightly more women work in agriculture than men and more than 80 percent of all women working in agriculture do so informally, reducing their access to social protection schemes, along with limited access to land and other agricultural assets compared with men.

The sector is characterized by a **fragmented ownership structure** with **90 percent of all farms being smaller than three hectares** (FAO, 2022^[9]). Smallholders produce a major part of gross agricultural product, around 97 percent (FAO, 2025^[13]). Relatively small landholdings generally do not foster a diversified production system and can lead to lower productivity. The Government of Armenia is supporting different efforts to help consolidate land to address this issue; because this report is focussed on financing support mechanisms these efforts are not covered and readers are asked to turn to the report under Output I under PROGRESS.

Box 1. Agricultural cooperatives

New consumer cooperatives did not emerge until 1993, after the collapse of Soviet institutions. Long-term commitment from donors and participatory training enabled the establishment of numerous cooperatives, which raised awareness of their advantages. Many were created through state-sponsored development programs and international donor initiatives such as the CARMAC project. Currently, most agricultural cooperatives in Armenia are involved in crop production (67 percent), followed by mixed farming (15 percent), milk processing and cheese production (7 percent), and smaller shares in crop processing, animal husbandry, and other activities. Although cooperatives are widespread throughout the country, most agricultural cooperatives are concentrated in specific areas such as Gegharkunik, Lori, and Vayots Dzor (Ministry of Economy of the Republic of Armenia, n.d.^[14]).

However, many cooperatives remain inactive or exist only on paper due to the significant challenges they face. Although the Agricultural Cooperatives Act passed in 2015 distinguishes between for-profit agricultural cooperatives and non-profit consumer cooperatives, legal uncertainties related to taxation have led some newly registered cooperatives to cease operations as current legislation does not clearly distinguish between surpluses from member activities and profits from commercial transactions (Shen, 2017^[15]).

In addition, many farmers perceive cooperatives as top-down, state-controlled institutions in which members have little say. Low membership fees limit the investment capacity of cooperatives, corporate governance is often undemocratic and subject to undue influence from local officials, and donor projects are frequently implemented with short timeframes, which is not conducive to sustainable results. In addition, there is a lack of financial products tailored to cooperatives, and interest rates on agricultural loans remain prohibitively high (Shen, 2017^[15]).

Agriculture and climate change

Armenia's agricultural sector is highly susceptible to the adverse effects of climate change, facing challenges such as frost, floods, droughts, heat stress, hail, soil erosion and landslides. Projections indicate that these climate-related impacts could reduce the country's GDP by up to 3 percent by 2060 and elevate poverty levels by as much as 2.7 percent points by 2030 (World Bank Group, 2024^[21]). The report estimates that total investment needs for climate change adaptation in Armenia — covering agriculture, water, and land restoration — will amount to approximately USD 2 billion by 2060. Of this, around USD 1 billion is required for water storage and irrigation efficiency, USD 610 million for land restoration, and USD 190 million for the agricultural sector more broadly.

Most farmers in Armenia are smallholders with limited or no savings, making them highly vulnerable to even minor crop failures. Climate change is expected to further increase these risks: by 2040, average temperatures are projected to rise by 1.3–1.7°C, and by 2.6–3.2°C by 2070 (KfW Development Bank, 2019^[16]; World Bank, 2024^[17]). Rainfall patterns are also expected to become more erratic, with more

frequent droughts and dry periods. Meanwhile, hail and frost already cause widespread damage, often destroying entire regional harvests and resulting in losses worth millions (KfW Development Bank, 2019^[16]; World Bank, 2024^[17]). The impacts of climate change will be particularly severe for the Ararat Valley, Armenia's main agricultural region. In this area, crop yields are expected to decline significantly, while irrigation needs will rise substantially. At the same time, overall water availability is projected to decrease (OECD, 2025^[18]).

Agriculture (including agricultural irrigation and aquaculture) is by far the largest consumer of water in the country, with a long-term average of around 87 percent of total consumption (AUA, 2024^[19]). Industry (e.g. mining and metallurgy, energy and food processing) consumes around 7 percent, while municipal and domestic use accounts for around 6 percent of total water consumption (AUA, 2024^[19]). Although agriculture is vulnerable to the effects of climate change, it also contributes to it. Agriculture contributes around 19 percent of total net greenhouse gas emissions in Armenia, mainly due to methane emissions from livestock and emissions from agricultural practices such as the use of fertilizers (Government of the Republic of Armenia, 2023^[20]).

Adaptation investments in the agricultural and water resources sectors, are estimated to increase GDP by 0.5 percent to 1 percent annually after 2030 (World Bank Group, 2024^[21]). Climate-smart adaptation investments—such as the adoption of drip irrigation, improvements in water-use efficiency, and the development of resilient crop varieties—are critical. These adaptation efforts can prevent future water shortages and enhance agricultural productivity, enabling rapid responses to climate-related or economic shocks (World Bank Group, 2024^[21]).

Trade integration and market access for agricultural products

Armenia is a member of the World Trade Organization (WTO) since 2003. Armenia is also a member of the Eurasian Economic Union (EAEU) which further includes Belarus, Kyrgyzstan, Kazakhstan and the Russian Federation and came into force in 2015. The EAEU establishes free movement of goods, services, capital and labour, and members pursue coordinated policies in many sectors, including agriculture. EAEU members are harmonizing their national policies, including support to agriculture and sanitary and phytosanitary (SPS) regulation (FAO, 2022, p. 3^[9]). EAEU members are committed to adopting the Common Customs Tariff (CCT), which, for Armenia presents a certain inconsistency with their WTO market access obligations, as for some agricultural products the CCT of the EAEU is higher.³

As showcased above, Armenia depends heavily on Russian markets for its high-value agricultural export. In 2023-2024, over 95 percent of Armenia's vegetable exports and more than 90 percent of fruit and nut exports went to Russia, totalling over USD 73 million and USD 52 million, respectively in each year. On the import side, Russia is Armenia's first supplier of cereals, providing over USD 82 million annually, which constitutes the vast majority of Armenia's cereal imports. Other than Russia, Armenia's agricultural trade remains interlinked with other neighbouring countries, such as Iran, Georgia, and Turkey. In 2023 and 2024, Iran was a relevant supplier of key imports of vegetables, fruits, and processed plant-based goods, while Georgia played a dual role as both supplier and key export destination, especially for Armenian wine, vegetables, and processed products. Turkey, by contrast, was a significant source of imports but not a major market for Armenian exports (ITC, 2025^[21]).

³ Armenia (together with Azerbaijan, Georgia and Republic of Moldova) is also a member of the Organization of the Black Sea Economic Cooperation (BSEC) and signatory to the Commonwealth of Independent States Free Trade Area (CIS FTA), which came into force in 2012 and replaces several bi- and multilateral free trade agreements in the region between former republics of the Soviet Union.

Between 2014 and 2022, a preferential trade regime for Armenia's trade with the European Union (under the European Union's Generalized Scheme of Preferences or GSP+) allowed Armenia to export some agrifood products to the European Union at zero or reduced tariff rates (European Commission, 2021^[22]). The scheme stopped in 2022, and the preferential rate no longer applies. In 2021, a Comprehensive and Enhanced Partnership Agreement (CEPA) between Armenia and the European Union entered into force. Some of the Chapters of Title V on other cooperation policies, include relevant provisions to climate adaptation in agriculture. Chapter 4 on climate action emphasizes cooperation on climate change mitigation and adaptation, promoting both market and non-market mechanisms, climate technology development, and the integration of climate considerations into sectoral-specific policies. Chapter 10 on Agriculture and Rural Development focuses on the promotion of agricultural modernization and sustainability, competitiveness and transparency of the market and the promotion of policies and control mechanisms for organic farming. Similarly, Chapter 3 on Environment outlines provisions on sustainable development and green economy, such as flood-risk management, water scarcity, and droughts (EU-Armenia, 2021^[23]).

Financial sector overview and digital banking

Armenia's financial sector is dominated by banks, with 17 commercial banks in the country accounting for around 85 percent of total financial sector assets (ARMSTAT, 2024^[24]). Their assets amounted to around AMD 9 trillion (USD 24 billion) (ARMSTAT, 2024^[25]). Most banks have foreign equity participation higher than 50 percent and eight bank are almost exclusively foreign owned. The financial sector includes also 12 credit organisations and five insurance companies, holding around AMD 770 billion (around USD 2 billion) and AMD 100 billion (around USD 250 million) assets respectively (CBA, n.d.^[26]).

The Central Bank of Armenia (CBA) has been at the forefront of the country's digital transformation in financial markets, emphasizing the importance of digital finance solutions to enhance financial inclusion, particularly in areas where traditional banking services are limited (AFI, 2022^[27]). Mobile banking is becoming more popular in Armenia, enhancing financial accessibility especially in rural areas, including for farmers, with many banks offering mobile banking applications.

Summary

Armenia's economic development in recent decades reflects both its resilience and structural vulnerability: While rapid GDP growth, driven by offshoring trends and a dynamic services sector, has enabled the economy to remain relatively stable and resilient even in the face of external shocks, the country's agricultural sector remains severely constrained by an over-reliance on a single export market, Russia, and a fragmented structure of smallholder farmers that limits both productivity and the ability to absorb and adapt to the increasingly severe impacts of climate change. The sector is further constrained by a high level of informality, with around 40 percent of the labour force employed in the informal economy, reducing access to finance and social protection, especially for women farmers, of whom more than 80 percent work informally.

The fruit, nut and berry sub-sectors, while inherently suited to Armenia's favorable conditions, face systemic challenges related to small and scattered land plots, low value-added processing and limited integration into diversified high value-added markets, as well as significant vulnerability to climate-related risks including frost, floods, droughts, heat stress, hail, soil erosion and landslides. Agriculture's dependence on water is significant, consuming around 87 percent of the country's total water use, increasing the sector's exposure to water scarcity risks exacerbated by climate change. These vulnerabilities are exacerbated by the country's susceptibility to regional geopolitical tensions and climate-related risks, which together threaten to undermine rural livelihoods and the overall aspirations for a resilient and competitive agri-food sector.

High-level recommendations

To reduce the risks associated with its agribusiness structure and strengthen its resilience to climate change, Armenia should further diversify its regional and international markets while strengthening the national capacity of smallholder farmers and processors to meet demanding standards of quality, safety and sustainability. This requires, among other things, a more strategic focus on export promotion, incentives for climate-friendly agriculture and targeted investments in modern logistics and certification systems that can open the way to more stable markets beyond traditional partners.

Addressing the challenges faced by smallholder farmers, particularly regarding access to affordable finance, formalization, and tailored support for women, it is essential to unlock the sector's full potential. It is equally important to adapt the country's financial ecosystem so that modern digital finance and banking tools and climate finance instruments truly reach smallholder and informal farmers (especially women) by combining financial inclusion with incentives for formalization, collective action through cooperatives, and the use of flexible and innovative insurance schemes that protect both against economic crises and the increasing volatility caused by climate change.

Finally, mitigating the impact of geopolitical trade risks requires intensified efforts to explore alternative markets, assess trade policy alignment between EAEU and WTO commitments, pursue the opening of the Turkey border for regional trade integration (though accompanied with a series of possible risks' mitigation measures), and build supply chain resilience.

3 Policy frameworks for adaptation and mitigation in agriculture

Armenia has introduced several policies and plans to strengthen climate change mitigation and adaptation and resilience. They are described below and linked to agriculture where possible. Under PROGRESS, a separate report has been produced that examines Armenia’s policy frameworks for agricultural resilience in greater depth; readers are encouraged to consult this complementary report for further analysis.

On adaptation, the National Action Program of Adaptation to Climate Change (NAP) was approved in May 2021, with a concrete list of measures for the period 2021-2025. By doing so, Armenia became the first country in the region to submit its NAP to the United Nations Framework Convention on Climate Change (UNFCCC) (on September 24th, 2021). Armenia’s NAP sets out sectoral⁴ adaptation priorities⁵ to leverage investments and financing options (Government of the Republic of Armenia, 2021^[28]). The list of measures explicitly mentioned the development of a draft RA Government Decree “On approval of the climate change adaptation concept and action plan for the agriculture sector” and submission to the office of the RA Prime Minister (measure 1.2 on the Introduction and Enhancement of the NAP process in Armenia at the national level).

Box 2. Definition of adaptation and resilience

Adaptation

In the context of agriculture, adaptation refers to the changes and adjustments made in agricultural practices, technologies, and policies to reduce the negative impacts of climate change and improve long-term sustainability. This includes water conservation, drought-resistant crops, and improved soil management techniques.

Resilience

Agricultural resilience involves the capacity of farming systems to recover from climate impacts such as droughts, floods, and extreme temperatures. Resilience is achieved through sustainable farming practices, diversified crops, efficient water use, and climate-smart technologies that allow farmers to withstand and recover from environmental shocks.

Sources: Bezner Kerr, R., T. Hasegawa, R. Lasco, I. Bhatt, D. Deryng, A. Farrell, H. Gurney-Smith, H. Ju, S. Lluch-Cota, F. Meza, G. Nelson, H. Neufeldt, and P. Thornton, 2022: Food, Fibre, and Other Ecosystem Products. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegria, M. Craig, S. Langsdorf, S. Lösche, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 713–906, doi:10.1017/9781009325844.007. OECD (2023), *Agricultural Policy Monitoring and Evaluation 2023: Adapting Agriculture to Climate Change*, OECD Publishing, Paris, <https://doi.org/10.1787/b14de474-en>.

⁴ The Plan identifies six priority sectors for adaptation: water, agriculture, energy, human settlements, health, and tourism. (Government of the Republic of Armenia, 2021^[28])

⁵ While sectoral adaptation plans (SAPs) were intended to be integrated into the broader National Adaptation Plan (NAP), they are not officially recognized as standalone sectoral NAPs under the UNFCCC registry (UNFCCC, n.d.^[92]).

Armenia is taking action to combat climate change, with a national target of reducing greenhouse gas (GHG) emissions by 40 percent compared to 1990 levels by 2030. The country has actively advanced the implementation of the Paris Agreement by strengthening its climate legislation and policy frameworks. With the support of its international partners, Armenia made significant progress in 2023 by consolidating its climate programme and preparing several key documents. These include the Nationally Determined Contribution (NDC) Implementation Plan, a financing strategy and investment plan, the country's first long-term low-carbon development strategy (Armenia 2050) approved by the government, and the latest GHG inventory report submitted to the UNFCCC.

In addition, Armenia has drafted a climate law, a draft government decree on GHG inventory procedures, and a legal framework to support the continued collection of data on mitigation measures and policies. By 2030, the government aims to increase the share of solar energy in total electricity production to 15 percent (1.8 billion kWh), through legislative incentives such as feed-in tariffs for producers. Large-scale projects to improve energy efficiency are also underway, particularly in the area of building renovation, which have achieved energy savings of 40 to 60 percent in residential and public buildings.

In addition, Armenia has taken important steps towards the transition to a green circular economy. The conference on green agriculture, held in spring 2025 and bringing together international experts and organisations to exchange innovations and good practices, was an important step in this process.

Armenia is currently working on refining the implementation of its NAP as well as the Nationally Determined Contributions (NDC) to advance medium and long-term adaptation planning. Planned adaptation include such measures as the introduction and cultivation of climate resilient crops, anti-flood and land degradation protection.

Strengthening resilience to natural disasters and improving disaster risk reduction (DRR) measures are also central to Armenia's climate agenda. The country has expanded its modernized weather monitoring systems to cover 80 percent of the territory and improved the accuracy of weather forecasts. The National Strategy on Disaster Risk Reduction (2017) includes measures for integrating disaster risk reduction (DRR) into agricultural policies, with a focus on climate-smart practices and early warning systems⁶. A new disaster risk management strategy for 2023–2030 was adopted in October 2023. The strategy comprises 46 measures. Considerable efforts have been made to improve the functional and methodological foundations of the disaster risk management (DRM) system, including improving national DRM legislation, establishing a disaster risk assessment and indexing system, developing a framework for post-disaster needs assessment and recovery processes, the integration of DRM requirements into urban development, and the improvement of the effectiveness of local DRM processes in the areas of climate change adaptation and biological risks.

Significant work has been carried out to develop climate change adaptation capacities, strengthen mudflow risk management capacities and increase the resilience of cities to disasters based on the geographic information system.

Armenia's water resources are highly vulnerable to climate change: by 2050, the country is expected to experience warming of around 2°C, while precipitation is expected to become more variable, with longer periods of drought, more severe storms and drier summers. Increasing water insecurity will also have repercussions on food and energy security and overall economic growth. According to Armenia's fourth national communication on climate change (2020), the country's water resources are expected to decline significantly under various climate models and scenarios. In particular, river flows are expected to decrease

⁶ Although not directly related to climate-smart farming practices, land consolidation plays its part in trying to make farming more productive and a significant share of agricultural state support went to the implementation of land reform and land consolidation. Since it is difficult to foresee how this will impact the adoption of climate-smart agriculture, this is outside the scope of this report and details are not provided.

by 39 percent by 2100, while the flow of rivers feeding Lake Sevan is expected to decrease by 12 percent by 2040 and up to 34 percent by 2100, which will have cascading impacts on various sectors of the economy (AUA, 2024^[19]).

Armenia's water reservoir capacity is about 1.12 billion m³, the same level as at the end of the Soviet era. These reservoirs are mainly used for irrigation and hydroelectric power generation. A small portion is used for industrial activity (specifically, mining in the Syunik province). None of these reservoirs are sources of drinking water. Two new reservoirs are currently under construction. These include the Vedi reservoir (with hydroelectric power generation) with a capacity of 29.4 million m³ in Ararat province, construction of which began in 2017 with loans from the French Development Agency and co-financing from the Armenian government. It is scheduled for completion by the end of 2025. Construction of a second new reservoir, Kaps, began in 2023 with support from KfW. This new reservoir, equipped with hydroelectric capacity, will be built in two phases, with a capacity of 25 million m³ in the first phase, which will be increased to 60 million m³ in the second phase. Several reports mention plans to build other water reservoirs. The number of reservoirs planned varies between 17 and 22.

Plans also involve the rehabilitation of irrigation water networks and expansion of modern irrigation systems, including but not limited to drip irrigation, for at least 500 hectares (Kato and Neuweg, 2021^[29]).

The protection of Lake Sevan's water and biodiversity forms another goal. Increasing resilience to climate related natural disasters, including the establishment of monitoring and early warning systems, are of particular strategic importance in Armenia's adaptation planning.

Armenia also has ambitious goals to reduce deforestation and increase reforestation and afforestation activities. The country wants to almost double the existing forested area by 2050 compared to 2015 which will require afforestation/reforestation of about 265 000 ha of land. As part of its pledge under the Bonn Challenge, a global effort to restore deforested and degraded land, Armenia is planning to afforest/reforest 50 000 ha (12.9 percent of the territory) of land by 2030 (Government of the Republic of Armenia, 2021^[30]).

An assessment has calculated that Armenia would need to invest at least around USD 170 million (AMD 66.2 billion) to reach its adaptation targets by 2030 and most of this into the agricultural sector (USD 150 million; AMD 58.4 billion) (Kato and Neuweg, 2021^[29]).

Following the approval of the NAP and to ensure the implementation of the 2020-2030 strategy, the government developed an Agricultural Sector Adaptation Plan (SAP). However, instead of adopting it as a standalone strategy for climate adaptation, the SAP was merged into the broader Action Plan of the Agricultural Sector Strategy 2023–2026 in 2022, under Decision N 1222-L on July 20 (World Bank, 2024^[17]). The Action Plan was later amended and re-adopted by RA Decree N 758-L on 12 June 2025, introducing changes to several measures and adding new actions, particularly around pasture improvement. Building on these frameworks, Armenia prepared the Climate Adaptation Investment Plan for the Horticulture Sector (CAIP) in 2024–2025. Aligned with the NAP and the Agricultural Development Strategy, it is designed to mobilize the estimated USD 150–190 million required for future climate adaptation investments in the sector. The plan outlines interventions in climate-smart production, processing, and commercialization, including R&D, extension and meteorological services, climate-resilient storage and logistics, and certification (e.g., GLOBALG.A.P.) and digital monitoring systems (ADB, 2025^[31]).

The Ministry of Environment, as the lead institution responsible for NAP implementation, outlined several key adaptation measures, such as introducing and scaling up drip-irrigation, using anti-hail nets, building greenhouses, developing new agricultural insurance products, using early warning systems and raising awareness.⁷ However, and although the government has made notable efforts to develop sectoral

⁷ For the full list of NAP implementation measures, see: https://climate-transparency-platform.org/sites/default/files/2024-06/Armenia_Adaptation_Ani%20Ghukasyan.pdf

adaptation strategies, their implementation remains a challenge, as sectoral strategies often lack detailed information regarding budget planning and expenditure framework (World Bank, 2024^[17]). Nonetheless, one issue is worth highlighting: most high-level climate change adaptation policies are implemented by the RA Ministry of Environment (including the development and submission of the NAP, NDCs, etc.), while concrete operations on the ground are designed and implemented by the RA Ministry of Economy in the form of public assistance programmes for agriculture. The reasoning is that the Ministry of Environment is responsible for developing policies and strategies, while the Ministry of Economy is responsible for implementing them. etc.), while concrete operations on the ground are designed and implemented by the RA Ministry of Economy in the form of public aid programmes for agriculture. The reasoning is understandable and justified, but such a configuration requires regular and close consultation and well-coordinated collaboration between the two government agencies.

For agriculture in particular- and to some extent overlapping with elements under the NAP - the government adopted a ten-year Agriculture Development Strategy (2020–2030) in 2019 which also explicitly mentions adaptation measures to promote sustainable agricultural growth (Government of the Republic of Armenia, 2021^[30]). Inter alia, the strategy refers to climate-smart practices, improved irrigation, and risk management as essential components of agricultural resilience (Government of the Republic of Armenia, 2019^[32]). It calls for improved nitrogen fertilizer management, development of organic farming, sustainable intensification of animal breeding through improved species, breeds, improved irrigation system, promotion of digital agriculture and technological innovation (ibid.).

The EU-Armenia Comprehensive and Enhanced Partnership Agreement (CEPA) was signed in 2017 and entered into force on 1 March 2021. By doing this, Armenia committed to aligning its economy with environmental standards of the EU Green Deal (EGD), including the agricultural sector. More concretely, the agreement calls for gradual approximation of Armenia’s legislation to the EU’s environmental and agricultural policies. In particular, Article 52 explicitly promotes adaptation to climate change and calls for the mainstreaming of climate considerations into general and sector-specific policies or Article 54 which specifies objectives related to developing a long-term adaptation strategy. Article 48 calls for the promotion of green economy measures and eco-innovation and the development of sector-specific strategies (European Union & Republic of Armenia, 2018^[33]).

In terms of mitigation targets, Armenia updated their Nationally Determined Contribution (NDC) 2021-2030 in 2021 committing to a 2030 target of a 40 percent reduction below 1990 GHG emissions level, which covers the agricultural sector (“enteric fermentation, direct and indirect N₂O emissions from managed soils”), but does not specify a GHG emission reduction target for the sector (Government of the Republic of Armenia, 2021^[34]) (UNDP, 2024^[35]). In 2022, Armenia also developed a draft Long-Term Low Emissions Development Strategy (LT-LEDS), to achieve climate neutrality by 2050. The document focuses on mitigation pathways for five sectors, including agriculture (CCIC Armenia, 2023^[36]). The Strategic Programme for Prospective Development 2014-2025, which sets out Armenia’s overarching developing strategy, also recognizes climate change as a challenge that must be tackled to enhance economic growth and includes a focus on agricultural adaptation (Government of the Republic of Armenia, 2014^[37]).

In addition, Armenia is currently preparing its third NDC submission (NDC3), with the United Nations Development Programme (UNDP) leading the technical support for this process. NDC3 is expected to improve NDC2 by setting sector-specific GHG and non-GHG targets, developing an integrated implementation and financing plan, strengthening adaptation actions, and establishing a more robust monitoring framework (Harutyunyan, 2025^[38]).

In collaboration with UNDP, the Government is also reviewing and strengthening its climate commitments under the Climate Promise 2025 initiative. Given that new national commitments must be more ambitious, it is necessary to intensify the implementation of climate measures on the ground through public, private, international and national funding. At the same time, underrepresented actors, particularly women, local communities and young people, must be supported to contribute to climate action. The Climate Promise

2025 initiative also focuses on ways to make NDCs more investable (for the private sector). The work includes reviewing the economy-wide GHG emission reduction target, setting economy-wide non-GHG targets/goals for key emitting sectors, developing an integrated implementation plan, and contributing to stakeholder consultations involving policymakers, local communities, the private sector, young people, women and vulnerable groups (UNDP, 2025^[39]).

The decision of the Government (N610-L) on the NDC also explicitly mentions the need for “adaptation measures in agriculture and better water management” (Government of the Republic of Armenia, 2021, p. 11^[34]). Some activities mentioned under the outcome of adaptation of climate vulnerable sectors are the introduction of modern irrigation systems, agricultural insurance programs or nature-based solutions, among others (NDC Partnership, n.d.^[40]). To fulfil these commitments, an Inter-Agency Climate Change Council established in 2012 was promoted in 2021 to coordinate and monitor its implementation (Government of the Republic of Armenia, n.d.^[41])

Box 3. NDC Financing Strategy and Investment Plan 2021-2030

In efforts to implement its Nationally Determined Contribution (NDC) under the Paris Agreement and make it investable, Armenia has developed a draft NDC Financing Strategy and Investment Plan (FS&IP) for 2021-2030. The objective of this document is to guide the country through the implementation of key actions that will enable it to meet the objectives established in the NDCs. In terms of climate adaptation in agriculture, Annex 2 highlights that the agriculture and water sectors alone will require approximately AMD 145 billion (around USD 357 million) in financial resources by 2030. This is consistent with earlier assessments (Kato and Neuweg, 2021^[29]). To address these financing needs, Armenia is planning to leverage different instruments, including the development of a green bond framework which will support investments in climate-resilient crops, stress-resistant agricultural systems, drought management and agricultural insurance (Government of the Republic of Armenia, 2022^[42]). Moreover, the FS&IP identifies potential international climate finance opportunities that are relevant for the agricultural sector such as the Adaptation for Small holder Agriculture Programme (ASAP) Fund, the Asian Development Bank Climate Change Fund, the German International Climate Initiative, the Global Fund for Disaster Risk Reduction and Recovery, and the Japan's Fast-Start Finance (Ibid).

The Draft Concept for Climate Law of Armenia was developed and presented in November 2023 under the EU4Climate project with participants from the European Commission, UNDP and the Government of the Republic of Armenia, among others. The document aims to establish a legal framework to coordinate national climate policy, enhance institutional governance for the implementation of climate commitments and mobilize financial resources (CCIC Armenia, 2023^[43]).

In addition, the Water Code of 2002 (Law No. HO-373-N) is a foundational legislative instrument for sustainable water resource management in Armenia. Its main purpose is the conservation of the national water reserve by establishing regulation of water use across different sections. The Code includes measures such as securing irrigation rights through water use permits to prioritizing sustainable groundwater access and enforcing basin-level water planning. (Government of the Republic of Armenia, 2002^[44]).

Table 2: Timeline of policies supporting adaptation in agriculture

Policy/Plan	Year
Water Code (Law No. HO-373-N).	2002
Strategic Programme for Prospective Development 2014-2025	2014
National Strategy on Disaster Risk Management	2017
Decision N1886-L: Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of RA for 2020-2030	2019
National Action Program of Adaptation to Climate Change (NAP) 2021–2025	2021

Updated Nationally Determined Contributions (NDCs) 2021–2030	2021
EU-Armenia Comprehensive and Enhanced Partnership Agreement (CEPA)	2021
Agricultural Sector Adaptation Plan (SAP)	2022
Decision N 1222-L: Agricultural Sector Strategy Action Plan 2023–2026	2022
Draft NDC Financing Strategy and Investment Plan (FS&IP)	2022

Summary

Armenia's policy response to climate adaptation and mitigation in agriculture reflects a growing awareness of the existential risks posed by rapid climate warming and declining water resources. However, the effectiveness of this response remains limited by persistent implementation gaps and fragmented planning across multiple overlapping strategies.

Despite an impressive policy architecture (from the NAP and NDCs to the sector-specific Agricultural Adaptation Plan and ambitious reforestation targets) the implementation of these plans is challenged by the absence of detailed budget planning and expenditure frameworks, weak inter-agency coordination, and unclear institutional responsibilities. As a result, although public spending on agriculture has increased significantly, structural problems such as outdated irrigation infrastructure (with reservoirs unchanged since the Soviet era) and slow adoption of modern systems (e.g., drip irrigation for just 500 hectares) persist, exacerbating water inefficiencies despite new reservoir projects like Vedi and Kaps.

Moreover, the split between policy development (led by the Ministry of Environment) and programme implementation (by the Ministry of Economy) requires closer coordination to translate strategic documents into field-level outcomes. The EU-Armenia CEPA's alignment with EU Green Deal standards and the draft Climate Law (2023) offer opportunities to strengthen governance, but sector-specific GHG targets for agriculture remain absent in current NDCs.

High-level recommendations

To make Armenia's extensive policy frameworks truly effective in building agricultural resilience and accelerating the green transition, the country should place stronger emphasis on translating its well-developed plans into fully costed, sequenced, and monitored action. This requires embedding climate adaptation and mitigation objectives within sectoral budgets while accelerating implementation of field-level solutions such as large-scale irrigation modernization, including rapid expansion of drip irrigation systems beyond the current target. The government should leverage EU-Armenia CEPA commitments to systematically align agricultural policies with EU Green Deal standards, particularly in organic farming and nitrogen management.

Strengthening institutional coordination between climate and agriculture authorities is critical, especially for the ongoing NDC3 process which should introduce sector-specific GHG reduction targets for agriculture. Concurrently, Armenia must prioritize finalizing and implementing its draft Climate Law to establish clear governance mechanisms for climate finance and policy coordination. These efforts should be complemented by scaling up proven climate-smart practices - including anti-hail nets, greenhouses, and drought-resistant crops - while improving smallholder access to agricultural insurance and early warning systems.

Readers are encouraged to consult the complementary report on policies and frameworks for agricultural resilience in Armenia prepared under PROGRESS for recommendations and an in-depth summary of existing gaps.

4 Public financing mechanisms for agriculture and its adaptation to climate change

Financial support to the agricultural sector

The Armenian government's decision to make agriculture a strategic priority has led to a significant increase in budget allocations in recent years, from around AMD 20 billion (around USD 50 million) in 2021 to around AMD 45 billion (USD 114 million) in 2024, accounting for 1.4 percent of total government spending (Government of the Republic of Armenia, 2024^[45]). The main objective is to improve the competitiveness and efficiency of the agricultural sector while increasing the income of all actors along the agricultural value chain (farmers, cooperatives, food processors, etc.). The budget increase reflects a commitment to modernising agricultural policy, integrating public investment and improving resilience.

Various institutions manage the agricultural support programs, including the Ministry of Economy, other state bodies and entities (projects implementation units, foundations), and international organisations like UN Agencies, different countries' development agencies (Austria, EU, Germany, France, Japan, Switzerland, USA (though ceased recently)) and organizations implementing their projects. International financial institutions (IFIs) prefer to work with the Government and allocate their funds to the State agencies and entities (or work through private banks).

The past two decades in Armenia have seen a significant transformation in agricultural support; from narrow, subsidy-driven programs targeting smallholders to broader, more diversified, and increasingly budget-intensive support. Post-2018 reforms and budget increases reflect a commitment to modernising agricultural policy, integrating public investments, and improving resilience. However, questions remain about efficiency and impact, particularly given agriculture's steadily declining share in GDP - falling from around 11.5 percent in 2019, 2020 and 2021 to around 10 percent in 2022, and then to around 8 percent in 2023 and 2024 respectively.

The government has taken some steps to introduce comprehensive monitoring and central evaluation systems for the programmes and measures financed from the budget. A corresponding unit has been established within the structure of the RA Ministry of Finance, which is taking the first steps towards developing a relevant legal framework and working methods. In parallel, the ministries make efforts to evaluate the results of certain measures, especially those supported by international financial institutions and donors. For example, the RA Ministry of Economy requested support from the World Bank for the first preliminary assessment of the impact of selected agricultural support programs in 2023.

2007–2015: Early Subsidy Programs and Focus on Smallholders

Armenia's agricultural support system initially focused on reactivating underutilized land and aiding small-scale farmers. Between 2010 and 2013, elite wheat seeds were distributed to wheat producers, later expanded to other crops from 2018 onward. During the 2012–2015 period, around one-third of the Ministry of Agriculture's budget⁸ was devoted to direct subsidies, including fertilizers, improved seeds, fuel, and interest rate support—primarily targeted at smallholders with less than three hectares of land (Christensen, 2017^[46]). However, this heavy reliance on input subsidies drew criticism. World Bank reports warned against over-dependence on direct producer support, raising concerns about the sustainability and efficiency of such measures.

2011–2018: Growing Producer Focus

From 2011 onward, Armenia steadily increased its budgetary transfers to agriculture—except in 2017, when several measures were discontinued. By 2018, the government allocated almost USD 60 million (around AMD 22 billion) to agricultural support, with most of it (96 percent) directed to producer support (FAO, 2022^[9]). Only USD 2.4 million (around AMD 930 million) supported general agricultural services such as education, inspection, and infrastructure (FAO, 2022^[9]).

Despite these increases, agricultural support remained relatively low by regional standards. Between 2016 and 2018, Armenia's budgetary support to agriculture averaged just 2.6 percent of the total value of agricultural production—modest compared to neighbouring Central Asian countries. Consumers received no direct support during this period.

Post-2018: Expansion, Structural Change, and Strategic Diversification

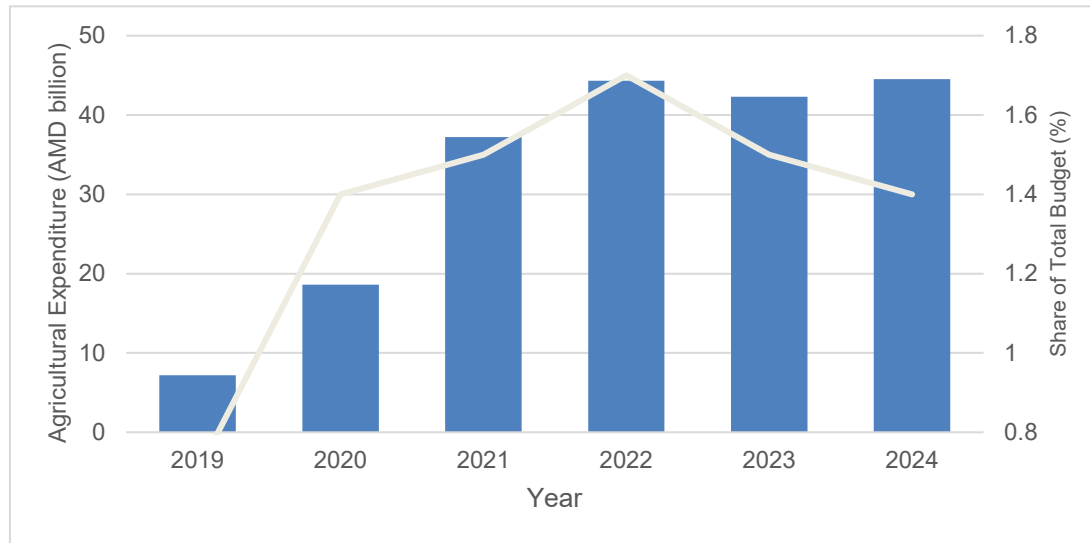
Since 2018, there has been a marked shift in both the scale and composition of Armenia's agricultural support. The government expanded seed purchase support to all crop types and continued offering subsidized fertilizers and diesel fuel—programs that had begun earlier in 2012.

Between 2019 and 2024, Armenia's agricultural budget increased more than sixfold—from more than AMD 7 billion (around USD 18 million) in 2019 to around AMD 45 billion (around USD 114 million) in 2024 (EDRC, 2024^[47]), as mentioned above. This dramatic rise— at an average annual growth rate of almost 50 percent— (Figure 2.) indicates a political prioritisation of the sector. It also marks a shift from more input-based subsidies to efforts to modernise the sector. For instance, the Intensive Horticulture Development Programme, launched in 2018, has mobilised USD 499 million in private sector loans in addition to USD 105 million in public funding. The initiative has supported more than 660 beneficiaries, expanding intensive orchards over 8,100 hectares and modernising irrigation systems on 11,000 hectares, equivalent to roughly 17 percent and 22 percent of national horticultural land, respectively (ADB, 2025^[31]).

Agriculture's share of total public spending peaked at 1.7 percent in 2022 before dipping slightly to 1.4 percent in 2024. Yet, its share of GDP remained stable at about 0.4 percent since 2021 (EDRC, 2024^[47]), suggesting that the increased investment has not led to productivity gains (but might have prevented output losses).

⁸ Armenia had a Ministry of Agriculture prior to 2019. It operated as a standalone ministry until it was merged into the Ministry of Economy as part of a broader government restructuring.

Figure 2. Agricultural Expenditure and Share of Total Government Spending in 2019–2024



Source: Authors based on data from EDRC (2024)

Main financing mechanisms for adaptation in agriculture

According to EDRC (2024^[47]) the Agricultural Modernisation Programme (AMP) received almost 60 percent of the total agricultural budget in 2024. It contains several subsidy programmes aimed at supporting modernization of agriculture where improving resilience is an important component. Most of the funding on horticulture goes towards subsidizing interest rates on loans provided for intensive fruit orchards.

Specific Measures within AMP:

- Intensive Horticulture & Modern Technologies:** Launched under **Decision No. 927-L (2021)**, aims to expand orchards/vineyards and introduce technologies like modern irrigation and anti-hail systems. In 2024, around AMD 45 million (around USD 100 000) were allocated to subsidize interest rates on loans provided in previous years for introducing modern irrigation systems on 1 500 hectares, and AMD 12 million (around USD 30 000) for installing anti-hail net systems on 200 hectares.
- Small & Medium Greenhouse Program:** Introduced in **Decision No. 1612-L (2019)** and modified in 2022, this supports greenhouse facilities to promote year-round climate-resilient production. The programme aims to boost greenhouse area and production by supporting the construction and equipping of small and medium-sized greenhouses, offering partial compensation for costs per square meter. Three greenhouse options are available, with higher subsidies for priority groups such as disabled veterans, young farmers, cooperatives and institutions. To be eligible, applicants must undergo specific training and submit the required documents, including proof of land ownership or a long-term lease (Ministry of Economy of the Republic of Armenia, n.d.^[48]).
- Leasing Agricultural Equipment:** **Decision No. 105-L (2022)** promotes the modernization of farming through subsidized leasing schemes for equipment like tractors, harvesters, and irrigation machinery. This project aims to create favourable conditions for farmers and agricultural businesses to access modern machinery at affordable rates, helping them to use land more efficiently and boost commercial agricultural production. The project offers lease agreements at a

low annual interest rate of 2 percent (or zero percent for priority groups, such as farmers in border areas and disabled veterans), with a mandatory down payment of 20 percent and repayment terms ranging from three to ten years, depending on the equipment (Ministry of Economy of the Republic of Armenia, n.d.^[49]). Its overall objective is to modernize the Armenian agricultural sector by facilitating access to expensive machinery, while the maximum total cost per lessee is limited to AMD 500 million (Government of the Republic of Armenia, 2025^[50]). However, while this government support programme may improve farmers' access to agricultural machinery, challenges remain in ensuring that this support leads to the adoption of high-quality, resource-efficient equipment. In practice, many farmers still opt for lower-cost options, which may limit the long-term benefits for productivity and climate resilience.

Table 3. Breakdown of Budget Allocations under the Agriculture Modernisation Programme in 2024

Component	2024 Budget (AMD)	Approx. Share of Total
Intensive horticulture	~17.4 billion	~68.6 percent
Leasing of agricultural machinery and equipment	~5.0 billion	~24.9 percent
Introduction of irrigation systems and anti-hail nets	~1.7 billion	~6.7 percent
Introduction of greenhouses facilities	~798.8 million	~3.1 percent
Cultivation of crops	~57.1 million	~0.2 percent

Source: EDRC, 2024

The “Agricultural Promotion Programme” received 37 percent of agricultural funding; it is broadly aimed at increasing productivity in agriculture and in food processing, but also includes the promotion of Armenia wines, helping land consolidation and supporting the implementation of Armenia’s agricultural insurance system (also described further below).

The government has also introduced various financial mechanisms to provide support to farmers, ensuring easier access to capital and investments in modernizing their operations, such as the **Agricultural Credit Subsidy Program**. This program, which has evolved since 2008, subsidizes interest rates on loans, enabling farmers to access affordable financing. The **Interest Rate Subsidy Program** (Govt. Decision No. 184-L, 2019) is a crucial part of this, reducing the effective interest rate to make credit more accessible for modernization. The programme aims to strengthen the economic capacity of farmers and agri-food businesses by improving lending conditions, introducing modern technologies and boosting the efficiency of the Armenian agri-food sector. Under this programme, eligible individuals and businesses can benefit from loans and microcredits at an annual interest rate of 0 percent, with amounts ranging from AMD 3 to 50 million and repayment terms of 2 to 7 years, depending on the activity. To be eligible, applicants must obtain a certificate from the Ministry of Economy, which is required by financial institutions to process subsidized loans.

Table 4. Overview of government financing schemes for climate-resilient agriculture with a focus on horticulture

Programme	Decision Title(s)	Implementation period	Objectives	Budget & scale
Agricultural credit subsidy program	Decision No. 706 (2008), 349-N (2011), 139-N (2015), 184-L (2019)	2008-present (expanded 2019) and stopped in 2023	Make agricultural credit more accessible by subsidizing interest rates	Since 2019: AMD 20–22 billion/year (~USD 272.5M)
Small & medium-sized greenhouse facilities	Decision No. 1612-L (2019), amended in 2022	2019-2022	Promote year-round climate-resilient production via greenhouse construction	Total budget (2020–22): AMD 3.375B; ~90 greenhouses/year (11.7 ha)
Intensive horticulture & modern technologies	Decision No. 927-L (2021)	2021-present	Expand orchards/vineyards; introduce irrigation, anti-hail nets, and high-value crops	AMD 2.35 billion (~USD 6.0M) in 2022
Leasing of agricultural equipment	Decision No. 105-L	2022-present	Modernize farming through subsidized equipment leasing	AMD 719.5 million (~USD 1.8M) in 2022; effective interest rate of 2 percent (after 12-point government subsidy)
Agricultural Land Consolidation Support Program	Decision No. 875-L	2023-2025	Stimulate productivity and reduce production costs through land consolidation; Support creation of new jobs and efficient land management; Provide 30 percent reimbursement of cadastral value for properly consolidated land plots (5–200 ha)	AMD 0.3 billion in 2024
Pilot Project on Introduction of an Insurance System in Agriculture	Decision No. 1485-L	2019-present	Develop and test agricultural insurance tools and risk management mechanisms; Establish an integrated agricultural insurance system; Provide 50–60 percent subsidy for insurance premiums	AMD 1.5 billion in 2024
Greenhouse Facilities Development Assistance Project	Decision No. 1284-L	2023-2026	Expand greenhouse areas; Boost production and export volumes; Increase competitiveness and income for agricultural businesses through affordable loans and interest subsidies	AMD 0.8 billion in 2024
State Assistance of Leasing for Financial Lending of Agri-Food Equipment	Decision No. 893-L	2018-present	Provide affordable leasing for agri-food machinery and equipment; Increase production and processing volumes; Meet international quality and safety standards; Boost competitiveness, exports, and import substitution	AMD 4.1 billion in 2024
Interest Rate Subsidy Program for Loans Aimed at Agricultural Raw Material Procurement	Decision No. 201-L	2019-present	Provide affordable loans for agricultural raw material procurement; Ensure prompt payment to suppliers of agricultural raw materials; Support stable supply chains for processors and exporters; Increase competitiveness of local products and substitute imports	AMD 4.4 billion in 2024

Box 4. Assessment of agricultural state support programmes

Accessibility, relevance and implementation challenges

The relevance of state support programmes to the needs of farmers, agricultural enterprises, and food processors appears generally high, based on available feedback and observations. These programmes—depending on their specific objectives and design—are broadly seen as responsive to beneficiary needs. The process for identifying and selecting beneficiaries is inclusive, with few restrictive

criteria, allowing a wide range of applicants to participate. Most farmers with a clean credit history report no major difficulties in accessing support, and many have used the funds to address working capital gaps, invest in equipment, and expand production (AM Partners Consulting Company LLC, 2024^[48]).

Nonetheless, there remains scope for refinement. Some farmers note that the programmes could better reflect their operational realities, particularly by facilitating access to more advanced technologies and machinery. While the programmes are not limited to food security objectives, they do not include a formal mechanism for beneficiary selection beyond basic eligibility criteria, which are applied by financial institutions and the Ministry of Economy. This open-access model has advantages in terms of reach but may not always ensure that support is optimally tailored to specific needs (AM Partners Consulting Company LLC, 2024^[48]).

Procedurally, the implementation of state support programmes is considered transparent and generally well-structured. However, smallholder farmers occasionally face challenges in navigating documentation requirements, especially for leasing schemes or infrastructure-related support. These administrative demands, while necessary for accountability and oversight, can be burdensome for some applicants (AM Partners Consulting Company LLC, 2024^[48]). Further details on these implementation challenges are discussed in the following chapter.

Note: Further details on these implementation challenges are discussed in the following chapter.

Source: AM Partners Consulting Company LLC, 2024

General Services

While producer support dominates, the government also invests in general services. In 2018, 93 percent of general service spending was allocated to two major areas: inspection/control (e.g., food safety, veterinary services, plant protection) and knowledge generation/transfer (e.g., breeding programs, education, extension services) (FAO, 2022^[9]). The remaining 7 percent supported infrastructure maintenance and land improvement. In 2024, and has been mentioned above, the biggest share of the budget went into the Agricultural Modernisation Programme. Funding for veterinary services, the Rehabilitation and Development of Rural infrastructure programme and promotion of plant growing, and plant protection only made up around 6 percent of total agricultural spending (EDRC, 2024^[47]).

Disaster risk management and agricultural insurance

In response to crop failures caused by climate impacts, the Armenian government launched its first national agricultural insurance scheme in 2019. The program aimed to provide income stability for smallholder farmers and improve their access to credit. By reducing income volatility, insurance enables farmers to invest in their operations, modernize practices, and build long-term resilience.

The scheme is co-financed by domestic resources (via the Ministry of Economy), bilateral partners, and international donors such as KfW and the Climate Investment Fund. It subsidizes 50–60 percent of insurance premiums and initially covered fruit orchards and vineyards in six regions, protecting against hail, fire, and spring frost. Over time, coverage expanded to include a broader range of crops—such as apricots, grapes, peaches, plums, apples, cherries, watermelons, melons, potatoes, wheat, barley, and oats (Badalian, 2024^[51]). By 2023, 11 662 hectares were insured.

However, the program faced a major setback in 2024 when Swiss Re Group, a key reinsurance provider, withdrew from Armenia due to high climate-related losses. Without sufficient reinsurance, local insurers were unable to fully absorb the risk. As a result, the program launched late in 2024, prompting the need for a temporary solution and a revised approach. To maintain continuity, the government temporarily

assumed part of the reinsurance risk, ensuring insurers could continue participating. It committed to compensating insurance companies if claims exceeded a certain threshold.

On March 13, 2025, the Armenian government approved a new decree for the Agricultural Insurance Support Program. Led by the Ministry of Economy in coordination with the Central Bank, the Agricultural Insurance National Agency (AINA), and private insurers, the updated program includes several key measures:

- The government will temporarily act as reinsurer in 2025.
- Objective tools and trained professionals will be introduced to improve risk and damage assessments.
- Farmers will receive increased subsidies of 70–80 percent on insurance premiums (up from 50–60 percent).
- Insurers will be compensated for losses exceeding 200 percent of total premiums collected.
- Insurance coverage in 2025 will extend to 13 crops and cover four major risks: spring frost, drought, hail, and fire.

According to Minister of Economy Gevorg Papoyan, these measures are temporary. The government is actively working to establish long-term, systemic solutions to ensure a sustainable agricultural insurance framework. Funding for the 2025 program will be fully provided through the state budget allocation to the Ministry of Economy (ARMENPRESS, 2025^[52]).

Summary

Despite all the clear commitment demonstrated by the increase in Armenia's agricultural budget and the diversification of public financing instruments, the overall architecture of adaptation support remains unbalanced and partially ill-suited to the realities of climate risk on the ground. The government's focus on large-scale intensive horticulture and machinery leasing is in line with strategic export ambitions and the need to modernise farms, but risks exacerbating structural inequalities if smaller and more vulnerable farms continue to be denied access to necessary services.

While the agricultural insurance scheme has been an important step forward in climate risk sharing, its vulnerability to the withdrawal of the reinsurance market highlights how quickly such progress can be reversed when not accompanied by systematic and joint strengthening of risk-taking capacity in the public and private sectors. The 2025 reforms increasing premium subsidies to 70-80 percent and temporary government reinsurance role, while responsive, remain fragile stopgap measures. These gaps indicate that Armenia's current financing mechanisms, while generous in volume, are not yet sufficiently conditioned to promote transformative resilience outcomes across all types of farms, climate zones and production systems. The disproportionate allocation of nearly 70 percent of AMP funds to intensive horticulture versus only 6.7 percent for irrigation/anti-hail systems creates imbalanced climate adaptation incentives. Without a more integrated, risk-based and results-linked design, there is a real risk that public funds will maintain pockets of modernisation without building a truly climate-resilient agricultural base. The uneven distribution of support and administrative challenges in accessing leasing and subsidy programs limits the benefits for smallholders and vulnerable farmers, reducing the overall effectiveness of public financing.

High-level recommendations

It is essential that Armenia does not simply increase its budgets, but fundamentally rethinks how subsidies, loans and insurance support are targeted and managed. A more resilient financial architecture must

incorporate clear requirements that link every dram of public aid to demonstrable adaptation practices, whether this means making loans for orchards conditional on smart, climate-friendly irrigation, making the leasing of machinery conditional on minimal soil-friendly work, or ensuring that insurance premiums reward risk reduction efforts on farms.

Similarly, the long-term stability of the insurance scheme requires that the government not only intervene temporarily as a reinsurer but also invest in strengthening national capacity in actuarial science and risk pooling, including through the creation of national disaster risk prevention funds or membership in regional climate risk pools. It is essential that this transformation be accompanied by a decisive strengthening of local technical support so that smallholder farmers, who are most affected by the effects of climate change, can access, use and benefit from these financial tools in practice and not just in theory. Only in this way will increase agricultural spending in Armenia translate into sustainable and systemic resilience for the communities that depend on it most, rather than short-term, one-off aid.

Improving beneficiary targeting and simplifying administrative procedures for support programs will enhance access and outcomes, particularly for smaller farms and priority groups such as disabled veterans and young farmers, as reflected in recent program designs.

5 Private financing mechanisms for adaptation in agriculture in Armenia

In addition to government-backed subsidy programmes, banks and credit organisations provide important support to Armenia's agricultural sector. This support is provided mostly through the engagement of international funding schemes (for example, those supported by KfW, IFAD, and others).

According to the Central Bank of Armenia (2024^[53]), approximately 6 percent of all bank-issued loans and leases and 11 percent of all credit organization loans and leases were directed toward the agricultural sector in 2024, hence making up a small share in overall commercial lending. Out of the 17 commercial banks currently operating in Armenia, eight banks (VTB Bank, Converse Bank, ACBA Bank, AraratBank, Armeconombank, Fast Bank, Ameriabank, and AMIO Bank) and four credit organizations (Aniv, CARD AgroCredit, ECLOF, and Farm Credit Armenia) actively participate in agricultural support programs financed through public and international resources. Separately, 18 credit organizations deliver similar services tailored to agriculture.

In addition to these externally funded initiatives, they offer small, medium, and large agricultural loans, as well as leasing for agricultural machinery and equipment.

Small agricultural loans are widely available through all eight banks. Typical products include:

- Easy-Agro loans (up to AMD ~1.5 million) offered by AraratBank, VTB Bank, and Fast Bank;
- Unsecured small agricultural loans (up to AMD 5 million) provided by ACBA Bank;
- Agricultural loans secured by gold collateral, available through Armeconombank and Converse Bank.

On the credit organization side, 13 players offer small-scale agri-finance products. Examples include:

- Loans up to 5 million AMD for intensive horticulture and food processing from Aniv (in cooperation with Ealkhezyan Inc.);
- Micro-loans from Aregak, MyCredit, Farm Credit Armenia, FINCA, and Kamurj;
- The Happy Farmer product (up to AMD 1.5 million) from CARD AgroCredit;
- Unsecured agro-loans (up to AMD 5 million) from FINCA, Smart Credit, CARD AgroCredit, and Global Credit;
- Gold-backed agro-loans from BLESS Credit;
- Fast loans (up to AMD 1 million) and individual agri-loans from ECLOF;
- Agro-loans secured by real estate (up to AMD 5 million) from Express Credit.

Medium and large agricultural loans offered by these banks include:

- Unsecured agri-loans up to USD 25 000 from AraratBank;

- AgroFast loans (up to AMD 150 million) from Fast Bank;
- Secured agricultural loans from Armeconombank;
- Standard and flexible agri-loans (up to AMD 30 million) from VTB Bank;
- Large-scale loans for agriculture (up to AMD 500 million) from AraratBank.

While not offering agriculture-specific products, others such as Inecobank, are actively involved in green financing and participates in initiatives such as the Armenia MSME Resilience Facility. Others such as the Development and Investments Corporation of Armenia (DICA), a state-owned financial corporation that provides a range of financial services including preferential loans and leasing targeted at agricultural producers and SMEs.

It is worth noting that **ACBA Bank**, since its foundation, has positioned itself as the country's leading agricultural bank and continues to offer the broadest range of agri-finance products, including Agricultural Credit Lines and Loans for Capital Investment in Agriculture.

Among credit organizations, mid- and large-scale agricultural loans include:

- Agri-loans up to AMD 7 million from G&A Universal Credit Organization;
- "Arat Kat" loan provided by Farm Credit Armenia UCO CC targets participants in the "Golden Goat" CJSC value chain;
- Program loans for horticulture up to AMD 80 million from Global Credit;
- Secured agro-loans from BLESS, CARD AgroCredit, Agro Leasing, Aniv, and Credit Concept.

Credit organizations like **FINCA, Kamurj, and ArFin** provide the widest variety of mid- and large-size agri-loans — each offering at least five distinct loan products in this segment.

Agricultural leasing is available from only two banks: Converse Bank and ACBA Bank (via its dedicated subsidiary, ACBA Leasing). Unlike Converse Bank, which mainly offers leasing for machinery purchased from Specmash LLC, ACBA Leasing covers a full range of agricultural machinery and equipment. While a few other banks do have general leasing options, they do not provide specific preferential terms for agricultural equipment.

Among leasing and credit organizations, only five players provide dedicated agri-leasing: Armenian Leasing Company (leasing for viticulture equipment and tractors); CARD AgroCredit (leasing of farm machinery, agri-food equipment, and subsidized greenhouse leasing); ID Leasing, AgroLeasing, and Farm Credit Armenia (leasing for agricultural machinery).

Central banks and financial regulators can play an important role in supporting private investment in climate-resilient farming practices by embedding climate and sustainability considerations into financial supervision, prudential rules, and disclosure frameworks. By integrating green taxonomies, adjusting risk-weighting or collateral rules, and promoting dedicated green credit lines or guarantees, they can lower perceived risks and direct more private capital toward climate-smart agricultural investments.

Armenia's Sustainable Finance Roadmap (released by Armenia's Central Bank in 2023) and its Green Taxonomy (adopted in 2025) do acknowledge agriculture's climate risks. For example, the Central Bank's roadmap explicitly flags agriculture (e.g. drought-affected Ararat Valley farms) as one of the economy's most climate-vulnerable sectors (Central Bank of Armenia, 2023, p. 4^[54]), and the new national Green Taxonomy names agriculture and forestry among its priority sectors (Government of Armenia, 2025^[55]). In fact, the taxonomy defines sustainable agribusiness activities – from irrigation systems and climate-adaptation technologies to organic/precision farming and ecosystem restoration – consistent with Armenia's 2020–2030 agriculture strategy (which emphasizes digital agriculture, improved irrigation and organic practices see Policy section above) (Government of Armenia, 2025^[56]). The Central Bank has also

developed an ESG and climate-related risk management tool for financial institutions to assess their credit portfolio's ESG risks (in the form of a heat map analysis), which can be used as a basis for individual risk analysis ((AFI), 2024^[55]). Despite these references, the roadmap and current regulations remain broad. The roadmap's "inclusive green finance" pillar is a general commitment, but there are no agriculture-specific credit policies or incentives. In practice, banks are not required (for example, through lower risk weights or special guarantees) to lend for climate-smart farming.

To close this gap, Armenia could explicitly build climate-resilient agriculture into its financial rules. Since the taxonomy already classifies small-scale irrigation, drought-tolerant seeds, soil-conservation and other climate-smart farm investments as green, prudential regulations could be eased for such loans (e.g. concessional credit lines or guarantees for farmers' adaptation projects). The fact that climate-smart agriculture is defined within the Green Taxonomy is already an important step. Aligning the taxonomy and banking guidance with the country's agricultural and climate goals further would help direct green finance into rural areas and make climate-adaptation investments more accessible to smallholder farmers.

Summary

The evolution of the private agricultural finance landscape in Armenia reflects a slow but noticeable transition towards the integration of climate change adaptation priorities into traditional banking and microfinance activities. The steady growth of agricultural loan portfolios, which have almost doubled in four years, reflects a growing willingness among financial institutions to serve this sector, particularly when they benefit from public subsidies or concessional international financing.

However, closer examination reveals that this apparent growth remains structurally fragile: most commercial banks and agricultural credit cooperatives (UCOs) remain heavily dependent on public aid programmes and external capital, rather than mobilising significant amounts of their own risk capital for long-term green investments.

This reality highlights an underlying tension: private finance is not yet truly "market-driven" when it comes to climate change adaptation but rather serves as a channel for channelling subsidised public resources. At the same time, high interest rates, strict collateral requirements and limited outreach in rural areas continue to reproduce the access barriers that have long held back Armenian farmers. In practice, this means that large, well-connected agribusinesses are the main beneficiaries of climate-related loans and leasing products, while thousands of smallholders remain completely excluded from commercial finance and are forced to absorb climate shocks without formal risk-sharing tools.

High-level recommendations

To break out of this restrictive dynamic, Armenia needs to accelerate the transition from a subsidy-dependent lending system to truly sustainable private financial intermediation for climate change adaptation. This requires the Central Bank and policymakers to do much more than subsidise interest rates: they must put in place regulatory incentives that reward banks and credit institutions that grant truly green loans and develop inclusive products for disadvantaged groups such as women, young farmers and members of cooperatives. For example, blended finance instruments, in which donor capital absorbs the first losses, could be deployed at scale to reduce the risks in the portfolios of banks and microfinance institutions, thereby freeing up private funds for farmers who currently cannot meet rigid collateral requirements.

At the same time, the national roadmap for sustainable finance should prioritise strengthening the capacity of national financial actors to issue significant volumes of green and sustainable development bonds specifically targeted at agriculture, and not just telecommunications or corporate debt in general. Better

integration of rigorous environmental and social performance monitoring is essential to ensure that private capital flows translate into tangible results in terms of farm resilience, rather than simply green labels in financial statements. Without such deliberate and systemic reconfiguration, private finance will remain an underutilised pillar, reproducing old patterns of dependency rather than becoming the driver of transformative climate adaptation that Armenia's agricultural future needs.

6 International cooperation to support financing for adaptation in agriculture in Armenia

In addition to domestic programmes and commercial finance, international finance has supported climate-adaptation projects in Armenia (Table 7). Agricultural development in Armenia has become a priority for many international donors seeking to strengthen the sector's sustainability, resilience and market orientation. In recent years, donor-funded initiatives have evolved from short-term capacity building to more integrated and multi-stakeholder approaches, guided by regional priorities for green growth, climate change adaptation and rural livelihoods.

International cooperation has supported Armenia's efforts also in financing climate adaptation in agriculture. A wide range of bilateral and multilateral donors, international financial institutions (IFIs), and development agencies have contributed to strengthening resilience, improving irrigation, and promoting sustainable land and water management practices. While the diversity of initiatives reflects strong international engagement, the overall impact remains fragmented, with limited reach to smallholder farmers and insufficient integration into national financing systems.

Nevertheless, according to analysis from the different schemes that could be tracked for this report, over USD 300 million in international funding was mobilised for adaptation-related projects in agriculture and water in Armenia in the past 15 years (between 2010 and 2025). Thousands of hectares of land were rehabilitated or brought under improved irrigation. Tens of thousands of farmers were reached through credit, insurance, training, and infrastructure support. And institutional innovations were introduced in climate finance, risk pooling, and value chain development.

Key Areas of Support and Achievements

1. Irrigation and Water Efficiency

Modernisation of irrigation systems has been a consistent focus of the international support, with major investments from the World Bank (e.g. *Irrigation System Enhancement Project* – USD 32 million), the French Development Agency (IADAAM), and the AFD-supported Vedi Reservoir project. The Irrigation System Enhancement Project (ISEP) alone rehabilitated over 57 km of canals, reducing annual water losses by more than 21 million m³ and improving irrigation for 9,500 hectares and over 8,000 users. The Vedi Reservoir, co-financed by a €75 million AFD loan and €15 million from the Armenian government, is expected to improve water availability in the Ararat Valley, contributing to long-term water security for agriculture. These efforts have increased water-use efficiency, reduced losses, and expanded irrigated areas, particularly in the Ararat and Armavir regions

2. Sustainable Land and Ecosystem Management

The RESILAND project and GEF Small Grants Programme (SGP) and the Adaptation Fund's Land-Based Adaptation Project (USD 2.5 million) have advanced reforestation, soil restoration, and sustainable land use practices (EPIU, n.d.^[54]).

The SGP alone has financed 120 community-based projects, with over USD 4.7 million in GEF grants and USD 6.8 million in co-financing, promoting biodiversity conservation and local climate resilience (SGP, n.d.^[55]).

3. Climate-Smart Agriculture and Value Chains

Programmes such as EU-GAIA and SIGMA have promoted organic farming, green technologies, and inclusive value chain development (ICARE, n.d.^[56]; EDA, n.d.^[57]). The Adaptation Fund project "Strengthening Land-Based Adaptation Capacity in Communities Adjacent to Protected Areas" (USD 2.5 million) established community-based climate-smart agriculture initiatives, installing 13 km of new irrigation lines, reducing water loss by 30%, and rehabilitating over 1 000 hectares of degraded land. In addition, over 3,000 m² of greenhouses were constructed, and 77 000 climate-resistant seedlings were distributed to farmers (Adaptation Fund, 2021^[58]).

These initiatives have supported infrastructure (e.g. cold storage, seed processing), training, and co-investment models that benefit smallholders and cooperatives.

4. Agricultural Finance and Risk Management

IFIs such as KfW, IFC, EBRD, and ADB have provided concessional loans, green credit lines, and risk-sharing facilities to expand access to finance for climate-smart investments. For instance, the German–Armenian (GAF-AF) programme⁹ has disbursed over 23 500 loans, supporting irrigation, organic farming, and cooperative investments, with total commitments exceeding EUR 30 million and an additional EUR 20 million in new financing (GAF, 2023^[59]). The EBRD Green Economy Financing Facility (GEFF), co-financed by the Green Climate Fund, channels credit through local banks to support green investments such as solar-powered irrigation and energy-efficient farming equipment (EBRD, n.d.^[60]). Similarly, the IFC launched Armenia's first climate-focused risk-sharing facility in 2024, guaranteeing up to 50 percent of losses on new SME loans targeting agribusiness and women-led enterprises (IFC, 2024^[61]). ADB's horticulture project (USD 32 million) supported the development of climate-controlled greenhouses with efficient irrigation systems (ADB, 2025^[62]).

The national agricultural insurance scheme, co-financed by KfW and others, has expanded coverage and introduced public reinsurance mechanisms in response to climate-related losses, as explained in detail above.

5. Institutional Capacity and Innovation

Technical assistance from donors (e.g. ADB, UNDP, FAO, SDC) has strengthened institutional frameworks, supported digital transformation, and introduced innovative tools such as smart irrigation, AI-based crop analysis, and performance-based budgeting. For example, PROPARCO's USD 20 million loan to ACBA Bank expanded SME financing in agriculture, benefiting around 500 enterprises and generating over 12,000 jobs (ProParco, 2020^[63]). Programmes such as RED-NEO and AGRI CAMP have further supported youth and women in agribusiness, combining training with financial access and market integration.

For a detailed overview of these and other initiatives, including funding amounts and specific project achievements, please refer to *Annex A: International Cooperation Projects for Climate Adaptation in Agriculture*.

⁹ The Agricultural Sector Support (GAF-AF) loan program is a financial cooperation initiative between Armenia and Germany aimed at improving agricultural finance.

Summary

Armenia's experience with international financing for climate change adaptation in agriculture illustrates both the breadth of global solidarity mechanisms and the depth of Armenia's structural dependence on them. Various grant and concessional loan programmes, as well as risk-sharing mechanisms, have injected millions of dollars into modern irrigation, sustainable land management, reforestation, cooperative development and green credit lines. These interventions have not only delivered tangible results on the ground, such as the rehabilitation of canals, the introduction of climate-resistant seeds and the expansion of drip irrigation, but they have also introduced advanced financial practices such as blended finance, value chain support and pilot projects improving direct access that transfer ownership to local institutions.

However, these projects remain fragmented in terms of both scale and impact: thousands of smallholders still struggle to access these funds, large agribusinesses capture a disproportionate share, and fundamental obstacles such as high collateral costs and perceived risks persist despite decades of international technical assistance. The fragmentation also stems from the diverse approaches of multilateral and bilateral donors, who tend to focus on specific sub-sectors or instruments without aligning fully with national systems. This highlights a deeper reality: external financing has helped fill investment gaps and highlight innovative solutions, but without structural reforms at the national level, its transformative potential to integrate climate change adaptation into the Armenian rural economy is only partially realised.

High-level recommendations

To transform this constant flow of external assistance into a solid foundation for long-term resilience, Armenia should reposition international cooperation not only as a source of grants or ad hoc loans, but also as a strategic partnership aimed at anchoring systemic change. Future agreements with IFIs and bilateral donors must go beyond simply financing scattered pilot projects: they must be explicitly conditional on national commitments to unlock domestic co-financing, modernise irrigation governance, reform water tariffs and strengthen the enforceability of agricultural contracts. Armenia could, for example, prioritise the use of risk-sharing mechanisms and concessional climate funds to provide innovative guarantees or portfolio insurance programmes that significantly reduce collateral requirements for smallholders and women farmers.

To increase their effectiveness, capacity-building components could shift from generic training to institutionalising modern agricultural finance expertise in local banks, credit cooperatives and extension services, so that climate-smart lending is no longer an external complement but a central part of the functioning of Armenia's rural financial architecture. In parallel, greater efforts should be made to integrate climate finance delivery mechanisms into national rural support systems, addressing accessibility issues such as complex application procedures, weak beneficiary readiness, and lack of tailored financial products.

Finally, international partners should be encouraged to better align their actions with each other and with national green finance roadmaps, overcoming donor-driven fragmentation and translating successful pilot projects into coherent national programmes that systematically link investments in adaptation to productivity growth, local job creation and the long-term competitiveness of Armenian agriculture.

7 Conclusions and possible areas of future project focus

Armenia's agricultural sector remains highly vulnerable to climate change, facing increasing risks from hail, frost, droughts, floods, soil degradation, and extreme weather events. Armenia has made meaningful progress in implementing financial mechanisms to support climate adaptation in its agricultural sector. The introduction of key initiatives—such as interest-free credit lines, agricultural insurance schemes, and subsidized leasing programs—demonstrates a growing political commitment to enhancing the sector's resilience. The adoption of the National Adaptation Plan, the updated Nationally Determined Contributions, and the Agricultural Sector Strategy provide a solid strategic framework for climate-responsive policy development. Moreover, the increasing availability of public finance and green finance products through select commercial banks and donor-supported programs signals an important shift towards integrating climate considerations into agricultural finance.

However, despite these advancements, Armenia's agricultural financing system remains fragmented, overly reliant on short-term subsidies, and insufficiently targeted toward long-term climate resilience. Many financial instruments, although well-intentioned, fail to reach the most vulnerable—smallholder farmers who face high barriers to access credit and insurance due to collateral requirements, blacklisting from prior defaults, and limited financial literacy. The overdependence on direct subsidies, the inconsistent uptake of climate-smart financial products, and weak integration of adaptation goals into public budgeting frameworks constrain the transformative impact of existing initiatives.

The government has taken positive initial steps by shifting toward investment-based financing and piloting innovative tools such as agricultural insurance and concessional lending. Yet, reforms must now accelerate and deepen. The development of climate finance should move from pilot to scale—targeting not just large agribusinesses but prioritizing the inclusion of smallholders, women farmers, and youth-led enterprises. Scaling concessional loans, bundling financial products, and strengthening insurance mechanisms will be essential to ensure adaptation is both affordable and impactful.

Looking ahead, several critical areas warrant increased attention and investment. First, cross-ministerial coordination must be institutionalized to align financial flows with climate risk assessments and measurable adaptation outcomes. Financial support instruments—credit, insurance, grants, and leasing—should be designed with conditionality that rewards climate-resilient behaviour. Second, Armenia must diversify its agricultural export markets to reduce vulnerability to trade shocks. This requires investments in value-added processing, certification, and logistics infrastructure that meet international standards.

Furthermore, Armenia should develop stable, long-term adaptation financing systems—such as a national disaster risk pool or performance-based budget allocation—to reduce reliance on external reinsurers and ensure funding predictability. A concerted effort is also needed to unlock private finance by de-risking adaptation investments and incentivizing banks to expand their outreach beyond large corporate clients.

Lastly, scaling technical assistance and farmer education is essential. Financial tools will only be effective if farmers understand how to use them and adopt sustainable practices. Integrating knowledge support with credit and insurance delivery will help maximize the impact of financing on resilience.

In conclusion, while Armenia has established a foundation for climate adaptation finance in agriculture, the next phase must focus on coherence, equity, and scale. A well-coordinated, inclusive, and outcome-driven financing architecture—aligned with adaptation priorities and supported by enabling policies—can transform Armenia’s agricultural sector into a resilient engine of rural development and climate preparedness.

Suggested recommendations

To maximize the benefits of its existing programs and address the remaining structural weaknesses, Armenia could complement the current measures with the following coordinated actions:

1. Institutional coordination:
 - a. Align the Ministry of Economy's financial instruments with the Ministry of Environment's climate risk maps, ecosystem priorities and monitoring systems, for example by establishing a permanent inter-ministerial working group on climate resilient agriculture.
 - b. Ensure that all grant, loan and lease instruments explicitly reflect national adaptation goals, for example through 2a below.
2. Linking support to climate results:
 - a. Tie new loans, grants and leasing schemes to verified climate-smart practices: e.g. drip irrigation, drought-resistant seeds, conservation tillage or accurate water use.
 - b. Integrate climate outcomes into Armenia's Medium Term Expenditure Framework (MTEF) so that public funds are tied to clear adaptation outcomes.
3. Stronger trade and value chains:
 - a. Invest in certification, storage, and logistics that meet standards of the EU, Gulf countries, and other high-value markets.
 - b. Help small and medium farmers move from exporting bulk goods to producing branded or higher-value products.
 - c. Strengthen trade promotion and help producers reach new buyers through better trade support and training.
4. Development and stabilization of the insurance sector:
 - a. Establish a national climate risk pool or a national catastrophe risk fund to share risks and reduce dependence on international reinsurers.
 - b. Offer insurance for all main climate risks, and give *premium discounts* to farmers who use risk-reducing practices.
5. Mobilize private finance:
 - a. Use blended finance - combining public and private funds - to make loans for smallholder and women farmers less risky.
 - b. Train local banks to issue green or sustainability bonds for agriculture, not only for energy projects.

- c. Provide incentives and guidance so banks develop new financial products for small farmers.
6. Strengthening technical assistance and knowledge sharing:
- a. Expand advisory and training programmes that help farmers get finance for climate-friendly technologies.
 - b. Combine loans and insurance with technical advice and farmer cooperatives, so smallholders can benefit in practice.
7. Irrigation and infrastructure
- a. Focus investments on *climate-resilient irrigation, water storage and drainage*. These systems should be monitored across sectors to ensure they truly save water and improve productivity.

Together with the measures outlined above, these actions would help Armenia transform its diverse but fragmented support system into a coherent driver of resilient growth that supports rural livelihoods, promotes trade diversification, protects natural resources and prepares the sector for an uncertain climate future.

Bibliography

- (AFI), A. (2024), *Inclusive Green Finance is taking root in AFI's Eastern Europe and Central Asia region*, <https://www.afi-global.org/news/inclusive-green-finance-is-taking-root-in-afis-eastern-europe-and-central-asia-region/> (accessed on 23 May 2025). [57]
- ACBA (2021), *results of the competition for the “Development of Organic Agriculture” 2020-2021 program*, <https://www.acba.am/hy/news/nabu-2021>. [97]
- ACBA Bank (2024), *From agricultural loans to environmental sustainability in Armenia*, https://assets.ctfassets.net/rwjxomptyc4q/16Cfcl35uBbFo6YNIFB7JX/5b436c0b413dcd405a36a895ca80d32/ACBA_EN.pdf. [86]
- ACBA Bank (2023), *acba digital*, <https://www.acba.am/en/individuals/distance-banking/acba-digital>. [101]
- ACBA Bank (n.d.), *Agricultural loans subsidy programs*, <https://www.acba.am/en/farmers/agro-subsidy-programs> (accessed on 20 March 2025). [110]
- Adaptation Fund (2021), *Strengthening land based adaptation capacity in communities adjacent to protected areas in Armenia*, <https://www.adaptation-fund.org/project/strengthening-land-based-adaptation-capacity-communities-adjacent-protected-areas-armenia-3/>. [62]
- ADB (2025), *Armenia : High-Efficiency Horticulture and Integrated Supply Chain Project*, Asian Development Bank (ADB), <https://www.adb.org/projects/51162-001/main>. [66]
- ADB (2025), *Climate Adaptation Investment Planning: Armenia Sectoral Report*. [31]
- AFI (2022), “Digital transformation of Armenia’s financial system”, *Alliance for Financial Inclusion*, <https://www.afi-global.org/opinion/digital-transformation-of-armenias-financial-system/>. [27]
- AINA (n.d.), *AINA*, <https://aina.am/>. [115]
- Alaverdyan, A. (2024), “Public investment priorities in Armenia’s agriculture. World Bank Blogs.”, *World Bank Blogs*, <https://blogs.worldbank.org/en/climatechange/prioritizing-public-investment-in-armenia-s-changing-climate>. [82]
- Alaverdyan, A. and J. Nijhoff (2024), “Climate Change | Public investment priorities in Armenia’s agriculture.”, <https://blogs.worldbank.org/en/climatechange/prioritizing-public-investment-in-armenia-s-changing-climate>. [106]
- Aleksandryan, M. (2007), *The Role of Specialized Agricultural Credit Institutions in the Development of the Rural Finance Sector: Case of Credit Clubs in Armenia*, European Association of Agricultural Economists, <https://doi.org/10.22004/ag.econ.9438>. [107]
- AM Partners Consulting Company LLC (2024), *Agriculture competitiveness in Armenia –* [123]

enhancing farm and value chain support mechanisms.

- Ameriabank (2024), *Ameriabank Successfully Placed Its First Ever Green Bond*, [92]
<https://ameriabank.am/investors/news-media/ArticleID/6403/Ameriabank-Successfully-Placed-Its-First-Ever-Green-Bond>.
- Araratbank (2025), *Application - AraratMobile*, <https://www.araratbank.am/en/araratmobile/130/>. [102]
- Araratbank (2024), *ARARATBANK Attracts USD 5 Million From GGF to Propel Green Financing in Armenia*, <https://www.araratbank.am/en/news/2024/01/17/araratbank-attracts-usd-5-million-from-ggf-to-propel-green-financing-in-armenia/670>. [76]
- Aregak (n.d.), , <https://aregak.am/en>. [124]
- ArmBanks.am - ARKA News (2025), “Cumulative volume of German-Armenian Fund’s loans in Armenia makes AMD 980 bln – Central Bank Governor”, *Armbanks*, <https://armbanks.am/en/2025/04/02/262712/>. [73]
- ARMENPRESS (2025), *The government will increase support for agricultural insurance*, ARMENPRESS, <https://armenpress.am/hy/article/1214266>. [52]
- Armenpress (2022), “Agricultural insurance becoming more popular among Armenian farmers”, *Armenpress*, <https://armenpress.am/en/article/1088527>. [108]
- ARMSTAT (2025), *Time series, GDP at market prices, mln. drams*, <https://www.armstat.am/en/?nid=12&id=01001>. [4]
- ARMSTAT (2024), *Finance Statistics of Armenia, 2024*, <https://armstat.am/en/?module=publications&mid=6&id=2687>. [24]
- ARMSTAT (2024), *Finance Statistics of Armenia, 2024*, <https://armstat.am/en/?module=publications&mid=6&id=2687>. [25]
- ARMSTAT (2024), *Main Indicators of Industrial Organizations by Economic Activities (five-digit code), for January-December 2024 (Armenian)*, <https://www.armstat.am/en/?nid=82&id=2713>. [12]
- ARMSTAT (2024), *Output of goods and services by NACE 2 classification.*, Statistical Committee of Armenia, <https://www.armstat.am/en/?nid=202>. [8]
- ARMSTAT (2023), *Foreign Trade of the Republic of Armenia (According to the EEU Commodity Nomenclature of External Economic Activity at 10-digit level)*, <https://www.armstat.am/en/?nid=778>. [10]
- Asian Development Bank (2016), *Proposed Loan Finca Armenia UCO CJSC Rural Financial Inclusion Project (Armenia)*, <https://ewsdata.right>. [98]
- AUA (2024), *Political Economy Analysis for the Water Sector of Armenia*, https://drive.google.com/file/d/1o6BW49xL40sXC5_3_IRexC_eNQYuYSon/view?pli=1. [19]
- Avanesov, A. (2024), *AFD delegation presented with details of Vedi reservoir construction and irrigation network modernization project*, https://finport.am/full_news.php?id=50028&lang=3. [77]
- AWHHE (2020), *2019-2026 – “Rural Economic Development-New Economic Opportunities” program*. [121]

- Badalian, N. (2024), *Government is ready to share risks with agricultural insurers*, ArmlInfo News Agency, https://finport.am/full_news.php?id=50152&lang=3. [51]
- BSTDB (2020), *Overview of the financial sector in Armenia*, The Black Sea Trade and Development Bank, https://www.bstdb.org/Overview%20of%20the%20fin_sector_ARMENIA.pdf. [100]
- CBA (2024), *Statistical overview*, https://www.cba.am/EN/ppperiodicals/Statistical_overview_III.2024.pdf. [113]
- CBA (n.d.), *Main balance sheet indicators of credit organizations in Armenia*, <https://www.cba.am/hy/statistics/the-main-balance-indicators-of-ra-credit-organizations/118> (accessed on June 2025). [26]
- CCIC Armenia (2023), *The Developed Draft Climate Law of Armenia Presented to the National Stakeholders*, <https://nature-ic.am/en/news/the-draft-climate-law-presented-to-the-national-stakeholders>. [43]
- CCIC Armenia (2023), *The Draft of Armenia's Long-term Low Emissions Development Strategy Presented at the 58th session of the Subsidiary Body for Scientific and Technological Advice of UN Framework Convention on Climate Change*, <https://nature-ic.am/en/news/the-draft-of-armenia%E2%80%99s-long-term-low-emissions-development-strategy-presented-at-the-58th-session-of-the-subsidiary-body-for-scientific-and-technological-advice-of-un-framework-convention-on-climate-change>. [36]
- Central Bank of Armenia (2024), *Loans of commercial banks and credit organizations by sectors (monthly) (Առևտրային բանկերի եւ վարկային կազմակերպությունների վարկերն ըստ ոլորտների (ամսական))*, <https://www.cba.am/hy/statistics/commercial-banks-and-credit-organizations-loans-by-fields-monthly/233>. [53]
- Central Bank of Armenia (2023), *National Sustainable Finance Roadmap of Armenia*, Central Bank of Armenia, https://old.cba.am/Storage/AM/downloads/finstability/National_Sustainable_Finance_Roadmap_eng.pdf. [54]
- Christensen, G. (2017), *Sustainable, Inclusive Agriculture Sector Growth in Armenia: Lessons from Recent Experience of Growth and Contraction.*, World Bank, <https://documents1.worldbank.org/curated/en/70149152220670956/pdf/124666-WP-PUBLIC-FINAL-Armenia-SCD-publication-of-technical-background-papers-on-agriculture-final-040518.pdf>. [46]
- CPI (2025), *Landscape of Climate Finance for Agrifood Systems 2025*, <https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2025/>. [1]
- EABR (n.d.), *Revolving trade finance loan facility to ArmSwissBank*, Eurasian Development Bank (EDB), <https://eabr.org/en/projects/in-process/revolving-trade-finance-loan-facility-to-armsvsibank/?n=y>. [75]
- EBRD (n.d.), *EBRD and GCF support Armenian green investment*, <https://ebrdgeff.com/ebrd-and-gcf-support-armenian-green-investment/>. [64]
- Economist Intelligence Unit (2025), *Five-year forecast : Armenia*, <https://viewpoint.eiu.com/analysis/geography/XG/AM/reports/five-year-forecast>. [3]

- EDA (n.d.), *Sustainable Inclusive Growth in Mountainous Armenia (SIGMA)*, <https://www.eda.admin.ch/countries/armenia/en/home/international-cooperation/projects.html/content/dezaproyects/SDC/en/2022/7F10710/phase1> (accessed on June 2025). [61]
- EDRC (2024), *Agriculture: Simplified Agricultural Budget for 2024*, Economic Development and Research Center of Armenia, https://budgets.am/wp-content/uploads/2024/06/Agro-Budget_ENG.pdf. [47]
- EEA (2019), *Total water use in the Republic of Armenia. ENI SEIS II East Project*, <https://eni-seis.eionet.europa.eu/east/indicators/c3-2013-total-water-use-in-the-republic-of-armenia>. [103]
- EIB (2013), *Private sector financing and the role of risk-bearing instruments. In Private Sector Financing in the Eastern Partnership Countries and the Role of Risk-bearing Instruments [Report]*, https://www.eib.org/attachments/efs/econ_report_psf_and_the_role_of_rbi_armenia_en.pdf. [91]
- EPIU (2023), *Final evaluation report: Strengthening land-based adaptation capacity in communities adjacent to protected areas in Armenia*, Adaptation Fund, https://fifspubprd.azureedge.net/afdocuments/project/15107/EPIU%20AF_EDA%20Full%20Proposal_rev%201_Clean.pdf. [71]
- EPIU (n.d.), *RESILAND: Armenia Sustainable Landscapes Project*, <https://www.epiu.am/en/category/projects/current-projects/>. [58]
- EU-Armenia (2021), *Comprehensive And Enhanced Partnership Agreement*, https://www.mfa.am/filemanager/eu/CEPA_ENG_1.pdf. [23]
- European Commission (2021), *EU-Armenia CEPA enters into force*, https://ec.europa.eu/commission/presscorner/detail/en/ip_21_782. [22]
- European Union & Republic of Armenia (2018), *Comprehensive and enhanced Partnership Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and the Republic of Armenia, of the other part*, Official Journal of the European Union, https://eur-lex.europa.eu/eli/agree_internation/2018/104/oj/eng. [33]
- FAC (n.d.), *Farm Credit Armenia UCO*, <https://www.fca.am/> (accessed on March 2025). [117]
- FAO (2025), *Armenia at a glance*, <https://www.fao.org/armenia/fao-in-armenia/armenia-at-a-glance/en/>. [13]
- FAO (2022), *Agricultural policy monitoring for eight countries in Eastern Europe, Caucasus and Central Asia*, <https://openknowledge.fao.org/server/api/core/bitstreams/cde05995-1e9f-42bb-946a-4dac84b835f4/content>. [9]
- FAO (2019), *Smallholders and family farms in Armenia. In Country Study Report*, Food and Agriculture Organization of the United Nations, <https://openknowledge.fao.org/server/api/core/bitstreams/e72612b1-14fd-4f29-889d-55510c1ae896/content>. [119]
- FINCA (n.d.), *Statistics*, <https://finca.org/locations/eurasia/armenia> (accessed on March 2025). [118]
- GAF (2023), *GAF 2023 Annual Report*, <https://gaf.am/en/about-us/annual-report.html>. [63]

- GAF (n.d.), *Agricultural Sector Support*, <https://gaf.am/en/sectors-of-lending/agriculture-finance.html>. [72]
- GAF (n.d.), *German-Armenian Fund: History*, <https://gaf.am/en/about-us/history.html>. [94]
- GCF (2023), *Annual Performance Report CY2023: Forest resilience of Armenia, enhancing adaptation and rural green growth via mitigation (SAP014)*, FAO & Government of Armenia, <https://www.greenclimate.fund/document/2023-annual-performance-report-sap014-forest-resilience-armenia-enhancing-adaptation-and>. [85]
- GEF (n.d.), *Small Grants Programme: Operating regulations for the National Steering Committee in Armenia*, <https://api.sgp.am/storage/media/original/2023/10/02/651a74af95e05.pdf>. [68]
- Government of Armenia (2025), *Հավելված ՅՅ կառավարության 2025 թվականի հունիսի 26-ի N 852-L որոշման (Annex to the Decision No. 852-L of the Government of the Republic of Armenia dated June 26, 2025 CLASSIFICATION SYSTEM (TAXONOMY))*, <https://doi.org/Available at: https://www.arlis.am/hy/acts/208769>. [56]
- Government of Armenia (2025), “ՅՅ կառավարության որոշում N 852-L, „Հայաստանի Հանրապետությունում կանաչ, անցումային և նպաստող ծրագրերի և միջոցառումների տեսակների դասակարգման համակարգը (Տարբերակային) (ON APPROVAL OF THE CLASSIFICATION SYSTEM (TAXONOMY) OF TYPES OF GREEN, TRANSITION AND SUPP”, *Government Decision*, <http://Available at: https://www.arlis.am/hy/acts/208769> (accessed on 23 October 2025). [55]
- Government of the Republic of Armenia (2025), “The opportunity of using the agricultural machinery leasing support program will be doubled”, <https://www.gov.am/en/news/item/10649/#:~:text=The%20adoption%20of%20the%20decision,of%20commodity%20production%20through%20the>. [50]
- Government of the Republic of Armenia (2024), *State Budget*, <https://www.gov.am/am/budget/>. [45]
- Government of the Republic of Armenia (2023), *Annex: Long-Term Low Emission Development Strategy of the Republic of Armenia (until 2025)*, United Nations Framework Convention on Climate Change (UNFCCC), https://unfccc.int/sites/default/files/resource/UNDP%20LT_LEDS_ARMENIA.pdf. [20]
- Government of the Republic of Armenia (2023), *Program of measures for 2023–2026 aimed at implementing the 2020–2030 Strategy on the main directions for economic development of the agricultural sector of the Republic of Armenia*, Government of the Republic of Armenia, https://www.arlis.am/Annexes/7/2023_N1222hav_inc1886.docx. [116]
- Government of the Republic of Armenia (2022), *Draft NDC Financing Strategy and Investment Plan: Appendix N 2*, https://drive.google.com/drive/folders/1QuL4U3QhFiHze-WTyNaQdcP3h4NyyQSR?usp=share_link. [42]
- Government of the Republic of Armenia (2022), *On Leasing of Agricultural Equipment. Decision No. 105-L*, <https://www.arlis.am/DocumentView.aspx?docid=193628>. [112]
- Government of the Republic of Armenia (2021), *Concept of Climate Change Adaptation in the Agricultural Sector and List of Measures.*, <http://Retrieved from https://www.arlis.am/DocumentView.aspx?DocID=137852>. [80]
- Government of the Republic of Armenia (2021), *Decision No. 1485-L on approving the 2021-2023* [84]

- Programme of State Support for Developing Intensive Horticulture, Introducing Modern Technologies, and Promoting the Production of Non-Traditional High-Value Crops in the Republic of Armenia.*, <https://www.arlis.am/DocumentView.aspx?docid=193636>.
- Government of the Republic of Armenia (2021), *Decision of the Government of the Republic of Armenia «22» April 2021 N 610 - L on approval of the Nationally Determined Contribution 2021-2030 of the Paris Agreement*, <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20of%20Republic%20of%20Armenia%20%202021-2030.pdf>. [34]
- Government of the Republic of Armenia (2021), *National Action Program of Adaptation to Climate Change and the List of Measures for 2021-2025*, https://unfccc.int/sites/default/files/resource/NAP_Armenia.pdf. [79]
- Government of the Republic of Armenia (2021), *On approval of the Nationally determined contribution 2021-2030 of the Republic. Decision No. 610-L*, <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20of%20Republic%20of%20Armenia%20%202021-2030.pdf>. [30]
- Government of the Republic of Armenia (2021), *The National Action Program of Adaptation to Climate Change and the list of measures for 2021-2025.*, UNFCCC., https://unfccc.int/sites/default/files/resource/NAP_Armenia.pdf. [28]
- Government of the Republic of Armenia (2019), *On approval of the state support program for interest rate subsidies on loans provided to agricultural sector entities. Decision No. 184-L*, [http://Retrieved from https://www.arlis.am/DocumentView.aspx?docid=193639](http://Retrieved%20from%20https://www.arlis.am/DocumentView.aspx?docid=193639). [83]
- Government of the Republic of Armenia (2019), *On approval the 2020-2030 Strategy of the main directions ensuring the economic development of the agricultural sector of the Republic of Armenia. Decision No 1886-L*, <https://www.arlis.am/DocumentView.aspx?DocID=137852>. [32]
- Government of the Republic of Armenia (2019), *On approving the Programme for Supporting the Introduction of Small and Medium-Sized Greenhouse Facilities. Decision No. 362-L*, <https://www.arlis.am/documentview.aspx?docid=193655>. [111]
- Government of the Republic of Armenia (2017), *Disaster Risk Management National Strategy and Action Plan*, https://wrd.unwomen.org/sites/default/files/2021-11/ARMENIA_DRM_%20national%20strategy%20and%20action%20plan.pdf. [81]
- Government of the Republic of Armenia (2014), *Strategic Programme for Prospective Development (2014–2025)*, <https://www.gov.am/en/prsp/>. [37]
- Government of the Republic of Armenia (2002), *Water Code of the Republic of Armenia (Law No. HO-373-N)*, <https://faolex.fao.org/docs/pdf/arm34344.pdf>. [44]
- Government of the Republic of Armenia (n.d.), *Inter-Agency Coordinating Council on Climate Change*, <https://nature-ic.am/en/projects/inter-agency-coordinating-council-on-climate-change>. (accessed on May 2025). [41]
- Harutyunyan, D. (2025), *Armenia’s Nationally Determined Contributions (NDC) 3.0 Development and Links with Transparency Framework*, UNDP Armenia, https://climate-transparency-platform.org/sites/default/files/2025-02/Armenia%27s%20Presentation%20on%20Transparency%20and%20NDC%203.0_Diana%20Harutyunyan.pdf. [38]

- ICARE (n.d.), *Harvesting Success: Achievements and Impact of the EU Green Agriculture Initiative in Armenia (EU-GAIA)*, <https://icare.am/harvesting-success-achievements-and-impact-of-the-eu-green-agriculture-initiative-in-armenia-eu-gaia/> (accessed on June 2025). [60]
- ICARE (n.d.), *Innovative Agriculture Training and Learning Camp*, <https://agricamp.icare.am/>. [122]
- IFC (2024), *IFC Partners with Armenian Banks to Boost Financial Inclusion, Support Climate Projects*. (n.d.). IFC., <https://www.ifc.org/en/pressroom/2024/ifc-partners-with-armenian-banks-to-boost-financial-inclusion-support-climate-projects>. [65]
- IFC (n.d.), *IFC Partners with Armenian Banks to Boost Financial Inclusion, Support Climate Projects*, <https://www.ifc.org/en/pressroom/2024/ifc-partners-with-armenian-banks-to-boost-financial-inclusion-support-climate-projects>. [87]
- ITC (2025), *Trade Map*, <https://www.trademap.org/Index.aspx> (accessed on July 2025). [21]
- Kato, T. and I. Neuweg (2021), *An Assessment of Investment Needs for Climate Action in Armenia up to 2030*, <https://www.eu4environment.org/app/uploads/2021/04/Report-Assessment-of-Investment-Needs-for-Climate-Action-in-Armenia-up-to-2030.pdf>. [29]
- KfW Development Bank (2019), *Armenia introduces agricultural insurance*, https://www.kfw-entwicklungsbank.de/International-financing/KfW-Development-Bank/About-us/News/News-Details_554048.html. [16]
- Khojayan, S. (2012), *Armenia's Agriculture Industry: Twenty Years After Independence, Living Off the Land Starting to Get Deserved Attention*, AGBU Magazine, <https://agbu.org/farms-villages-armenia/armenias-agriculture-industry>. [88]
- Martikian, L. (2024), "EBRD and GCF support green investments in Armenia", <https://www.ebrd.com/home/news-and-events/news/2024/ebrd-and-gcf-support-green-investments-in-armenia.html#>. [74]
- Ministry of Economy of Armenia (2024), *State Support for Agricultural Programs – 2024 Report*, <https://mineconomy.am/media/32614/Hashvetvutyun2024..%20%285%29.pdf>. [114]
- Ministry of Economy of the Republic of Armenia (n.d.), *Agricultural Cooperation*, <https://www.mineconomy.am/en/page/1331> (accessed on July 2025). [14]
- Ministry of Economy of the Republic of Armenia (n.d.), *Agricultural Machinery Leasing Support Project in the Republic of Armenia*, <https://mineconomy.am/en/page/2069> (accessed on May 2025). [49]
- Ministry of Economy of the Republic of Armenia (n.d.), *Program on state assistance for introduction of small and medium-sized greenhouses*, <https://mineconomy.am/en/page/1448> (accessed on July 2025). [48]
- Modex (2025), *Universal Credit Organizations in Armenia ranked by their credit portfolio size*, <https://modex.am/en/top-10-universal-credit-organizations-in-armenia/>. [95]
- NDC Partnership (n.d.), *Armenia: Climate Commitments*, <https://ndcpartnershipplans.com/public/view/bce1c0ff-6f1a-4db4-8053-35fccdbadf58> (accessed on March 2025). [40]
- OECD (2025), *Assessing the enabling environment for investment in water security in the EU's* [18]

Eastern Partner Countries.

- OECD (2023), *Agricultural Policy Monitoring and Evaluation 2023: Adapting Agriculture to Climate Change*, <https://doi.org/10.1787/b14de474-en>. [109]
- OECD (2001), *Agricultural Finance and Credit Infrastructure in Transition Economies*, https://www.oecd.org/content/dam/oecd/en/publications/reports/2001/09/agricultural-finance-and-credit-infrastructure-in-transition-economies_g1ghq983/9789264195646-en.pdf. [104]
- ProParco (2020), *Proparco and ACBA Bank cooperate to support SMEs and the agricultural sector in Armenia*, <https://www.proparco.fr/fr/carte-des-projets/acba>. [67]
- SEI (2025), “Green Agenda for Armenia, Georgia, Moldova and Ukraine”, *Stockholm Environment Institute*, <https://www.sei.org/projects/green-agenda/#overview>. [99]
- SGP (n.d.), *The GEF Small Grants programme. Country Programme Snapshot: Armenia*, <https://sgp.undp.org/component/countrypages/?view=countrypage&country=17&Itemid=184> (accessed on June 2025). [59]
- SGP (n.d.), *The GEF Small Grants programme. Country Programme Snapshot: Armenia*, <https://sgp.undp.org/component/countrypages/?view=countrypage&country=17&Itemid=184> (accessed on 2025). [69]
- Shen (2017), *DEVELOPMENT OF AGRICULTURAL COOPERATION IN ARMENIA: NEEDS ASSESSMENT*, https://shen.am/sites/default/files/publications/Needs%20Assessment_Armenia.pdf. [15]
- Statistical Committee of the Republic of Armenia (2025), *Economic and Financial Data. Real Sector. National Accounts. 7th February 2025*, <https://armstat.am/nsdp/>. [78]
- Stratta, N. (2021), *Development Finance Assessment Armenia.*, UNDP, https://www.undp.org/sites/g/files/zskgke326/files/2022-11/DFA%20Armenia_final.pdf. [89]
- Telecom Armenia OJSC (2024), *Sustainability-Linked bonds to prospective investors at an official event*, <https://www.telecomarmenia.am/en/news/2024/12/12/team-telecom-armenia-presents-sustainability-linked-bonds-to-prospective-i>. [93]
- The Economist (2025), *Armenia EUI*, <https://viewpoint.eiu.com/analysis/geography/XG/AM>. [6]
- The World Bank Group (2025), *Armenia. Last Updated: Oct 22, 2024.*, <https://www.worldbank.org/en/country/armenia/overview#3>. [5]
- U.S. Department of Agriculture (2023), *Armenia Country Commercial Guide: Agriculture*, <https://www.trade.gov/country-commercial-guides/armenia-agriculture>. [11]
- UN Food Systems Summit Dialogues (2021), *Armenia National Pathway Document*, https://summitdialogues.org/wp-content/uploads/2021/09/Armenia_National-Pathway_2021_En.pdf. [105]
- UNDP (2025), *Agenda for the Pre-Validation Workshop on Armenia’s Nationally Determined Contribution (NDC3.0) for 2025-2035*, <https://www.undp.org/armenia/news/armenias-nationally-determined-contributions-ndc-30-2025-2030-pre-validation-workshop>. [39]
- UNDP (2024), *Armenia’s 2021-2030 Nationally Determined Contributions*, <https://www.undp.org/armenia/publications/armenias-2021-2030-nationally-determined-> [35]

[contributions.](#)

- UNFCCC (n.d.), *Submitted NAPs from developing country Parties*, [96]
<https://napcentral.org/submitted-NAPs> (accessed on 2025).
- Urutyán, V. (2009), *Rural credit and finance overview in Armenia*, American University of Armenia., https://icare.am/Publications/20.%20ruralfin_09.pdf. [90]
- USAID (n.d.), *Farmer to farmer*, <https://farmer-to-farmer.org/>. [120
]
- Whyte, G., T. Christiansen and S. Pedersen (2025), *Republic of Armenia: Personal Income Tax and Social Security Contribution Gaps*, IMF: Fiscal Affairs Department, <https://www.imf.org/-/media/Files/Publications/TAR/2025/English/tarea2025009-print-pdf.ashx>. [7]
- World Bank (2024), *Country Climate and Development Report: Armenia*, [17]
<https://documents1.worldbank.org/curated/en/099110524115029619/pdf/P18076418d641b0e91954b113281d9a1165.pdf>.
- World Bank (2020), *Armenia - Irrigation System Enhancement Project*, [70]
<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/720591593095446301/armenia-irrigation-system-enhancement-project>.
- World Bank Group (2024), *Armenia Country Climate and Development Report*, [125
]
<http://hdl.handle.net/10986/42379>.
- World Bank Group (2024), *Armenia. Country Climate and Development Report*, The World Bank Group, <https://openknowledge.worldbank.org/server/api/core/bitstreams/41034941-5448-4df9-bfb8-6f93f32e7c4b/content>. [2]

Annex A. International Support for Climate Adaptation in Agriculture

In addition to national financing measures, Armenia has benefited from substantial international support aimed at strengthening climate adaptation, agricultural resilience, and rural finance. These programmes have been funded through a mix of grants, concessional loans, and technical assistance provided by international financial institutions (IFIs), bilateral donors, and global climate funds.

The following section provides a non-exhaustive overview of examples for key donor-supported projects that have contributed to improving irrigation efficiency, land restoration, agricultural finance, and climate-smart agricultural practices in the country.

The **Global Environment Facility (GEF) launched a Small Grants Programme (SGP)** in 2009 to support community-based environmental projects that promote biodiversity conservation, climate change adaptation, and sustainable land management. The National Steering Committee (NSC) is responsible for project selection, implementation and evaluation (GEF, n.d.^[64]). The most recent operational phase (2018-2024) incorporates different thematic such as combating land degradation or conservation and sustainable use of biological resources. The SGP in Armenia has implemented 120 projects, including 110 GEF-funded initiatives and 10 non-GEF projects. The program has received USD 4.7 million (≈2.2 billion AMD) in GEF grants, complemented by USD 5 million in cash co-financing and USD 1.85 million in in-kind contributions (SGP, n.d.^[65])

The **Irrigation System Enhancement Project (ISEP)**, financed by a USD 32 million USD (≈14.9 billion AMD) loan from the World Bank and implemented between 2013 and 2019, had the objective to reduce energy consumption and improve irrigation efficiency, as well as to improve the availability of data in the sector. As part of agricultural development, 57.26 km of canals were rehabilitated, reducing water losses by 21.44 million m³ per year. This improved irrigation and drainage services for 8,286 users across 9,537 hectares. Farmers are expected to see long-term productivity benefits, particularly in irrigated areas such as Meghri (686 ha), Baghramyan-Norakert (573 ha), and Kaghtsrashen (1 232 ha) (World Bank, 2020^[66]).

The **Adaptation Fund** has also implemented several projects in the country. In 2019, the project "Strengthening Land-Based Adaptation Capacity in Communities Adjacent to Protected Areas in Armenia", was launched aimed to enhance the resilience of rural communities. To achieve this, a total grant of 2.5 million USD (≈1.2 billion AMD) were transferred to the Ministry of Nature Protection of Armenia, which led the execution of the project. Specific objectives were set up including community-based climate-smart agriculture in degraded areas (USD 1.7 million), strengthening value chains and technology transfer (USD 342.397 million), and awareness raising, capacity building, monitoring and decision-making support (USD 200.00) (Adaptation Fund, 2021^[58]). The project evaluation reported that 13,206 linear meters of new irrigation lines were installed, contributing to an estimated 30% reduction in water loss; 77,000 seedlings and 2.44 kg of seeds of climate-resistant vegetable varieties were distributed; and more than 1000 hectares of degraded land were improved, among other outcomes (EPIU, 2023^[67]).

- 50 m² were built in the administrative units of Vedi, Dilijan, Pambak, and Fioletovo communities. A total of 3,000 m² of unheated greenhouses were built for 38 beneficiaries in various locations (EPIU, 2023^[67])

- In 2021-2022, 415 beneficiaries received tomato, eggplant, sweet potato, lettuce, broccoli seedlings, and cucumber seeds. 8,850 plants with a closed root system of tomatoes, cucumbers, and greenhouses were provided to beneficiaries (EPIU, 2023^[67])
- In 2021-2022, 1,568 community residents participated in 27 courses, 5 of which were online (EPIU, 2023^[67])

A **new Adaptation Fund** proposal was submitted in 2023 under the Adaptation Fund's Enhanced Direct Access (EDA) mechanism, with a potential budget of 4.76 million USD (\approx 2.2 billion AMD). Of this budget, USD 3.8 million are allocated to the component for channelling funding for adaptation, with the aim of identifying and funding at least 50 local adaptation projects, including those related to agriculture and climate change.

- Maximum Grant Size (indicative): No more than USD 100 000.
- Minimum Co-financing Requirement: Minimum threshold equivalent to 15%.

The **Agricultural Sector Support (GAF-AF)** loan program is a financial cooperation initiative between Armenia and Germany aimed at improving agricultural finance. The program is primarily funded through KfW (Germany's Development Bank) but the Armenian government provides co-finance. The loans are distributed through private financial institutions (banks, microfinance institutions), which lend them to farmers under commercial conditions. The total loan amount is EUR 30 million (\approx 15 billion AMD) from KfW implemented in two phases (each of EUR 15 million) and USD 5.5 million provided by the Armenian Government. The full loan disbursement (2010-2020) was completed in April 2017 accomplishing more than 23,500 agricultural loans accounting for AMD 60.8 billion (EUR 120 million). Loans were provided to PFIs under a refinancing scheme with a 5-year term at market interest rates.

An extension of the program was approved in 2020 and it continues as for now, having included an additional loan funding of EUR 20 million. This phase introduced value chain financing, organic farming, and cooperative investments, alongside continued long-term funding (GAF, n.d.^[68]). The program includes financing mechanisms aimed at supporting agricultural cooperatives and strengthening market linkages for farmers. The program has included a value chain financing component, supporting investments in climate-smart agriculture, organic farming, and improved irrigation systems. In 2023, 574 loans were issued under this component, totaling AMD 517.7 million (\approx 1.1 million USD) (GAF, 2023^[59]). The total volume of the German-Armenian Fund's loan in the country has reached AMD 980 bln in early 2025, from which 13% accounts for agriculture (ArmBanks.am - ARKA News, 2025^[69]).

Training programs, conducted in collaboration with institutions such as the Frankfurt School of Finance and Management and BFC Consulting, have focused on agricultural finance technologies and risk assessment in climate-sensitive investments. The introduction of agricultural technical cards has facilitated improved financial planning and risk management for lending institutions (GAF, 2023^[59])

International Financial Institutions (IFIs) have played a growing role in expanding access to climate-related agricultural finance in Armenia, often administered by local banks. For instance, in 2019, the European Bank for Reconstruction and Development (EBRD) launched a **Green Economy Financing Facility (GEFF)** in Armenia, co-financed by the Green Climate Fund, which provides credit lines to local banks to finance climate-related investments by companies and farmers. Some projects include energy-efficient irrigation, solar-powered farm equipment, and other sustainable technologies. Under this program, **Ameriabank** became EBRD's first partner in the country, receiving a USD 12.5 million (\approx 5.8 billion AMD) loan. Possible investments cover sustainable use of water resources (e.g. modern drip irrigation) and other green tech to improve productivity (EBRD, n.d.^[60]). In 2023, the EBRD extended USD 5 million to **AraratBank** with the objective of promoting green energy and competitiveness in the country. In 2024, the EBRD and the Green Climate Fund provided a further 10 million USD (\approx 4.6 billion AMD) loan to Inecobank to support SMEs and corporates investing in green technologies, including energy and water efficiency measures, such as solar panels, electric vehicles, and efficient irrigation systems (Martikian, 2024^[70]).

The **Asian Development Bank (ADB)** approved a 32 million USD (\approx 14.9 billion AMD) horticulture loan that aim to develop 30 hectares of climate-controlled greenhouses in Yerevan, including drip irrigation systems for tomatoes and bell peppers, mainly for export (ADB, 2025^[62]). Similarly, the Eurasian Development Bank announced a trade finance loan facility to Armswissbank to help support Armenia's international trade. The loan will be used to issue letters of credit and guarantees to businesses (EABR, n.d.^[71]).

In late 2024, The **International Finance Corporation (IFC)** signed agreements with three banks -Acba Bank, Converse Bank, and Evocabank- to focus on enhancing small businesses' access to finance, including agribusinesses and rural businesses. With a 40 million USD (\approx 18.6 billion AMD) total approved in 2024, it became the first climate-focused risk share in Armenia's banking. Notably, IFC set up the country's first risk-sharing facilities with Acba and Converse Bank, guaranteeing up to 50% of losses on portfolios of new SME loans (covering agribusiness, women-led and rural enterprises). In addition, IFC is directly lending USD 10 million (\approx 4.6 billion AMD) to Evocabank for on-lending to MSMEs, with the stipulation that 50 percent of the loan proceeds must finance climate-related projects (IFC, 2024^[61]). Also in 2024, the **Green for Growth Fund (GGF)** (public-private fund initiated by EIB/KfW) provided the country with a 5 million USD (\approx AMD 2.3 billion) credit line to AraratBank in 2024. The objective is to promote green loans in sectors such as agriculture and food processing (Araratbank, 2024^[72]). In 2025 IFC is investing up to USD 200 million (\approx AMD 93 billion) in Ameriabank to address financing gaps for climate finance projects, micro, small, and medium enterprises (MSMEs), and women-owned MSMEs in Armenia. The investment will support the country's green transition and enhance climate resilience, aligning with national and global climate goals.

Additionally, in December 2020, the private sector financing division of the Agence Française de Développement Group (AFD Group) known as PROPARCO signed a 20 million USD (\approx 9.3 billion AMD) senior loan agreement with ACBA Bank. The objective of this project is to enhance the bank's capacity to finance small and medium sized enterprises in Armenia, particularly in the agricultural sector. The project is expected to boost credit access for around 500 SMEs operating in agriculture and generate 12 750 indirect jobs in SMEs within a timeframe of five years (ProParco, 2020^[40]). Additionally, the Vedi reservoir project, co-financed by a EUR 75 million (\approx 37.2 billion AMD) AFD loan and EUR 15 million (\approx 7.4 billion AMD) from the Armenian government aim at improving water availability for agriculture in the Ararat Valley contributing to more sustainable water management (Avanesov, 2024^[73]).

Table 5. Examples of international funding for climate adaptation in agriculture

Programme	Date	Focus	Budget
GEF Small Grants Programme (SGP)	2009–Present (latest phase: 2018–24)	Community-based environmental projects, climate change adaptation, sustainable land management	USD 4.7M (GEF) + USD 5M (co-finance) + USD 1.85M (in-kind)
ISEP (Irrigation System Enhancement Project)	2013-2019	Improve irrigation efficiency, reduce water loss, boost productivity across 9,500+ ha	USD 32M (World Bank loan)
Adaptation Fund – Land-Based Adaptation	2019-present	Climate-smart agriculture, land restoration, value chain support, capacity building	USD 2.5M (Adaptation Fund) Key outcomes: 13,206m irrigation lines, 1,000+ ha restored, 77,000 seedlings, 1,568 trained beneficiaries
Adaptation Fund - Enhanced Direct Access (EDA)	Proposal submitted in 2023	Funding local adaptation projects, including agricultural climate resilience	USD 4.76M (proposed, Adaptation Fund)
GAF-AF Loan Program (KfW)	2010-present (3 phases)	Agricultural finance, value chain investments, organic farming, cooperative support	EUR 50M (KfW) + USD 5.5M (Armenian Gov.) Includes 574 loans in 2023 worth EUR 1.2M; 23,500 loans by 2017

EBRD Green Economy Financing Facility (GEFF)	2019-present	Credit lines for climate-related investments (e.g., energy-efficient irrigation, solar tech)	USD 12.5M to Ameriabank (2019); USD 5M to AraratBank (2023)
ADB Climate-Controlled Greenhouse Loan	Approved 2025	Development of 30 ha climate-controlled greenhouses in Yerevan for export (with drip irrigation)	USD 32M (Asian Development Bank)
IFC SME Climate Risk-Sharing & Finance	2024-present	Risk-sharing for SME loans (50 percent coverage); USD 10M to Evocabank for MSME climate finance	USD 40M total; includes direct loans + risk-sharing with Acba, Converse, Evocabank
IFC Investment in Ameriabank	2025	Expanding MSME, climate finance, and women-led MSME financing	USD 200M
Green for Growth Fund (GGF)	2024	Green loans in agriculture and food processing (via AraratBank)	USD 5M (EIB/KfW Green for Growth Fund)
KfW Crop Insurance Program	2017-present	Public-private insurance for agricultural climate risks	USD 5M loan facility to AraratBank (2024); also supports national crop insurance scheme
EDB Revolving Trade Finance Loan (to Armswissbank)		Support international trade, including agricultural products	USD 5 million
PROPARCO-ACBA	2020-present	Finance small and medium sized enterprises in Armenia, particularly in the agricultural sector	USD 20 mio (ACBAbank)
AFD Vedi Reservoir Project	2016-2026 (under construction)	Improve water availability for agriculture via modern irrigation systems	EUR 75M loan + EUR 15M co-financing by Government