

PROGRESS

Promoting Green Deal Readiness in the Eastern Partnership Countries

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Moldova's policy frameworks for climate change adaptation and resilience in agriculture

Stocktaking report for Output I



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Background and acknowledgements

The purpose of this report is to take stock of Moldova's policy frameworks for climate change adaptation and resilience in agriculture (as of April 2025) to inform future project activities.

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

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PROGRESS aims to support the European Union (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 (stone fruits and nuts for Moldova). PROGRESS lasts during 2023-2028 and has a total budget of EUR 20 million.

The GIZ selected stone fruits and nuts as two subsectors of particular focus for the PROGRESS project in Moldova based on selection criteria and following consultations with relevant ministries, 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 mobilisation of green finance in agriculture

This report was developed as part of Output I on national policies and frameworks. Output I aims to analyse the state of national policies and frameworks for climate change adaptation and resilience in agriculture, with a focus on horticulture (fruits and vegetables), provide recommendations for improvement and share best practices, especially those of the EU. It also aims to improve the understanding of the EU Green Deal and EU standards among farmers and farming associations and promote public-private dialogue.

Concurrently, the OECD is also carrying out a stocktaking on mobilisation of green finance in agriculture under Output IV, which will be presented in a separate report.

Following an Executive Summary and the Introduction (Chapter 1), Chapter 2 provides an overview of Moldova's main policy frameworks for climate change adaptation and resilience in agriculture and a few key issues relevant for the EU Green Deal approximation, as well as the main institutions involved. Chapter 3 summarises relevant provisions of the EU Green Deal, the Farm to Fork Strategy, the EU Climate Adaptation Strategy, and key EU import standards for fruits and berries.

The report was prepared based on desk research and findings from an in-country stocktaking mission to Chisinau in November 2024. An online discussion was organised to present and discuss the draft findings on 17 July 2025 with representatives of Moldova's Ministry of Agriculture and Food Industry, Ministry of Environment, other public institutions as well as the PROGRESS implementation partners.

Olga Olson, OECD Environment Directorate, managed the report preparation under the supervision of Krzysztof Michalak, OECD Environment Directorate. The main authors are: Béatrice Marois, OECD Environment Directorate (Chapter 1); Natalia Guranda, Environmental Consultant, Conseco Consulting SRL (Chapter 2 on local policy frameworks and institutions, policy gaps and recommendations, annexes), and Olga Olson, OECD Environment Directorate (Chapter 3). Thomas Dworak of Fresh-Thoughts Consulting provided valuable inputs.

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Table of contents

Background and acknowledgements	3
Abbreviations	7
Executive summary	9
1 Introduction	12
Impact of climate change on Moldova's agriculture	12
Brief description of the agricultural sector	13
Challenges facing the fruit and vegetable sector	14
2 Overview of Moldova's policy framework for climate change adaptation and resilience in agriculture	17
Moldova's policy framework for climate change adaptation and resilience in agriculture	17
Relevant provisions of Moldova's Association Agreement with the EU	25
Institutional set-up for designing and implementing the climate change adaptation policy for agriculture	28
3 EU Green Deal provisions and environmental standards	30
Relevant European Green Deal provisions	30
EU environmental standards for fruit and vegetable imports	34

4 Conclusions and initial policy gaps	37
Annex A. Description of policy documents for climate change adaptation and resilience in Moldova's agriculture	41
Annex B. List of legal acts in the agricultural sector with climate adaptation and resilience provisions	50
Annex C. Institutional set-up for designing and implementing the climate change adaptation policy for agriculture	56
References	60

TABLES

Table 4.1. List of legal acts in the agricultural sector with climate adaptation and resilience provisions	50
Table 4.2. Institutional set-up for designing and implementing the climate change adaptation policy for agriculture	56

BOXES

Box 1.1. Stone fruit and nut production in Moldova: Economic trends and challenges	15
Box 2.1. Government programmes with provisions for climate change adaptation in agriculture	19

Abbreviations

AA	Association Agreement
AI	Artificial Intelligence
ANSA	National Food Safety Agency
BRCGS	British Retail Consortium Global Standards
CAP	Common Agricultural Policy
CBI	Centrum ter Bevordering van Import uit ontwikkelingslanden
CMO	Common Market Organization
DRR	Disaster Risk Reduction
EAFRD	European Agricultural Fund for Rural Development
EAGF	European Agricultural Guarantee Fund
EBA	European Business Association
EC	European Commission
EMS	Environmental Management System
EU	European Union
EUR	Euro
FAO	Food and Agriculture Organization of the United Nations
GD	Government Decision
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
Global G.A.P	Global Agricultural Practices
GMS	General Marketing Standards
HACCP	Hazard Analysis and Critical Control Points
IEF	Institute of Economics and Forecasting of the National Academy of Sciences of Ukraine
IFS	International Food and Safety Standard
IKI	International Climate Initiative
MAFI	Ministry of Agriculture and Food Industry
MoE	Ministry of Environment
MRLs	Maximum Residue Levels
NAP	National Action Plan
NCCC	National Commission on Climate Change
ND-GAIN	University of Notre Dame Global Adaptation Initiative
OECD	Organisation for Economic Co-operation and Development
POPs	Persistent Organic Pollutants
PROGRESS	Promoting Green Deal Readiness in the Eastern Partnership Countries
REC	Regional Environmental Centre for the Caucasus

SME	Small and Medium-Sized Enterprises
SQF	Safe Quality Food
UK	United Kingdom
UNECE	United Nations Economic Commission for Europe
USD	American dollar

Executive summary

The agricultural sector, which covers 67.8% of Moldova's territory, is a significant contributor to Moldova's economy and is its largest employer. However, Moldova is one of the most climate-vulnerable countries in Europe and is especially affected by droughts and floods. The agricultural sector is particularly vulnerable to extreme climatic events.

This stocktaking report has identified progress and recent developments in several key areas of Moldova's policy framework for climate change adaptation and resilience in agriculture:

- Moldova has strategies aimed at climate change adaptation and resilience at national, sector-specific and regional levels. The main national strategy on adaptation is the Climate Change Adaptation Programme until 2030 and its plan for implementation. At sector level, the National Strategy for Rural and Agricultural Development 2023-30, the draft Strategic Programme for Agricultural Policy 2025-30 and the Horticulture Development Programme integrate climate adaptation into their objectives. At regional level, the National Regional Development Strategy aims to support adaptation in less developed southern regions.
- A new Climate Action Law, which will enter into force in November 2025, provides definitions for climate change and adaptation and creates an overarching regulatory framework for climate action in Moldova.
- To guide adaptation planning in the agricultural sector, the Government of Moldova has committed the Ministry of Agriculture and Food Industry (MAFI) to carrying out region-specific risk and vulnerability assessments for the sector.
- There are ongoing initiatives to improve the monitoring and provision of information on climate change impacts, including early warning systems. Notably, a PIGISC climate portal and a dedicated Climate Change Service have been established within the State Hydrometeorological Service. Moldova aims to develop a multisectoral climate forecasting and early warning system.
- Several government programmes and laws mandate the provision of advisory services and promotion of adaptation technologies to farmers, including on soil protection and land use. A new Centre for Agricultural Advice and Development was created in 2023 within the MAFI, and there are plans to set up regional Agricultural Chambers as one-stop-shops for farmers.
- Various laws, programmes and regulations address land sustainability practices such as crop rotation, erosion control, organic fertilisers, proper irrigation, afforestation and organic farming.
- Moldova's Law on Water incorporates almost all provisions of the European Union (EU) Water Framework and Floods Directive, and drought management is a priority for the Ministry of Environment (MoE). In addition, flood risk management plans are scheduled to be

developed in the upcoming period, further aligning Moldova's water governance with EU requirements. A study on water reuse is ongoing with the support of the Stockholm Environment Institute (SEI).

- Moldova's Climate Change Adaptation Programme until 2030 calls for climate-informed pest monitoring, and the National Food Safety Agency (ANSA) monitors pest prevalence.
- A new National Research Institute for Applications in Agriculture and Veterinary Medicine is mandated to carry out research and provide guidance on climate change adaptation. The State Commission for Plant Variety performs relevant tests in the regions.
- Moldova's Association Agreement with the EU, signed in 2014, has relevant provisions for agriculture and rural development as well as climate change. Moldova approved its National Action Plan (NAP) for Accession to the European Union for 2024-27, and a NAP for 2025-29 is under preparation. Progress in approximating the EU acquis has been achieved, notably on marketing standards for some products, organic farming and quality requirements. Moldova is undergoing screening of its legislation against the EU environmental and agricultural acquis this year.

Progress notwithstanding, this stocktaking report identified several priority areas for reform:

- *Adaptation programmes* should be informed by a sector-wide climate risk and vulnerability assessment. It is recommended to develop a sustainability and climate resilience strategy for horticulture following the conclusion of the current programme.
- There is no *early warning system* for agriculture. It is recommended to establish such systems to reduce losses from natural catastrophic events.
- *Pest and disease surveillance* it is not yet fully automated or digitised, which limits its geographic scope and responsiveness. It is recommended to ensure that it has country-wide coverage. Farmers should be adequately trained on integrated pest and disease management.
- *Advisory services* should be scaled up and cover climate change adaptation issues, with efficient co-operation between the MAFI Centre for Agricultural Advice and Development and the regional Agricultural Chambers.
- *Climate-resistant seeds and plant varieties* can be supported through an improved legal framework, restoration of the seed production system, and research on adaptation of foreign plant varieties.
- *Water management and irrigation*: Moldova needs to establish a comprehensive policy and legal framework for flood risk management, develop legislation on water reuse, expand irrigation without harming the environment, improve the use of groundwater resources and develop a drought management plan.
- *Support to small-scale farmers*: The predominantly small size of farms leads to knowledge gaps and difficulties meeting international standards; and accessing markets, credit and modern technologies. There should be support provided to small-scale farmers, including through advisory services.

In addition, the report identified some key issues for approximating the EU Green Deal which have an environmental impact:

Pesticide and fertiliser use

- Moldova's policy framework has partially transposed key EU regulations on pesticide and fertiliser use, including with its 2023 Law on Placing on the Market of Plant Protection Products for Amendment of Certain Normative Acts. EU legislation on the import and export of phytosanitary products and fertilisers has been fully transposed. EU-registered phytosanitary products are recognized in Moldova without the need for additional testing. Training for pesticide users has been made available through the e-learning platform of the ANSA.
- Areas for improvement include ensuring that there are environmentally friendly alternatives available for those pesticides that are removed from the registry of authorised pesticides, training on pesticide application and improved registration of organic pesticides.

Development of organic agriculture

- Organic agriculture is a priority for Moldova, which plans to increase the area of its organic farming. It has approximated the EU Regulation on organic production and labelling of organic products and is developing secondary legislation. Several organic certification bodies operate in the country. European certification organisations can also operate in Moldova. ANSA is responsible for control of organic production, marking an expansion of its institutional mandate.
- The ANSA needs to improve its expertise and technologies as well as inter-agency co-ordination, and would benefit from a capacity needs assessment. There is also a need to further develop personnel competencies of the MAFI's division responsible for organic agriculture.
- In addition, it is important to further promote consumer awareness about organic production, to develop a National Organic Farming Register, and increase incentives for suppliers of organic phytosanitary products.

Food loss and waste

- Moldova's Environmental Strategy for 2024-2030 and the Programme to Promote a Green and Circular Economy 2024-2028 both establish targets to reduce food losses along production and supply chains, including post-harvest losses.
- However, future legislative development may be needed to embed food loss prevention directly into agricultural and food system regulations.

The future work under the PROGRESS programme will focus on providing support to Moldova on a selected number of topics from the ones listed above.

1 Introduction

Impact of climate change on Moldova's agriculture

The Republic of Moldova (referred to as Moldova throughout the report) contributes only to 0.03% of the total global greenhouse gases emissions, and its per capita emissions were around half the global average (Crippa et al., 2024^[1]). Yet, Moldova is one of the most climate-vulnerable countries in Europe, according to the 2022 vulnerability score of the University of Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index¹ (University of Notre Dame, 2025^[2]). Without action, climate change is expected to reduce Moldova's GDP by up to 2.8 percent by 2050, relative to the EU Reference (REF) scenario, with the most severe impacts expected in the agricultural sector (World Bank Group, 2024^[3]).

Agriculture covers 67.8% of Moldova's territory because of favourable climate and soils (FAO, 2022^[4]; World Bank, 2022^[5]). Climate change heavily impacts the country's agricultural areas (comprising permanent crops, permanent pastures and meadows, and arable land). Increased extreme climatic events including torrential rains, hail, frost, heavy winds and droughts, are the biggest threats to Moldovan agriculture due to their unpredictability and the lack of farmers' preparedness for them (Government of the Republic of Moldova, 2023^[6]; FAO, 2022^[4]). Moldova's average annual losses from multiple hazards are approximately USD 164 million (accounting for 1.3% of its 2021 GDP) (World Bank Group, 2024^[3]). In 2020, drought decreased agricultural production by more than 25%, leading to a 20% job loss in the sector (Government of the Republic of Moldova, 2023^[6]). Predictions show that droughts will lead to soil degradation and salinization, potentially rendering land unsuitable for agricultural production. Only 0.2% of Moldova's arable land is irrigated while 9% of it is equipped for irrigation, limiting the ability of crops to withstand climate fluctuations (World Bank Group, 2024^[3]). Consequently, the productivity of most agricultural crops can decrease by up to 25% by 2050 (Government of the Republic of Moldova, 2023^[6]). This will significantly impact the economic sector and the rural population that relies on agriculture for food and income (Government of the Republic of Moldova, 2023^[6]).

¹ The ND-GAIN Country Index is made of two scores: a vulnerability score and a readiness score. The vulnerability score measures the exposure, sensitivity and adaptive capacity of a country's food, water, health, ecosystem services, human habitat and infrastructure sectors. The readiness score evaluates the capacity of a country to invest in climate change adaptation and assesses economic, governance and social readiness. The index score is updated annually, and data is available at: [Country Index // Notre Dame Global Adaptation Initiative // University of Notre Dame](#).

Extreme events are predicted to continue, especially droughts and floods (Government of the Republic of Moldova, 2023^[6]). It is predicted that climate change will shift Moldova's climate from a dry sub-humid climate to semi-arid, with a general increase in temperature and more variable rain patterns (FAO, 2022^[4]; Government of the Republic of Moldova, 2023^[6]). Water availability will decrease, even in case of more precipitation, because of higher temperatures and evaporation. Indeed, it is anticipated that surface water flows will fall by 16-20% by 2030 (FAO, 2022^[4]).

The agricultural sector is also vulnerable to the **spread of pests and diseases** (FAO, 2022^[4]; Government of the Republic of Moldova, 2023^[6]). They have been appearing more frequently due to milder winters in the South-East of the country.

Even though climate change will mainly have an adverse effect on agricultural production, **higher temperatures** will extend the growing season for some crops. As a result, more horticultural crops will be able to grow in open spaces, leading to reduced production costs (Government of the Republic of Moldova, 2023^[6]). Heat stress, however, is likely to lead to labor productivity losses (World Bank Group, 2024^[3]).

Brief description of the agricultural sector

The **agricultural sector** accounts for 7.6% of Moldova's Gross Domestic Product (GDP), which represents a threefold decrease compared to its share 20 years earlier (World Bank, 2024^[7]). Indeed, the sector has been losing attractiveness, as shown by migration from rural areas, especially because of its low monthly income (Government of the Republic of Moldova, 2023^[6]). Nevertheless, the sector is still a cornerstone of Moldova's economy. It contributes 14.5 percent to the country's GDP (World Bank Group, 2024^[3]). It is also the largest employer, representing 51% of total employment in 2023² (National Bureau of Statistics, 2024^[8]; World Bank, 2023^[9]). Beyond its economic significance, agriculture is essential for the food security of the country. In fact, more than 99% of the farms are less than 10 ha in size and are subsistence or semi-subsistence farms (FAO, 2022^[4]).

The **food industry** is also central for Moldova. Its production value makes up a third of the country's manufacturing industry (FAO, 2022^[4]).

Regarding **trade**, agricultural exports represented 45% of Moldova's export revenue in 2021 (FAO, 2022^[4]). The European Union is the biggest importer of Moldova's agricultural exports (with Romania representing 31% of the total), followed by Turkey at 11% and Russia at 6% as of 2022 (Invest Moldova Agency, 2024^[10]). There is a shift of exports away from Russia after the war in Ukraine and due to Russia's suspensions or bans of different agricultural commodities from Moldova (Government of the Republic of Moldova, 2025^[11]).

Horticulture is a fundamental subsector in Moldova's agriculture and is particularly developed because of the advantageous natural conditions (Invest Moldova Agency, 2024^[10]). Horticulture

² According to the National Bureau of Statistics of Moldova, agricultural employment represents 18% of the workforce in 2024. The difference with the World Bank data could be explained by the broader definition of employment the World Bank uses. For example, the National Bureau of Statistics survey does not take into account subsistence farming which is very important in Moldova.

represented 20% of total crop production in 2022, and 90% of locally processed fruits and vegetables are exported (The International Trade Administration, U.S. Department of Commerce, 2024^[12]; National Bureau of Statistics, 2023^[13]). In 2022, fruit, nut and berry production amounted to 650.5 thousand tonnes (mostly apples, followed by plums and grapes); and vegetable production was 257 thousand tonnes (Invest Moldova Agency, 2024^[10]).

Recent investments in marketing and post-harvest infrastructure increased the success of fruits in the European Union and international markets (The International Trade Administration, U.S. Department of Commerce, 2024^[12]). Moldova plays a significant role in the global stone fruit market, as it is the third exporter of plums and the ninth exporter of apricots and cherries globally (Invest Moldova Agency, 2024^[10]). The vegetable sector is less economically important than the fruit sector and results in net import, although it is expanding (Invest Moldova Agency, 2024^[10]).

The fruit and berry sector is more developed in the northern and central regions of Moldova than in its southern areas. In the northern areas, the total plantation area of fruits and berries has gradually decreased from about 27 096 ha in 2020 to 21 920 ha in 2024. The total production varied, but dropped significantly in 2024 compared to its 2021 peak. In the south, plantation areas remained relatively stable, with a slight decline from 8 487 ha in 2020 to 7 420 ha in 2024 (National Bureau of Statistics, 2024^[14]). However, total production was consistently much lower than in the north, reflecting both smaller areas and lower productivity.

The horticultural **processing industry** is composed of a small number of large, primarily export-oriented, processing companies that account for 80% of the industry's output. The remaining 20% corresponds to small firms focused on meeting domestic demand. In 2022, 20% of vegetables and 55% of fruits were processed (Invest Moldova Agency, 2024^[10]).

Challenges facing the fruit and vegetable sector

The **agricultural** sector in Moldova faces challenges slowing its evolution and openness to international markets:

- Irrigation is a major challenge due to the small area equipped for irrigation and the actual irrigated area. The need for irrigation is reinforced by climate change, along with the resulting droughts, rising temperatures and increasingly unpredictable rainfall patterns (Government of the Republic of Moldova, 2023^[6]; FAO, 2022^[4]). In addition, water from underground sources in Moldova is high in salinity and the costs associated with desalination are prohibitively high.
- Low productivity, notably due to the high fragmentation of the farmland and a high level of soil processing (Government of the Republic of Moldova, 2023^[6]).
- Low profitability and declining attractiveness of the sector for the workforce, evidenced by the agricultural sector's decreasing contribution to GDP, migration from rural areas because of rural poverty and widespread informal employment (FAO, 2022^[4]; Government of the Republic of Moldova, 2023^[6]).
- Non-compliance with some international standards, which impacts exports (FAO, 2022^[4]).
- Slow pace of introducing technology (Government of the Republic of Moldova, 2023^[6]).

Box 1.1. Stone fruit and nut production in Moldova: Economic trends and challenges

The GIZ selected stone fruits and nuts as two subsectors of particular focus for the PROGRESS project in Moldova based on selection criteria and following consultations with relevant ministries, sector experts and specialists. The selection was based on six criteria: economic potential, environmental impact, social inclusion, institutional development, opportunities for value chain development, and processing potential.

Stone nut and fruit production: Economic trends

As regards **stone fruits**, plums accounted for 64% and apricots for 10% of the total stone fruit production in Moldova in 2024, making these two crops representative of the country's stone fruit production (National Bureau of Statistics, 2024_[15]). All newly planted orchards of plums and apricots are irrigated, making them less sensitive to droughts. Nevertheless, droughts are already affecting the size of plums and can become a bigger threat to stone fruits in the future because of predicted water scarcity (FAO, 2022_[4]). On the other hand, stone fruits are particularly vulnerable to hail and frost⁴. Even though there is a National Hail Service that aims to protect land against hail, its effectiveness remains limited⁵. In addition, high summer temperatures can lead to loss of unripe fruits, especially in plum orchards. In 2022, plum orchards suffered a 30% decrease in production compared to the past five-year average due to high summer temperatures (FAO, 2022_[4]).

Production of **nuts** in Moldova is dominated by walnuts, which make up 98% of nut production (National Bureau of Statistics, 2024_[15]). Walnuts and almonds⁶ are less vulnerable to droughts because of their deep-rooted trees and to pests. However, walnuts are affected by droughts, which can reduce their size, and by frost⁷ (FAO, 2022_[4]). Higher summer temperatures affect walnut production less than that of stone fruits (FAO, 2022_[4]). Still, reduced humidity due to climate change has reduced walnut quality, increased the risk of mould and created a greater need for removing walnut shells post-harvest (Agri Mundus, 2024_[16]).

Moldova offers ideal conditions for **walnut** cultivation while only 7% of the world's territory is suitable for walnut culture (Invest Moldova Agency, 2024_[10]). As a result, walnut production has grown significantly since the 2000s, dominating the country's nut production and exports. Moldova has emerged as one of the EU's key walnut suppliers (Invest Moldova Agency, 2024_[10]). Almonds and hazelnuts are also cultivated in smaller quantities. In 2023, around 21 000 tonnes of nuts were produced, of which 9 000 tonnes were exported (Alternative Internationale de Dezvoltare, 2024_[17]).

Challenges to nut production

Beyond the general agriculture vulnerabilities, the **nut** sector suffers from little processing infrastructure and lack of co-operation among producers to share good practices and experiences (Alternative Internationale de Dezvoltare, 2024_[17]):

Source: (National Bureau of Statistics, 2024_[15]); (FAO, 2022_[4]); (Agri Mundus, 2024_[16]); (Invest Moldova Agency, 2024_[10]); (Alternative Internationale de Dezvoltare, 2024_[17]).

Despite its economic and trade significance, the **fruit** sector still faces some difficulties³:

- Low competitiveness, notably because of limited irrigation.
- Difficulty in meeting consumer demand as regards the quality, packaging, food safety and certification.
- Insufficient infrastructure for distribution.
- Lack of information on markets (demand, supply, international sales) or how to access them.

Additional information on the production trends in the stone fruit and nut sector (the two subsectors of focus of the PROGRESS project in Moldova) are provided in Box 1.1.

³ Value chains analysis report, elaborated within the PROGRESS project, based on ValueLinks 2.0. methodology designed by the GIZ.

⁴ Value chains analysis report, elaborated within the PROGRESS project, based on ValueLinks 2.0. methodology designed by the GIZ.

⁵ Ibid.

⁶ For the purpose of this report, almond is considered to be part of nuts.

⁷ Value chains analysis report, elaborated within the PROGRESS project, based on ValueLinks 2.0. methodology designed by the GIZ.

2 Overview of Moldova's policy framework for climate change adaptation and resilience in agriculture

Moldova's policy framework for climate change adaptation and resilience in agriculture

Moldova's policy framework pertaining to climate change and its mainstreaming into the agricultural sector consists of a series of **policies (Annex A)** and **legal acts (Annex B)**. The policy framework is established at national level and applies across the country, while the local authorities adapt and implement it within the local context.

Climate adaptation plans for agriculture and the main measures foreseen

Moldova enacted its first **Climate Action Law** only in 2024. It will enter into force in November 2025 (Parliament of the Republic of Moldova, 2024^[18]). The law creates the regulatory framework for climate action, aiming for climate neutrality by 2050 to align with the Paris Agreement. It describes the responsibilities of each governmental institution, including the Ministry of Agriculture and Food Industry (MAFI). The MAFI is tasked with defining intervention measures in agricultural and rural development policy documents to support climate change mitigation and adaptation efforts; assess climate risks to agriculture and the food industry; and develop measures to adapt to and mitigate the impacts of climate change by co-operating with other relevant institutions through the exchange of data, information, and support in the development of policy documents (Parliament of the Republic of Moldova, 2024^[19]).

The Climate Action Law refers to "adaptation" as the "process of human-induced adjustments in natural and anthropogenic systems to address current climate variability or future climate change, with the aim of reducing potential harm or leveraging beneficial opportunities". Similarly, "climate change" is defined as "changes in weather patterns that are directly or indirectly attributed to human activity, leading to alterations in the composition of the global atmosphere. These changes occur in addition to natural climate variability observed over comparable time periods" (Parliament of the Republic of Moldova, 2024^[19]).

Moldova has adopted a comprehensive framework of **national and regional strategies as well as sectoral programmes** to address climate adaptation in agriculture, most importantly the **Climate Adaptation Programme until 2030 and its Action Plan** (GD 624/2023). These documents outline concrete measures for climate change adaptation in agriculture, including expansion of irrigation, implementation of digital technologies, conservation agriculture, promotion of rainwater harvesting, support to climate resilient producer groups and development of regulations. Its implementation is monitored by the MoE of Moldova. The Food and Agriculture Organisation (FAO) drafted the Programme's agricultural chapter while the United Nations Development Programme (UNDP) has supported the preparation of the other chapters. Additional relevant programmes are shown in Box 2.1.

There is no strategy focusing exclusively on **sustainability of horticulture**, however, the sector association MoldovaFruct has expressed interest in developing one.

Box 2.1. Government programmes with provisions for climate change adaptation in agriculture

- The National Strategy for Rural and Agricultural Development 2023-2030 (GD 56/2023) and the draft Strategic Programme for Agricultural Policy 2025–2030 integrate climate adaptation into their objectives, including modernisation of the plant breeding sector, application of climate resilient technologies and practices, expansion of irrigated areas, implementation of digital technologies and innovation.
- The Environmental Strategy 2024-2030 sets out a comprehensive long-term vision for the sustainable development of Moldova, aiming to mainstream environmental priorities in all public policy areas. It commits to reducing climate risks by 50% in agriculture, calls for implementation of climate-resilient farming practices, early warning systems, expanded irrigation for drought mitigation, reducing food losses, developing green technologies and encouraging soil protection (*Government of the Republic of Moldova, 2024*^[20]).
- The Programme to Promote a Green and Circular Economy in the Republic of Moldova for the Period 2024-2028, approved through GD 495/2024, promotes a proactive policy for climate change adaptation and minimizing the impact of economic and human activities on fragile ecosystems. The programme aims to integrate the principles of the European Green Deal into legislation and sectoral policy documents between 2024 and 2028, including the agricultural sector, aligning with the Farm to Fork Strategy and the EU Biodiversity Strategy. The programme prioritises several EU Green Deal provisions relevant to agriculture, notably those related to sustainable land management, the reduction of chemical inputs, promotion of organic farming and climate neutrality.
- The Food Security Strategy 2023-2030 targets domestic seed production to reduce climate-related import dependency and increase competitiveness (*Parliament of the Republic of Moldova, 2023*^[21]).
- The Horticulture Development Programme (GD 840/2020) focuses on reducing vulnerability to water scarcity and climate-related weather risks in the fruit and berry subsector. To address these, it aims to modernize production technologies, increase irrigated horticultural land and expand protected growing areas. Key measures include upgrading the anti-hail system, expanding irrigation, promoting perennial crops, and boosting local planting material production.
- At the regional level, the National Regional Development Strategy 2022-2028 (GD 40/2022) supports adaptation in less developed southern regions through investments in sustainable agriculture and infrastructure (*Government of the Republic of Moldova, 2022*^[22]).
- The National Integrated Plan for Energy and Climate 2025-2030 supports innovation linkages in agriculture, though it lacks explicit adaptation targets.

Climate risk and vulnerability assessments

In terms of **climate risk and vulnerability assessments**, Moldova has taken initial steps toward systematically evaluating the exposure and sensitivity of its agricultural sector to climate change. The **National Strategy for Disaster Risk Reduction 2024-2030** (GD 804/2024) commits to conducting region-specific risk and vulnerability assessments for agriculture (State Chancellery, 2024^[23]). These are expected to guide sector-specific adaptation planning, including for high-value subsectors such as fruits, nuts and berries. Under the **Climate Action Law** (Law No. 74/2024), the MAFI is tasked with assessing climate risks and co-ordinating adaptation policies

with other institutions. In addition, the **Strategy for Disaster Risk Reduction** seeks to identify and map region-specific risks and vulnerabilities to climate change. Although no publicly available standalone climate vulnerability assessment for agriculture has yet been published, these commitments provide the framework for such an assessment to be undertaken.

Monitoring and forecasting the impact of climate change on the agricultural sector and Early Warning Systems (EWS)

Monitoring and predicting climate change impacts on agriculture is supported legally by **Law No. 368/2023 on Meteorological and Hydrological Activity**. The MoE has launched digitization of the State Hydrometeorological Service's hydrometeorological archives with support from the Swedish Meteorological Institute. The UNDP has previously provided support to the State Hydrometeorological Service for improving its climate services. The development of the IS "PIGISC" climate portal and the creation of a dedicated Climate Change Service under **GD 782/2024** represent institutional steps to strengthen climate analytics. The **Strategy for Disaster Risk Reduction**, which seeks to identify and map region-specific risks and vulnerabilities to climate change, also aims to develop a multisectoral forecasting system.

The **National Strategy for Disaster Risk Reduction 2024-2030** envisages introducing multi-sectoral early warning mechanisms, including the MD-ALERT system. The General Inspectorate for Emergency Situations, with EU support, developed a feasibility study and project documentation for the MD-ALERT system, while six pilot climate services⁸ are in development across key sectors, including agriculture.

The **Climate Change Adaptation Programme** commits to sector-specific warning systems for agriculture. Annual reports from the MoE show progress in expanding meteorological services for agriculture and integrating mobile alerts.

The **State Hydrometeorological Service (SHS)** issues warnings on weather-related hazards, and the information is disseminated by the General Inspectorate for Emergency Situations (GIES). The SHS also delivers daily, weekly, fortnightly, monthly and quarterly forecasts. Information is provided to all user categories, including farmers and food processing companies.

Extension and advisory services

Advisory services and promotion of adaptation technologies are promoted through the **Strategic Programme for Agricultural Policy 2025-2030**, which supports digitized advisory platforms and demonstration farms for sustainable and adaptive agriculture. The MAFI, as per the **Climate Action Law** (Law No. 74/2024), is mandated to disseminate information and collaborate on adaptation advice. These services aim to improve farmer awareness and the application of climate-smart practices. The **Land Improvement Programme** also includes public training on soil protection and land use under climate stress aimed at both farmers and agricultural service providers (Government of the Republic of Moldova, 2020_[24]).

⁸ A climate service provides climate information to help end-users make informed, climate-smart decisions. This can range from short-term weather forecasts to long-term projections, such as changes in agro-climatic zones. Combined with sector-specific data (e.g., crop or population distribution), such services support risk and vulnerability assessments.

A new **Centre for Agricultural Advice and Development** was created in 2023 within the MAFI to provide advisory services to farmers. As of November 2024, the Centre had two departments in the central office: 1) a training and advisory service (4 people); and 2) a knowledge transfer service (e.g. on the most recent developments in the agricultural sector) (7 people). It is supported by its regional branches. The Centre has a database of farmers and a database of approximately 100 agricultural advisors. It is headed by an advisory board, which includes representatives of the MAFI, sector associations and experts, and has six thematic groups including one on horticulture. These groups discuss training needs and consist of several sector associations. The Centre is in the process of identifying priority training needs and has already delivered some training to farmers, including on irrigation and financial management/insurance.

In addition, Moldova plans to set up **Agricultural Chambers** in each region as one-stop-shops for agronomy, advisory and veterinary services. These Agricultural Chambers will be autonomous, apolitical and non-profit public entities operating independently from public authorities. They are intended to function as intermediary platforms for structured public-private dialogue, notably by participating in the development of agricultural policies by the MAFI.

Additional training to farmers is provided by sector organisations such as Euroalun and MoldovaFruct, and international organisations. **MoldovaFruct**, for example, organises seminars and events on topics such as water use, anti-frost equipment, resilient varieties or waste. The FAO has organised **farmer field schools** for smallholders, for example, on organic fertilisers.

Technological innovation and climate-resilient varieties

Technological innovation and climate-resilient varieties are enabled by the **Law No. 68/2013 on Seeds** and the **Law No. 39/2008 on Plant Variety Protection**, which support testing and conservation across agroclimatic zones (Parliament of the Republic of Moldova, 2013^[25]; Parliament of the Republic of Moldova, 2008^[26]). The tests are performed in order to be included in the register of seeds and the possibility to sell them internally or externally. The Law on Seeds and the Government Decision no. 43 on testing of plant varieties have been partially harmonised with EU standards, which has streamlined the process for foreign seed producers to register their varieties, particularly those already registered in one of the EU registers. **GD 123/2018 on the National Integrated Plant Protection Programme for 2018-2027 and the Action Plan for its implementation** recognise that the instability of agricultural production volume is caused by insufficient implementation of risk mitigation mechanisms, dependence on climatic conditions, and the low level of application of advanced agricultural technologies including drought- and pest-resistant varieties. The **Food Security Strategy** (GD 775/2022) promotes the breeding of native climate-adapted seeds and updating of the National Fund for Agriculture to support this shift. Finally, the **Disaster Risk Reduction Strategy** (GD 804/2024) also promotes the development of drought- and heat-tolerant varieties.

Research institutions manage drought-resistant genetic resources under **GD 480/2019 on the Approval of the Regulation on the Creation, Maintenance, Development, Management and Financing of the Genetic Fund of Agricultural Crops**, particularly, but not limited to, apples, maize, wheat, and vine varieties (Government of the Republic of Moldova, 2019^[27]). Moldova's Institute on Horticultural Crops (now called the "**National Institute for Applied Research in Agriculture and Veterinary Medicine**") studies new varieties of vines and grapes, and has begun to study vegetable and organic varieties, but not fruit. A **state register of new plant varieties** also exists.

Promotion of soil sustainability practices in view of climate change

Soil sustainability practices are guided by the **Technical Regulation on Soil Protection** (GD 1157/2008), the **Land Code** (Law No. 22/2024) and the **Land Improvement Programme** (GD 864/2020), which mandate practices like crop rotation, erosion control and organic fertilisation. These provisions, though predating newer climate policies, form the basis for sustainable land management. The **Environmental Strategy**, a recent comprehensive policy, prioritizes soil protection, promoting sustainable practices to prevent degradation such as proper irrigation, afforestation programmes and organic farming. Complementing this, the **Programme to Promote a Green and Circular Economy** supports soil sustainability by encouraging organic farming, reducing chemical inputs and implementing climate-resilient agricultural practices aligned with EU Green Deal.

Promotion of water sustainability practices in view of climate change

Water sustainability practices are guided by the **Law on Water** (Law No. 272/2011). This law incorporates provisions of the EU Water Framework Directive and the Floods Directive, requiring water management plans to address long-term climate impacts, including drought and irrigation needs. **Law No. 171/2010 on Irrigation Water Users' Associations** supports farmer-led irrigation through Water User Associations.

Drought management is a priority for the MoE. On 27 March 2025, the MoE signed the Order on the Methodology of the Assessment of Drought Conditions, derived from the GD 21/2024 on drought planning and management. The Ministry is also in the process of developing a comprehensive national drought plan.

Pest, disease and invasive species management

Pest, disease and invasive species management is underpinned by **Law No. 422/2023 on Plant Health** and **GD 679/2024 on Phytosanitary Measures**, which implement multiple EU regulations on pest control. While they do not explicitly mention climate change, they use risk-based and ecological criteria that could include climate considerations in future amendments. These laws identify priority pests and promote surveillance and quarantine aligned with EU standards. The **Climate Change Adaptation Programme** (GD 624/2023) also calls for climate-informed pest monitoring. Moldova's **Law on Placement on Markets of Phytosanitary Standards** has been amended, and secondary legislation is being developed. Law No. 119 on Phytosanitary Products and Fertilizers will be abrogated once a new draft law is adopted.

The hazelnut company "Euroalun" has a project on digitising pest information in co-operation with the MAFI and the Agency for Intervention and Payments in Agriculture (AIPA).

The **National Food Safety Agency (ANSA)** monitors pest prevalence and pesticide use. It has 1-2 inspectors per region focusing on pest monitoring, and 37 national inspectors for pesticide use (as of November 2024). Information on phytosanitary matters is shared by inspectors and via an e-Learning platform (supported by USAID). The National Centre for Testing and Approval of Phytosanitary Products, which reports to the ANSA, maintains a **register of phytosanitary products**. However, there are some difficulties with registering organic pesticides.

Post-crisis recovery and agricultural risk management

Post-crisis recovery and agricultural risk management are supported by the **Disaster Risk Reduction Strategy** (GD No. 804/2024), which promotes region-specific vulnerability assessments. The **Strategic Programme for Agricultural Policy 2025-2030** supports installation of protective infrastructure and enhancement of on-farm resilience.

Research on climate change adaptation

Regarding **research on climate change adaptation**, the newly established **National Research Institute for Applications in Agriculture and Veterinary Medicine** (GD 668/2024) has a mandate to conduct research and provide guidance on climate change adaptation, including in horticulture, soil health, and resilient plant material. In addition, the State Commission for Plant Variety performs tests in different regions of the country.

Additional topics of relevance to the EU Green Deal

Environmental and export standards

Environmental and export standards are defined by **Law No. 929/2009 on Quality and Marketing Requirements for Fresh Fruit and Vegetables** and **Law No. 94/2024 on the Production and Marketing of Fruit Propagating and Planting Material Intended for Fruit Production**, which align Moldova's fruit and vegetable standards with EU marketing and labelling rules. **Law No. 728/1996 on Pomiculture** and **Law No. 312/2013 on Producer Groups** provide the institutional basis for structured production and marketing, though they lack explicit references to climate. **GD 695/2020 for the Approval of the Regulation on the Procedure for the Recognition of Groups of Agricultural Producers** regulates group recognition and supports modernization and compliance with EU standards.

The **Institute for Standardisation of Moldova** has several technical committees. It created a **Technical Standards Committee on the Environment** in 2024 with the goal of harmonising national and international standards, including those of the EU. The **Technical Committee on the Food Industry** is the most active committee which brings together representatives of public institutions, academia and the private sector. It identifies areas where standards are missing. The Institute has a database of standards used by farmers. It regularly organises meetings with producers and co-operates with the MoE in the committee work.

Sustainable use of pesticides and fertilisers

Law No. 403/2023 on the placing on the market of plant protection products and for the amendment of certain normative acts and **Law No. 119/2004 on plant protection products and fertilisers** regulate plant protection products and fertilisers, partially transposing EU Regulations **1107/2009 (concerning the placing of plant protection products on the market)** and **128/2009 (framework for Community action to achieve the sustainable use of pesticides)**. The **Sustainable Chemical Management Programme** includes the environmentally sound management of pesticide stockpiles and waste containing persistent organic pollutants. Recently, Moldova has transposed **EU Directive 2009/128/EC on the sustainable use of**

pesticides and has developed a resolution on its implementation. Moldova has also modified the penalties related to pesticide use in the **Contravention Code**.

As part of the recent harmonisation of Moldova's legal framework with EU legislation, certain active substances found in environmentally friendly fertilizers, which are already recognised in the EU, are now also recognised in Moldova. For phytosanitary products containing EU-registered active substances, a recognition procedure is applied without the need for additional testing or approval. This streamlines the process, reducing both the time and costs for suppliers. On the other hand, the use of phytosanitary products in organic farming remains a sensitive and complex issue that requires further attention. There is a need to identify solutions that would facilitate the registration and availability of approved organic inputs. In this context, it is important to explore additional measures to attract input suppliers to the Moldovan market and to create incentives that support the production and certification of organic phytosanitary products.

Organic production

Organic agriculture is an important priority for Moldova, which plans to increase the percentage of the organic area by 10% by 2030. Organic farming and reduced chemical use are regulated by **Law No. 237/2023 on Organic Production and Labelling**, aligned with EU Regulation 2018/848, setting out rules for organic farming and labelling. It supports reduced use of synthetic inputs and encourages organic seed production. Moldova is currently developing secondary legislation. In addition, as a result of this law, EU certification is recognised domestically without a need for another certification process. The **Programme for a Green and Circular Economy** (GD 495/2024) further promotes organic farming, crop diversity and soil carbon storage.

Several organic certification bodies operate in Moldova, including STC (Latvia) and Ceres (Germany). Recent amendments to the Law on Organic Production have facilitated the operation of foreign certification bodies in the country, allowing them to certify national products without additional special requirements, provided they have at least one staff member who speaks Romanian and can collaborate and share data with the MAFI. The **ANSA** is involved in the control of organic producers, however, it lacks capacities in key areas, including the training of its personnel on organic production standards and legislation (including on application of EU legislation), access to appropriate equipment for pesticide residue testing, the capacity to detect and investigate contamination, efficiently handling complaints and notifications as well as digital monitoring and reporting systems, and mechanisms for cross-institutional co-ordination (Bureau for Integration, 2024^[28]).

It is important to note that while Moldova has transposed the EU organic production regulations, this does not equate to providing the EU organic label. The national certification mechanism is largely aligned with EU standards, but functions independently. As Moldova is not part of the European Union, it cannot apply the EU organic label to certified products. For this reason, a national certification system has been established, incorporating the majority of the provisions from the EU organic regulations to ensure a high degree of alignment while maintaining distinct national labelling and control procedures. In this framework, the accredited certification body issues the organic label, whereas ANSA is responsible for official controls, including inspections of registered organic operators, handling complaints and notifications, and maintaining relevant registers.

The **Moldova Organic Value Chain Alliance (MOVCA)**, comprising almost 140 organic farmers and processing companies, lobbies for their interests and acts as a liaison with the government, contributes to development of legislation, promotes exports and provides training.

Food loss and waste

To reinforce food system resilience, Moldova has also begun integrating food waste reduction into its policy agenda. The **Environmental Strategy for 2024–2030** (GD No. 409/2024) and the **Programme to Promote a Green and Circular Economy 2024–2028** (GD No. 495/2024) both establish targets to reduce food losses along production and supply chains, including post-harvest losses (in line with the Sustainable Development Goal 12.3). While there is no dedicated law targeting food waste from agricultural production, these strategies include commitments to align with the EU Farm to Fork Strategy and promote efficiency across the value chain. Future legislative development may be needed to embed food loss prevention directly into agricultural and food system regulations.

Relevant provisions of Moldova’s Association Agreement with the EU

Moldova’s [Association Agreement \(AA\)](#) with the EU was signed in 2014 (Parliament of the Republic of Moldova, 2014^[29]). The document lays down all the preconditions for Moldova to comply with for its integration into the EU.

Chapter 12 of the AA addresses **agriculture and rural development** by promoting the alignment of Moldova's agricultural policies with EU standards. This includes enhancing food safety and quality standards, and sustainable agricultural practices. The agreement encourages co-operation in rural development and support to Moldova’s agricultural sector to improve its productivity and market access. Additionally, it aims to facilitate trade in agricultural products and promote investment in the sector, helping Moldova to modernize its agriculture and integrate more fully into EU markets (European Union EUR-Lex, 2023^[30]).

Annex VII to Chapter 12 of Title IV outlines that Moldova will gradually align its legislation to EU laws and instruments. This includes:

- enhancing quality policy on agricultural products and foodstuffs
- supporting and implementing organic production and labelling of organic products
- establishing marketing standards for plants, seeds of plants, and products derived from plants, fruits, and vegetables⁹.

Chapter 17 of the AA addresses **climate change** and mandates that climate considerations be integrated into all sector policies, particularly in agriculture. This integration is essential to ensure sustainable agricultural practices that mitigate the impacts of climate change, promote resilience, and enhance food security (European Union EUR-Lex, 2023^[30]).

⁹ Marketing standards for fruits were planned to be implemented during five years after AA’s entry into force.

Moldova's implementation of the Association Agreement provisions

Moldova initiated the necessary measures to align its national legal framework with EU standards in accordance with the AA provisions. In 2023, Moldova approved its [National Action Plan \(NAP\) for Accession to the European Union for 2024-2027](#). This document outlines co-operation priorities aimed at fostering political association and economic integration with the EU and reflects the planning of implementing Moldova's AA commitments, specifying the required financial resources (Ministry of External Affairs, n.d.^[31]). The Government is preparing a more comprehensive **NAP covering the period of 2025-2029** which will replace the current plan. The new document also includes a brief assessment of the current status and achievements in harmonizing the legal framework (Government of the Republic of Moldova, 2024^[32]).

Moldova's **progress in approximating the EU acquis** includes the following:

- According to the European Commission's 2024 Report, Moldova demonstrates a strong level of **preparedness in common market organisation** (European Commission, 2024^[33]). It has achieved progress in aligning with the **EU marketing standards** for edible vegetable oils and spreads derived from vegetables or animal products intended for human consumption (European Commission, 2024^[33]).
- **Marketing standards** for fruits, as foreseen in the AA, have been partially implemented in Moldova. [GD No. 929/2009 on quality and market requirements for fresh fruits and vegetables](#) partially transposes the Commission Delegated Regulation (EU) 2023/2429 of 17 August 2023 supplementing [Regulation \(EU\) No. 1308/2013 of the European Parliament and of the Council as regards marketing standards for the fruit and vegetables sector, certain processed fruit and vegetable products and the bananas sector, and repealing Commission Regulation \(EC\) No 1666/1999 and Commission Implementing Regulations \(EU\) No 543/2011 and \(EU\) No 1333/2011](#) (Government of the Republic of Moldova, 2009^[34]). It also recognizes compliance with United Nations Economic Commission for Europe (UNECE) standards, which are accepted in the EU, thereby allowing Moldova's products to align with EU import requirements. However, full transposition and enforcement of all EU marketing standards for fruits are still in progress.
- In the area of **organic farming**, Moldova adopted the **Organic Production and Labelling Law** in August 2024, ensuring alignment with the EU acquis (Government of the Republic of Moldova, 2024^[35]). Moldova has transposed all identified EU legislation in the area of organic agriculture into national legislation except for articles the implementation of which is contingent upon the country's accession to the EU. Further legislative alignment has encompassed certification of organic products and control measures¹⁰.
- Moldova's [Law 237/2018 on the control of conformity to quality requirements for fresh fruit and vegetables](#) partially transposes Chapter II of Title II, Annex III, and Annex V of the [Commission Implementing Regulation \(EU\) No 543/2011](#) of 7 June 2011 laying down

¹⁰ Official control refer to the monitoring and verification processes carried out by accredited bodies. This includes inspections, traceability checks, and compliance verification for organic farming, processing, labelling, and marketing. Moldova's organic certification mechanism remains national and is not equivalent to EU organic certification, therefore the monitoring verifies whether economic operators comply with the national legal framework.

detailed rules for the application of Council Regulation (EC) No. 1234/2007 in respect of the fruit and vegetables and processed fruit and vegetables sectors (Parliament of the Republic of Moldova, 2018^[36]).

The MAFI aims to fully transpose the EU acquis by the end of 2026.

In the **fruit and vegetable sector**, several key national legal acts are scheduled to be amended or aligned with the EU legislation. These include:

- Amendment of Law No. 237/2018 on the control of conformity with quality requirements for fresh fruit and vegetables, which will incorporate the provisions of [Commission Implementing Regulation \(EU\) 2023/2430](#) concerning checks on conformity to marketing standards for fruit and vegetable products.
- Law No. 312/2013 on producer organizations and associations, interbranch organizations and their recognition will be aligned with relevant provisions of [Regulation \(EU\) No. 1308/2013](#), specifically Articles 152–159, 164, and 173-175.
- Government Decision No. 695/2020 approving procedures for recognizing producer organizations and associations will be adjusted to reflect Articles 125-126 and 160-172b of the same EU Regulation.
- Commission Delegated [Regulation \(EU\) 2017/891](#) (on penalties and operational programmes in the fruit and vegetable sectors) and Commission Implementing [Regulation \(EU\) 2017/892](#) (regarding detailed rules for the fruit and vegetable sector) will be further transposed through a draft Government Decision planned for 2026 on the approval of procedures for the recognition of producer organizations, their associations, and interprofessional organizations (Bureau for EU Integration, 2024^[37]). The Commission Delegated [Regulation \(EU\) 2016/232](#) (on aspects of producer co-operation) will be transposed as well.
- A draft law on the financing, management, and monitoring of agricultural policy will transpose [Regulation \(EU\) 2021/2115](#) supporting the development of the Common Agricultural Policy (CAP) strategic plans (Bureau for EU Integration, 2024^[37]).

Moldova still faces challenges with approximating certain EU policies and standards on common market organization, marketing standards and conformity checks, plant reproductive material etc. It is in the process of adjusting the legislative and institutional framework necessary for full implementation. Key obstacles include a lack of administrative and institutional capacity, which requires clearer procedures, staffing and staff retention strategies, and co-ordination mechanisms; and the need for effective policies to support farmers and rural development such as access to finance, farmer organisations (co-operatives), knowledge transfer, innovation and value chain development (Bureau for EU Integration, 2024^[37]).

Moldova is undergoing **screening** of its legislation against the EU environmental and agricultural acquis. The MoE is carrying out the screening in the environmental sector and will need to approximate around 200 EU legal acts within two years. The MAFI is now completing the screening of agricultural legislation.

Institutional set-up for designing and implementing the climate change adaptation policy for agriculture

The development of climate change policy in the agricultural sector involves multiple governmental bodies that must collaborate in its formulation and implementation. The new Climate Action Law establishes clear institutional responsibilities:

- The **MoE** oversees climate change issues by providing climate data, vulnerability assessments and technical guidelines. It has a dedicated **climate change department**. The MoE is responsible for monitoring Moldova's Climate Change Adaptation Programme until 2030.
- The **Hydrometeorological Service** under the MoE provides hydro-meteorological monitoring data.
- The **MAFI** oversees the agricultural sector. It has various sector-specific departments, including a plant department and a land department. The MAFI is also responsible for aligning with the EU acquis for the "Agriculture and Rural Development" chapter. It has been restructured to strengthen its administrative capacity to cover all aspects of implementing the National Strategy for Rural and Agricultural Development and the EU integration process. As part of MAFI's reorganization, five additional subdivisions have been established, including for **Climate Change, Environmental Measures and Risk Management** (Government of the Republic of Moldova, 2024^[34]). The recently created climate change department has five staff members.
- The MAFI oversees a **Land Improvement and Irrigation Agency**, established in 2023.
- The **Centre for Agricultural Advice and Development** under the MAFI is an advisory service established in 2023.
- The MAFI has plans to set up an **Office of Horticulture** according to the Law on Horticulture, which will enter into force in October 2025. Half of the funding for this office will come from the state budget and half from the private sector.

Even though the MoE and the MAFI are in the same building, it seems that their co-operation is minimal.

Institutions co-operate through specially created **Working Groups** or **Commissions**, set for specific policy development or exchange of data and information. One example is the **National Commission for Climate Change (NCCC)** that includes representatives of various institutions.

The NCCC is an inter-ministerial body under the government chaired by the Prime Minister and includes key ministers: Environment, Finance, Energy, Infrastructure, Agriculture, Health, Labour, Education, Internal Affairs, etc. The main role of the NCCC of the Republic of Moldova is to act as the central co-ordinating and decision-making body for national climate policy, ensuring that climate change mitigation and adaptation are fully integrated into the country's economic, environmental, and social development strategies. However, it is not yet operational (World Bank Group, 2024^[3]).

Regarding **disaster risk reduction (DRR) and the early warning system**, responsibilities are shared between the MoE, the MAFI, and the **Ministry of Internal Affairs** (General Inspectorate for Emergency Situations).

The table in **Annex C** details the respective institutions and their responsibilities in developing climate change policies for the agricultural sector.

3 EU Green Deal provisions and environmental standards

Relevant European Green Deal provisions

The **European Green Deal** is a package of policy initiatives that support the EU on the path to a green transition, with the ultimate goal of reaching climate neutrality by 2050. The Green Deal underlines the need for all policy areas to contribute to fighting climate change. It supports measures across economic sectors covering energy, transport, industry, agriculture, sustainable finance and more (European Council, 2025^[38]). The European Green Deal is an integral part of the European Commission's strategy to implement the United Nation's 2030 Agenda and the Sustainable Development Goals (European Commission, 2019^[39]).

The European Green Deal notes that food production still results in air, water and soil pollution, contributes to the loss of biodiversity and climate change, and consumes excessive amounts of natural resources, while an important part of food is wasted (European Council, 2025^[38]).

The Farm to Fork Strategy is a pillar of the European Green Deal which aims to make food systems more fair, healthy and environmentally friendly (European Commission, n.d.^[40]). This strategy aims to reward farmers, fishers and other operators in the food chain who have already undergone the transition to sustainable practices, enable the transition for the others and create additional opportunities for their businesses (European Commission, 2020^[41]). It states that farmers, fishers and aquaculture producers need to transform their production methods more quickly and make the best use of nature-based, technological, digital, and space-based solutions to deliver better climate and environmental results, increase climate resilience and reduce and optimise the use of inputs (e.g. pesticides, fertilisers).

Relevant provisions of the EU Green Deal and the Farm to Fork Strategy

The key provisions of the EU Green Deal and the Farm to Fork Strategy with relevance for the horticultural sector include¹¹:

¹¹ The PROGRESS project prioritises adaptation and resilience policy rather than mitigation policy. It does not focus on influence on consumer behaviour, carbon sequestration, bio-energy, and energy efficiency. The list includes some items that are not within the project scope but of importance to the horticultural sector overall. The list also covers matters on green finance, which are covered by Output IV of the PROGRESS project.

- **Sustainable practices in national strategic plans under the CAP:** National strategic plans should lead to the use of sustainable practices such as precision agriculture, organic farming, agro-ecology, and agro-forestry. They will need to reflect an increased level of ambition to reduce significantly the use and risk of chemical pesticides, as well as the use of fertilisers and antibiotics.
- **Tackle climate change** in the agricultural sector (mitigate climate change and adapt to its impacts).
- **Reduced use of pesticides, fertilisers and antibiotics:** Strategic plans will reflect an increased level of ambition to reduce significantly the use and risk of chemical pesticides, as well as the use of fertilisers and antibiotics.
 - Measures to **reduce chemical pesticide risks** which contribute to soil, water and air pollution, and biodiversity loss include:
 - integrated pest management and safe alternative ways to protect the harvest from pests and diseases other than chemical pesticides (e.g. crop rotation, mechanical weeding)
 - biological pesticides
 - better environmental risk assessment of pesticides
 - improved data on pesticides
 - a faster pesticide authorisation process.
 - **Reduction in the use of fertilisers** by:
 - implementing and enforcing relevant environmental and climate legislation
 - applying balanced fertilisation and sustainable nutrient management
 - managing nitrogen and phosphorus better throughout the lifecycle
 - precise fertilisation techniques and sustainable agricultural practices.
- **Organic farming:** The area under organic farming will need to increase. It will be promoted through actions such as stimulation of supply and demand, promotion campaigns and green public procurement.
- **Protection against pests and diseases:** The EU needs to develop innovative ways to protect harvests from pests and diseases.
- **Seed security and diversity:** Farmers need to have access to a range of quality seeds for plant varieties adapted to the pressures of climate change. There is a need for registration of seed varieties, including for organic farming and easier market access for traditional and locally-adapted varieties.
- **Research and innovation:** Research and innovation is a key driver for accelerating the transition to sustainable, healthy and inclusive food systems from primary production to consumption. There is a need to consider the potential role of new innovative techniques to improve the sustainability of the food system while ensuring that it is safe. Innovative techniques, including biotechnology and the development of bio-based products, may play a role in increasing sustainability.

- **Reduction of food loss and waste:** Measures to reduce food loss and waste include legally binding targets, quantification of food waste levels, investigation and prevention of food losses at the production stage, and appropriate date marketing (use by and best before dates) etc.
- **Carbon sequestration** by farmers, which should be rewarded.
- **Circular bio-based economy** e.g. bio-refineries that produce bio-fertilisers, protein feed, bioenergy, bio-chemicals.
- **Renewable energy:** Biogas production from the food and beverage industry, solar panels etc.
- **Stimulating sustainable food processing, wholesale, retail, hospitality and food services practices:**
 - **Energy efficiency,** to reduce the environmental footprint and energy consumption.
 - **Reducing packaging.**
 - **Improvement of the corporate governance framework,** including a requirement for the food industry to integrate sustainability into corporate strategies.
 - **Circular business models in food processing and retail,** including specifically for small and medium-sized enterprises (SMEs); e.g. making use of food waste.
 - **Food packaging:** Revision of food contact materials legislation to improve food safety and public health (in particular, in reducing the use of hazardous chemicals), use of innovative and sustainable packaging solutions using environmentally-friendly, re-usable and recyclable materials, food waste reduction such as reusable packaging etc.
 - **Revision of marketing standards** to provide for the uptake and supply of sustainable agricultural products.
 - **Creation of shorter supply chains through** a reduction of dependence on long-haul transportation.
- Protecting land, soil, water, air, plant and animal health and welfare and reversal of **biodiversity** loss.
- **Enforcement of legislation,** including on pesticide use and environmental protection.
- **Certification and labelling** of sustainability performance of food products and **targeted incentives.**
- **Access to fast broadband internet:** This will enable precision farming and the use of Artificial Intelligence (AI), leading to better soil management and water quality as well as a reduction in the use of fertilisers, pesticides and Greenhouse gas (GHG) emissions.
- **Advisory services:** there is a need for objective, tailored advisory services for all actors in the food system.

- **Investments** are key to encourage innovation and create sustainable food systems¹².
- **Targeted support for SMEs:** Specific tailored solutions are required for SME food processors and small retail and food service operators, to help them develop new skills and business models while avoiding administrative and cost burdens.

Importantly, the EU aims to support the global transition to sustainable agri-food systems, including through **international co-operation** and **trade** policy. The EU will seek to ensure that all EU bilateral trade agreements have a robust sustainability chapter. The EU's trade policy will seek to obtain ambitious commitments from third countries in areas such as the use of pesticides and antimicrobial resistance (European Commission, n.d._[40]).

Relevant provisions of the EU Adaptation Strategy

The new **EU Adaptation Strategy** is part of the European Green Deal. It states that its adaptation action will be implemented in an integrated manner with the other European Green Deal initiatives, including the Farm to Fork Strategy, the Soil Strategy, the Circular Economy and Zero Pollution Action Plans and the Biodiversity Strategy (European Commission, 2021_[42]). The key relevant provisions include:

- The importance of the **private and the public sector to work more closely together**, especially on financing adaptation.
- Adaptation **awareness and planning** would be spread to every single local authority, company and household.
- There is a need to **expand adaptation knowledge**, and acquire more and better climate-related data, especially on economic losses. Dialogue between policy makers and scientists needs to be promoted, and improvements in modelling are needed.
- The **digital transformation** is critical to achieving Green Deal objectives: The use of latest technologies and climate services to underpin decision-making must be promoted (for example, remote sensing, smart weather conditions, artificial intelligence and high performance computing).
- **Climate resilience considerations must be mainstreamed in all relevant policy fields** applicable to public and private sectors, to support the development and adaptation strategies and plans at all levels of government. **Adaptation strategies at all levels must be effective and based on the latest science.**
- **Monitoring, reporting and evaluation are essential** to setting a robust baseline against which to measure progress on adaptation.
- **Achieving resilience in a just and fair way is essential** so that the benefits of climate adaptation are widely and equitably shared. Adaptation measures need to consider the needs of men and women, older people, persons with disabilities, displaced persons, or socially marginalized groups. Support is needed for education, training and reskilling initiatives that lead to green jobs.
- **Budgetary planning, governance and institutional arrangements need to reflect**

¹² This topic falls under PROGRESS Output IV.

disaster risk management (including processes and tools to address ex-ante climate related risks and reducing ex-post disaster consequences).

- **Implementing nature-based solutions on a larger scale** would increase climate resilience and contribute to multiple Green Deal objectives. For example, **promoting and sustainably managing forests and farmland** will help adapt to climate change in a cost-effective way. It is vital to better quantify their benefits and to better communicate them to decision-makers and practitioners at all levels to improve take-up.
- To accelerate adaptation action, **implementation requires resources** that are commensurate with the challenge.
- **Solutions are urgently needed to help farmers and land managers** tackle climate risks. **Supply of suitable high-quality plant reproductive material** to support adaptation in agriculture, forestry and land ecosystem management should be facilitated and broadened. More work is needed to encourage **collaborative, transnational production and transfer of seeds and planting material**.
- **Climate resilience decision support systems and technical advice** must become more accessible and rapid to foster their take-up. Such solutions would have to work on a timescale and with resources available for the financial sector, SMEs or small farmers.
- Climate adaptation action must better leverage synergies with broader work on **disaster risk prevention and reduction**.
- Ensuring that **freshwater is available** in a sustainable manner is fundamental for climate resilience. A wider use of **drought management plans**, measures to **increase the water retention capacity of soil and safe water reuse** should be promoted. In agriculture, a **knowledge-based approach**, as well as both **high tech and nature-based solutions** are necessary to ensure a sustainable use of water. Member States can support **precision farming** via national CAP Strategic Plans. Member States must also ensure that **water is priced correctly**, in line with the Water Framework Directive, so that consumers are not misled about the real cost of food.
- A **stable and secure supply of drinking water is of highest importance** and it must be guaranteed. It is **important to include climate impacts** in the risk analyses of (drinking) water management plans, develop water-monitoring technologies and ensure minimum river flow. Similarly, **it is important to maximize the capacity of soils to purify water** and reduce pollution.

EU environmental standards for fruit and vegetable imports

Imported food that does not comply with relevant EU environmental standards is not allowed on EU markets (European Commission, n.d.^[40]). EU market requirements include mandatory requirements set in European regulations and non-mandatory private regulations set by buyers (certifications) (CBI, 2023^[43]).

Mandatory requirements

Mandatory requirements apply to food safety and quality, including:

- **Limited use of pesticides** according to a regularly updated list of Maximum Residue Levels (MRLs) of pesticides. Some EU Member States apply stricter rules to pesticide levels than is required by European legislation, including supermarket chains in the Netherlands, Austria and Germany (CBI, 2023^[43]). The [EU pesticide database](#) provides information on relevant MRLs for specific products.
- **Limits on contaminants** (substances that are not added to food on purpose but appear from various sources such as agricultural practices, pollution, packaging, transport and holding or occur naturally as “inherent plant toxins”) such as chemicals (e.g. heavy metals, nitrate and perchlorate). Rules for raw and processed fruits and vegetables may vary (CBI, 2023^[43]).
- **A Hazard Analysis and Critical Control Points (HACCP) Plan** to supply pre-cut fresh fruits and vegetables, to **control microbiological hazards** (viruses, parasites and bacteria) through the processing and packaging process. The buyer must be informed if there is a power cut during storage (CBI, 2023^[43]).
- **A phytosanitary certificate** for most fruits and vegetables, guaranteeing that the products are free from quarantine pests and other pests. This certificate is usually issued by the exporting country’s plant protection authorities (CBI, 2023^[43]). The EU phytosanitary requirements are in line with the World Trade Organisation and other international rules (European Commission, n.d.^[44]).
- **General marketing standards (GMS)** for quality and maturity (CBI, 2023^[43]). The OECD Fruit and Vegetables Scheme has developed 31 explanatory brochures on the marketing standards (e.g. the one on apricots is available [here](#)). The UNECE also has explanatory brochures. It is better to aim even higher than the GMS to overcome the competition. The FAO publishes additional marketing standards for fruits and vegetables.
- **Traceability** of products according to the General Food Law Regulation, with the **proof of origin** document required for all fruits and vegetables (CBI, 2023^[43]).
- **Labelling and packaging**
 - **Labelling** must adhere to EU legislation on food labelling. There are rules on labelling cartons of fresh fruits and vegetables as well as those that are processed or directly packed for consumption (CBI, 2023^[43]). Stricter regulations on the **use of plastic in packaging** are expected.
 - **Packaging requirements** aim to protect the environment and prevent risk to the health of consumers. Packaging must protect the product against contamination, leakage or dehydration (CBI, 2023^[43]).

It is important to keep abreast of EU regulations which are regularly updated. Products are submitted to compulsory tests at an entry point, which can include a check of phytosanitary certificates/documents; physical checks to ensure that they are free from harmful organisms; identity checks to ensure that they correspond to certification; and inspections to check for harmful organisms (CBI, 2023^[43]).

Non-mandatory certifications

The main **non-mandatory certifications** include:

- [Global Agricultural Practices \(Global G.A.P.\)](#) is a private, voluntary certification used by most buyers of fresh fruits and vegetables in the EU, especially in northern Europe and in supermarkets. Global G.A.P. includes standards on sustainable production practices and environmental protection, including crop management, as well as worker health and safety (CBI, 2023^[43]).
- [International Food and Safety Standard \(IFS\)](#) is a food safety management system dedicated to food safety and quality. Developed by Germany and France, it is widely recognized by food manufacturers and retailers in Europe (CBI, 2023^[43]).
- [British Retail Consortium Global Standards \(BRCGS\)](#) include a Retail and Safety Certification for companies in the food retail supply chain. The standard helps companies and their customers meet legislative requirements for food and product safety. BRCGS are used in the United Kingdoms, but are also common in mainland Europe (CBI, 2023^[43]).
- The [Rainforest Alliance Certification](#) applies to some fruits, including apricots and raspberries. The standard has detailed criteria for environmental, social and economic sustainability. It is used in large retail chains in northwestern Europe (CBI, 2023^[43]).
- [Fairtrade Standards](#) incorporate social, economic and environmental criteria. They cover fresh fruits including apricots and raspberries. These standards apply to the realities of farmer co-operatives, workers at large farms or factories, artisanal miners, as well as traders and companies who buy and sell Fairtrade products. These standards are not at the top of the list for buyers because of complex requirements and high costs (CBI, 2023^[43]).
- **Organic certification** is applied throughout the EU, with all European countries having their own national organic labels (CBI, 2023^[43]).
- [ISO 14001](#) for Environmental Management is an internationally recognised standard that provides a framework for organisations to design and implement an Environmental Management System (EMS). An EMS would help organisations ensure that they take steps to minimize their environmental impact, comply with legal requirements and achieve environmental objectives. It comprises many aspects, including the use of resources, waste management, monitoring of environmental performance, and involvement of stakeholders in environmental commitments (ISO, 2023^[45]).
- [Safe Quality Food \(SQF\)](#) provides an independent and external verification that a product, process and service complies with international, regulatory and other standards that enable a food producer to show that food has been produced, prepared and handled according to the highest possible standards. SQF certified sites span more than 40 countries (SQF, n.d.^[46]).
- [FSSC 22000](#) provides a certification for the food manufacturing industry and the related supply chain to ensure food safety standards and processes.

Some multinational buyers in Western Europe have their **own compliance programmes**, such as [Unilever's Sustainable Agriculture Code](#) that applies to all Unilever suppliers of agricultural goods, farmers that produce these goods and contractors working on the form.

4 Conclusions and initial policy gaps

The report took stock of Moldova's policies, strategic documents and legal frameworks for climate change adaptation and resilience in agriculture and several topics of the EU Green Deal, including reports developed in the context of the country's EU accession. The existing policy frameworks address horticulture in general, without differentiating among specific crop cultivars. Moldova has strategies for climate adaptation and resilience at national, sector and regional levels, and a Climate Action Law is expected to be adopted in 2025. The MAFI plans to carry out region-specific agricultural risk and vulnerability assessments to support adaptation planning. Moldova is improving its monitoring and information-provision on climate change impacts and will establish a multisectoral climate forecasting and early warning system. A new Centre for Agricultural Advice and Development provides extension and advisory services, and new Agricultural Chambers will be set up in the regions to serve as one-stop-shops. A new National Research Institute for Applications in Agriculture and Veterinary Medicine carries out research on climate change adaptation and delivers guidance. Moldova's water policy framework has significantly approximated the EU Water Framework and Floods Directive. In addition, Moldova has partially transposed the EU regulations on pesticide and fertiliser use and has approximated the EU Regulation on organic production and labelling of organic products. Finally, Moldova has targets to reduce food losses.

The report identified the following initial policy gaps in the climate change adaptation policy for the agricultural sector and its EU Green Deal approximation:

National adaptation plans

- A comprehensive, sector-wide **climate risk and vulnerability assessment** for the agricultural sector should be carried out to inform climate change adaptation policy in the sector (including just (fair) resilience looking at marginal groups) (European Environment Agency, 2022^[47]).
- The dedicated horticulture programme is set to conclude at the end of 2025. It is recommended to develop a **sustainability and climate resilience strategy for horticulture**, for example, through including a chapter on horticulture in the National Strategy for Rural and Agricultural Development 2023-2030 (GD 56/2023) or the draft Strategic Programme for Agricultural Policy 2025-2030. The MoldovaFruct association has plans to develop a resilience strategy for horticulture and should be involved in any such efforts.

Monitoring and early warning systems

- The private sector has identified the lack of an early warning system as a gap in the policy framework. Indeed, sector-specific systems are limited. The Climate Change Adaptation Programme commits to a sector-specific **warning system for agriculture**, which must be established.

Water management and irrigation

- There is an urgent need for a comprehensive national policy and legal framework on **flood risk management** to protect flood-vulnerable horticultural areas. Moldova should adopt a dedicated Flood Risk Management Law and develop a National Strategy.
- Moldova should develop **legislation on water reuse** in line with EU Regulation 2020/741.
- **Irrigation** must be expanded and improved in view of Moldova's low percentage of irrigated lands while taking care to minimise environmental harm. It is recommended to adopt a sustainable and efficient approach to irrigation systems and to amend the Law on Horticulture to include sustainable irrigation.
- There is also a need to improve **underground water use** due to illegal water abstraction.
- The MoE should proceed with developing a **drought plan**.

Pest and disease surveillance

- **Pest/disease surveillance** should provide country-wide coverage to respond to climate change. It is not yet fully automated or digitised, which limits its geographic scope and responsiveness.
- Farmers should be adequately **trained** and have **access to practical knowledge** on integrated pest and disease management.

Development and promotion of climate-resistant seeds and plant varieties

- The MAFI could consider **enhancing its legal framework** for promoting the development and use of climate-resistant varieties, including through amending the Law on Propagating Material and the Law on Pomiculture to mandate breeding of resilient varieties and zonal adaptation.
- The private sector has signalled the need to **restore the seed production system** within Moldova and to **facilitate access to high-quality varieties** from abroad.
- A more detailed and systematic **research effort** should be undertaken on the **adaptation capacity of foreign (non-native) plant varieties to local agro-climatic conditions**. This is particularly important given that many farmers have reported difficulties with the performance and resilience of imported varieties under Moldova's specific climate stressors. The findings should inform national plant variety registration procedures. Strengthening **phytosanitary controls and acclimatisation procedures** for foreign varieties is also essential.

Extension and advisory services

- Establishment of a **Centre for Agricultural Advice and Development** is a positive development, and the government should ensure that it has sufficient resources to scale up its activity and provide good quality training to farmers and food processing companies on climate change and adaptation matters. Its activity should be **effectively co-ordinated** with the Agricultural Chambers.

Adoption of climate-resistant technologies

- According to the private sector, existing policies may not adequately **incentivize or support the adoption of climate adaptation measures**, including research with proactive participation of agricultural producers.

Pesticide use

- There is a lack of environmentally-friendly **pesticides to replace those that are removed from the authorised pesticide registry**, creating confusion among farmers. Research, testing, and fast-track registration of environmentally safe and effective alternatives to banned/deregistered pesticides, including biological and low-risk substances, should be ensured.
- There is a need on **training and advisory services** for pesticides application and **integrated pest management** to reduce environmental impacts.
- There is a **limited number of plant protection products** approved for use in organic farming, which may reflect challenges in the registration or evaluation process for organic inputs as well as a lack of incentives to suppliers.

Organic agriculture

- The **ANSA's capacity** for oversight should be strengthened, enforcing **Law No. 237/2023 on organic production**, specifically, its expertise in applying EU organic production standards, technical infrastructure for pesticide residue testing, systems for digital monitoring, complaint handling, and inter-agency co-ordination. A targeted capacity needs assessment for ANSA in the field of organic production control is recommended to assess its technical, operational, and human resource needs, with a view to aligning control practices with EU requirements and strengthening climate-resilient agricultural governance.
- **Personnel competencies at the MAFI** need to be further developed within the division responsible for organic agriculture in assessing applications from control bodies requesting recognition/authorisation to carry out inspections or certification of organic production in Moldova, and the monitoring/ supervision/non-compliance response in regards to these bodies.
- **Consumer awareness** about organic products must be further promoted.
- It would be beneficial to set up a **National Organic Farming Register**.

Food waste reduction

- The Environmental Strategy for 2024-2030 and the Programme to Promote a Green and Circular Economy 2024-2028 both establish targets to reduce food losses. However, future legislative development may be needed to **embed food loss prevention** directly into agricultural and food system regulations.

Further approximation of the EU acquis

- While Moldova has made important progress in aligning with the EU acquis, it must further **approximate several EU legal acts**.
- Moldova has not yet transposed the **Critical Entities Resilience Directive**, which requires essential infrastructure providers such as energy and water suppliers to conduct risk assessments and adopt resilience measures. Given the dependence of horticulture

on irrigation and a stable energy supply, Moldova should integrate infrastructure resilience planning into the National Irrigation and Water Management Strategy, the National Strategy for Agricultural and Rural Development and the Climate Change Adaptation and DRR strategies.

Moldova's MoE and MAFI are screening environmental and agricultural legislation for compliance with the EU acquis, and it will be important to take into account the findings of the screening.

Annex A. Description of policy documents for climate change adaptation and resilience in Moldova's agriculture

The [National Strategy "European Moldova 2030"](#) is the country's key long-term policy document, outlining strategic development directions. It aligns national priorities, objectives, indicators and targets with Moldova's international commitments. By 2030, the key climate change targets include ensuring climate resilience by reducing climate change risks (SDG 13.1) and combating soil degradation (SDG 15.3). Priority interventions focus on the sustainable development of agriculture, particularly through securing long-term funding for research into developing new climate-resilient local varieties. Additionally, it promotes sustainable agricultural practices such as reducing the consumption of plant protection products and fertilisers and implementing innovative farming systems (Government of the Republic of Moldova, 2018^[48]).

The [National Development Plan \(NDP\) for 2025-2027](#) establishes public policy priorities for the next few years, in line with the Government's "Prosperous, Safe, European Moldova" programme, the National Action Plan for EU accession (2024-2027), the 2030 Agenda for Sustainable Development, and planned sectoral reforms. The **NDP 2025-2027** ensures continuity and builds on the 2024-26 planning cycle. Instead of having separate chapters for each sector, the NDP lays out concrete actions across key areas, including agriculture. Respectively, the document mentions climate change adaptation and resilience, though not as stand-alone objectives for agriculture. Instead, these themes are embedded in broader operational measures. For the farming sector, the plan highlights the need to boost productivity and competitiveness, help farmers access better support, and encourage more sustainable practices. It includes practical steps like rehabilitating irrigation systems, aiming to build 80 micro-irrigation systems and 1 km of access roads by 2026, and setting up demonstration plots to show how efficient irrigation works. The plan provides loans to small businesses, young people and women working in agriculture. It also supports digitizing advisory services through an online platform for farmers and improving Moldova's forecasting abilities with five new specialized weather forecasts by 2027. Under the general objective 9, the NDP foresees strengthening capacities for rapid responses to emergencies and exceptional situations, including early warning of the population (*creation of the national system for warning the population (MD- ALERT-STUDY)*). However, there is no dedicated chapter or strategy focused explicitly on climate change adaptation in agriculture, nor are there tailored measures for climate-sensitive crops like fruits and nuts. The measures are practical but fragmented and infrastructure-focused, lacking a comprehensive, climate-resilient framework. NDP includes monitoring indicators and progress reports developed by the State Chancellery either each quarter, semester or yearly (Government of the Republic of Moldova, 2024^[49]).

The [Environmental Strategy for the Years 2024-2030](#), approved through the Government Decision (GD) 409/2024, outlines a comprehensive long-term strategy for the sustainable development of Moldova, emphasizing the integration of environmental considerations across all facets of public policy. This strategy encompasses targeted initiatives designed to safeguard biodiversity, effectively manage natural resources, mitigate pollution, and address the challenges posed by climate change. The primary objective is to secure a healthy environment for the population amidst the realities of global climate change while simultaneously facilitating the transition to a green and sustainable economy. Under the general objective 7, the strategic targets related to the analysed subsector are:

- By 2030, ensure climate resilience by reducing climate change risks by 50% and facilitating adaptation in 6 priority sectors - **agriculture**, water resources, health, forestry, energy, and transport (SDG 13.1.).
- By 2030, implement **agricultural practices** that increase productivity, contribute to the maintenance of ecosystems, and enhance resilience to climate change and extreme weather events such as droughts, floods, and other exceptional situations (SDG 2.4.).

All the aforementioned targets include actions such as establishing climate-related exceptional weather warning systems, adopting and implementing local strategies to reduce the risks of exceptional situations in alignment with national strategies, and assessing the proportion of irrigated land used for soil drought mitigation relative to the total irrigable land area.

The general objective 8, foresees that:

- By 2030, infrastructures should be upgraded and industries rehabilitated to become sustainable and resource-efficient, and the uptake of clean and green industrial technologies and processes should be increased (SDG 9.4).
- Sustainable production and consumption should be integrated into national policies and their implementation (SDG 12.1.).
- By 2030, food losses along production and supply chains should be reduced, including post-harvest losses (SDG 12.3.).
- Science and technology capacities should be built to move towards more sustainable consumption and production patterns (12.a.).

The strategy lists actions such as certifying products (organic production certification and ecolabelling), integrating aspects of the green economy into national policies, promoting sustainable production and consumption, implementing environmental standards, and benefiting from greening grants and support to achieve the above targets.

Another priority of the strategy is **combating soil degradation** and ensuring the protection and sustainable use of soil resources. This includes promoting good agricultural practices to prevent degradation and nutrient loss, implementing sustainable soil management measures, reducing salinization and acidification caused by improper irrigation, **restoring degraded land** through afforestation programs, rehabilitating areas affected by desertification, drought, and floods, and promoting organic farming (Government of the Republic of Moldova, 2024^[20]).

The [National Climate Change Adaptation Programme until 2030](#), approved through GD 624/2023, aims to identify and implement climate change adaptation measures across various sectors. Its goals include reducing vulnerability to extreme events and protecting key areas such

as **agriculture**, transport, energy, forestry, health, and water management. The programme provides a framework for integrating these measures into national and local policies to enhance the country's resilience to climate change. The Programme was drafted with the support of the UNDP and FAO.

Priority action 5.1 has a special focus on **agriculture**. It calls to adapt the agricultural sector to climate change by applying complex agricultural practices, modern adaptation technologies, and soil conservation. Under the current action are foreseen:

- Stimulating the construction of rainwater storage basins for irrigation by 2027.
- Developing the necessary regulatory framework for the implementation of digital agricultural technologies in both open and protected spaces¹³ by 2027.
- Promoting the subsidization of agricultural producer groups¹⁴ based on climate-resilient development programmes by the end of 2025.

Regarding **Disaster Risk Reduction (DRR)** and climate change, the policy document includes measures such as developing, testing, and **enhancing early warning systems** and disaster risk communication mechanisms, including mobile alerts (SMS, voice messaging). It also aims to upgrade the **hydrometeorological monitoring system** to track key physical processes (e.g., extreme heat or precipitation) for integration into planning and early warning systems, as well as incorporating sector-specific climate risk information into the early warning system (Government of the Republic of Moldova, 2023^[6]).

According to **the annual progress report** published by the MoE in March 2025, several actions were taken in 2024:

- Climate implications were reviewed for three reservoir rehabilitation projects in Ocnîța district.
- Drafting began for the GD on the Information and Management Portal for Climate Change (IS "PIGISC"), intended to centralize climate data with GIS integration. Approval is expected in 2025.
- The State Hydrometeorological Service (SHS), together with the Swedish Meteorological Institute, launched a digitization project for Moldova's National Meteorological and Hydrological Data Fund, with implementation starting in early 2025.
- Six pilot climate services are in development for agriculture, water, health, forestry, energy and transport.

MAFI's institutional capacity was strengthened by creating the **Climate Change, Environmental Measures and Risk Management Service**, under GD No. 782/2024.

¹³ Open-field farming is traditional agriculture where crops grow in natural conditions directly in the soil. Protected-field farming uses controlled environments like greenhouses, solariums, or tunnels with nets or covers to shield plants from weather and pests.

¹⁴ The Law no. 312/2013 on agricultural producer groups and their associations defines "producer groups" as any legal person, with the exception of non-commercial organizations, formed by agricultural producers and recognized by the competent authority under the terms of this law, whose main purpose is the joint marketing of the agricultural products of the members of the group.

In terms of genetic resource conservation, the vine genetic fund is now managed by the National Institute for Applied Research in Agriculture and Veterinary Medicine, with a 2024 budget of 1.6 million MDL. The National Institute for Research and Seed Production oversees maize, wheat, and apple genetic resources, using conservation and selection techniques to preserve and adapt native varieties. These activities are guided by Law No. 68/2013 and GD No. 480/2019.

Additionally, in 2024, the GIES, through the EU-funded UCPM-2023TRACK1-IBA Technical Assistance Project, developed a feasibility study and the necessary documentation for implementing the national population alert system in emergencies (MD-ALERT STUDY), officially registered under no. 3821 of 20.12.2024 (Ministry of Environment, 2025^[50]).

The FAO is looking into providing **support on development of indicators** to monitor programme implementation.

The [National Integrated Plan for Energy and Climate 2025-2030](#), approved¹⁵ recently by the Government of Moldova outlines the existing, planned, and possible investments and policies to be introduced in the current decade. The plan addresses agriculture mainly through the dimension of **research and innovation competitiveness**. It outlines measures to put in place a Smart Specialisation Strategy to strengthen connections between business and academia (promote innovative businesses) in four core fields: Energy, IT, Agriculture, and Health. However, it does not explicitly establish a link between research and innovation and climate change adaptation or resilience.

The [Nationally Determined Contribution \(NDC 3.0\)](#) outlines Moldova's commitments for the 2025-2030 period, including a strong emphasis on strengthening adaptation and resilience in the agricultural sector. By 2030, the Republic of Moldova aims to reduce its greenhouse gas emissions by 71% below 1990 levels, and by 2035, it targets a reduction of 75% below 1990 levels.

The key priorities for agriculture include:

- promoting integrated food, water, and energy systems and climate smart agriculture practices (designed to improve soil nutrition such as crop rotation, organic fertilizer use, and precision application technologies)
- adopting climate-smart irrigation and drainage systems
- strengthening resilience to extreme weather events through the development of hail and frost protection systems
- leveraging data and knowledge to enhance risk management through remote sensing, digital technologies, household-level weather stations, enhancing early warning, and meteorological and hydrological information systems
- mandatory public-private insurance mechanisms against natural hazards, ensuring accessibility for small producers
- promoting crop diversity and resilience, including the cultivation of drought-resistant crops (Government of the Republic of Moldova, 2024^[51]).

¹⁵ The Plan was approved on 26 February 2025. It is to be published in the Official Gazette of the Republic of Moldova

The [National Strategy for Rural and Agricultural Development 2023-2030](#), approved through GD 56/2023, aims to foster a competitive agri-food sector that prioritizes value chains with high potential (in Moldova, these are fresh and processed fruits, berries and nuts). This sector will be environmentally sustainable and climate-resilient, contributing to improved food security and safety. Additionally, it will enhance the well-being and living conditions of rural communities. The policy document highlights that Moldova, owing to its geographical characteristics, landscape, and position within the temperate-continental climatic zone, **is highly susceptible to climate change** and various natural hydrometeorological events. In light of these factors and other emerging risks, the strategy's main objective is **to enhance the potential of the primary agricultural sector** while promoting smart, sustainable, and climate-resilient farming practices. It includes measures for modernization of the plant breeding sector including the application of climate resilient technologies; adoption of modern practices for efficient use and management of water resources as well as expansion of irrigated areas to enhance climate resilience; implementation of digital technologies and innovations in agriculture through knowledge transfer and enhancement of the role of domestic agricultural research, etc. (Government of the Republic of Moldova, 2023^[52]).

To implement the National Strategy for Rural and Agricultural Development 2023–2030, the draft [Strategic Programme for Agricultural Policy 2025–2030](#) has been developed and will likely be approved until the end of 2025 (MAFI, 2025^[53]). The programme aims to promote intersectoral cohesion through a comprehensive approach, preventing duplication of actions and funding. It seeks to ensure a balanced distribution of financial support based on strategic priority levels while maintaining interdependence among the regions. Additionally, the programme aims to introduce a new approach to agricultural public investment projects, particularly in the context of transitioning toward green and sustainable agriculture. This model requires that all proposed projects undergo a prior assessment before public funding is approved. The assessment process will be based on clear eligibility and selection criteria, aligned with EU standards, and will focus on determining the project's strategic relevance, cost-effectiveness and additionality, for example, whether the project would be feasible without external (public) financial support. This approach reflects EU requirements under the CAP, which stipulates that public co-financing is justified only for projects that lack sufficient private funding and demonstrate a clear contribution to public policy objectives, including climate resilience, sustainability, and innovation.

Although the Strategic Programme does not always refer explicitly to "climate adaptation" in every section, adaptation and resilience to climate change are fundamental, cross-cutting objectives embedded throughout its design. The strategy clearly acknowledges the increasing vulnerability of Moldova's agricultural sector to climate variability and extreme weather events. In response, it outlines a comprehensive set of measures aimed at improving the resilience of farmers and agricultural systems. The measures include the expansion and modernization of efficient irrigation and water management infrastructure, the promotion of climate-resilient crop varieties and technologies, and the adoption of conservation agriculture practices such as minimal tillage and protective forest belts.

In addition, the programme places strong emphasis on supporting investments that mitigate climate risks (e.g. frost and hail protection systems), and on strengthening knowledge, innovation, and advisory systems. These actions are intended to help farmers better manage climate-induced threats such as pest outbreaks, water scarcity and declining soil quality. Specific interventions also include capacity-building for producers, support for producer groups, and the development of short supply chains to enhance market resilience and income diversification.

In terms of sectoral focus, the strategy recognizes the need to **strengthen the fruit and berry value chain**, recognizing its potential for competitiveness and export growth. Support measures aim to expand and modernize plantations, with particular attention to small-scale producers' access to markets and value chains. This includes continued assistance for establishing, converting, and upgrading the technology on farms, along with targeted support for on-farm processing, organizational development and training. By fostering co-operation among producers, the programme seeks to improve market positioning, encourage collective investments, and promote integration into both domestic and international markets. These investments and organizational innovations are expected not only to improve productivity and quality, but also to increase the adaptive capacity of the sector to the current and future climate challenges.

The [Food Security Strategy of the Republic of Moldova for 2023-2030](#), approved through GD 775/2022, outlines the government's vision for supporting the enhancement of the country's food security by creating relevant conditions for the development of an efficient and resilient food, supply, and social protection system in the face of emergencies and crises. While the document does not list all crises explicitly in the introduction, it later identifies several key challenges, including climate-related hazards such as droughts and extreme weather. The Strategy sets out three main objectives:

- First, it aims to strengthen the capacity of the agricultural sector to withstand climate change by promoting smart, efficient, and sustainable farming practices.
- Second, it focuses on developing the local market and increasing the country's export potential.
- Third, it seeks to support sustainable socioeconomic development in rural areas.

These goals will be pursued through a series of specific objectives, which will generate the development of programmes, investment and financial support measures, as well as sectoral plans with concrete actions and interventions. One key intervention area is **replacing imported seeds and planting material** by investing in domestic production adapted to climate challenges. The **regulation on the National Fund for the Development of Agriculture and Rural Environment** will be updated to allow advance funding for businesses producing horticultural seed and planting material. This aims to reduce import dependence, lower costs, boost climate resilience and increase sector competitiveness. Research and innovation, particularly in plant breeding and genetics, are essential to support this development (Parliament of the Republic of Moldova, 2023^[21]).

The [Horticulture Development Programme and the Action Plan](#) for 2021-2025, approved through GD 840/2020, aims to contribute to achieving the objective of "Directing investments to strengthen the value chain and infrastructure for processing agricultural production and modernization of the processing industry by creating a system of small and medium-sized enterprises for processing, preserving and packaging of agri-food products". The programme identifies the **lack of water resources for irrigation** and the increased risk of losses from extreme variations of weather conditions due to climate change as key risks. To tackle that, the programme establishes **objective 2.3: Modernisation and efficiency of production technologies to reduce the impact of climate related challenges in the horticultural sector**, so that by 2025, the area of irrigated land for horticulture will increase to 91.1 thousand ha and the area of protected spaces (greenhouses, solariums, anti-hail systems, and protective nets) to 241.8 ha. The main activities included under the current objective are oriented towards the

modernization and the operational enhancement of the anti-hail system, irrigation of new lands, stimulating the establishment of perennial plantations (cultivated parcels), production of local planting material, etc. (Government of the Republic of Moldova, 2020^[54]).

The [National Regional Development Strategy of the Republic of Moldova for 2022-2028](#), approved through GD 40/2022, highlights disparities in regional development, with the agricultural sector more developed in the northern and central regions and less so in the southern areas.

In this context, the strategy aims to increase the competitiveness and sustainable development of each region across all key sectors, including agriculture. It aims to address regional disparities and increase the quality of life of citizens, and support regions' adaptation to climate change, risk prevention, and disaster resilience. As part of this approach, a key policy priority for the 2022–2028 period is addressing pressing environmental challenges by strengthening support for: 1) the transition to a circular economy, aimed at more efficient use of natural resources and optimization of economic activities; and 2) improving energy efficiency and increasing the share of renewable energy sources as a means to reduce carbon dioxide (CO₂) emissions.

The [Programme to Promote a Green and Circular Economy in the Republic of Moldova for the Period 2024-2028](#), approved through GD 495/2024, promotes a proactive policy for climate change adaptation and minimizing the impact of economic and human activities on fragile ecosystems. The programme aims to integrate the principles of the European Green Deal into legislation and sectoral policy documents between 2024 and 2028, including, but not limited to, the agricultural sector. The programme prioritises several EU Green Deal provisions relevant to agriculture, notably those related to sustainable land management, the reduction of chemical inputs, promotion of organic farming, and climate neutrality. Specifically, **Objective 2.1** of the programme focuses on supporting the sustainable development of agriculture, aligning with Green Deal objectives such as those outlined in the Farm to Fork Strategy and the EU Biodiversity Strategy. It promotes:

- A reduction in the use of plant protection products and fertilisers through rational crop rotation and crop diversification.
- The adoption of innovative and climate-resilient agricultural systems.
- Increased carbon sequestration in agricultural soils.
- A decrease in the use of non-renewable energy resources and their derivatives.
- The scaling up of organic agriculture in line with EU principles of sustainable and ecological farming.
- The implementation of mandatory sustainable soil management protocols.
- Prioritized public funding for research and development of context-adapted technological solutions to reduce soil erosion and degradation.

Additionally, the programme foresees the annual preparation of a Green Transition Report, in accordance with OECD guidelines, to monitor the progress of Moldova's shift toward a green and circular economy (Government of the Republic of Moldova, 2024^[55]).

The [Sustainable Chemical Management Programme for the years 2023-2030](#), approved through GD 816/2023 and in force since January 2024, focuses on the agricultural sector, particularly on the **environmentally sound management of pesticide stockpiles and waste**

containing persistent organic pollutants (POPs). The programme aligns with the Chapter 16 “Environment” of the AA, aiming to carry out the provisions of multilateral environmental agreements on chemical substances and waste management, for which Moldova has to develop implementation measures¹⁶. By 2030, the programme aims to update the inventory of obsolete pesticide stockpiles and pesticide waste containing POPs, identify and promote alternatives to pesticides containing POPs, and establish and secure centralized repositories for the temporary storage of pesticide waste containing POPs. These measures are intended to enhance environmental safety and promote sustainable agricultural practices.

The [National Strategy for Disaster Risk Reduction for the Period 2024-2030](#), approved through GD 804/2024, envisions building a resilient and secure society by significantly reducing disaster risks and impacts through proactive, multi-sectoral, all-hazards, and society-wide measures. The document represents the fulfilment of Moldova’s commitments under the Sendai Framework for Disaster Risk Reduction 2015-2030, the 2030 Agenda for Sustainable Development and the Paris Agreement. It focuses on enhancing resilience to both natural and human-induced disasters at the national, regional, and local levels through the development of effective mechanisms for disaster risk reduction, ensuring timely and adequate responses to disasters, and enabling recovery processes that improve conditions beyond pre-disaster levels.

In the agricultural sector, the strategy seeks to improve the legal framework for the management of disaster risks and **integrate disaster risk reduction into national strategies** and sectoral development programmes (currently, it aims to reach at least two sectorial programs by 2027 and another three until 2030). **Key measures** include increasing the sector’s resilience by identifying and mapping region-specific risks and vulnerabilities to climate change¹⁷, promoting crop diversification and rotation to minimize total losses (agricultural production or yields), advancing systemic crop improvement through the development of drought- and heat-tolerant varieties and hybrids, and promoting agricultural insurance¹⁸ to protect farmers from losses caused by natural disasters. Through strengthening preparedness and responses to emergencies and disasters, followed by post-disaster recovery under optimal conditions, with enhanced resilience to a level higher than before the disaster, the policy document outlines the development of multi-sectoral **early warning and forecasting systems** and the enhancement of **disaster resilience** across key national sectors, including the economy, agriculture, energy, water resources, and cultural heritage (State Chancellery, 2024^[23]).

¹⁶ The agreements in question are Stockholm Convention on Persistent Organic Pollutants (Article 7) (ratified by Law No. 40/2004), the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Article 15) (ratified by Law No. 389/2004), as well as the Minamata Convention on Mercury (Article 20) (ratified by Law No. 51/2017)).

¹⁷ While Moldova has undertaken various climate-related studies, a comprehensive, sector-wide climate risk and vulnerability assessment for agriculture has not yet been completed. Existing analyses are fragmented and primarily project based.

¹⁸ Insurance schemes to protect investments and assets against disasters, or the creation of financial mechanisms to support rapid post-disaster recovery, thereby reducing long-term economic impacts.

The [Land Improvement Programme to Ensure Sustainable Management of Soil Resources for the Years 2021-2025](#), approved through GD 864/2020, aims to achieve the following objectives by 2025¹⁹:

- Adapt the research and education system to sectoral priorities with a focus on sustainable land management and climate change adaptation. Research and educational institutions will modernize agricultural education by aligning curricula with labor market needs, international commitments, and national strategies. It will also provide practical training for landowners on soil improvement, protection, and sustainable use. Emphasis will be placed on building institutional and human resource capacity through the training of specialists and trainers, as well as raising public awareness. Although not directly framed as climate change adaptation measures, these actions contribute significantly to strengthening the agricultural sector's resilience to land degradation and climate-related risks.
- Prevent and combat soil erosion on 2 552 ha of agricultural land (land improvement, protection, conservation and soil fertility enhancement measures will be extended in order to minimize surface and deep erosion processes, stabilize landslides and gullies²⁰).
- Improve²¹ soil quality on 68 500 ha (implementation of land improvement measures to apply environmentally friendly agricultural practices, which will allow to obtain the expected yields, improve depleted (alkaline) soils, cleaning irrigation and drainage canals and rehabilitation of irrigation and drainage systems).
- Preserve and enhance soil fertility²² on 5 000 ha (implementation of environmentally friendly agricultural practices, which will allow to obtain the expected yields). This objective will be achieved by applying methods to increase soil fertility (soil conservation practices, crop rotation, rational structure of agricultural land use²³, complex fertilisation²⁴ with organic and mineral fertilisers, implementation of hydro-ameliorative arrangements, etc.) (Government of the Republic of Moldova, 2020^[24]).

¹⁹ At the moment of the report development no public information existed on the development of an action plan/updated programme for the following period up to 2030.

²⁰ Stabilizing landslides and ravines involves implementing technical and ecological measures to prevent soil erosion, reduce land degradation, and restore slope stability. This may include reforestation, terracing, drainage systems, or structural reinforcements to limit the expansion of ravines and prevent future landslides.

²¹ Soil improvement is a corrective process applied when the soil is already degraded or presents significant issues such as compaction, salinization, acidity, or erosion.

²² Soil fertility conservation and enhancement is a preventive and maintenance-oriented process aimed at preserving the soil's long-term capacity to support agricultural production.

²³ Optimal planning and distribution of different crops across available agricultural land, based on ecological conditions, soil type, climate, and economic needs.

²⁴ *Complex soil fertilisation* refers to the balanced application of both organic and mineral (chemical) fertilisers, tailored to the specific needs of the soil and crop. Its goal is to ensure complete plant nutrition and to maintain or enhance soil fertility over the long term.

Annex B. List of legal acts in the agricultural sector with climate adaptation and resilience provisions

The following section will focus on key legal acts addressing the agriculture sector, emphasizing fruits, berries and nuts, including provisions related to their climate adaptation and resilience.

Table 4.1. List of legal acts in the agricultural sector with climate adaptation and resilience provisions

Legal act	Transposes an EU act	Provisions related to the subsector of focus
Plant Health and Phytosanitary Measures		
GD no. 679/2024 Regulation on the application of protective measures against organisms harmful to plants (Government of the Republic of Moldova, 2024 ^[56])	Partially transposes CELEX 32019R2072 (protective measures against pests of plants) 32018R2019 (provisional list of high-risk plants, plant products or other objects, within the meaning of Article 42 of Regulation (EU) 2016/2031 and a list of plants for which phytosanitary certificates are not required for introduction into the Union, within the meaning of Article 73 of that Regulation) 32019R1702 (Delegated Regulation by establishing the list of priority pests) 32020R1213 (phytosanitary measures for the introduction into the Union of certain plants, plant products and other objects which have been removed from the Annex to Implementing Regulation (EU) 2018/2019) 32022R1941 (prohibition of introduction, movement, holding, multiplication or release of certain pests)	The regulation implements the provisions of Law no. 422/2023 <i>protective measures against organisms harmful to plants</i> , on listing quarantine pests, quarantine pests for protected zones, and regulated non-quarantine pests. Although the legal act transposes several EU phytosanitary regulations aimed at protecting plant health, there are no measures specifically designed to manage climate-induced shifts in pest and disease patterns.
Law 422/2023 protective measures against organisms harmful to plants (Parliament of the Republic of Moldova, 2023 ^[57])	Partially transposes CELEX 32016R2031 (protective measures against pests of plants) 32019R0827 (criteria to be fulfilled by the professional operators in order to comply with the conditions set out in Article 89(1)-point (a) of Regulation (EU) 2016/2031)	The law establishes rules for determining plant health risks posed by any species, strain, or biotype of pathogens, animals, or parasitic plants harmful to plants or plant products. It also includes measures to reduce those risks to below the economic threshold of harmfulness. The law is fully aligned with EU plant health regulations and supports Moldova's capacity to meet EU import standards. While it does not explicitly refer to climate adaptation, its pest risk management approach, grounded in ecological

		and climatic analysis, provides a foundation for adapting to pest pressures intensified by climate change.
Chemicals and Pesticides		
Law no. 403/2023 concerning the placing of plant protection products on the market and amending certain normative acts (Parliament of the Republic of Moldova, 2023 ^[58])	Partially transposes CELEX 32009R1107 (placing of plant protection products on the market)	Establishes the regulatory framework and state policy for plant protection products, including rules for authorization, commercialization, manufacturing, storage, marketing, and use while ensuring safety for human health, animal health, and the environment. It also regulates supervision, state control, and compliance reporting. It defines the rights and obligations of individuals and entities, as well as the responsibilities of competent authorities. Moldova does not currently have a dedicated national law that sets MRLs, but compliance with permitted EU pesticide residue levels is ensured through the authorization process for plant protection products, as regulated under Law No. 403/2023. This means MRLs are indirectly enforced as a precondition for market approval.
Law no. 119/2004 on plant protection products and fertilisers (Parliament of the Republic of Moldova, 2004 ^[59])	Partially transposes CELEX 32009L0128 (sustainable use of pesticides) 32009R1107 (placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC)	The law establishes the legal framework and state policy for plant protection products and fertilisers, regulating their research, testing, approval, production, import, transport, storage, marketing, and use while ensuring safety for humans, animals, and the environment. It also governs state supervision and compliance, defines the rights and obligations of entities and individuals, outlines the responsibilities of competent authorities, and specifies violations and corresponding liabilities. The law reflects EU standards in its terminology and principles, but it does not explicitly establish or enforce EU-level pesticide residue limits or other binding requirements set by specific EU regulations.
Organic and Seed Regulation		
Law no. 237/2023 on organic production and labelling organic products (Parliament of the Republic of Moldova, 2023 ^[60])	Partially transposes CELEX 32018R0848R(04) (Corrigendum to Regulation on organic production and labelling of organic products)	The law defines the principles of organic production and establishes regulations for the certification, labelling, and advertising of organic products. It also sets additional control measures for production and labelling compliance. The law applies to live or unprocessed ²⁵ agricultural products, including seeds and other plant reproduction material.
Law no. 68/2013 on seeds (Parliament of the Republic of Moldova, 2013 ^[25])	Partially transposes Council Decision 2005/834/EC (on the equivalence of checks on practices for the maintenance of varieties carried out in certain third countries)	This law establishes the legal framework for production, processing, quality control and certification, and marketing of plant seeds and reproduction material, including those registered

²⁵ *Live or unprocessed agricultural products* refer to goods obtained directly from agriculture that have not undergone any significant industrial or chemical processing. These include fresh fruits and vegetables, raw milk, unprocessed eggs, cereals, live animals, and other products in their natural state immediately after harvest or collection.

		in the FRUMATIS ²⁶ informational system of the EU. The law does not explicitly refer to the development of climate change-resistant seed varieties. While it establishes a system for testing plant varieties across different agroclimatic zones, climate adaptation objectives are not directly addressed.
Law no. 39/2008 on plant variety protection (Parliament of the Republic of Moldova, 2008 ^[26])	No ²⁷	This law regulates the creation, legal protection, and use of plant varieties across all genera and species, establishing the legal framework for the organization and functioning of the plant variety protection system. The law does not explicitly mention the development of climate change-resistant varieties or adaptation to climate change as an objective or selection criterion.
Environmental Protection and Monitoring		
Law no. 368/2023 on meteorological and hydrological activity (Parliament of the Republic of Moldova, 2023 ^[61])	No	The law establishes the legal framework for meteorological and hydrological activities, which are essential for sustainable socio-economic development and for preventing and mitigating the impact of hazardous meteorological and hydrological events on human life, property, and national security. The law also defines the classification of information, access to data, and international co-operation in data exchange, including climate change monitoring .
Law no. 1515/1993 on environmental protection (Parliament of the Republic of Moldova, 1993 ^[62])	No	It forms the basic legal framework for developing special normative acts and instructions on specific environmental protection issues. The law establishes key principles for agriculture, including the promotion of sustainable practices through the reduction of mineral fertilisers and pesticides , the application of environmentally friendly technologies, and the restoration and maintenance of an ecological balance and geo-ecosystems. The law does not explicitly mention climate change adaptation or resilience in its original form.
GD no. 1157/2008 Technical Regulation "Soil protection measures in agricultural practices" (Government of the Republic of Moldova, 2008 ^[63])	Partially transposes CELEX 31986L0278 (protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture)	This Technical Regulation establishes measures to prevent soil degradation, whether naturally occurring or caused by agricultural activities that compromise soil functionality. It also sets requirements for agricultural land users to implement preventive organizational, agro-technical, phyto-technical, phytoameliorative, and hydro-technical measures to mitigate degradation and ensure the soil's environmental,

²⁶ Fruit Reproductive Material Information System provides information on the identification of the variety, its registration, the registration validity period, intellectual property rights, and optional information such as the breeder and maintainer of the variety. FRUMATIS aims to increase the confidence in varieties marketed throughout the EU, <https://ec.europa.eu/frumatis/>.

²⁷ The law establishes the legal framework for implementing the International Union for the Protection of New Varieties of Plants provisions and aligning with key EU regulations on plant variety rights. However, it only creates the preconditions for compliance and does not include provisions promoting climate change-resistant varieties or climate adaptation objectives.

		economic, social, and cultural functions. The regulation does not explicitly mention climate change, but it includes measures such as crop rotation, soil improvement, and climate-adapted irrigation, indirectly supporting adaptation and resilience to climate-related risks.
Land and Water Management		
Land Code no. 22/2024 (Parliament of the Republic of Moldova, 2024) ^[64]	No	The normative act classifies agricultural land and how it can be used. It also foresees that territorial-organizational measures ²⁸ for soil protection and improvement can be assessed based on the structure of agricultural and forestry land use, considering degradation processes, topography, and climate conditions.
Law no. 171/2010 on Associations of Irrigation Water Users (Parliament of the Republic of Moldova, 2010) ^[65]	No	The law establishes an efficient management mechanism for irrigation and desiccation infrastructure, whether owned by the state, administrative-territorial units, or private entities. To this end, it promotes the creation of irrigation water user associations. They are community-based entities responsible for managing and maintaining local irrigation infrastructure. Established under national water governance reforms, their roles include distributing water, collecting user fees, and ensuring system upkeep. They operate under the legal framework of the Water Law No. 272/2011 and contribute to sustainable water use and climate resilience in agriculture.
Law no. 272/2011 on water (Parliament of the Republic of Moldova, 2011) ^[66]	Partially transposes CELEX 31991L0271 (urban waste-water treatment) 32006L0007 (management of bathing water quality) 32007L0060 (assessment and management of flood risks)	The abstraction and use of water from various sources for irrigation are permitted only with an environmental permit for special water use, an integrated environmental permit, or an environmental permit issued under the conditions of this law, in accordance with Law No. 227/2022 on industrial emissions. The law foresees that policy and planning documents in the field of water resource management and protection will include provisions on priority measures to promote adaptation to the effects of climate change, including the identification and mitigation of water scarcity, taking into account the long-term imbalance between water demand and supply, as well as the increased risk of droughts and floods. The law includes provisions aligned with both the EU Water Framework Directive (2000/60/EC) and the Floods Directive (2007/60/EC), establishing the legal framework for integrated water resource management and the assessment and management of flood risks in Moldova.
Fruit and Horticulture		

²⁸ *Territorial-organizational measures* refer to spatial planning and land-use arrangements designed to prevent soil degradation and promote sustainable land management. These include revising land use patterns based on erosion risk and terrain, organizing anti-erosion protections, allocating crops in rotation systems to reduce slope erosion, applying erosion control principles in cultivation, ensuring rational land-use systems, and aligning land organization with the ecological limits of the landscape.

<p>Law no. 929/2009 approving the Quality and Marketing Requirements for Fresh Fruit and Vegetables (Government of the Republic of Moldova, 2009^[34])</p>	<p>Partially transposes CELEX 32023R2429 (marketing standards for the fruit and vegetables sector, certain processed fruit and vegetable products and the bananas sector)</p>	<p>The law foresees the quality and marketing requirements for fresh fruit and vegetables intended for human consumption. Products not covered by specific Moldovan marketing requirements are deemed compliant with general marketing standards if they meet relevant UNECE standards. Since these standards are also recognized by the EU, this provision supports the alignment of Moldova's fruit and vegetable exports with EU import requirements.</p>
<p>Law 728/1996 on pomiculture (Parliament of the Republic of Moldova, 1996^[67])</p>	<p>No</p>	<p>This law regulates the general and specific conditions for the production and marketing of fruits, berries, and fruit tree propagating material. It aims to preserve, develop, and enhance the productive potential of fruit and apple plantations, regardless of ownership type or organizational-legal structure. The law does not contain specific provisions related to climate change adaptation, resilience or EU import compliance. While it supports the general development of the fruit sector, it lacks references to modern requirements in line with EU regulations or climate-smart agriculture.</p>
<p>GD 94/2024 on the production and marketing of fruit propagating and planting material intended for fruit production (Government of the Republic of Moldova, 2024^[68])</p>	<p>Partially transposes CELEX 32008L0090 (marketing of fruit plant propagating material and fruit plants intended for fruit production) 32014L0096 (requirements for the labelling, sealing and packaging of fruit plant propagating material and fruit plants intended for fruit production) 32014L0097 (registration of suppliers and of varieties and the common list of varieties) 32014L0098 (specific requirements for the genus and species of fruit plants)</p>	<p>This Regulation establishes the specific conditions for the production and commercialization of fruit propagating and planting material intended for fruit production in the territory of Moldova. Although the regulation does not explicitly refer to climate change adaptation or the development of climate-resilient varieties, it establishes flexible inspection, sampling, and testing procedures for fruit plants and propagating material that take into account climatic conditions, plant biology, and pest dynamics. This adaptability allows for timely and context-specific phytosanitary measures, which may indirectly contribute to resilience against emerging pest and disease risks exacerbated by climate variability.</p>
<p>Law 62/2025 on horticulture²⁹</p>	<p>No</p>	<p>The law establishes the legal framework for regulating the horticultural sector by adopting specific rules for the establishment of horticultural plantations, production, processing, and marketing of horticultural products. Also, it highlights several climate-relevant provisions, including the requirement to designate favorable cultivation zones for horticultural species based on climatic and soil conditions, as well as access to irrigation water. It also promotes the application of agro-phytotechnical measures, such as crop rotation, which contributes to climate resilience.</p>
<p>Law 312/2013 on agricultural producer groups and their associations (Parliament</p>	<p>No</p>	<p>It establishes the legal framework for the organization, recognition, and operation of agricultural producer groups, which are associated for the purpose of marketing their members' agricultural production, improving their</p>

²⁹ In force starting 22 October 2025.

of the Republic of Moldova, n.d. ⁽⁶⁹⁾)		efficiency, planning production, concentrating supply, organizing the sale of agricultural products, and setting the conditions for providing financial support related to their organization and functioning.
GD 695/2020 on the recognition procedure for agricultural producer groups (Government of the Republic of Moldova, 2020 ⁽⁷⁰⁾)	No	The recognition procedure for agricultural producer groups in Moldova establishes the legal steps for officially acknowledging groups formed to jointly market agricultural products, improve efficiency, plan production, and access financial support. Recognition is granted by a designated commission under the Ministry of Agriculture and is valid for five years.

Annex C. Institutional set-up for designing and implementing the climate change adaptation policy for agriculture

Table 4.2. Institutional set-up for designing and implementing the climate change adaptation policy for agriculture³⁰

Institution/ Agency	Responsibilities	Relevance to the climate change adaptation policy/agriculture
Ministry of Environment	The Ministry's mission is to assess the situation and challenges in its areas of responsibility, develop effective public policies in environmental protection, climate change and sustainable natural resource management, and monitor policy and regulatory quality.	Responsible for developing a climate change policy, ensuring the activity of the National Commission for Climate Change and chairing its meetings.
Environmental Agency	Ensures implementation of environmental policy at the national and local levels. Monitors air, groundwater, and surface water quality. Issues environmental permits (including special water use) Manages the Environmental Information System.	Responsible for incorporating climate change considerations into water demand management. Responsible for the management and operation of the National System for Monitoring and Reporting GHG emissions and other information relevant to climate change impact. Issues permit for special water use (for irrigation purposes).
Apele Moldovei Agency	Administrative authority for the water sector and water resources management. Implements state policy in the field of water management (integrated management of water resources based on the basin principle). Responsible for implementing river basin management plans and coordinating water resources management at national level.	Responsible for managing and reducing drought and flood risks, which are among the major impacts of climate change
State Hydrometeorological Service	Implements the national policy in the field of hydrometeorology. Performs hydrological, climatic, and meteorological forecasts and provides	Issues warnings of imminent dangerous hydrometeorological phenomena (including climate-related ones).

³⁰ The current table was developed based on the information provided in the National Climate Change Adaptation Programme until 2030 and National Strategy for Agriculture and Rural Development 2022-2023.

	relevant information to the government, economic agents, and the public.	
Ministry of Agriculture and Food Industry	Responsible for developing and implementing policies and strategies in the fields of agriculture, rural development and food security.	Develops appropriate programmes and action plans for the sector to be more resilient to climate change.
Agency for Interventions and Payments in Agriculture (AIPA)	The Agency's mission is to manage the resources of the National Fund for the Development of Agriculture and Rural Medium (FNDAMR) and the resources of development partners allocated for administration, as well as to implement intervention measures in agriculture. The fields of activity include ensuring the correct and legal conduct of operations to manage the funds allocated to support agricultural producers; control of the use of funds allocated to beneficiaries; participation in the preparation of subsidy regulations; continuous monitoring of grant beneficiaries' compliance with eligibility criteria and contractual conditions for granting grants; information, communication.	AIPA participates in adapting the regulatory framework in the field of agricultural subsidies to the practices of the European Union and ensures the legal and correct management of FNDAMR, as well as other funds to support agricultural producers and rural development. This includes preventing negative impacts and combating the consequences of extreme weather phenomena on the agricultural sector.
Agency for Agriculture Development and Modernization	The agency facilitates farmers' access to modern agricultural equipment by implementing donor-financed projects to ensure increased competitive agri-food production. It supports the development of alternative solutions for modernizing agriculture and provides consultancy, expertise, training and assistance in business planning in the sector.	It contributes to providing the agricultural sector with efficient technology, including for conservation tillage, modern irrigation and organic farming, which has a tangible impact on the sector's adaptation process to climate change.
Special Service for Active Influences on Hydrometeorological Processes	The Special Service's main activity is organizing and executing works aimed at actively influencing clouds to reduce hail damage, as well as other works related to active influence on hydrometeorological processes with recognized technologies.	It contributes to reducing the negative impact on the agricultural sector caused by the increased frequency and intensity of hail in the current context of global climate change.
National Agency for Food Safety	The Agency is responsible for the implementation of policies in the areas of food safety, sanitary-veterinary, plant protection, and phytosanitary quarantine, seed control, quality of primary products, food, feed, and consumer protection throughout the food chain.	The Agency assesses the phytosanitary status of production lots, and issues phytosanitary permits and certificates, including the Export Quality Certificate for propagating and planting material and the Certificate of Conformity for the quality of fresh fruits and vegetables. It also carries out plant protection ³¹ inspections and issues plant protection permit and certificates. It also assesses storage facilities for plant protection products and fertilisers as well as operators in the phytosanitary field.
State Inspectorate for Technical	The inspectorate is responsible for the examination and certification of agricultural machinery mechanics and operators, the	Contributes to climate change adaptation in agriculture by ensuring the safe and efficient operation of agricultural machinery,

³¹ Plant protection activities in Moldova, coordinated by the National Food Safety Agency (ANSA), involve monitoring and controlling plant health risks by preventing and managing harmful organisms. These include phytosanitary quarantine, certification of plant products, pest surveillance, risk assessment, issuance of phytosanitary permits, farmer training, and cooperation with international partners.

Supervision "Intehagro"	registration of agricultural machinery, equipment, and machinery for the sector, and carrying out their technical overhauls.	promoting the modernization of equipment, enforcing environmental protection standards, and supporting the adoption of resilient, climate-smart farming practices through technical oversight and certification.
National Land Improvement Agency (ANIF)	Established in 2023 under the Ministry of Agriculture and Food Industry, it implements state policy in water and land improvement, land relations, the land cadastre, and land monitoring.	Ensures the sustainability of investments in land improvement, land relations, land cadastre, and land monitoring; oversees and supervises land improvement infrastructure; conducts studies and research programmes in the field of land improvement.
National Institute for Applied Research in Agriculture and Veterinary Medicine³²	In the analysed subsector, the Institute's responsibilities include food security, adapting to climate change by identifying solutions to manage its impacts on agriculture, and developing resilient crops, breeds, and hybrids. It also focuses on resource use efficiency through optimization of water, soil, feed, additives, and agricultural inputs. Additionally, it covers soil and water resource protection through sustainable use, enhancing soil productivity, and optimizing plant nutrition. Sustainability is addressed through research and implementing environmentally friendly agri-food practices, including bioconversion of agri-food waste and its rational use. Lastly, it includes plant, animal, and aquaculture health by identifying, preventing, and controlling pests and diseases, as well as testing new plant varieties.	The institute supports climate change adaptation in agriculture by developing resilient crop varieties and livestock breeds, promoting efficient use of resources (water, soil, feed, and inputs), and advancing sustainable farming practices. Its work also contributes to soil and water protection, plant and animal health, and food security through research, innovation, and environmentally friendly solutions such as bioconversion of agri-food waste.
Agricultural and Rural Advisory Centre	The Centre is a public institution under the Ministry of Agriculture and Food Industry, tasked with supporting farmers through technical, economic and managerial consulting, training programs, and access to funding opportunities. It promotes innovation, coordinates advisory networks, and facilitates knowledge transfer to improve agricultural efficiency and rural development.	Supports climate change adaptation by training farmers in resilient practices, promoting sustainable resource use, and facilitating access to knowledge, technologies, and funding that help reduce climate-related risks in agriculture.
General Inspectorate for Emergency Situations under (GIES) Ministry of Internal Affairs	GIES implements the state policy in civil protection, fire defense, qualified first aid, emergency prevention, and response, as well as nuclear and radiological safety.	In collaboration with the State Hydrometeorological Service, it informs the population about exceptional situations, including their duration and intensity (floods, fires, droughts, extreme temperatures, winds etc).
Institute for Standardization of Moldova	The Institute is the national body responsible for adopting and promoting Moldovan, European, and international standards. It	Plays an indirect but important role in supporting climate change adaptation in agriculture by adopting and promoting

³² It was created through the merger and reorganization of the following public institutions: "Nicolae Dimo" Institute of Pedology, Agrochemistry, and Soil Protection, Scientific and Practical Institute of Horticulture and Food Technologies, Scientific-Practical Institute of Biotechnology in Animal Husbandry and Veterinary Medicine, Center for Animal Breeding and Reproduction, including the Aquatic Genetic Resources Research Center "ACVAGENRESURS" (as a branch), and the State Commission for Plant Variety Testing.

	ensures public access to standards, coordinates technical committees, supports regulatory alignment, and represents Moldova in international standardization organizations.	standards related to sustainable farming practices, environmental protection, soil conservation, and climate-resilient technologies.
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