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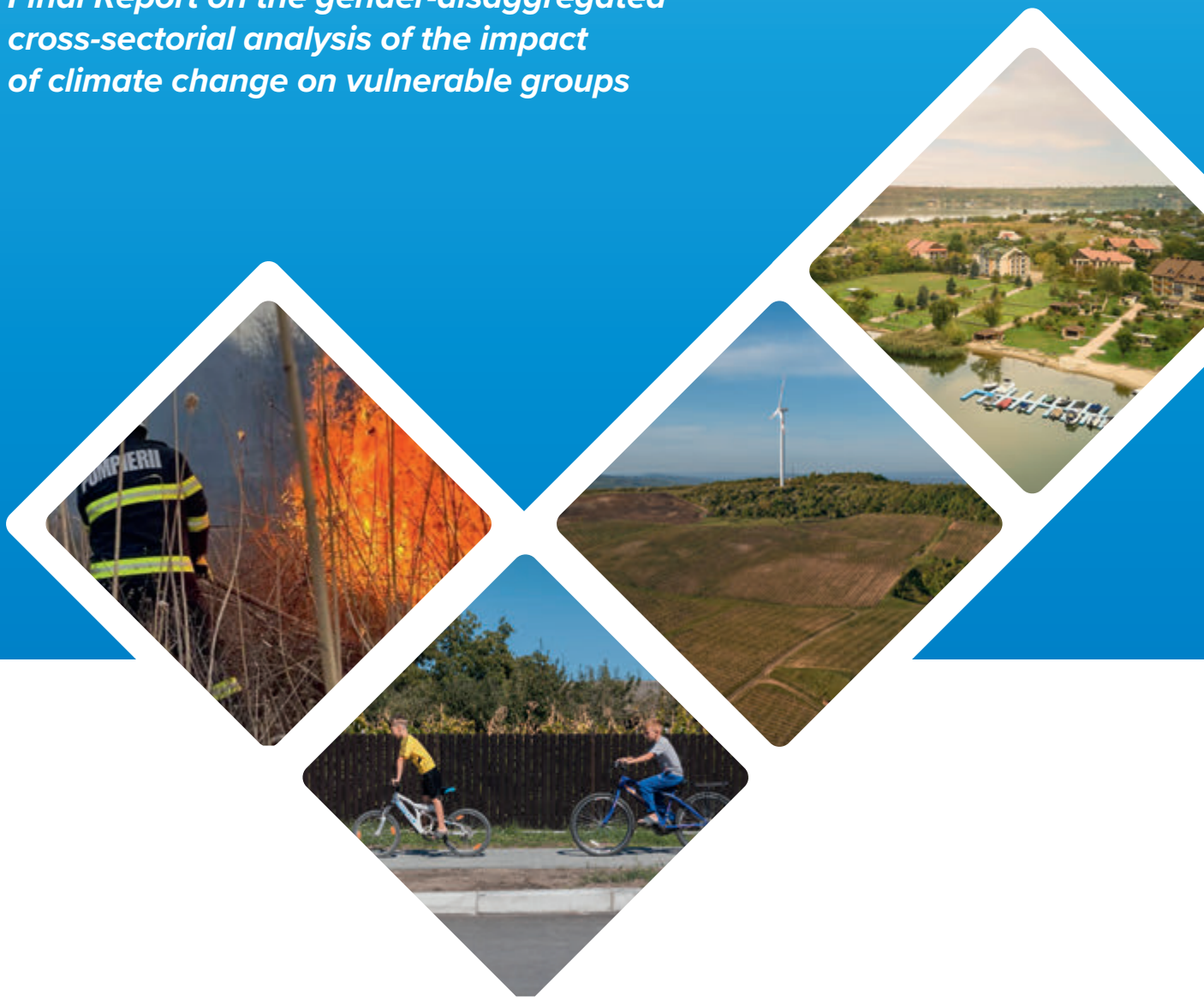
Final Report on the gender-disaggregated cross-sectorial analysis of the impact of climate change on vulnerable groups



2025

Climate change and vulnerable groups in Moldova: impacts, risks and adaptation measures

Final Report on the gender-disaggregated cross-sectorial analysis of the impact of climate change on vulnerable groups

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Acknowledgement

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This multidisciplinary endeavour to analyse climate impacts on vulnerable groups in Moldova requires the involvement of specialists from different fields and backgrounds. This work would not have been possible without their support. It is hoped that this first phase will inspire further actions and cooperation to enhance the resilience of the people of Moldova to climate change, particularly of those most at risk.

Contens

Acronyms

CCA	climate change adaptation
CPIU IFAD	Coordinating Programme Implementation Unit of the International Fund for Agricultural Development
DRM	disaster risk management
DRR	disaster risk reduction
FAO	Food and Agriculture Organisation of the United Nations
GCF	Green Climate Fund
GHG	greenhouse gases
GoM	Government of the Republic of Moldova
ILO	International Labour Organisation
ICT	Informational and Communicational Technology
LAP	local adaptation plan
LPA	local public administrations
NAP-1	National Adaptation Plan (in the context of the document refers to NAP 2014 – 2020
NAP-2	National Climate Change Adaptation Programme until 2030
NBS	National Bureau of Statistic
NCCC	National Committee on Climate Change
NDC	Nationally Determined Contributions
NGO	non-governmental organisation
SAP	sectoral climate change adaptation plan
SECAP	Sustainable Energy and Climate Action Plans
SHS	State Hydrometeorological Service
UN Women	United Nations entity dedicated to gender equality and the empowerment of women
UN	United Nations
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNPRPD	United Nations Partnership on the Rights of Persons with Disabilities
WMO	World Meteorological Organisation

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Introduction

The Republic of Moldova is highly vulnerable to the impacts of climate change due to its geographical location and socio-economic context. Climate change poses a significant threat, with rising temperatures, erratic rainfall, and frequent extreme weather events such as floods, droughts, and hailstorms. These changes are profoundly affecting key sectors of the economy, particularly agriculture, water resources, and public health. Floods in 2008 and droughts between 2007 and 2012 alone caused damages exceeding $1 billion, underscoring the urgent need for effective adaptation strategies.

This report is part of the NAP-2 (National Adaptation Programme) project, which aims to enhance Moldova's climate change adaptation planning. The research focuses on understanding the complexity and critical importance of addressing the impacts of climate change on Moldova's most vulnerable populations, including women, children, the elderly, persons with disabilities, and other socially and economically disadvantaged groups.

The report aims to analyse the differential impacts of climate change on vulnerable groups in Moldova and propose tailored adaptation measures to ensure climate resilience and equity. The methodology includes a comprehensive review of existing literature, policy documents, and international frameworks, as well as qualitative data collected from 15 expert interviews and a survey of 211 informants from both urban and rural areas across Moldova. This participatory approach ensures the inclusion of vulnerable populations' voices and experiences in the analysis and subsequent policy recommendations.

Moldova faces several key challenges in adapting to climate change:

- **Economic vulnerability:** The country's economy is heavily dependent on agriculture, which is highly sensitive to climate variability. Crop failures and reduced agricultural yields from droughts and extreme weather events threaten food security and livelihoods.
- **Social inequality:** Vulnerable groups, such as women, children, the elderly, and persons with disabilities, often lack the resources and support systems needed to cope with and adapt to climate impacts. Social and economic inequalities worsen their vulnerability, making targeted adaptation measures essential.
- **Infrastructure deficits:** Existing infrastructure, including water supply systems and flood defences, is inadequate to cope with the increasing magnitude and frequency of climate-related events. Investment in resilient infrastructure is urgently needed to protect communities and reduce economic losses.

Policy and governance: while international and national climate adaptation policies are in place, the integration of gender and social vulnerability into these policies remains insufficient. Effective implementation requires robust governance frameworks, stakeholder engagement, and cross-sectoral coordination.

Moldova's climate adaptation efforts align with international frameworks such as the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, which emphasize the importance of addressing the needs of vulnerable groups through climate justice and gender-responsive approaches. The European Green Deal and Sustainable Development Goals (SDGs) further stress the necessity of integrating socio-economic and environmental goals to build resilient and inclusive societies.

At the national level, Moldova's NAP-2 project is a key component of the country's strategy to strengthen its adaptive capacity. Along with other objectives, the project aims to mainstream climate risks and the interests of vulnerable groups into national policies, ensuring a comprehensive approach to climate resilience.

The report is structured as follows:

Part 1 provides background information on the human rights and climate justice approach to policymaking, which seeks to integrate social and gender considerations into climate and development policies at all levels. Part 2 offers a detailed analysis of the impacts of climate change on different vulnerable groups in Moldova, drawing on international and national data and case studies. Part 3 examines existing policies and measures aimed at enhancing the resilience of vulnerable groups, with recommendations for improvement. Part 4 outlines specific recommendations for capacity development, data collection and management, and the division of responsibilities among stakeholders to support climate adaptation efforts. Conclusions summarise key findings and lessons learned from the research, providing a basis for future action and policy development.

By addressing the multiple challenges posed by climate change and focusing on the needs of the most vulnerable, this report aims to contribute to a more resilient and equitable future for Moldova.

Objective and methodology of the research

The main objective of the research is to analyse the impacts of climate change and the socio-economic determinants of climate risks to the most vulnerable groups in Moldova, with a special emphasis on gender aspects.

The cross-disciplinary nature of the analysis, along with the variety of topics and types of materials involved, required a flexible yet structured approach to collecting and analysing relevant information. The research methodology needed to reflect the intersectionality of climate vulnerability and gender mainstreaming.

The research methodology uses the IPCC framework for climate change risks and adaptation (as presented in the 5th Assessment Report (AR4) (IPCC, 2014)) as a basis for analysing information and capacities for assessing climate risks, including both climate and socio-economic risks. The study also draws on international guidelines for climate risk assessment and mainstreaming social and gender aspects into national climate policies – NAPs and NDCs (Daze & Dekens, 2017) (Global Network & UNFCCC, 2019) (Huyer, 2016) – which are used to identify key areas for building adaptive capacity and the resources available to support national action in these areas.

The main steps for data collection and analysis include:

1. Survey with representatives of vulnerable groups in Moldova;
2. Interviews with key informants;
3. Review of existing materials and information on climate change in Moldova and the impact of climate change on vulnerable groups;
4. Analysis and summarisation of information on:

   (a) the impacts and socio-economic determinants of climate risks to the most vulnerable groups in Moldova;

   (b) current measures to address climate risks, social and economic determinants of vulnerability, and analysis of actors involved at different levels and sectors;
5. Development of recommendations for more effective mainstreaming of climate, social and gender factors and reducing climate risks for vulnerable groups.

Survey with representatives of vulnerable groups in Moldova

A series of interviews with representatives of vulnerable groups was conducted in spring-summer 2023 by the NAP-2 project experts.

The main objective of on-site data collection was to understand the impacts of climate change on selected vulnerable groups in Moldova, including rural women, young people, the elderly, and people with disabilities. The on-site semi-structured interviews provided the framework for data collection from informants, such as representatives of vulnerable groups, specialists working with them, and community leaders.

A total of 211 interviews were conducted with representatives of vulnerable groups in different regions. Thirty-four people declined to participate in the interviews, with the primary reasons being lack of interest in the topic (24) and the questions being perceived as irrelevant (5).

The data collected during the interviews have been summarised in an Excel table, with the analysis presented in a separate report. The analysis is divided into four sections for each group:

1. Demographic and occupational profile of the group;
2. Overview of everyday life/economic activities;
3. Environmental challenges/climate change impacts;
4. Participation in decision-making/access to resources;

Together with the key informant interviews, the on-site interviews represent the main sources of information used for the analysis of the key factors defining risks for socially vulnerable and gendered groups in Moldova.

Interview with key informants

A series of interviews were conducted in November-December 2023 with key informants representing various agencies and organisations working in areas related to climate change, social and economic development, gender issues, data collection and management, local administration, budgeting, and education. The objectives of the interviews included:

- Collecting and analysing information on the impacts of climate change on vulnerable groups and the causes and precursors of vulnerability to climate impacts;
- Analysing the existing situation regarding the understanding of impacts on vulnerable groups, including data collection and analysis;
- Analysing existing tools and capacities to support vulnerable groups in adapting to climate change;
- Collecting information on necessary steps (institutional, practical, informational, financial, etc.) to support vulnerable groups and integrate their interests (including gender dimensions) into climate change policies.

Taking into account the diverse expertise of the key informants and their varying levels of involvement in climate, gender, and intersectional issues, the interviews were conducted in a semi-structured format. This approach allowed the interviewees to share their expertise on the areas and issues with which they were most familiar.

A total of 13 interviews were conducted with 15 stakeholders; the names of the interviewees are not disclosed. The selection of interviewees reflected key stakeholder groups:

- *Policy and administration:* Ministry of Health, Labour and Social Protection, Ministry of Environment.
- *Agencies responsible for data collection and statistics:* NBS (environmental and climate information, SDG information).
- *Local public administrations:* Balti municipal administration, Straseni municipal administration.
- *International agencies:* UNDP, FAO, UM Women, Swedish Embassy (empowering program for rural women), Covenant of Mayor East.
- *Researchers and analysts:* Academy of Economic Studies in Moldova (gender equality and gender-responsive budgeting), Institute of Ecology (climate change modelling and impact assessment).
- *NGOs:* NGO Gutta Club.

The materials from the interviews have been summarised in a separate report and used to draw conclusions and recommendations.

Review of existing materials and information

The review of existing materials and information on climate change in Moldova and its impact on vulnerable groups was conducted between October and December 2023.

The main objective of the analysis is to assess the information, data, and resources available to support the process of climate risk assessment and risk reduction for vulnerable groups in Moldova. The materials analysed include policy documents and strategies in the areas of climate change, socio-economic development, and specific aspects related to vulnerable groups, as well as literature, thematic reports, databases, information and data platforms, project materials, and case studies.

The most relevant resources have been synthesised in a table (Annex 2) according to the main categories of analysis. Each resource is annotated to describe its relevance to the topic of climate change and/or socio-economic vulnerability of one or several vulnerable groups: women, the elderly, children and youth, and people with disabilities. Each resource was ranked according to its relevance to the gender and climate change agenda:

- Gender inclusion:
  "–" – Gender is not addressed;
  ● – Gender aspects are mentioned;
  ●● – Gender aspects are discussed;
  ●●● – Gender is the main focus of the document.
- Climate Change (CC) inclusion:
  "–" – CC is not addressed;
  ● – CC aspects are mentioned;
  ●● – CC aspects are discussed;
  ●●● – CC is the main focus of the document.

The thematic areas of the analysis include:

- **International documents and programs***:* Main international policies, programmes, and other documents influencing national climate change planning and actions, as well as national policies related to gender and vulnerable groups.
- **National data sources and statistics***:* Main sources of climate and socio-economic data related to climate change and socio-economic vulnerability.
- **Climate impacts and exposure***:* Analytical documents and data on climate change in Moldova, main trends and scenarios at the national level, across sectors, and for vulnerable groups.
- **Vulnerabilities, risks, and opportunities***:* Information and resources on natural and socio-economic factors defining climate change and socio-economic vulnerabilities, risks, and opportunities at the national level for vulnerable groups: women, children and youth, the elderly, and people with disabilities.
- **Adaptive capacities and capacity building***:* Documents and materials providing the foundation for assessing and developing capacities to reduce climate and socio-economic risks and vulnerabilities, mainstreaming climate change into development and social policies, and mainstreaming gender issues and the interests of vulnerable groups into climate change policies and actions at the national and local levels:
  - National policies and programs in the following areas: climate change; economic development and social policies, strategies, and supporting documents; social and gender policies; sectoral and regional strategies and plans;
  - Institutional and decision-making practices;
  - Access to finance;
  - Capacity building, educational, and communicational programs;
  - Monitoring and evaluation;
  - Relevant projects and case studies.

The synthesis of the materials allows for preliminary conclusions to be drawn on the current state of knowledge and information available to (1) support inclusive and gender-responsive climate adaptation planning in Moldova, and (2) climate-proof development and social policies (including gender policies).

Analysis and recommendations

The data from the survey, interviews, and review of existing documents, supported by the analysis of an extensive body of international literature, enabled the formulation of analysis and recommendation.

The description of each vulnerable group includes:

- Characteristics of the group and its position in Moldova
- Exposure to climate change (where possible) and main impacts on: health, water supply and quality, economic activity, income and assets, well-being and security.
- Socio-economic determinants of vulnerability and resilience to climate risks: economic conditions and income levels, health and mobility conditions, social status and roles, participation in decision-making, awareness of climate risks and access to information, regional disparities, gender aspects.

Recommendations were made on key areas for potential interventions:

- Capacity building to strengthen the resilience of vulnerable groups in the context of climate change
- Collection and management of data reflecting climate change risks for vulnerable groups
- The division of responsibilities among different actors to reduce the impact of climate change on vulnerable groups.

1 Part 1. CLIMATE CHANGE AND TACKLING THE IMPACTS ON VULNERABLE GROUPS

Climate change and vulnerable groups

Global climate change is leading to significant economic losses, with Europe facing substantial economic and social impacts. The European Environment Agency (EEA) estimates that weather- and climate-related extremes caused economic losses of assets estimated at EUR 650 billion in the EU Member States, of which EUR 59.4 billion in 2021 and EUR 52.3 billion in 2022 (EEA, 2023) (Figure 1). In Moldova, 2008 floods resulted in costs more than EUR 120 million, and the droughts between 2007 and 2012 inflicted damages over USD 1 billion, affecting 80% (UNDP, 2023) of the country's territory (UNDP, 2023).

Heatwaves, floods, and droughts have particularly severe effects on agriculture, infrastructure, and energy systems globally and in Eastern Europe. Vulnerable groups, such as low-income households, the elderly, and marginalized communities, bear the highest costs, often lacking the resources to recover and adapt. The drivers of vulnerability include exposure to climate risks and deep-rooted social and economic inequalities. Limited access to financial resources, healthcare, and adaptive infrastructure exacerbates the adverse effects of climate change, highlighting the need for policies that address both environmental and socio-economic challenges to build resilience among the most at-risk populations.

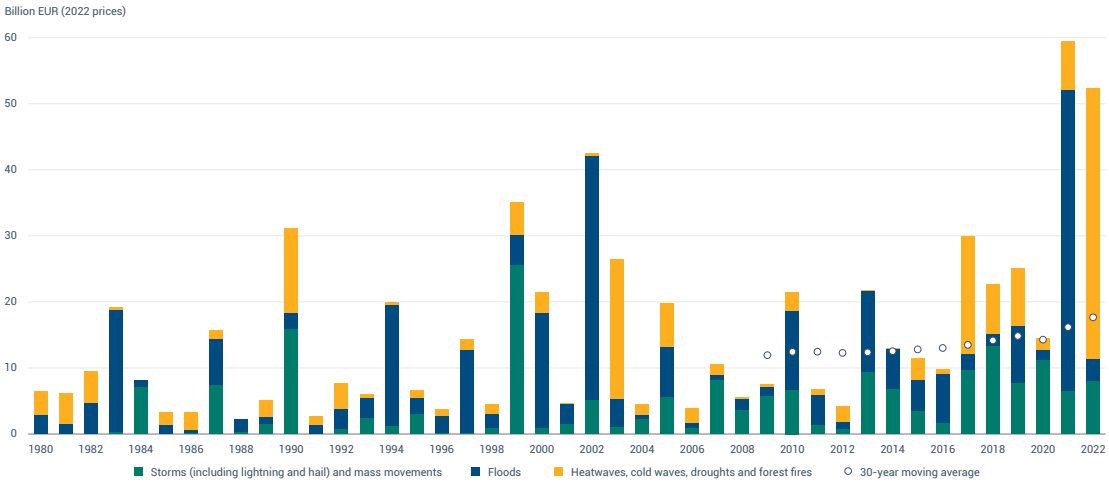


Figure 1. Annual economic losses caused by weather- and climate-related extreme events in EU Member States (EEA, 2023)

Social and economic drivers for climate vulnerability

The main factors that determine climate-related risks are: exposure to climate change, vulnerability of specific groups or individuals, and adaptive capacity, which helps to reduce risks and address vulnerability (Figure 2) (UN Women, UNDP, 2011)

Exposure to climate change is defined by geographical, environmental, and climatic factors. Vulnerability is largely determined by socio-economic and infrastructural factors, which may be common or specific to different groups.

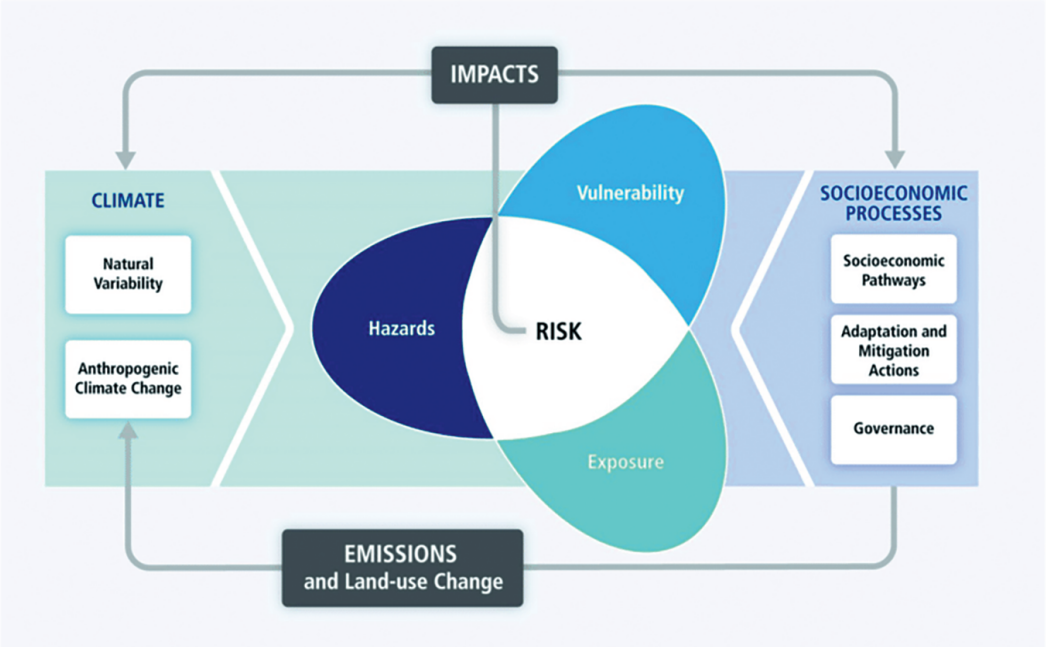


Figure 2. IPCC framing of climate risks and risk responses (IPCC, 2014)

The analysis of vulnerable groups in Moldova provides examples of common factors defining social and economic vulnerability in the country (UN Women, UNDP, 2011; UNFCCC, 2016):

- **Poverty:** older persons, large households, and children are particularly vulnerable;
- **Age** (subject to exclusion from participation, stigma, unemployment): older persons, young people, children;
- **Disability** (subject to exclusion, stigma, inadequate participation in decision-making): people with physical and mental disabilities, children with disabilities;
- **Language/ethnicity** (inadequate access to education, stigma): Roma, Bulgarians, Ukrainians, Gagauz, Moldovans in Transnistria;
- **Religion** (registration difficulties, religious services, stigma): Muslims, non-Orthodox Christians, Jews;
- **Rural regions** (inadequate access to infrastructure, high unemployment): children of educational age, active population;
- **Gender** (stigma, employment, pay disparities): women, LGBT individuals (lesbian, gay, bisexual, transgender), victims of trafficking and domestic violence;
- **Occupation** (inadequate access to markets): agricultural entrepreneurs.

Additional drivers defining vulnerability to climate change include:

- **Health conditions** (ability to sustain and restore physical health, mobility, and mental health, access to healthcare): older people, persons with disabilities, children, and women are particularly vulnerable;
- **Food and nutrition** (adequate quantity and nutritious quality of food): children and young people, women (especially pregnant women and young mothers), people with lower income, migrants are particularly vulnerable;
- **Access to infrastructure and services** (electricity, transport, water, and sanitation): people in rural areas, people with lower income, people with limited mobility, children, and migrants are particularly vulnerable;

- **Access to information and education** (early warning information and forecasts for long-term changes, ability to access and use information about climate change, technologies, support schemes, and finance): older people, people living in rural areas, children, and migrants are particularly vulnerable;
- **Access to financial and other support** (access to finance to cover damage from climate impacts and disasters, introducing climate-resilient technologies and practices, insurance): women, young people, older people, ethnic minorities, and migrants are particularly vulnerable;
- **Participation in decision-making** (ability to take and influence decisions – economic, behavioural, political, and others – at different levels, from household to regional and national): women, young people, ethnic minorities, and migrants are particularly vulnerable.

Different groups and individuals may have specific adaptive capacities and potential for action. For example, women have a significant impact on the behavioural changes within their families and are active in community life, social initiatives, and environmental protection. Elderly people often influence community life and manage free-time resources. Young people have a high ability to obtain and use new information.

The combination of climate, economic, and demographic factors creates specific pressures and growing risks due to climate change for the most vulnerable groups (Global Infrastructure Hub, 2019):

- Women and girls, particularly those living in rural areas
- Children and young people
- Elderly people
- Low-income individuals
- People living with disability
- Job seekers and the unemployed
- Minority groups (such as Roma communities)
- People living in isolated communities and informal settlements
- People living in vulnerable environment, such as areas particularly exposed to climate impacts and natural disasters.

Key international policies addressing climate change and vulnerable groups

Key international documents on sustainable development and climate policy highlight the need for climate justice, human rights, and a gender-responsive approach.

The 2030 Agenda for Sustainable Development advocates the integrated implementation of 17 Sustainable Development Goals, encompassing social, economic, and environmental objectives. The European Green Deal and European policies adhere to the principles of climate justice and "leaving no one behind," including the promotion of gender equality and the rights of vulnerable groups.

The UNFCCC and the Paris Agreement stress the importance of social and economic inclusion, as well as integrating the interests of vulnerable groups in climate policy and planning (UNFCCC, 2016) (UNFCCC, 2023). The Glasgow Climate Pact, adopted at UNFCCC COP26 in Glasgow, acknowledges that "climate change is a common concern of humankind, and Parties should, when taking action to address climate change, respect, promote, and take into account their respective obligations with respect to human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities, and persons in vulnerable situations, and the right to development, as well as gender equality, women's empowerment, and intergenerational equity."[1]

1 Decision -/CMA.3 Glasgow Climate Pact. Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its third session, held in Glasgow from 31 October to 13 November 2021. Addendum Part two: Action taken by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its third session. FCCC/PA/CMA/2021/10/Add.1

To specifically address gender issues, the Lima Work Program on Gender (LWPG) was established in 2014. It aims to integrate gender considerations into the work of UNFCCC Parties and the Secretariat in implementing the Convention and the Paris Agreement. At COP25, an enhanced five-year Lima Work Program on Gender was adopted,[2] which includes a Gender Action Plan (GAP). At COP 26, Parties adopted Decision 20/CP.26, which includes, inter alia, aspects related to reviewing the implementation of the Gender Action Plan (UNFCCC, 2023) (Turquet, Tabbush, Staab, Williams, & Howell, 2023). At COP27, Parties completed the mid-term review of the implementation of the GAP, which began at SB 56 in June 2022, and made changes to some outcomes and activities in priority areas. The expanded version of the GAP sets out objectives and activities in five priority areas (UNFCCC, 2023):

Priority Area A: Capacity building, knowledge management and communication

Priority Area B: Gender equality, participation and women's leadership

Priority Area C: Coherence

Priority area D: Gender-responsive implementation and means of implementation

Priority area E: Monitoring and reporting.

COP28 in Dubai highlighted the risks faced by the most vulnerable groups and emphasized the need for actions to reduce risks and provide compensation, positioning these as key concerns of climate policy. Significant decisions were made, including the establishment of the Loss and Damage Fund to support the most vulnerable countries and groups. The climate justice approach and gender mainstreaming were addressed through various initiatives. UN Women proposed a new framework and guidelines for integrating the feminist agenda into climate change policies, focusing on four key action areas (Turquet, Tabbush, Staab, Williams, & Howell, 2023):

1) Recognizing women's rights, labour, and knowledge
2) Redistributing economic resources
3) Representation of women's voices
4) Repairing inequalities and historical injustices.

The increasing risks of climate change for vulnerable groups are addressed in several policies and documents related to youth, the elderly, and persons with disabilities. The UNFCCC process needs to extend its knowledge to include a wider range of vulnerable groups. For instance, the UNFCCC currently lacks a disability constituency (Stein, Stein, Groce, & Kett, 2023; UNFCCC, 2023), which may not stimulate an impetus in addressing their needs within (NDCs and national adaptation plans. In this context, national and local risk assessments, policies, and actions play a crucial role in identifying and supporting the most vulnerable groups, including older people (UNFCCC, 2023) (Harrington & Otto, 2023), persons with disabilities (Jodoin, Lofts, Bowie-Edwards, Leblanc, & Rourke, 2022), migrants (European Migration Network, 2023) (The White House, 2021), ethnic minorities, and others.

Mainstreaming gender and social vulnerability into the national policies

International documents provide guidance on human rights and gender mainstreaming. This paves the way for addressing the interests of vulnerable groups in national policies - NDCs, National Adaptation Plans, National Sustainable Development Strategies, international cooperation, and sectoral documents and action plans (Figure 3, 4).

However, it is the process of national policy making and risk management that is responsible for identifying the most vulnerable groups at national and local levels, assessing their needs and risks, and, developing their adaptation potential. All levels and sectors of decision-making – including the economy, finance, spatial planning and administration, education health, international cooperation, and others – need to be involved in mainstreaming climate risks and the interests of vulnerable groups, including gender issues. This work requires broad stakeholder engagement in the collection and assessment of information, as well as development of recommendations for all levels of government and stakeholder groups.

[2] Decision 3/CP.25

Figure 3. A gender-responsive NAP process (Daze & Dekens, 2017)

Establishing instutional arrangements	Ensure that institutional mechanisms for the NAP process are gender-equitable, inclusive and include gender expertise
Capacity development	Enhance the capacity of all relevant actors to facilitate genderresponsive approaches in the NAP process
Stakeholder engagement	Undertake inclusive, gender-equitable stakeholder engagement in the NAP process
Integrating adaptation in budgets	Channel resources for adaptation in ways that generate equitable benefits for people of all genders and social groups
Securing finance from international sources	Ensure that adaptation finance from international sources generates equitable benefits for people of all genders and social groups
Information sharing	Ensure that access to information on adaptation and the NAP process is equitable for people of all genders and social groups

Figure 4. Gender-responsive principles for the enabling activities (Global Network & UNFCCC, 2019)

2 Part 2. CLIMATE CHANGE IN MOLDOVA AND MOST VULNERABLE GROUPS

Climate change and impacts in Moldova

Overview

Republic of Moldova ranks amongst the most vulnerable countries to climate change in Europe, due to both the current and projected climate impacts and economic conditions. At present, the county faces significant risks from a changing climate, with an growing probability and magnitude of national disasters.

Incremental changes in climate characteristics – such as rising temperature, shifting weather patterns, and altered rainfall and water cycles – are impacting the economy and public health. High temperatures lead to heat stress, affecting human health and quality and availability of water resources.

The 4th National Communication of the Republic of Moldova and recent risk assessments forecast increasing climate impacts in mid- and long-term:

- A decrease in surface waterflows by 16 to 20% by 2030;
- A decrease in total annual precipitation on 13%;
- A less stable and more unbalanced precipitation regime, with increasing possibilities of extreme events such as flood and droughts;
- An increasing likelihood and severity of extreme events – floods, droughts, spring frosts, hails, and storms;
- An increase in the average temperature of 2°to 3°C by 2050, with the greatest warming occurring from June– August (USAID, 2017).

Changes in temperature

Observations of climate trends in Moldova show a steady increase in temperature since 1980, averaging approximately 0.58°C per decade, with the most significant warming occurring during the spring and summer season (World Bank, 2022). Seven of the ten warmest years in Moldova have occurred during the last two decades (World Bank Group, GFDRR, 2020), with the winter season 2019-2020 being one of the warmest in history.

In the coming decades, this trend is expected to continue, with temperature anticipated to increase in temperature by +1.7 to 2.0°C in the near future, +2°to 3°C by 2050 and +4.1 to 5.4°C by the end of the century (Government of the Republic of Moldova, 2023). The rate of predicted temperature increase is among the highest in Europe.

Figure 5 shows the projected changes in average temperature under different scenarios, while Figure 6 illustrates the rate of temperature increase across different regions. Although the south of the country will remain the warmest, the central and northern regions will experience a higher rate of change, leading to an increase in heat waves and droughts in areas currently less affected by heat-related threats.

Current temperature trends are driving an increase in the frequency and intensity of heatwaves, resulting in health risks, strain on infrastructure, increased energy demand, damage to agriculture, and exacerbated impacts from air pollution and wildfire risks, affecting both urban and rural areas.

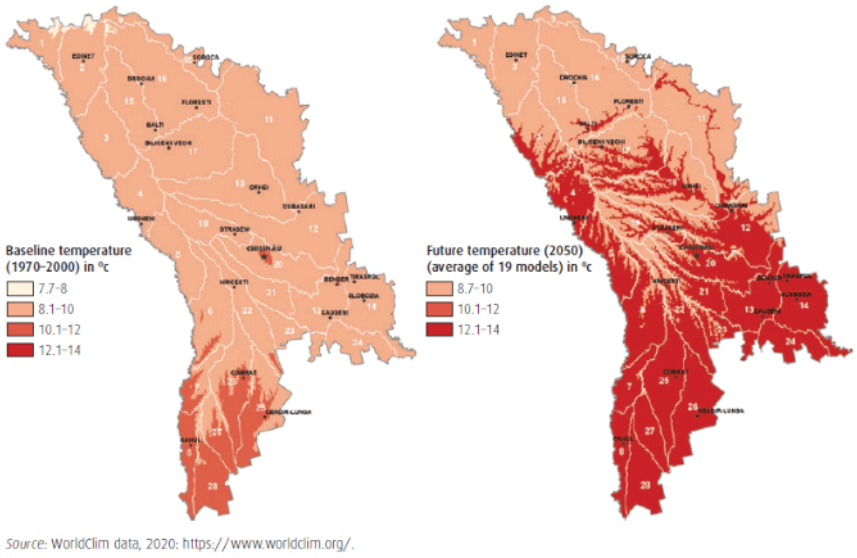


Figure 5. Projections of average annual temperatures in Moldova from 2022 to 2050 (Smets, et al., 2020)

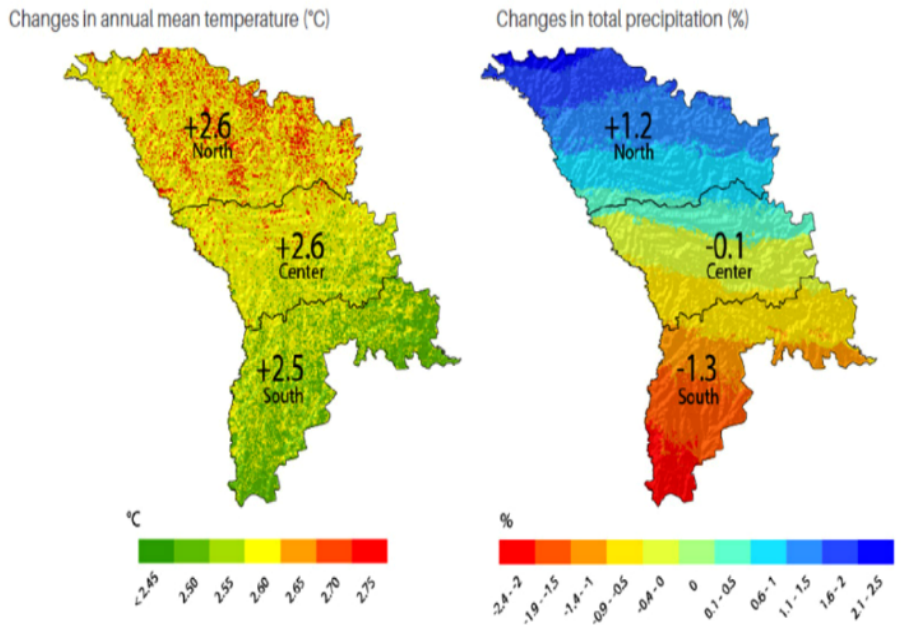


Figure 6. Projected changes in temperature and precipitation in Moldova by 2050 (World Bank Group, GFDRR, 2020)

Changes in precipitation

At present, while the annual amount of precipitation has not changed significantly, there is an increasing disparity in its distribution over space and time (Government of the Republic of Moldova, 2023). It is expected that this tendency will continue in the short- and mid-term, with decrease in precipitation starting from 2050 (Government of the Republic of Moldova, 2023) (Figure 7).

The contrast in precipitation distribution will grow, with the southern region experiencing a greater decrease in precipitation than the central and northern regions (Figure 6, 7). The reduction in rainfall will be most notable during summer and autumn months (Government of the Republic of Moldova, 2023).

Changes in the precipitation regime and increasing extremes in distribution will amplify both the risks of droughts and floods across the country.

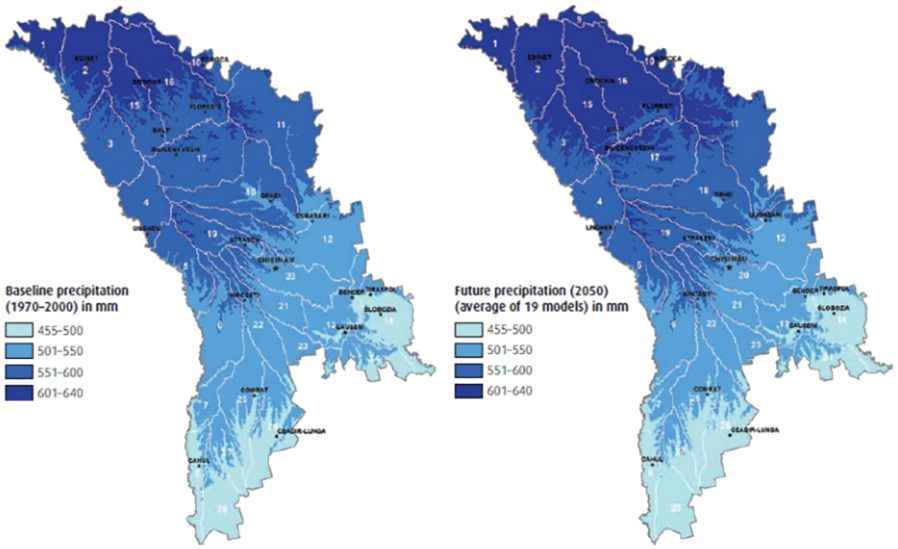


Figure 7. Projections of average precipitation in Moldova from 2022 to 2050 (Smets, et al., 2020)

Natural disasters

Moldova is particularly prone to climate hazards such as flood, droughts, spring frosts, and hail (EU4Climate, 2024). In recent decades, natural disasters related to climate change have become more prevalent in the country compared to other hazardous events, such as earthquakes (Figure 8). Climate-related events cause significant damage to both the population and the economy. In the coming decades, the magnitude and frequency of such disasters are expected to continue increasing.

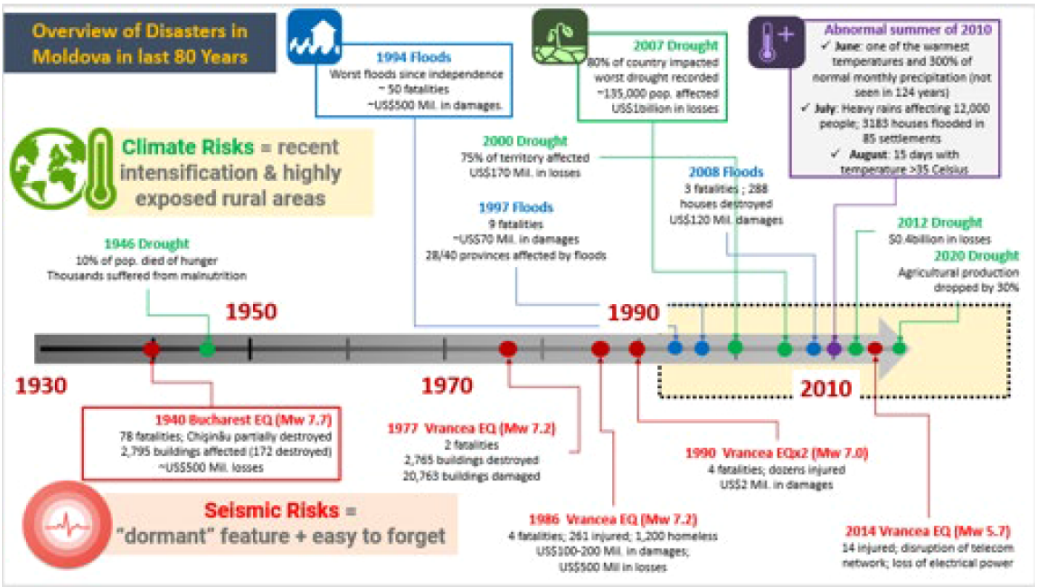


Figure 8. Natural disaster events and impacts in Moldova: A historical perspective (World Bank, 2021)

Floods

The floodplains along Moldova's two main rivers – the Dniester and the Prut – and the areas between them have traditionally been prone to flooding after spring snowmelt and heavy summer rains. The major and minor rivers are protected by a system of dikes and flood barriers. However, the capacity of this infrastructure is becoming insufficient to cope with the increasing magnitude and frequency of floods (Frank, Ramsbottom, & Avanzi, 2016).

Floods cause significant damage in both rural and urban areas, affecting about 70,000 people every year and costs Moldova about USD 100 million in GDP (FAO, 2023) (Figure 9). Around 40% of settlements in Moldova is currently at risk of flooding (World Bank, 2021).

A severe flood in 2008 in the Dniester and Prut River basins caused damage of about 120 million USD, impacting over 40 localities and more than 1,000 private and public buildings. In 2022, flash flooding in Chisinau caused significant infrastructure damage, and disrupted transportation and services.

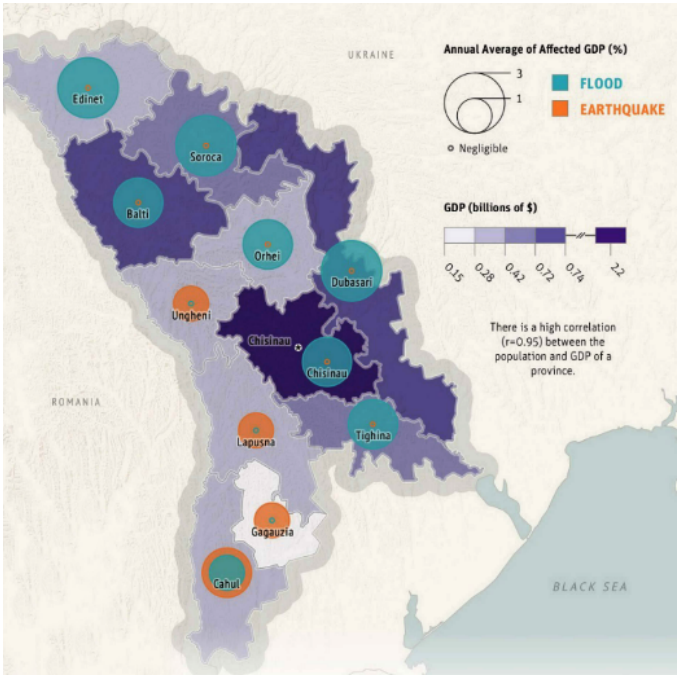


Figure 9. Impacts of floods and earthquakes on Moldova's regions and economy (World Bank, 2017)

Floods and heavy precipitation are often the causes of landslides, water supply disruptions, water pollution, and other impacts that disrupt the economy, damage infrastructure and affect human health.

The predicted 16 to 20% increase in surface runoff and a more contracted rainfall regime will intensify the frequency and severity of floods and landslides. While the entire country will be affected, the southern region and areas near Moldova's main rivers – Briceni, Ocnita, Edinet and Donduseni – are likely to be the most impacted (USAID, 2017).

Droughts and water shortage

Drought and water scarcity are among the most common and devastating extreme climate events in Moldova (USAID, 2017). Currently, severe droughts are estimated to occur once 3 to 10 years.

Droughts cause estimated losses of USD 20 million in crop production every year (FAO, 2023). In 2007, about 80% of the country's territory was impacted by drought, affecting 135,000 people, with total losses of about USD 1 billion. The most recent event in 2022 caused a 30% drop in maize and wheat production.

Droughts significantly reduce agricultural yields, affecting food security and livelihoods in a country heavily dependent on agriculture. They also strain water resources, leading to challenges in water supply for both domestic and agricultural needs, and increasing the risk of forest fires.

Currently, the southern regions of the country are more vulnerable to droughts (Figure 10). At the same time, the average level of water scarcity (unmet demand) for industry, agriculture, and the population is higher in the northern and central parts of the country, where agricultural and industrial production is more intense – Stefan Voda, Soldanesti, Falesti, Riscani, Balti, Briceni and several others. (Figure 11). This means that all regions will face an increasing risk of water scarcity, but the causes and impacts may vary and need to be analysed for each region.

Predicted temperature increases (+2°to 3°C by 2050), changes in the precipitation regime, reduced surface runoff (16 to 20% by 2030) will inevitably increase the risk of droughts and water scarcity. The impact of these risks will largely depend on adaptation measures and capacities.

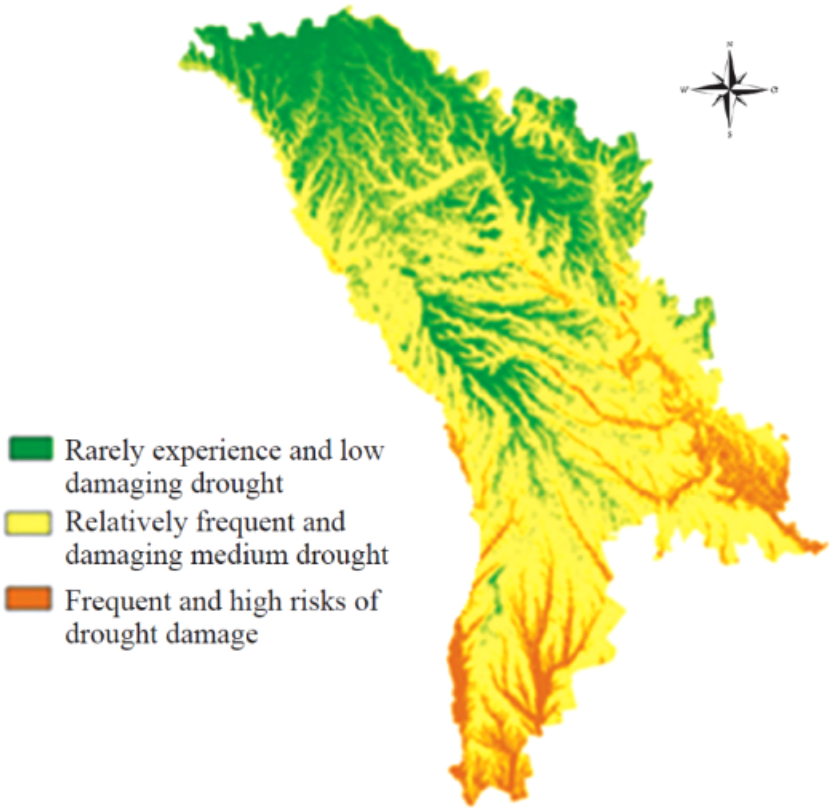


Figure 10. Drought-sensitive areas of Moldova (Daradur, et al., 2019)

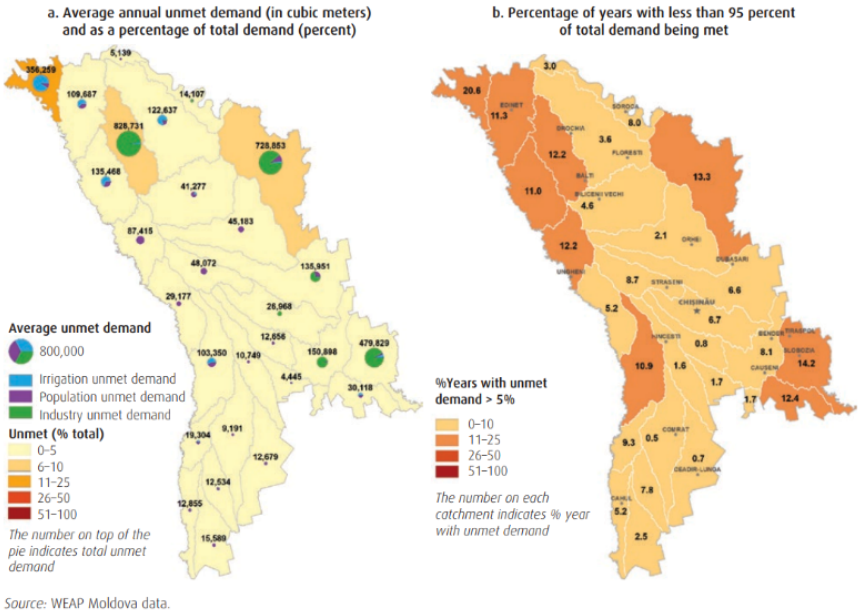


Figure 11. Average water scarcity for irrigation, industry and population in Moldova, 2018 (Smets, et al., 2020)

Other impacts

Other climate-related natural hazards include windstorms, hailstorms and late spring and early autumn frosts. These phenomena are partly caused by Moldova's geographical location in the zone of frequent convergence of colder and warmer air masses and have a significant impact on agriculture. While the frequency of such events is increasing, certain events are highly predictable and cause additional damage, especially to heat-loving crops and orchards – apricots, peaches, almonds, early grapes, and others. In the spring of 2020, unexpected late frosts severely affected vineyards and orchards. This led to significant losses in grape and fruit production, affecting local farmers and the agricultural sector.

More active distribution of pests, as well as plant and animal diseases can affect agriculture and human health.

Rising temperatures and prolonged droughts are likely to exacerbate air quality problems, particularly in urban areas and for people with limited access to recreational facilities (the elderly, persons with disabilities).

Regional distribution of impacts

The spatial distribution of climate impacts in Moldova is influenced by the country's varied topography, geographic location, and ecosystems. The Figure 12 shows the distribution of climate impacts across the country.

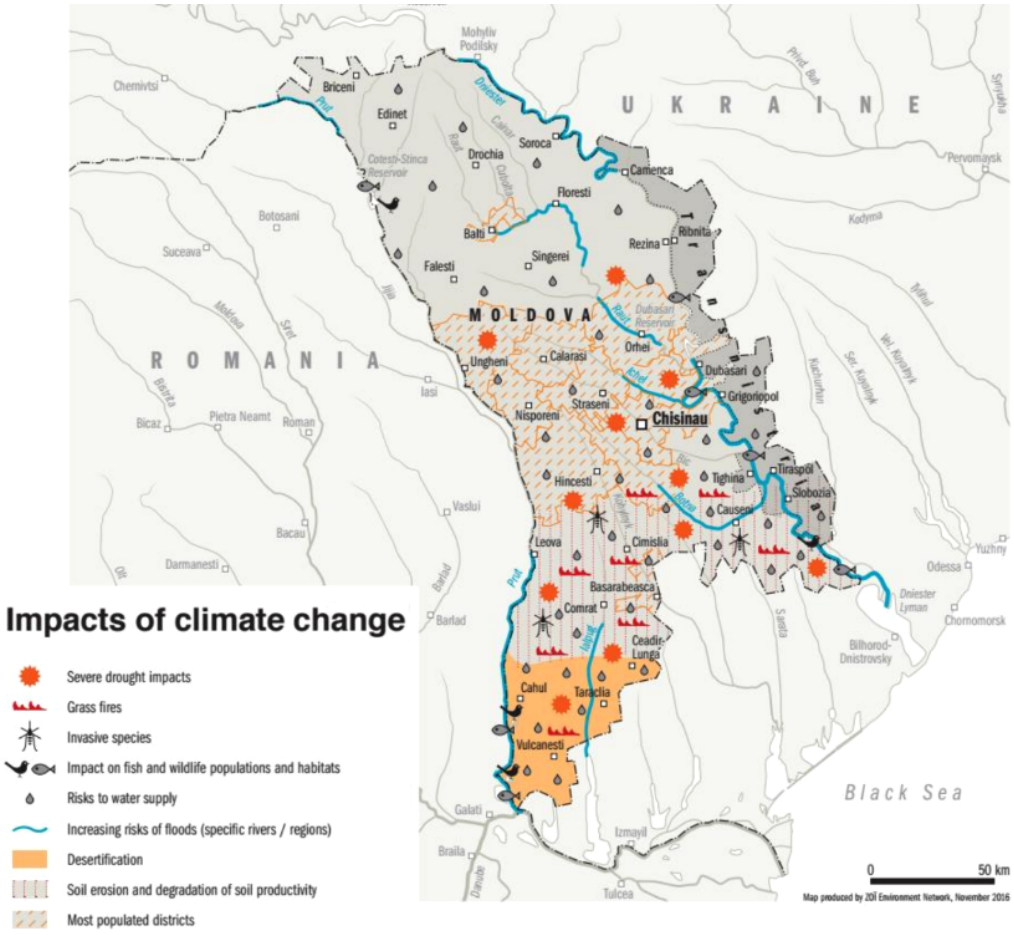


Figure 12. Impacts of climate change in Moldova (Zoi Environment Network, 2017)

The northern and central regions, characterised by higher elevations and more fertile soils, experience significant agricultural challenges due to both floods and droughts, particularly affecting crop yields and water availability. These areas are also prone to frost damage, which can devastate vineyards and orchards.

The southern regions, with their lower elevations and more arid conditions, face more severe and frequent droughts. This exacerbates water scarcity issues and negatively impacts the predominantly agricultural landscape, leading to reduced productivity and economic hardships for farmers. Additionally, the southern areas are more susceptible to heatwaves, which can further stress water resources and agricultural output, and increase the risk of forest fires.

Urban areas, including the capital city Chisinau, experience different climate impacts primarily related to heatwaves. The urban heat island effect intensifies heat stress, increasing energy demands for cooling and posing health risks to residents. Infrastructure in these urban centres also faces challenges from extreme weather events, such as heavy rainfall and flooding, which can disrupt transportation and strain public services.

Climate impacts are not uniform across the country, with each region facing distinct challenges that require tailored adaptation and mitigation strategies. The distribution of impacts of climate change causes exposure of the population and economy to climate risks (Table 1).

Figure 13A represents an integrated index of current exposure to climate characteristics and indicators, reflecting extremes in temperature and precipitation. Figure 13B reflects an integrated assessment for extreme events and adverse environmental conditions – floods, droughts, air pollution, and land degradation. The differences between the two maps reflect different characteristics of impacts and call for detailed regional assessments.

The combination of the two maps reflects the most exposed regions to climate change, where both climatic factors and conditions for natural hazards (e.g., location in the floodplain) are significant: Cantemir, Leova, Cahul, Stefan Voda, Hincesti, Arsenie Noi, Causeni, Chisinau, Nisporeni, Ungheni, Falesti, Galesti, Balti, Singerei, Telenesti, Orhei.

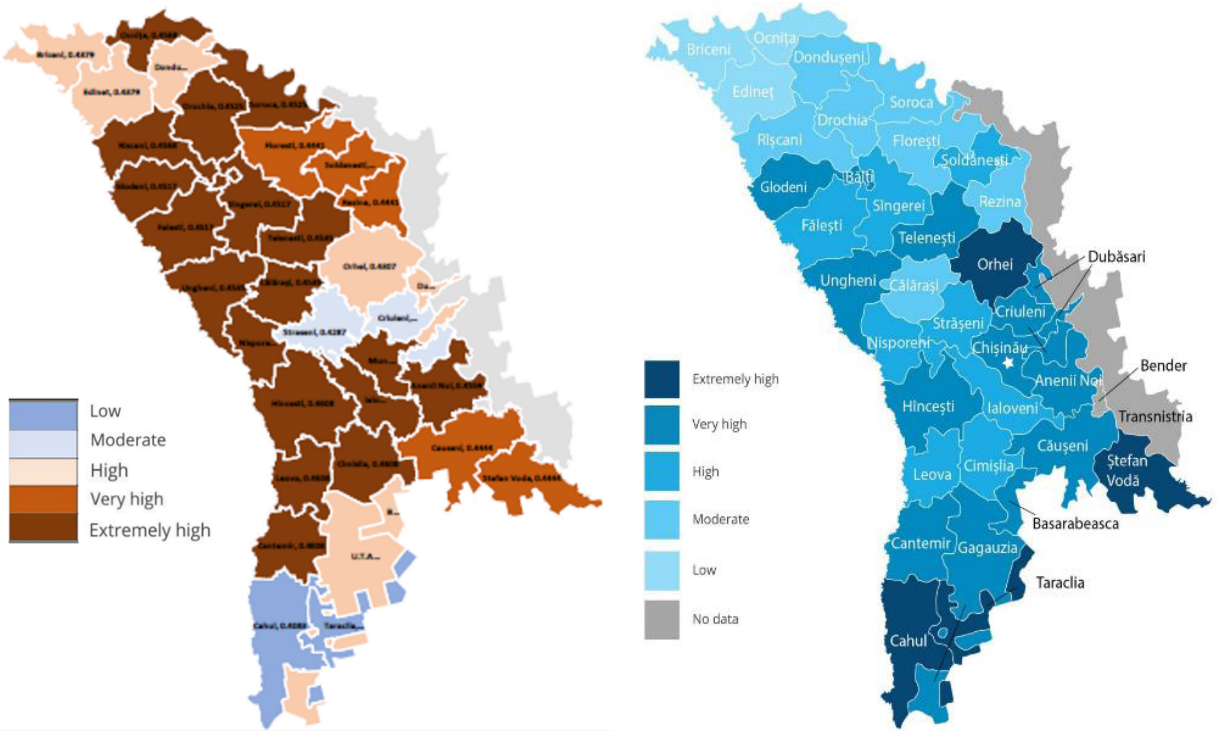


Figure 13. Exposure to climate change in the regions of Moldova.
A. Integrated assessment of exposure to adverse climatic conditions (Gutium & Țăranu, 2021).
B. Integrated assessment of exposure to climate-related natural hazards: droughts, flooding (urban and river), air pollution, and land degradation (UNICEF, 2023).

Table 1. Observed and projected climate change in Moldova and highly vulnerable regions (UNICEF, 2023)

Climate impacts	Observed Changes	Projected Changes	Highly vulnerable regions
Rising temperatures	Temperature increase of 0.58°C per decade (mostly between March–August). 2020 is the warmest year on record, with 37.9°C in Tiraspol.	Increase in average temperatures by 2°–3°C by 2050, with warming greatest from June–August. Increase in the number of "hot" days* by 32 and "dry" days (zero precipitation) by 12 by 2050. Greater temperature increases are expected in the northern regions.	Cahul, Stefan Voda, Taraclia, Causeni, Gagauzia Autonomous Territorial Unit, Basarabeasca, Anenii Noi, Criuleni, Chisinau, Cimislia, Leova, Cantemir
Changes in rainfall patterns **(drought and flooding)**	Overall decline in rainfall. Shift in seasonal rainfall patterns. Rainfall levels increasing in March–May and decreasing in June–August.	Changes in precipitation are uncertain; projections suggest a mild reduction in annual precipitation by 2100, with drier summers (June–August), wetter winters (December–February), and more variable precipitation. Increasing frequency and severity of extreme events such as droughts, floods, and landslides. Decreasing surface river flows, leading to water scarcity.	**Drought:** Cahul, Stefan Voda, Taraclia, Causeni, Gagauzia Autonomous Territorial Unit, Basarabeasca and Anenii Noi **Flooding:** Briceni, Ocnita, Edinet and Donduseni.

Impacts on economy sectors

With its status of the most vulnerable to climate change country in Europe, Moldova faces significant pressure from climate-related events on its economy and society. The updated NDC (Government of the Republic of Moldova, 2020) the National Communication of the Republic of Moldova (Government of the Republic of Moldova, 2023) and the NAP-2 (Government of the Republic of Moldova, 2023) assess the impacts of climate change on the operation of key sectors and the resulting impacts for the economy and society (also see Annex 1).

Agriculture

Rising temperatures and heat stress in Moldova are changing water demands, requiring more irrigation and reducing crop yields. These changes are also leading to an increase in agricultural pests and diseases, reducing crop quality and increasing economic risks. In addition, shifts in crop growing conditions lead to nutrient pollution and the loss of indigenous crop varieties. Changes in livestock production and crop distribution further affect farming systems, leading to income loss, economic risk, and potential labour displacement.

Changes in rainfall patterns exacerbate water scarcity, soil salinisation, and may create conflicts among water users. Extreme weather events such as heatwaves, frosts, droughts, floods, and hailstorms degrade soil fertility, cause crop failures, and accelerate desertification, leading to higher food prices and poor food security.

Energy

High temperatures and heatwaves in Moldova increase the demand for electricity for cooling, stressing transmission systems and increasing natural gas consumption. Changes in precipitation are reducing water flows in the Prut and Nistru rivers, reducing hydropower generation and biomass harvesting. Extreme events such as droughts, floods, and hailstorms reduce the resilience of energy infrastructure, increasing

the cost and uncertainty of energy production and distribution. Reduced renewable electricity generation due to balancing power issues exacerbates these challenges.

Forestry

High temperatures and heatwaves extend the growing season but have a negative impact on climate-sensitive species and increase the risk of forest fires. Changes in precipitation alter forest health, species composition, and pest and disease patterns, reducing the ability of forests to maintain biodiversity and their socio-economic functions. Extreme weather events lead to low biomass growth, increased fire risk, and seedling mortality, resulting in economic losses and population displacement.

Health impacts

High temperatures and heatwaves increase morbidity and mortality in Moldova, particularly affecting outdoor workers and the elderly. They aggravate chronic diseases and stimulate the spread of infectious diseases, reducing labour activity and increasing healthcare costs.

Floods increase the incidence of waterborne diseases, while droughts affect food security and nutrition. Low temperatures and cold spells increase respiratory diseases and hypothermia, especially among vulnerable populations, and reduce access to healthcare during heavy snowfalls.

Transport

High temperatures and heatwaves damage Moldova's transport infrastructure by deforming roads, bridges, and railway tracks, increasing maintenance costs and limiting the movement of heavy goods. Heavy rains and floods damage transport infrastructure, causing delays and disrupting construction and maintenance activities, isolating rural communities. Low rainfall limits river transport, increasing operating costs. Extreme winds damage road, rail, and port infrastructure, disrupting transport services and commercial activities, and increasing infrastructure maintenance costs.

Water management

Changes in precipitation reduce surface and groundwater flows, dry up rivers and ponds, and cause soil erosion. Extreme weather events contaminate water sources, damage supply infrastructure, and force population displacement due to water shortages and flooding. Droughts exacerbate drinking water shortages and crop losses, leading to migration in search of alternative livelihoods.

Rising temperatures are reducing oxygen levels in water bodies, increasing algal blooms, and disrupting freshwater ecosystems in Moldova. Reduced water availability and quality affect the cost of drinking water and ecosystem services.

Key drivers of climate vulnerability

Moldova's socio-economic situation makes it particularly vulnerable to the impacts of climate change. Some of the key factors that determine vulnerability and risk to climate change at the national level are:

- **Structure of economy:** The prevalence of climate-sensitive economic sectors such as forestry and agriculture increase risk and potential losses in the event of disasters, but at the same time supports the country's sustainability and food security.
- **Demographic and social profile situation:** Economically active, educated adults have a higher adaptive capacity to climate and other stressors, while the elderly population, children, and some other groups are more vulnerable and have less adaptive capacity.
- **Economic conditions and income:** Communities, households, and individuals with higher incomes are expected to have greater adaptive capacity, to mitigate and compensate for risks in the event of disasters, and to develop regular adaptive responses (e.g. use of technology and cooling, prevention of losses in agriculture, and others).
- **Access to services and infrastructure:** A developed system of infrastructure (water, energy, transport, and others) reduces potential risks to people and the economy.

Moldova is one of the smallest landlocked countries in Europe, with a significant share of its economy based on agriculture. Farmland covers about 75% of the territory (the highest proportion in Europe), while forests cover about 11.4% (one of the lowest in Europe) (FAO, 2023). The agricultural sector employs 21% of working population, generates 9% national GDP (2019) (NBS, 2024) and accounts for about 50% of national export (World's Top Exports, 2020). About 50% of the population live in rural areas (50.2% of urbanisation (Worldometers, 2023) (Figure 14).

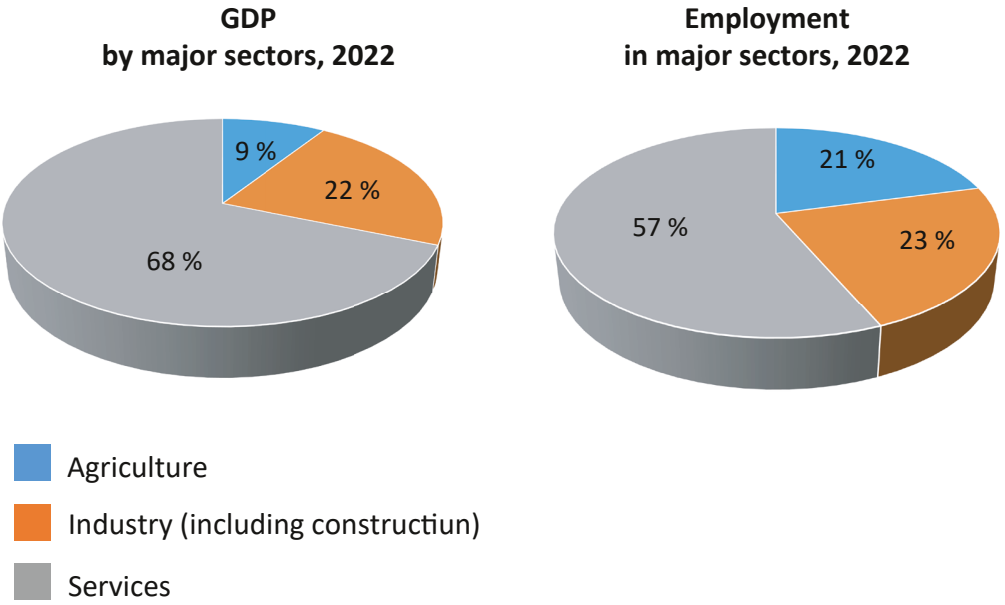


Figure 14. Structure of economy in Moldova: GDP and employment per main sectors (UNECE, 2024)

The population of the country is 2.5 million people (as of 1 January 2023) and shows a steady decline over the last few years due to natural decline (the death rate exceeded the birth rate by 9.2 thousand in 2022) and negative net migration (43 thousand more people left the country than entered in 2022). As a result, the country's elderly population (23.8% of people aged 60 and over in 2023) exceeds the youth population (18.1% of those aged 0-14 years in 2023), while the economically active age group (aged 15-59) forms about half of the population (58.1% of people aged 15-59 in 2023) (Figures 15, 16).

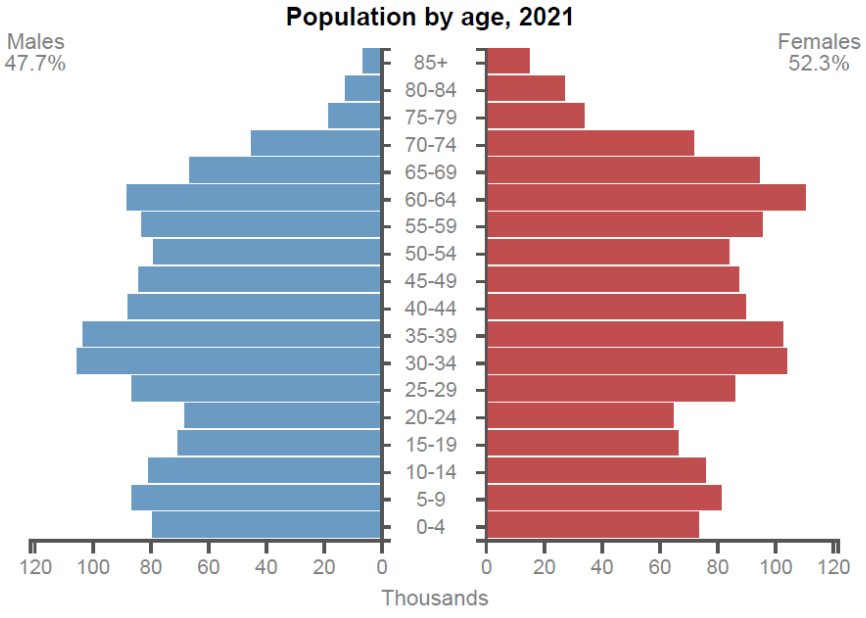


Figure 15. Population of Moldova by age groups (UNECE, 2024)

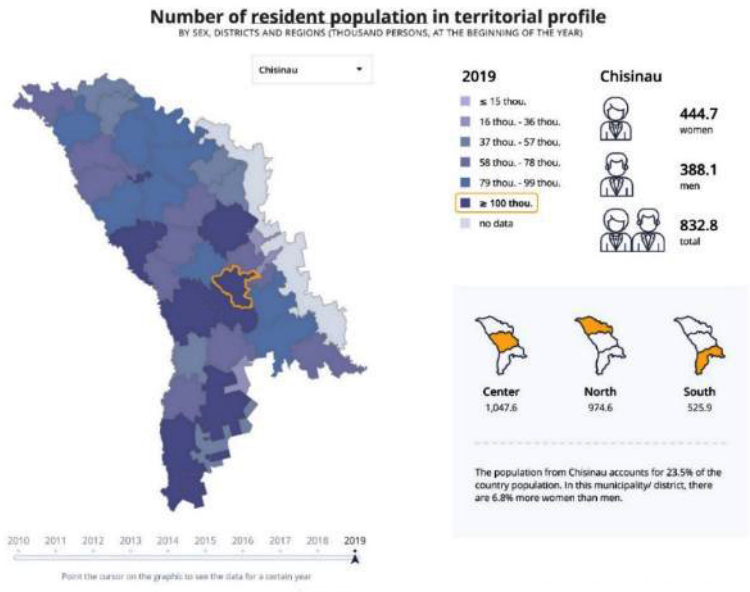


Figure 16. Population of Moldova by territory (NBS, 2023)

The employment rate is relatively low, only 52.1% of the population aged 20-64 officially employed in 2022, including 55.8% of men and 48.7% of women (Figure 17). The service sector and agriculture have the highest share of employment – 57% and 20.2% respectively of all employed people (Figure 18).

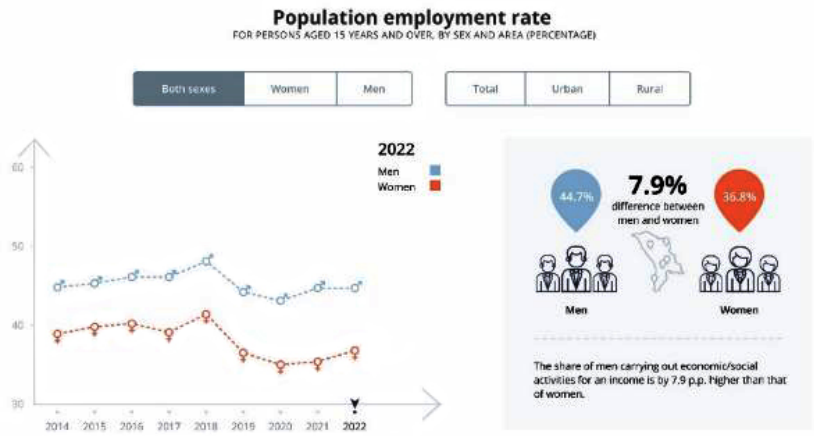


Figure 17. Population employment rate in Moldova for persons aged 15 years and over, 2022 (NBS, 2023)

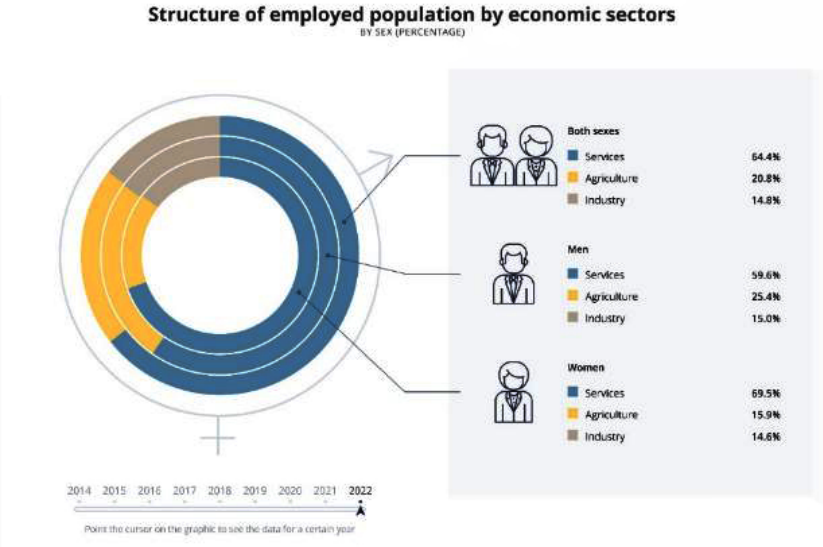


Figure 18. Structure of employed population by economic sectors in Moldova (NBS, 2024)

Moldova is one of the poorest countries in Europe. In recent years, political and economic crises in the region have significantly impacted the economic situation, income, purchasing power, and livelihoods. While the average monthly income in 2022 was 21.1% higher than in the previous year, the costs of essential goods and services increased drastically, including +268% cost of electricity, +213% cost of coal, +63% cost of passenger transport, +30.3% for wheat flour bread, +48% for fruit, and others.

The distribution of income and poverty is uneven. The southern regions usually have a higher poverty rate than the north and centre. The lowest poverty rate is in the capital region of Chisinau (Figure 19).

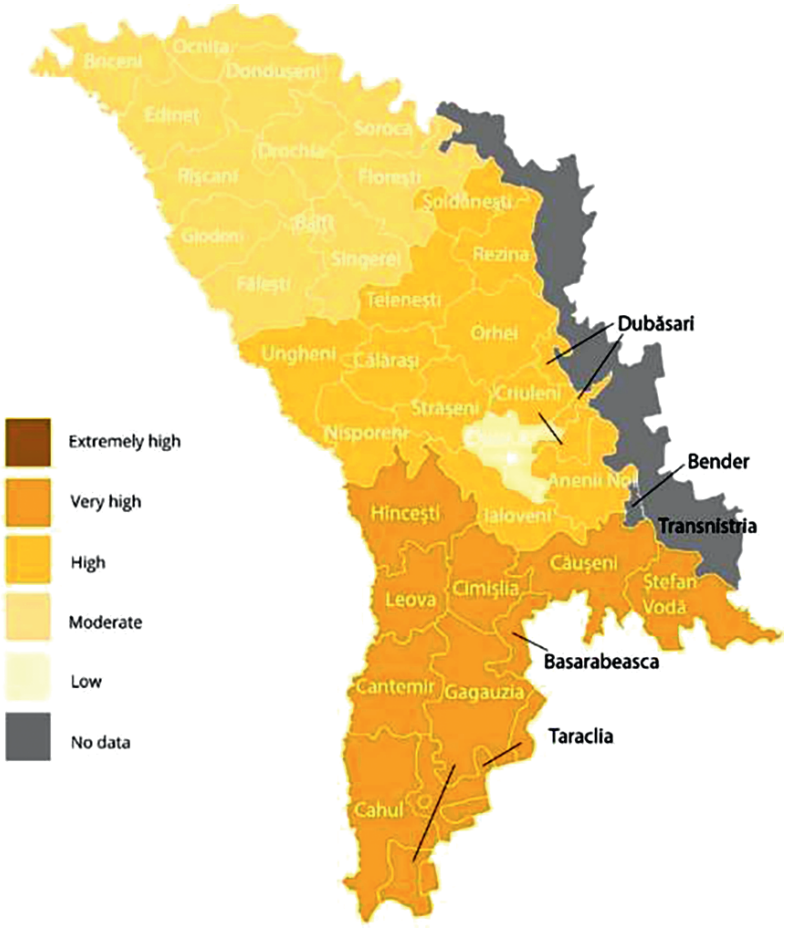


Figure 19. The integrated index of multi-dimensional poverty (absolute and relative poverty) in Moldova (UNICEF, 2023)

Access to services and infrastructure may vary among regions, communities, and households. Rural areas across the country have much lower access to water supply and sanitation infrastructure. About 45% of rural households have access to piped water at home, compared to more than 90% of urban households. Only approximately 15% of rural households have a flush toilet, compared to 70% in urban areas (Figure 20). In 2013, many communities in the north, central, and south-west of the country had only 20-40% or fewer households connected to centralized water supply. Almost all communities, except for urban regions like Chisinau, Balti, and a few others, had only about 20% of households connected to the public sewage system (Figure 21).

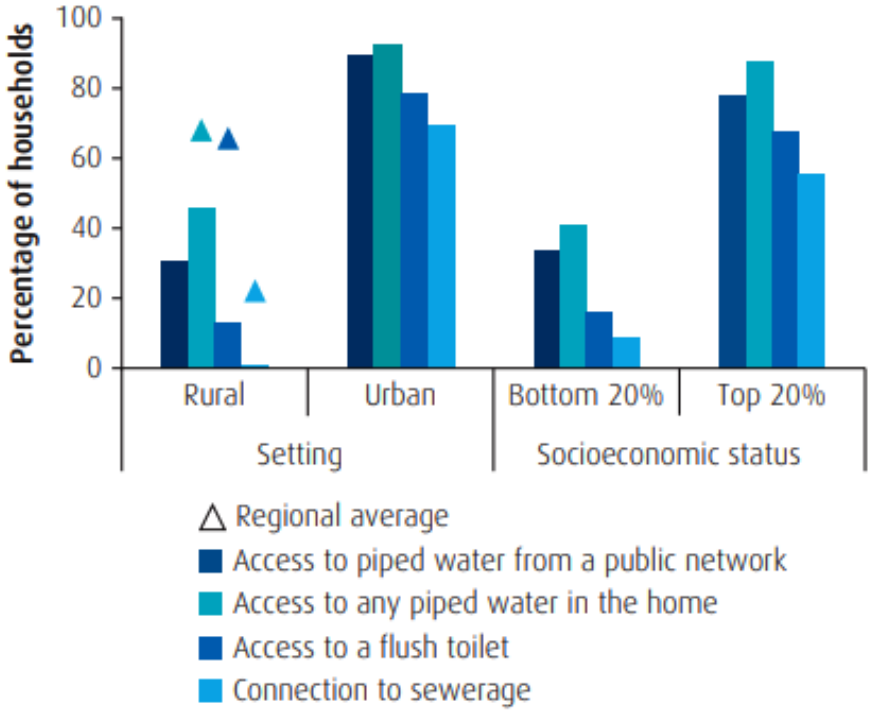


Figure 20. Inequalities in access to water supply and sanitation in Moldova (Smets, et al., 2020)

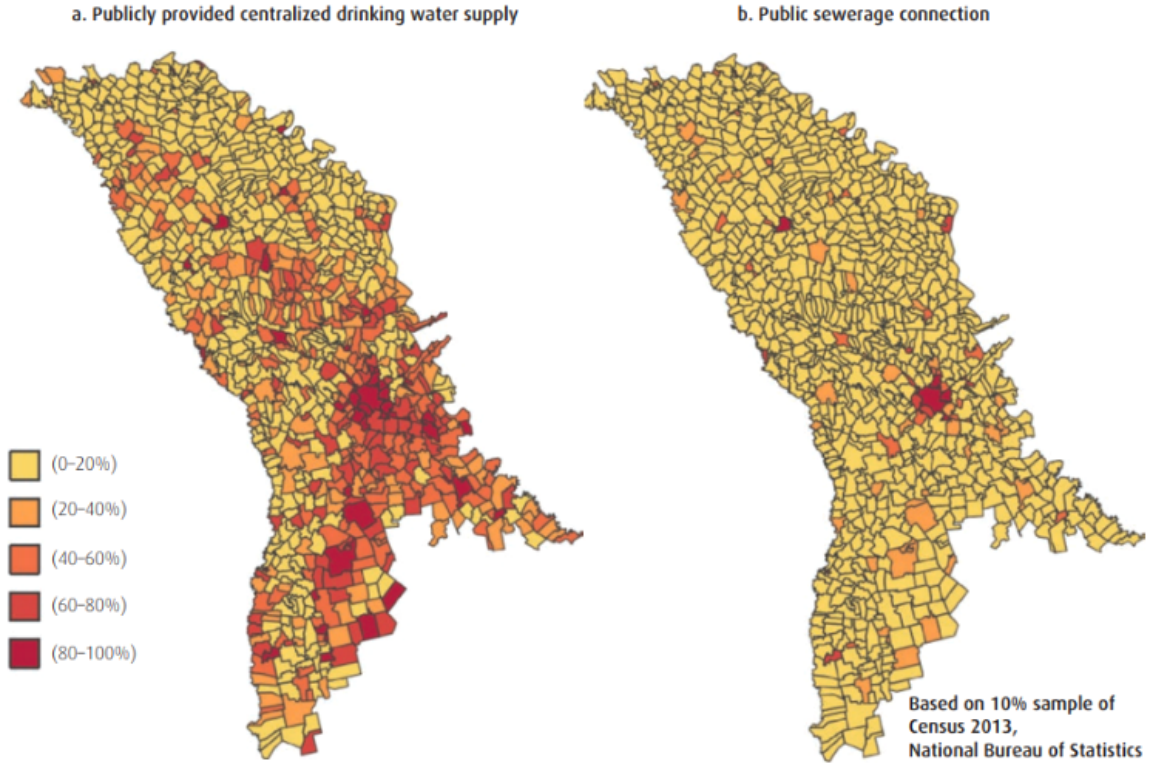


Figure 21. Public access to centralised water and sanitation facilities in Moldova (Smets, et al., 2020)

The combination of economic, social and environmental factors defines the level and specificity of vulnerability at the local level.

The assessment carried out under the UNEP-GEF project supporting the preparation of the Fifth National Communication to the UNFCCC reflects integrated indicators of vulnerability to climate risks, combining 38 indicators reflecting environmental conditions, water and sanitation, demography, employment and social security, public health, land use, and economy (Figure 22).

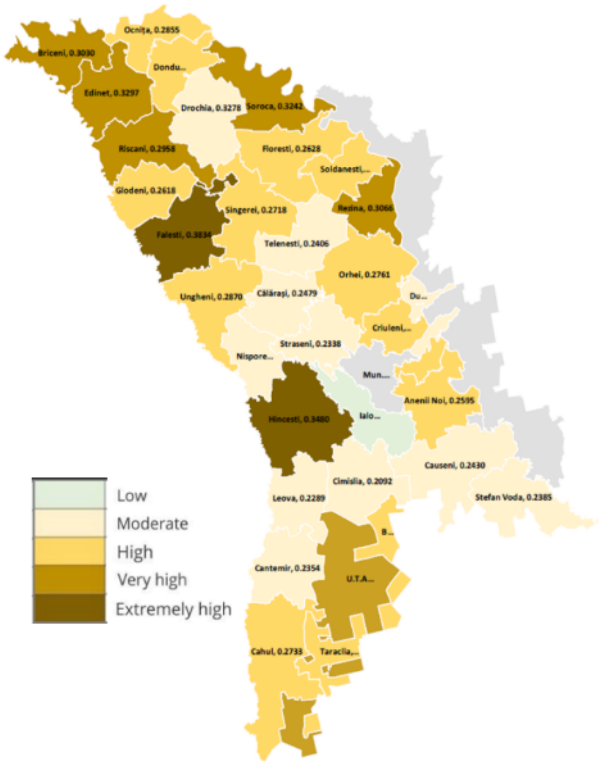


Figure 22. Integrated assessment of socio-economic factors, defining sensitivity to climate change in Moldova (Gutium & Țăranu, 2021)

The combination of natural factors of exposure to climate change and vulnerability drivers (sensitivity) and adaptive capacity define the resulting risks and vulnerabilities associated with climate change in different regions of the country (Figure 23). However, the detailed assessment of risks and adaptation needs at regional and local levels requires a thorough analysis of the conditions and factors that define vulnerability for different localities, households, and individuals. Particular attention needs to be paid to the most vulnerable groups and areas and the factors that define their risks, which are discussed in the following sections.

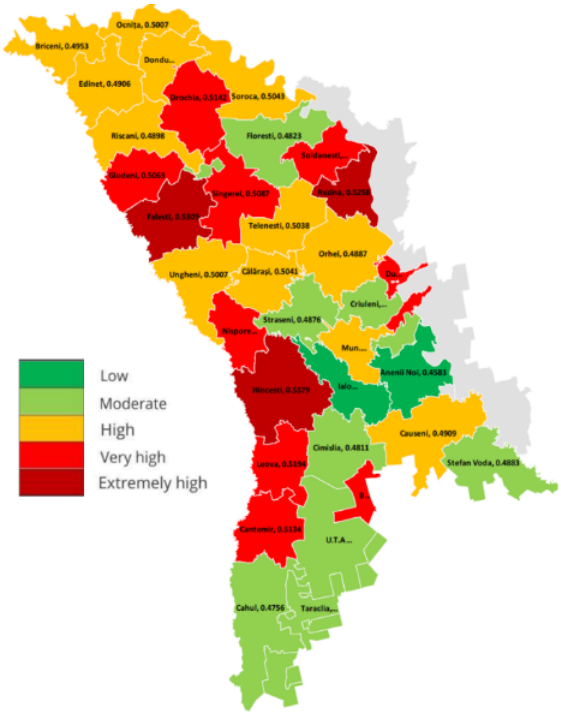


Figure 23. Integrated assessment of vulnerability to climate change in the republic of Moldova (Gutium & Țăranu, 2021)

Groups vulnerable to climate change in Moldova

Climate change has a disproportionate impact on different regions, groups, and individuals, as challenges related to economic and social conditions are exacerbated by changing climatic conditions. The literature analysis, as well as data from interviews and surveys, helped identify the groups most vulnerable to climate change in Moldova and the general factors that determine their vulnerability:

Women are vulnerable to economic factors, health conditions, social and family context, and environmental conditions. They often have less access to resources and less decision-making power. Women are frequently victims of domestic violence, which can be compounded by social stresses due to weather conditions and natural disasters.

Children and young people are vulnerable to economic factors, family situation, and environmental conditions due to their lower physical and mental adaptive capacity (especially young children and infants). They have limited capacity to make decisions about their behaviour and rely on others (parents, relatives, guardians) for their livelihoods and decisions.

Elderly people are vulnerable to economic factors, health conditions, social context (e.g., loneliness), and environmental conditions. They may also have less digital literacy to access information and resources, and less ability to participate in decision-making.

People living with disabilities are vulnerable due to health conditions and reduced mobility. They often also have lower income, a high dependency on other people or groups, and limited ability to participate in decision-making.

Rural communities and farmers tend to be more vulnerable to environmental factors, although they may not always be fully aware of their vulnerable status and the risks they face. Rural people's work and income are largely dependent on weather and climate conditions, and climate change can reduce or diminish the output of long hours of work, or lead to the loss of business and livelihoods.

Other groups including ethnic minorities (e.g., Roma) and migrants, face several challenges, such as low income, limited access to healthcare and information, and less involvement in decision-making. These groups have lower resilience to climate change.

The combination of vulnerability factors and belonging to several vulnerable groups increases the risks. Gender vulnerability is an example of a cross-cutting risk that can apply to all groups.

General factors that determine vulnerability to climate change for social groups and individuals in Moldova include:

Economic conditions and income level: Income levels are closely related to adaptive capacity, risk reduction, and loss recovery across all areas. Lower-income groups have less ability to purchase adaptation equipment and services (cooling and heating devices, home adaptations, holidays in more adaptable conditions), as well as limited access to financial resources for services, including insurance and credit. Lower incomes can lead to systemic problems: for example, weak and old structures, dilapidated roofs in some low-income neighbourhoods, which not only make them vulnerable to climate change impacts (such as floods and storms) but also prevent the implementation of sustainable and affordable solutions, like installing solar panels.

Adaptive capacity: Certain population groups (e.g., higher-income groups, urban dwellers) may have better adaptive capacity due to access to resources, better quality of life, diverse employment opportunities, and access to healthcare. On the other hand, urban residents are more dependent on food, water, and other resource supplies and may face higher risks in the case of disasters.

Health conditions and risks: Vulnerable groups, such as women, the elderly, children and persons with disabilities face different health risks from climate change that affect their vulnerability.

Social status and roles: Women, especially in rural areas, bear multiple responsibilities, including family care and work, leading to increased workloads.

Climate risk awareness and access to information: Different groups may have varying levels of access to information and awareness. Older individuals may have limited access to digital information resources. Women's increased involvement in family care may make them more aware of the impact of climate change on different groups (such as children and the elderly), which could influence their decision-making.

Regional disparities: Regional differences in both climate impacts and income levels contribute to varying vulnerabilities. For example, the northern regions may experience fewer problems with water resources but higher risks of flooding, while the southern regions face more significant impacts from water scarcity and drought. Rural populations and farmers are more affected by weather and climate conditions and have fewer options to change occupations compared to urban dwellers, making them more vulnerable to climate-related changes.

Understanding these vulnerability factors is crucial for designing effective interventions and adaptation strategies that address the specific challenges faced by each vulnerable group. This is a new and challenging process that requires innovative approaches to data and information collection and processing, and it faces several barriers.

First, Moldova lacks a comprehensive definition of 'vulnerable groups' at the national level. This lack of clear parameters, including who is considered vulnerable and the reasons for their vulnerability, complicates the analysis of risks. The primary criterion often used to identify 'vulnerable groups' is income level. Many government support initiatives aid individuals and households whose income falls below a predetermined threshold. However, income criteria do not always reflect vulnerability to climate change and adaptive capacity.

Second, the lack of data disaggregated by gender, social group, region, and other factors makes it difficult to accurately describe and identify vulnerable groups.

Third, gender and social vulnerability are highly contextualized and still not fully understood by the public and professionals. Gender aims to ensure equal access to services and resources (e.g., access to grants and loans), transport, and other services for women, men, and other social groups and genders. The vulnerability of all gender groups needs to be addressed, as they may have specific vulnerability factors (e.g., men working outdoors and in jobs requiring intensive physical labour).

The next section will analyse the exposure to climate risks, vulnerability drivers, and impacts for the main vulnerable groups in Moldova: women, the elderly, young people, persons with disabilities, and other groups.

> *"At the national level, there is no clear definition of "vulnerable groups", particularly "groups vulnerable to climate change" - who belongs to them and why. In the current practices, vulnerability is seen as equal to the income level, however, we often don't know the difference among people with certain levels of income – maybe they are people with disabilities, maybe they are war veterans, maybe they are families with many children." (Respondent, UNDP)*

3 Part 3. IMPACTS OF CLIMATE CHANGE ON VULNERABLE GROUPS IN MOLDOVA

Women

Characteristic of the group

In 2022, there were 1,362,400 women and 1,241,400 men living in Moldova, with a gender ratio of 91 men per 100 women (NBS, 2023). This overall gender ratio masks variations across different age groups. In the 0-14 age group, there are 112 boys for every 100 girls (NIRAS, 2021). In the 15-34 age group, the ratio is approximately one man for every woman. However, in the 35-64 age group, the number of men decreases to 92 per 100 women, and this disparity becomes more pronounced among those aged 65 and older, where there are only 61 men for every 100 women (Figure 24).

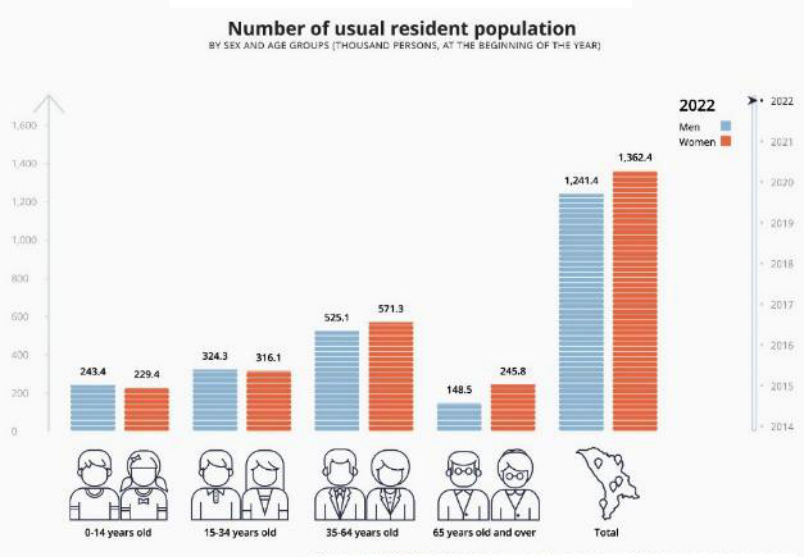


Figure 24. Population of Moldova in 2022 (NBS, 2023)

Life expectancy also shows a significant gender disparity. Women in Moldova tend to live longer than men, with an average life expectancy of 75.1 years for women compared to 66.8 years for men (NIRAS, 2021). This difference can be attributed to various factors, including lifestyle choices, healthcare access, and occupational hazards. The longer life expectancy of women contributes to their higher proportion in the older age groups, which defines the gender ratio among the elderly population (NIRAS, 2021).

The rate of female population is higher in the northern regions of the country and at the southeast. Urban regions like Chisinau and Balti, as well as the Donduseni district, have the highest rate of women in the population, with fewer than 90 men for every 100 women. (Figure 25)

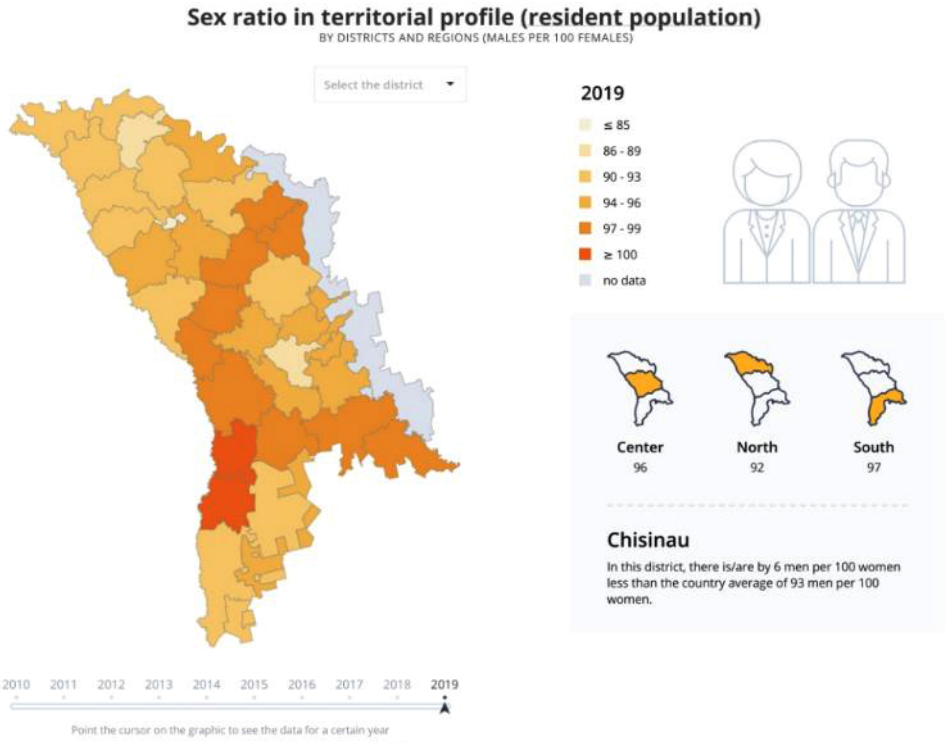


Figure 25. Gender ration in residential population in Moldova (NBS, 2023)

Climate change exposure and impacts

Exposure to the impacts of climate change depends largely on the climatic and geographical conditions. The higher concentration of potentially vulnerable groups and people increases the overall risk for such communities and areas.

The maps of exposure to climate change in Moldova (Figures 12 and 13) define the regions with potentially higher risks: Cantemir, Leova, Cahul, Stefan Voda, Hincesti, Arseni Noi, Causeni, Chisinau, Nisporeni, Ungheni, Falesti, Goleni, Balti, Singerei, Telenesti, Orhei. Among these regions, the southeast (Cahul), the north (Goleni, Balti), and Chisinau also have a higher concentration of female population. The municipalities of Chisinau and Balti are particularly exposed to flood risks, while Cahul faces a high risk of drought (Figures 10, 11, and 12). The overall number of women potentially exposed to the risks of climate change is higher in these regions, but detailed analysis is needed to identify specific impacts and groups of women at risk.

The interview and survey data allow the identification of the currently observed impacts of climate change on women in Moldova.

Impact on health

Women are more vulnerable to climate change and heatwaves in terms of health, including a higher risk of cardiovascular death. The impact extends to the difficulty of carrying out daily activities in extreme heat. Pregnant women and young mothers are particularly vulnerable to heat waves and natural disasters.

Environmental challenges exacerbated by climate change, particularly increased pollen during flowering seasons, contribute to health problems such as allergies. It is more difficult for people with respiratory problems to be outdoors at such times.

Women, especially in rural areas, face additional physical and psychological pressures from household chores and staying indoors. These risks increase during periods of heatwaves, water shortages, and natural disasters.

Impact on water supply and quality

Water scarcity forces women, especially in rural areas, to walk long distances or buy water, resulting in additional expenses. In several regions, women have had to fetch water from far away and buy extra fodder for animals because of the drought.

The lack of water for irrigation is affecting the quality and quantity of agricultural crops. Individuals, especially those involved in agriculture, face additional costs related to water procurement, either by buying water or investing in infrastructure such as aqueducts to cope with water scarcity.

The scarcity and quality of drinking water has a significant impact on daily life.

Impact on economic activities, incomes, and assets

Environmental challenges such as lack of rainfall and drought lead to economic losses, especially for those involved in agriculture. Reduced harvests affect the financial resources of families, making it more difficult to meet their needs. Several respondents acknowledged that environmental challenges and crop failures have led to increased prices for food and other goods.

Those involved in livestock farming report significant economic losses due to climate change, particularly drought. Lack of rainfall affects the growth of fodder crops, leading to reduced income and profitability. Some mention a reduction in livestock numbers due to lack of fodder.

Economic constraints can lead to limited career opportunities (especially for mothers) and lower incomes due to employment in lower-paid sectors.

Impacts on wellbeing and security

Climate change puts additional physical and psychological stress on women, especially in rural areas, where they often have responsibilities for other vulnerable groups such as children and the elderly. Water scarcity can disproportionately affect women's domestic responsibilities, including cooking, domestic water use, hygiene, and others.

Climate change can affect women's security through economic instability (especially in rural areas where family income and livelihoods can be affected by adverse weather and climate conditions).

Vulnerability factors for women include the potential risk of domestic violence, as rates of domestic violence tend to increase during periods of natural disasters and specific climatic conditions such as heatwaves.

Some respondents express frustration at the perceived lack of support from local authorities in addressing environmental challenges and providing support to prevent and mitigate the consequences of adverse climate impacts.

Socio-economic determinants of vulnerability and resilience to climate change risks

Women in Moldova face a complex array of demographic, economic, and social challenges. Socio-economic factors define the level of vulnerability to climate change. Addressing these issues will reduce vulnerability and strengthen adaptive capacity for women as a social group.

Although the majority of informants do not admit to critical discrimination issues, almost all have mentioned aspects of unequal treatment of gender groups, e.g.:

- Women are often involved in lower-paid activities, while higher-paid sectors (e.g. energy, ICT, finance, and transport) are dominated by men;
- Men may be prioritized for access to resources, including bank loans;
- Women are more involved in domestic work, making them responsible for other family members and facing an additional burden.

Economic conditions and income level

Economic inequality between men and women in Moldova is pronounced. Women generally earn less than men and receive lower pensions, which makes them and women-led households more vulnerable to the loss of income and assets.

Women in Moldova are more likely to be employed in the service sector, which tends to offer lower wages compared to sectors like manufacturing and construction, where men are more commonly employed. In agriculture, the share of officially employed women is 47.7% less than that of men (NIRAS, 2021). Additionally, women are less likely to be engaged in formal employment and more likely to be involved in unpaid domestic and care work. This limits their earning potential and impacts their financial security, especially in the case of losing income as a result of natural disasters such as floods and droughts (Figure 26).

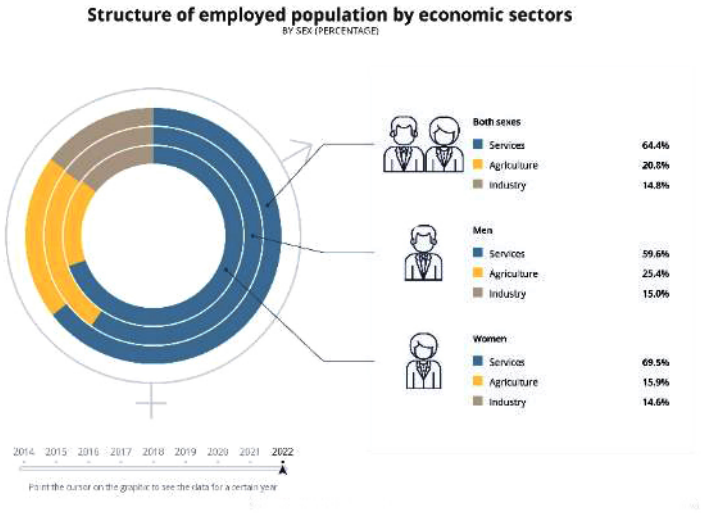


Figure 26. Structure of employed population by economic sectors in Moldova (NBS, 2023)

The gender pay gap remains significant, with women earning on average 14% less than men for similar work (NIRAS, 2021) It is notable that in the lower-paid sectors such as agriculture and administration, salaries are comparable, though men still earn more. In agriculture—the sector with the lowest official salaries—monthly earnings for women are about 10% less than for men. In contrast, in highly paid sectors like ICT and finance, where the number of employed women is comparable to or exceeds that of men, women's average salary is about 40% lower than men's. Average earnings in IT exceed those in agriculture by about three times for women and 4.5 times for men (NBS, 2023) (Figure 27, 28).

> "In general, I do not see any difference between men and women in the workplace. We have more women than men in the office. However, if you think about it, men are often in positions with higher salaries. Also, there are still some prejudices, such as the belief that men are better at business than women, which leads to the perception that men are more reliable when it comes to repaying loans and investments". (Respondent, National authority)

This gap can be attributed to several factors, including occupational segregation, differences in work experience and education, and potential discrimination in the workplace. The economic vulnerability of women is further exacerbated by the lack of comprehensive social support systems and limited opportunities for career advancement (NIRAS, 2021).

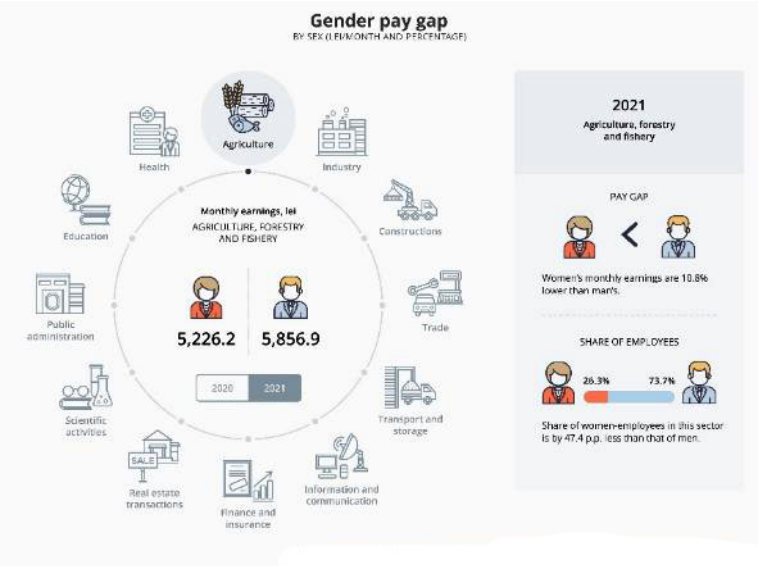


Figure 27. Employment and earning by gender in agriculture in Moldova (NBS, 2023)

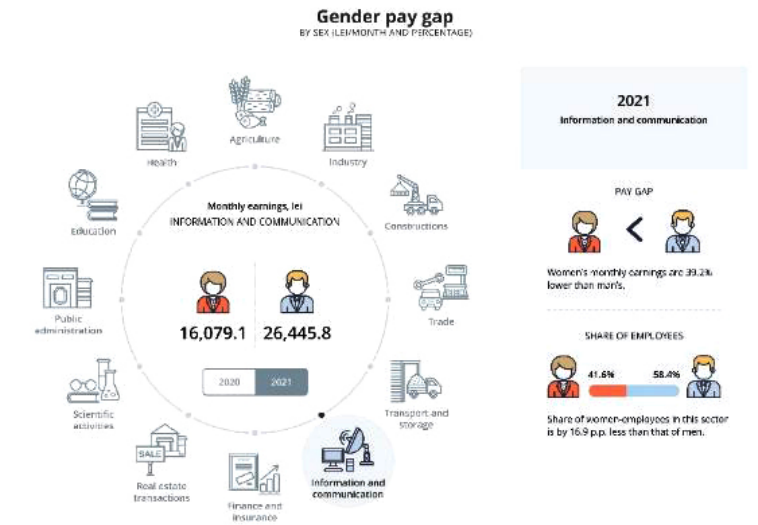


Figure 28. Employment and earning by gender in information and communication in Moldova (NBS, 2023)

Women's participation in the labour market is another critical area. The employment rate of women is lower than that of men, with 48.7% of women in employment compared to 51.3% of men, and they are more likely to lose their jobs in times of crisis (NIRAS, 2021). The COVID-19 pandemic has had a greater impact on the female labour market, with 30.9% of women affected compared to 18.5% of men (NIRAS, 2021). Female employment, particularly in rural areas, is strongly influenced by family circumstances and childbirth (NBS, 2023). Family responsibilities are one of the key reasons for women's unemployment after old-age pension (Holla, et al., 2017) (Figure 29). The share of employed women with children aged 0-6 is 27% lower than for men (Figure 30).

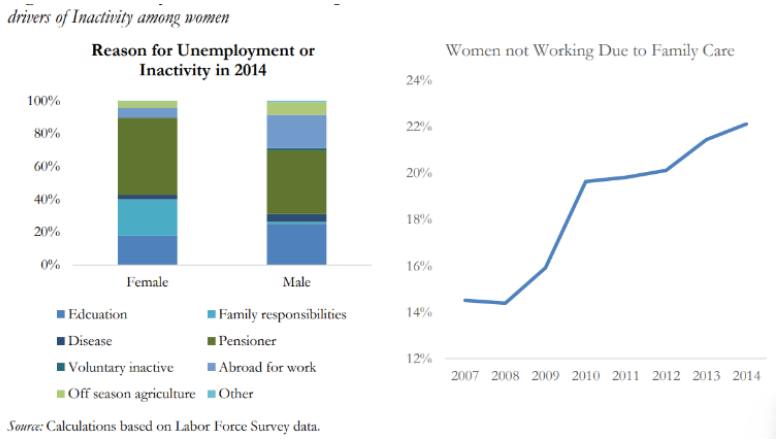


Figure 29. Key reasons for unemployment in Moldova (Holla, et al., 2017)

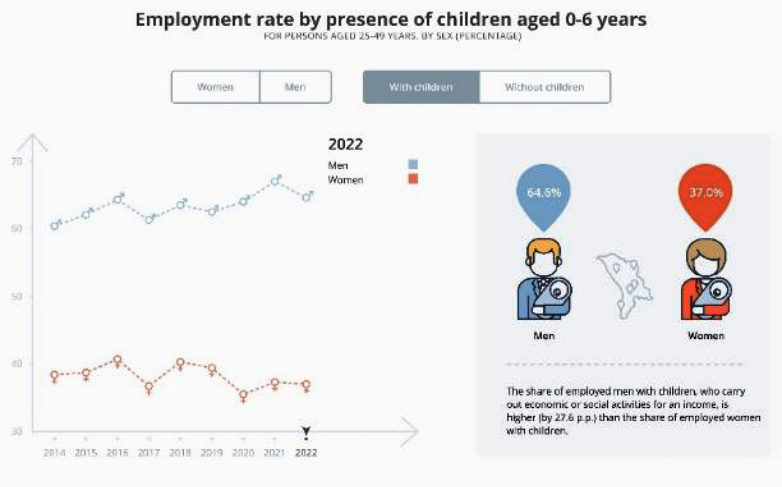


Figure 30. Employment rate by gender with presence of young children in Moldova (NBS, 2023)

Ownership of assets and machinery is an important determinant of household resilience and ability to adapt to changing climate conditions and restore after disaster, especially in rural areas. The number of female-led households in rural Moldova who own agricultural machinery is disproportionately lower compared to men-led households. The rate of female-led households owning agricultural machinery ranges from as low as 8% to 18% (Figure 31)(FAO, 2022).

Type of agricultural machinery or equipment	In female-headed holdings		In male-headed holdings	
	Number of machines/ equipment	% owned	Number of machines/ equipment	% owned
Tractors	2 317	9.4	22 378	90.6
Mini-tractors	191	17.5	899	82.5
Trucks	665	8.7	6 989	91.3
Combines and harvesters	275	9.2	2 725	90.8
Seeders and planters	737	8.7	7 694	91.3
Mechanical cultivators	1 065	8.8	10 980	91.2
Ploughs for tractors	1 245	9.0	12 537	91.0
Irrigation machinery	61	7.9	712	92.1
Milking machines and aggregates	22	11.9	169	88.5
Sprayers and machinery for application of treatments	312	11.1	2 315	88.1

Source: FAO and National Bureau of Statistics of the Republic of Moldova. 2014. *Women and Men in Agriculture of the Republic of Moldova*. Budapest and Chisinau.

Figure 31. Access to selected agricultural machinery and equipment, by sex of the head of the holding (FAO, 2022)

Access to financial resources and support schemes, especially for businesses, also face gender disparities. Although equal access to resources is guaranteed by national policies, in practice, women can be seen as "less serious" businesspeople and less reliable in repaying loans, as they may have to take care of families and have fewer official business records.

The number of female applicants for governmental agricultural subsidies is about four times lower than male applicants (18.7% female and 81.3% male in 2020) (FAO, 2022) (Figure 32). As a result, the share of women receiving payments from the National Fund for Agriculture and Rural Development in 2020-2021 related to crop production, horticulture, and livestock was relatively low: 12% to 34% compared to men (FAO, 2022).

Farmers	Number of unique applicants	Percentage of applicants
Women	821	18.7
Men	3 571	81.3
Total	4 392	100.0

Sources: AIPA. 2021b. Raport de activitate a AIPA pentru anul 2020 [AIPA Activity Report for 2020]. Chisinau, p. 6; additional data provided by AIPA for this assessment.

Figure 32. Unique applicants of agricultural subsidies, by sex, 2020 (FAO, 2022)

"Although officially there is equal access to business loans, women with families and children are often seen as less reliable. In several cases, women business owners have been asked by banks to bring their husbands with them." (Respondent, Academia)

Despite these challenges, there are positive trends in women's economic activity and entrepreneurship. There is a growing recognition of the importance of supporting women's entrepreneurship at the national level (NIRAS, 2021). However, women still face significant barriers to starting and running businesses, including limited access to finance, resources, and networks. Encouraging and supporting women's entrepreneurship, especially in the sectors related to mitigation and adaptation to climate change such as renewable energy, sustainable agricultural practices, support to vulnerable groups, and others, is crucial for economic growth and gender equality.

Health conditions and risks

Health inequalities between men and women are also significant. While women have a higher life expectancy, they are more likely to suffer from chronic diseases and disabilities (Figure 33). The health sector in Moldova faces many challenges, including limited access to health services, particularly in rural areas, and inadequate funding. These challenges disproportionately affect women, who often have greater healthcare needs, especially for reproductive health services (NIRAS, 2021). In recent years, there has been an increase in maternal mortality rates in both rural and urban areas (Figure 34).

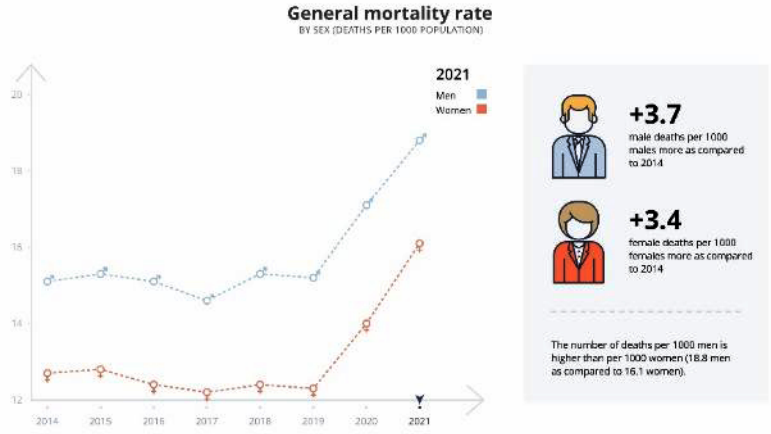


Figure 33. General mortality rate in Moldova (NBS, 2023)

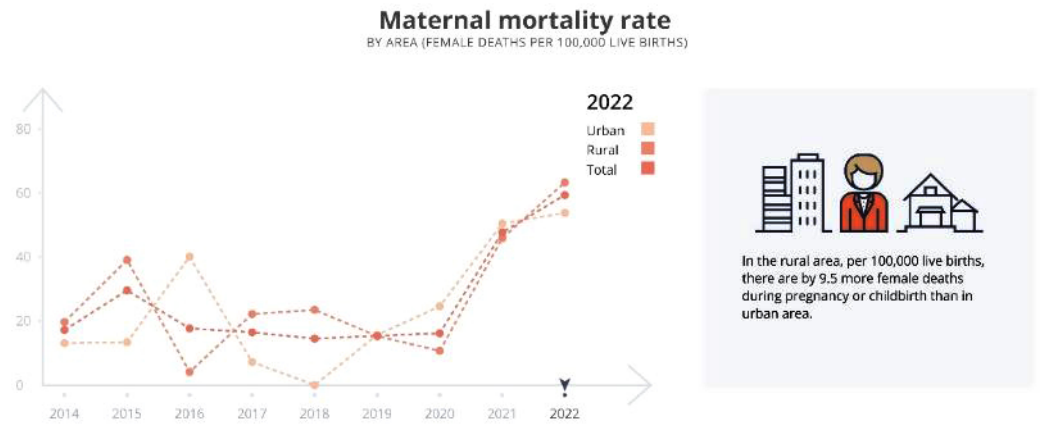


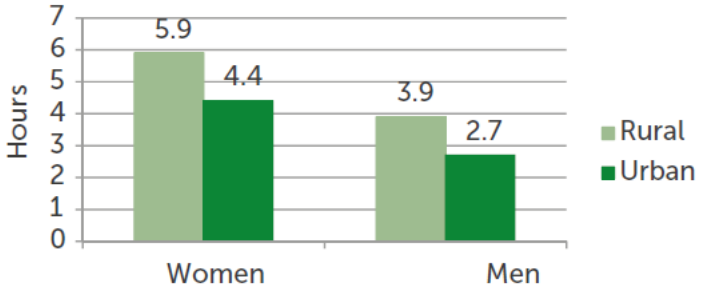
Figure 34. Maternal mortality rate in Moldova (NBS, 2023)

Social status and roles

The social status of women in Moldova is shaped by a combination of economic, cultural, and structural factors. Women, particularly in rural areas and in female-headed households, face higher rates of poverty and limited access to services, which exacerbates their vulnerability to climate change.

The poverty rate for female-led households is 26.6%, slightly higher than the 24.8% rate for male-headed households (FAO, 2022). These households often rely on a single income, which is typically lower than the combined income of dual-earner households. Female-led households in rural areas have higher rates of production for own consumption compared to male-led households, which produce more saleable goods (FAO, 2022).

Social norms and gender roles often place additional burdens on women, who are expected to manage household responsibilities alongside their employment, leading to extra pressure. Rural women tend to face higher workload to compare with men and higher involvement in unpaid work, mostly by carrying out family responsibilities (Figure 35) (FAO, 2022).



Source: UNDP Moldova. 2014. *Analytical Brief 7 – The Importance of Unpaid Work in Moldova*. Chisinau.

Figure 35. Time spent in unpaid work in hours per day, by sex and location, 2012 (FAO, 2022)

The absolute poverty rate for women in rural areas is significantly higher at 15.6% compared to 4.8% in urban areas. This disparity is due to several factors, including fewer employment opportunities, inadequate infrastructure, and limited access to health and education in rural areas (NIRAS, 2021).

Women are more often victims of domestic violence. Gender-based violence remains a significant barrier to women's empowerment, well-being, and ability to adapt to economic and environmental challenges, including climate change impacts.

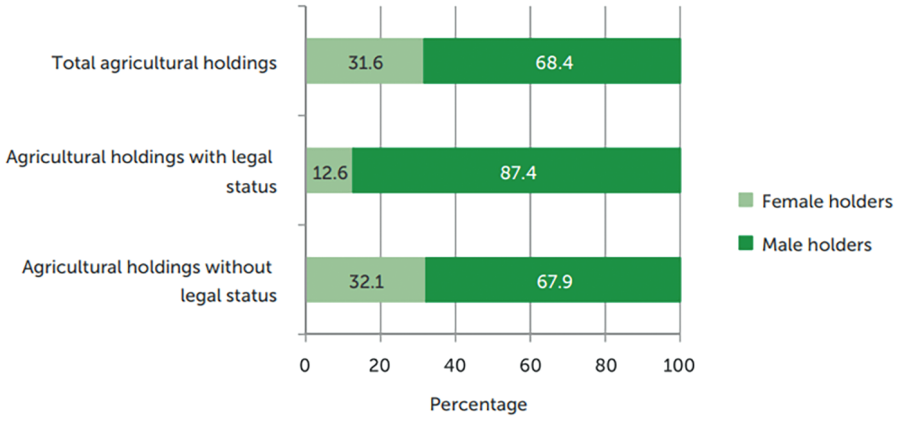


Figure 36. Share of female and male holders who had participated in a training course in the field of agriculture, by legal status of the holding, 2011 (FAO, 2022)

Participation in decision-making

Social norms and stereotypes continue to influence gender roles in Moldova. Women are often perceived as being "weaker" or less capable in business and leadership roles compared to men. These stereotypes limit women's participation in decision-making processes and their representation in leadership positions (Figure 37).

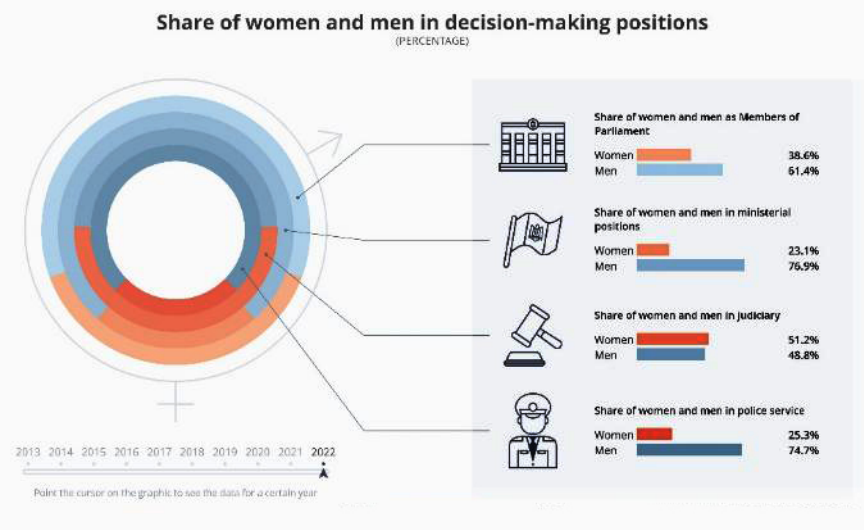


Figure 37. Share of women and men in decision-making positions in Moldova (NBS, 2023)

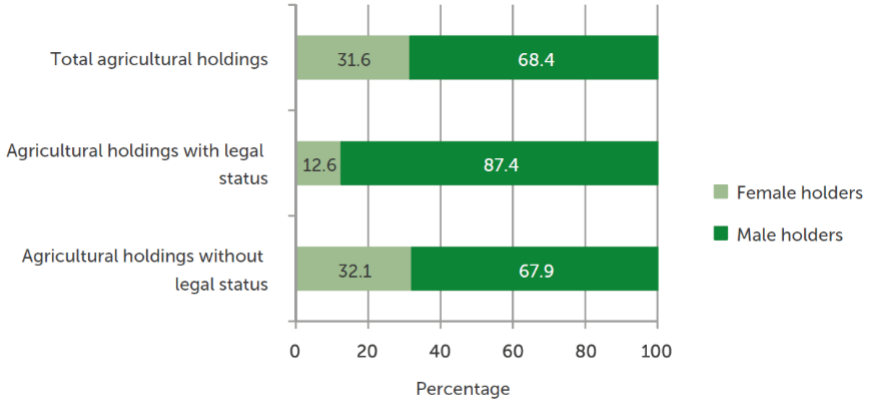
Decisions at the household level that are critical for climate adaptation are often taken by men, especially in rural areas. This is particularly the case for irrigation, where male-headed households are more likely to be represented in water user associations (WUAs). To improve the climate adaptation capacity of female-headed households, women need to be empowered with technical knowledge and decision-making opportunities (FAO, 2022).

Women are under-represented in higher management positions, but they constitute a significant proportion of the workforce in government agencies and administrations, including ministries, sectoral agencies, and local authorities. Since women are often more active in addressing social and environmental issues, they are well-positioned to become involved in environmental and social programs, provided they receive the necessary guidance and institutional support.

Climate risk awareness and access to information

Education is a crucial factor in improving women's social status. In Moldova, women tend to have higher levels of education than men. Women constitute 58% of all students in higher education, and 54% of those in post-secondary technical vocational education are girls. Education status can be potentially linked to the level of awareness about current and future climate risks, ability to access and use information for climate adaptation and mitigation of climate-related risks.

At the same time, women are much less involved in vocational training than men, especially in rural areas (31% of females and 69% of males in 2011) (FAO, 2022) (Figure 38). This may significantly limit their ability to receive up-to-date information about effective technologies and impacts of climate change (aspects that can be addressed by training).



Source: National Bureau of Statistics of the Republic of Moldova. 2013. *2011 General Agricultural Census in the Republic of Moldova. Main results.* Chisinau, pp. 114–115.

Figure 38. Share of female and male holders who had participated in a training course in the field of agriculture, by legal status of the holding, 2011 (FAO, 2022)

The survey shows that awareness of climate change among women is influenced by factors such as age, occupation, sources of information, and individual beliefs. Information about climate change is obtained from a variety of sources, including television, school, internet, newspapers, and social networks. Access to the internet is particularly important, as several governmental and international supporting programs often advertise information through their websites.[3]

A number of survey respondents show a solid understanding of climate change and its effects, while others admit to having limited knowledge and a lack of interest. Professionals, especially those in teaching or related fields, appear to be more concerned about climate change. Several respondents, particularly in the older age group, admit to having little or no knowledge of the topic. At the same time, there is a common concern about the impact of climate change on agriculture, with mentions of reduced rainfall, droughts, and negative effects on crop quality and quantity. Some respondents express awareness of climate change on a global scale, emphasizing the need for responsible environmental behaviour and the potential dangers that climate change poses to people, ecosystems, and the economy.

There is an important gap in the understanding of gender aspects of social and economic vulnerability for both women and men among the population and professionals. It is not uncommon for sector experts to perceive gender mainstreaming as a formal and vague requirement to involve women and men equally in all activities. Understanding gender issues in the context of climate vulnerability is particularly challenging, especially in rural areas.[4]

Regional disparities

The urban-rural divide and economic conditions are the main regional differences in social and economic vulnerability to climate change. Poverty remains a major challenge, particularly in southern regions and rural areas, where economic opportunities are scarce and are higher among women and female-headed households. Rural women spend more time than urban women on family responsibilities and unpaid work (Figure 35).

Domestic violence has certain regional disparities that need to be addressed depending on the course and nature of the effects. In rural areas, women are more likely to experience physical violence from partners and family members, while urban women are more likely to experience violence from non-family members (Figure 39) (FAO, 2022; OSCE, 2019). All types of domestic violence tend to increase during periods of adverse climate conditions (especially heat waves) and disasters.

[3] In one reported case, a group of middle-age women received information about grants supporting sustainable agricultural practices. Nevertheless, the information was initially found on-line by a younger relative.

[4] One of the informants mentioned that gender rhetoric can lead to resistance because it can be perceived as promoting LGBT rights, which can conflict with traditional and religious values.

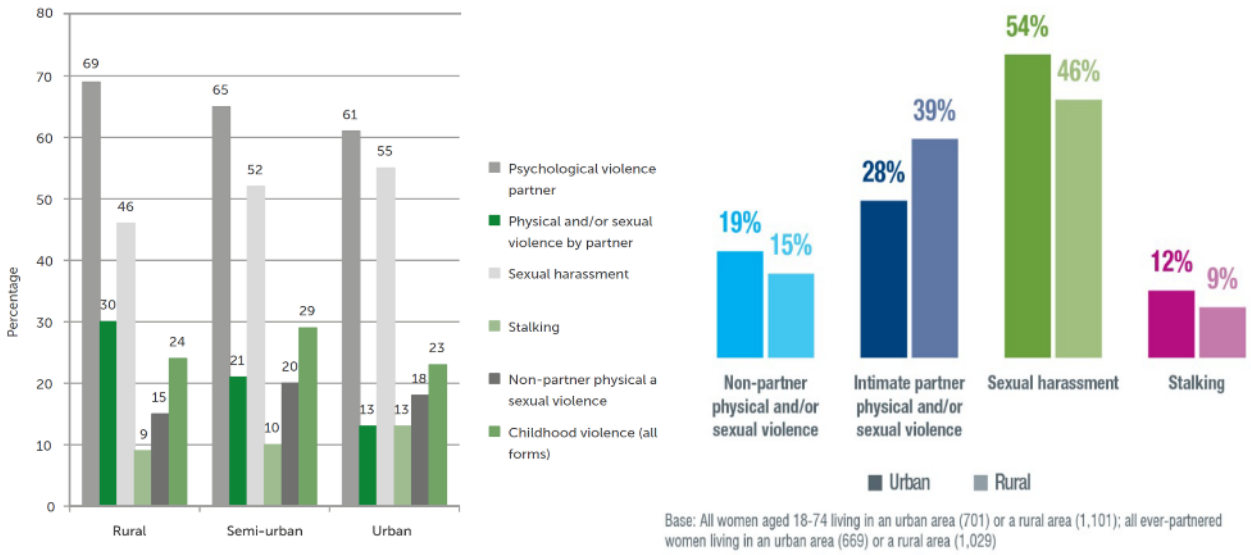


Figure 39. Gender-based violence by the type of settlement in Moldova (OSCE, 2019; FAO, 2022)

There is a trend for women to migrate from rural areas to urban areas or abroad in search of better employment opportunities. This migration is driven by the lack of local job prospects, poor quality of services, and inadequate infrastructure in rural areas. While migration can provide women with better income opportunities, it also poses challenges, particularly for families remaining in rural areas, including the elderly and children, making them more vulnerable to climate risks.

> "In terms of vulnerability, there is no such group as "women".
> There are rural women, pregnant women, mothers, and others.
> All of them have specific conditions that may make them vulnerable
> to something." (Respondent, UN Women)

Children and youth

Characteristic of the group

Children and adolescence represent one fifth (21.4%) of Moldova's population, which is projected to further decline. An ageing population is one of the key socio-economic risks in Moldova, which puts special emphasis on the well-being and protection of children and youth (Figure 40) (UNICEF, 2023; NBS, UNICEF, 2023).

The distribution of children and young people is relatively even across the country, with the highest concentration in densely populated urban areas and the lowest in the north. (Figure 41).

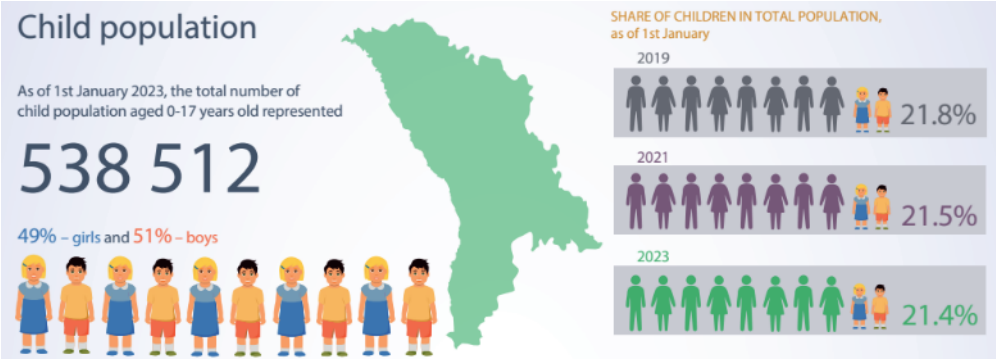


Figure 40. Child and youth population in Moldova, 2023 (NBS, UNICEF, 2023)

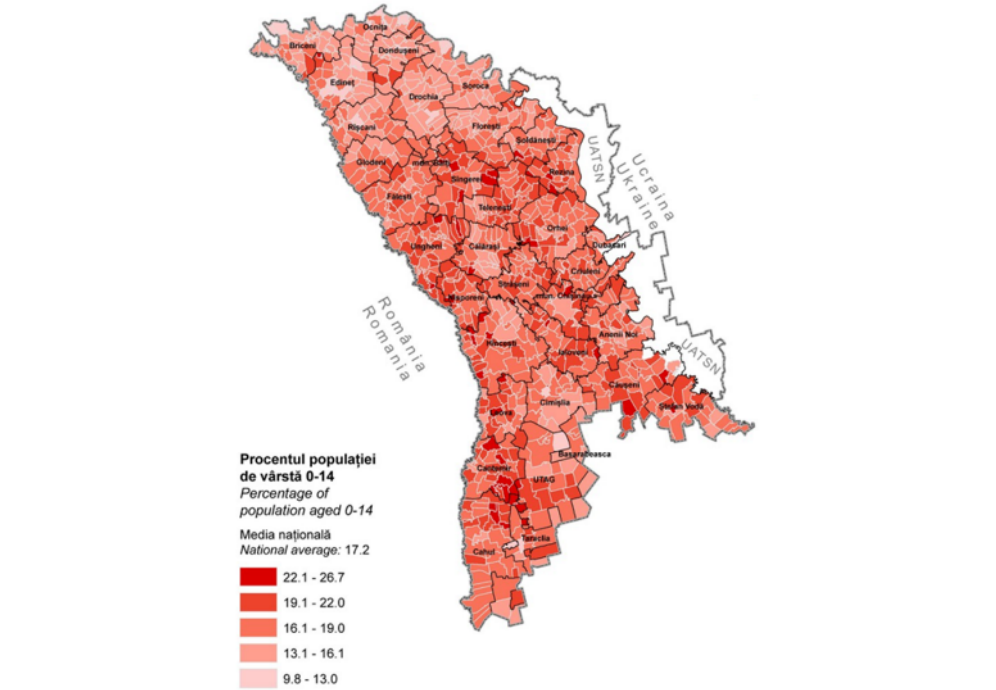


Figure 41. Percentage of population aged 65 and over in Moldova, 2014 (NBS, 2017)

UNICEF provided a detailed analysis of the impacts of climate change on children and factors defining vulnerability for children and families (UNICEF, 2023). This report also highlights impacts on young adults in rural and urban areas, drawing on the results of the survey.

Climate change exposure and impacts

High temperatures, more frequent and intense floods, droughts, and storms disrupt daily life, damage infrastructure, and pose significant risks to children's safety and well-being. This group, especially those from the poorest families, is highly vulnerable to climate change impacts. Children often live in unsafe housing with limited access to clean water, food, and energy, making them more susceptible to climate risks. Rural children are particularly at risk due to inadequate infrastructure and services.

Impact on health

Children are less able to regulate their body temperature, making them more vulnerable to heat waves and increasing the risk of hypothermia during cold spells. Heat-related health problems in summer affect the well-being of young people. Young adults report health problems related to environmental and climatic conditions, including migraines, bone pain, lack of energy, and skin diseases due to harmful rainfall and chemical pollution.

Children are at greater risk of dehydration, malnutrition, and water-borne diseases during droughts or periods of high-water scarcity. Children are more vulnerable to disasters such as food shortages or storms and are less able to physically protect themselves from immediate dangers.

Climate change increases the impact of air pollution, which causes respiratory diseases in children, as Moldova struggles with industrial emissions and urban smog, particularly in cities such as Chisinau.

Impact on water supply and quality

Children are particularly sensitive to the quality of drinking water, water scarcity, and hygiene, which requires access to clean water. Droughts and changing rainfall patterns exacerbate water scarcity, affecting both drinking water supplies and agricultural irrigation.

Children in rural areas are more vulnerable. Many rural communities rely on wells that are often contaminated with bacteria and chemicals, leading to diseases such as diarrhoea. Improved water sanitation is critical to reducing these health problems.

Impact on economic activities, incomes and assets

Young people, especially those with less experience and lower incomes, find it difficult to adapt to climate-related disasters. Increasing risks in agriculture due to climate change make them reluctant to pursue agricultural careers and push them towards other occupations.

Economic losses due to reduced harvests have a negative impact on family income, leading to increased expenditure on food. Drying-out and loss of household fruits due to drought lead to unexpected expenses. Despite personal adaptation, individuals express concern about the future negative impact of environmental challenges on the quality of life and health of their families.

Economic impacts in agriculture due to drought, leading to reduced crop yields and increased food prices. Concerns about economic losses in rural areas affecting the livelihoods of local people.

Impacts on wellbeing and security

Poor housing conditions increase children's vulnerability to climate hazards such as floods and storms. Many homes lack proper insulation and structural integrity, making them unsafe during extreme weather events.

Food insecurity due to reduced agricultural productivity affects children's nutrition, leading to stunted growth and other health problems. Children face unprecedented psychological stress during disasters, especially when they are displaced and their homes are damaged.

Socio-economic determinants of vulnerability and resilience to climate change risks

Economic conditions and income level

High levels of poverty, especially in rural areas, limit families' ability to adapt to climate change. Financial constraints make it difficult for families to invest in necessary adaptations such as improved housing and energy efficiency, which directly impact the well-being of children. Economic pressure is particularly high on single-parent households (10% of households) and families with many children (14% of families have three or more children) (Figure 42) (NBS, UNICEF, 2022).

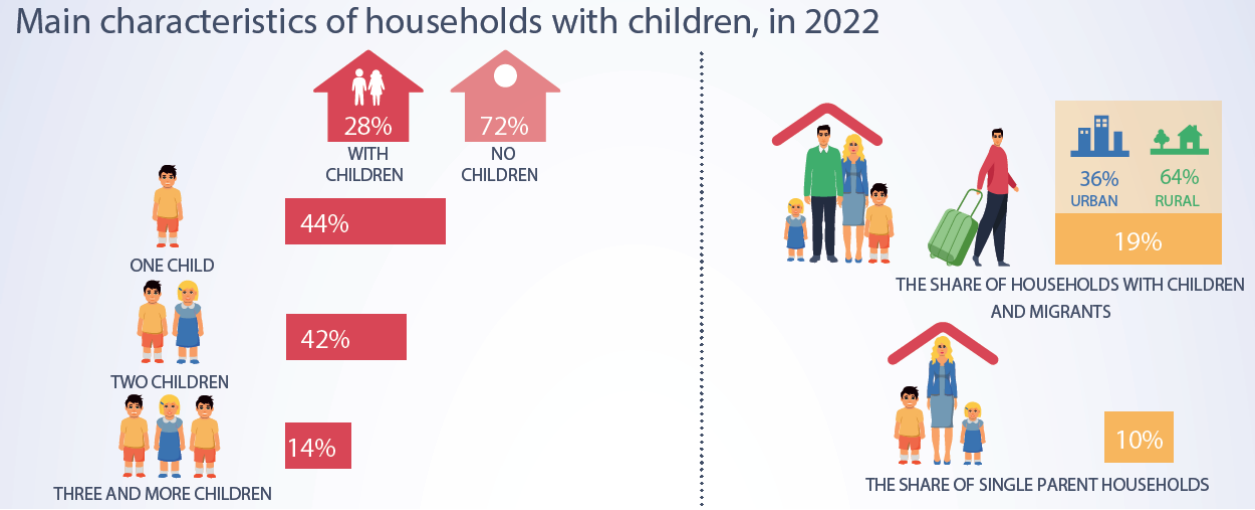


Figure 42. Characteristic of households with children in Moldova, 2022 (NBS, UNICEF, 2022)

Young people in rural areas are involved in agricultural work from an early age, often working outdoors in extreme heat. In single-parent families, typically led by females, and in households where one parent (usually male) works overseas, children are actively involved in household chores and income generation, including outdoor work, placing an additional burden on them.

For young adults, primary sources of income are wages and parental support. Students, both urban and rural, often rely on scholarships and parental support as their main sources of income. Urban areas offer a wider variety of occupations and higher-paid jobs. In contrast, rural young people are likely to face financial difficulties, especially during the cold season when expenses increase. Rural employment, particularly in agriculture, may be seasonal or informal, affecting economic security. Financial support from parents is more common in rural areas, with many parents working abroad and sending money home.

Health and mobility conditions

Children, especially infants and newborns, are vulnerable to heat stress and other extreme weather conditions due to limited physical adaptive capacity.

Limited healthcare and transport infrastructure in rural areas makes it difficult to address climate-related health issues. The density of doctors in urban areas was 2.3 times higher than in rural areas. Poor transportation infrastructure in rural areas limits access to essential services and emergency facilities, further increasing vulnerability to climate-related impacts (UNICEF, 2023).

Social status and roles

A specific characteristic of this group is a high degree of dependency - mostly on family or guardians, but also on schools and other institutions - in all aspects of life. This makes children vulnerable to all the risks faced by their family, with limited or no capacity to develop adaptive resources themselves.

Participation in decision-making and access to *informational* resources

Although children and young people's decision-making powers are limited, young respondents express a notable desire to increase their involvement in environmental initiatives now and in the future.

Young people and children, particularly in rural areas, are involved in environmental initiatives such as recycling, litter picking, and tree planting. Respondents in urban areas are involved in volunteering.

A subset of respondents advocate a prominent role for government and public authorities in leading the fight against climate change. They argue that these bodies have the power and resources to take effective action. The prevailing view is that tackling climate change requires a collective effort, involving not only individuals but also civil society organisations (NGOs) and educational institutions.

Climate risk awareness and access to information

A significant majority of young people (77%) reported that climate change had affected their families (UNICEF, 2023). Teenagers and young adults also express concern about potential long-term negative impacts on their lives and health.

Climate change awareness is influenced by factors such as location, gender, age, occupation, and education. Education has a significant impact on understanding of climate change. Teenagers and young adults with higher levels of education tend to have a more comprehensive awareness, linking climate change to specific concepts and recognizing its wider implications. **For children**, school programs and community campaigns are the main source of information and raising awareness about climate risks and adaptation strategies.

Many young survey respondents express genuine concern about the impact of climate change on their quality of life. They recognize the potential dangers posed by environmental challenges and the need to address these issues. Some draw on personal observations noting changes in rainfall patterns, temperature, and the overall destabilization of the climate. Economic loss, health concerns, and a sense of uncertainty about the future emerged as common themes during the survey. Young people tend to feel a sense of urgency and advocate proactive measures to combat climate change.

Regional disparities

There are significant disparities between children and adults living in urban and rural areas in terms of economic situation, employment, infrastructure, and access to services. Some rural regions, such as Gagauzia and Transnistria, face more severe impacts due to higher poverty rates and limited access to basic services. These districts include Cahul, Stefan Voda, Taraclia, and Orhei.

Although the quality of services and higher incomes make urban youth more resilient to climate risks, young people admit to lower environmental quality in urban areas, especially air pollution.

The regions with the highest risks due to the combination of exposure to climate hazards and economic vulnerability include Cahul, Stefan Voda, Taraclia and Orhei (UNICEF, 2023).

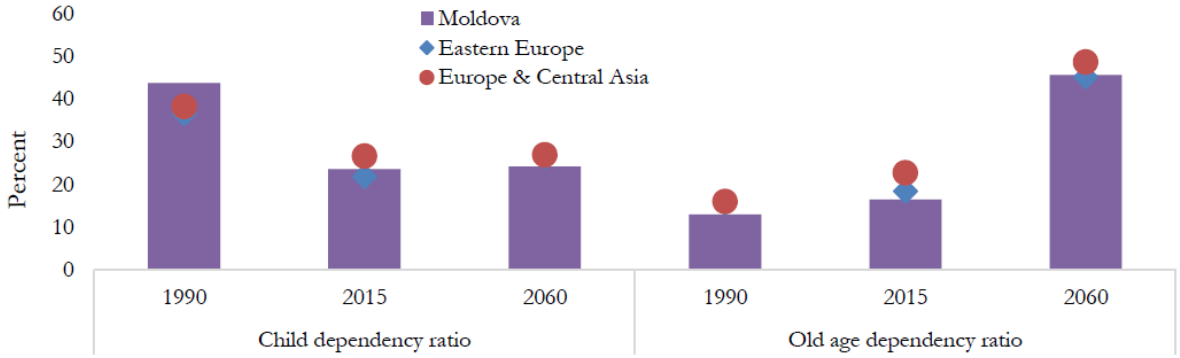
Gender aspects

The impacts of climate change can vary by gender, with girls often facing additional burdens due to cultural and socio-economic factors. For example, girls may have to walk longer distances to fetch water during droughts, affecting their education and health. Girls are more sensitive to the quality of sanitation and hygiene, and to domestic violence, which can increase in times of climate crisis.

Elderly people

Characteristic of the group

Moldova faces significant aging-related policy challenges. Low birth rates and high emigration define demographic tendencies towards aging and a shrinking population. In 2023, persons aged 60 and older accounted for 23.8% of the population in Moldova, with more than 60% of them being women (Figure 43).



Source: World Population Prospects: The 2015 Revision (database), Population Division, Department of Economic and Social Affairs, United Nations, New York, http://esa.un.org/unpd/wpp/.
Note: Eastern Europe includes Belarus, Moldova, and Ukraine. In Moldova, the estimates are taken from the 2012 Revision, which does not include the region of Transnistria. Regional averages are simple averages.

Figure 43. Child and old pension dependency ration in Moldova (Holla, et al., 2017)

With one of the highest rates of population shrinkage in Europe and Central Asia, the number of older people out of the labour force is projected to rise, increasing pressure on pension systems and social services (NBS, 2017) It is expected that by 2060, almost half of the country's population will depend on old-age pension income (Figure 43) (Holla, et al., 2017).

Northern regions of the country have the higher rate of aging, with 15-25% of the population aged 65 years and over (Figure 44).

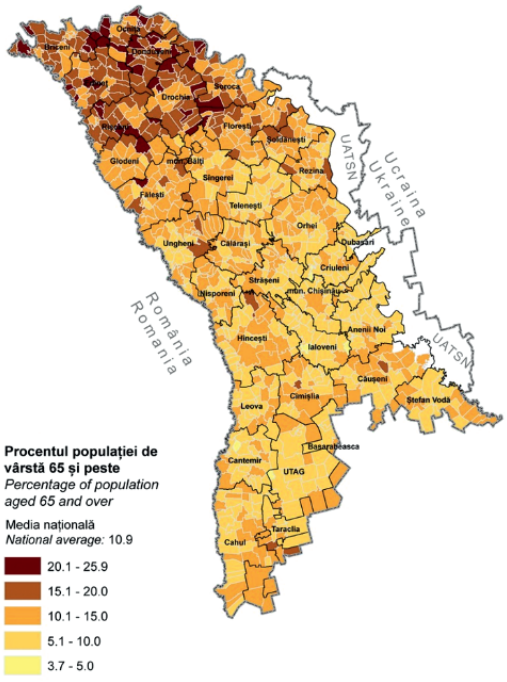


Figure 44. Percentage of population aged 65 and over in Moldova, 2014 (NBS, 2017)

Climate change exposure and impacts

In a similar way to women and other social groups, the regions facing higher risks and simultaneously having a high rate of aging population include Ocnita, Riscani, Drochia, Soroca, Falesti, and Soldanesti (Figures 5-13)

Impact on health

Extreme temperatures, especially high summer heat, significantly contribute to health problems and challenges in daily life. Elderly people are likely to stay at home during extreme heat to avoid breathing polluted air, further contributing to health problems and isolation.

Many respondents report various health problems exacerbated by climate change, including headaches, high blood pressure, insomnia, and respiratory issues. Lack of rainfall and hot weather are associated with insomnia and sleep disturbance, which in turn amplify respiratory problems caused by polluted air.

Impact on water supply and quality

The lack of drinking water due to wells drying up or having low water levels is a growing concern. Water scarcity and droughts affect agricultural practices, with difficulties in irrigating crops and vegetables leading to challenges in growing crops and reduced harvests.

Impact on economic activities, incomes and assets

The financial impact of climate change is felt through reduced income due to challenges in agriculture, particularly affecting those who depend on it. Climate-related challenges, such as drought, affect food production and lead to income losses.

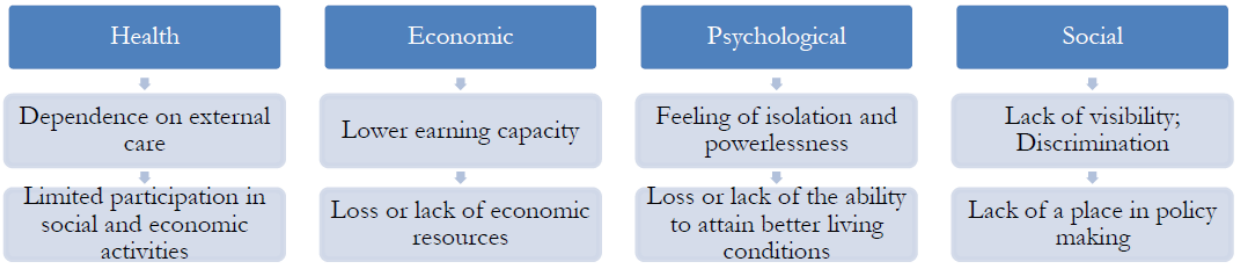
During the cold season, low-income households face problems paying for heating.

Impacts on wellbeing and security

Excessive economic and health pressure, isolation caused by climate conditions, and the risk of consequences from natural disasters such as relocation and loss of property, cause significant disturbances. This is especially concerning for elderly people with limited capacity to restore and recover from disasters, and those who have dependent family members, such as grandchildren, spouses, or relatives with disabilities.

Socio-economic determinants of vulnerability and resilience to climate change risks

The elderly population in Moldova faces a number of risks generally associated with older age (Figure 45), which are amplified by economic and social conditions, health risks, social status, participation in decision-making, risk awareness, and regional disparities. These factors, combined with exposure to climate risks, define the risks elderly people face from climate change and climate-related disasters.



Source: Adapted from Huenchuan 2010.

Figure 45. Risks associated with old age and their manifestations (Holla, et al., 2017)

Economic conditions and income level

Approximately 20% of older persons live in poverty, with higher risks for older women, rural residents, Roma individuals, and those with disabilities (Mahler, 2023).

The primary source of income for the elderly in Moldova is their pensions, complemented by salaries and occasional income from activities such as selling vegetables, agricultural products, or providing cultural services. There exists a significant gender pension gap, with women receiving smaller pensions (20.3% in 2020) due to lower lifetime earnings and longer life expectancy. The minimum pension rate remains insufficient to cover basic needs, leaving many older persons below the poverty line (Mahler, 2023) (Holla, et al., 2017).

Employment rates for older individuals remain low. Older people are likely to work in climate-sensitive and lower-income sectors such as agriculture, or in informal sector work, which provides no social security benefits. Meanwhile, younger people tend to choose less risky occupations, such as those in services (Figures 46, 47). Some households rely on multiple sources of income, with both spouses contributing pensions and salaries.

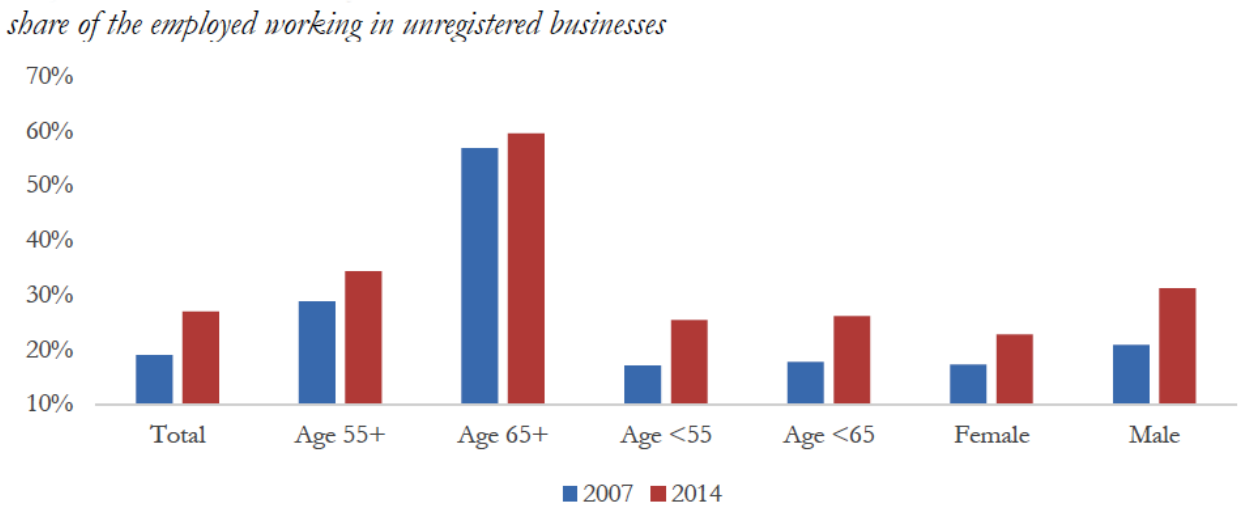


Figure 46. People working in unregistered business by age in Moldova (Holla, et al., 2017)

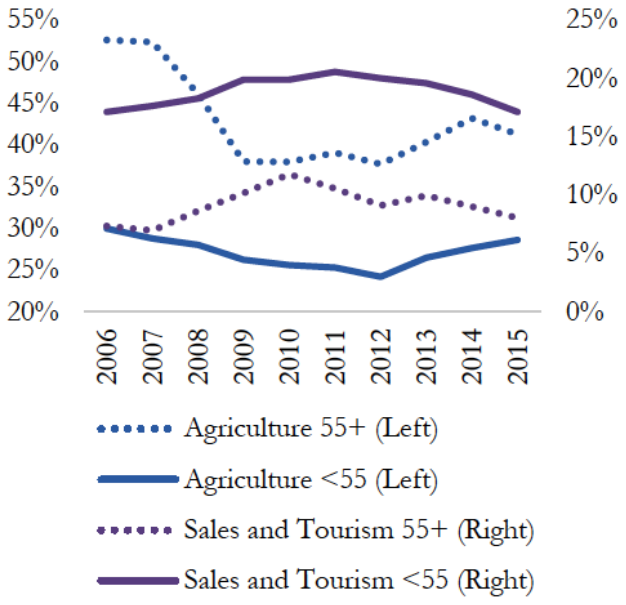


Figure 47. Sectoral employment by age in Moldova (Holla, et al., 2017)

Source: Calculations based on Labor Force Survey data.

One of the sources of income for elder people is financial support from children living abroad. At the same time, migration of parents can leave older people as the main caretakers of the children (about 21 percent of all children left without one or both parents). Grandparents, especially grandmothers, assume the role of the main caretakers in most cases (91 percent if both parents are abroad, and 36 percent if one parent is abroad) (Holla, et al., 2017).

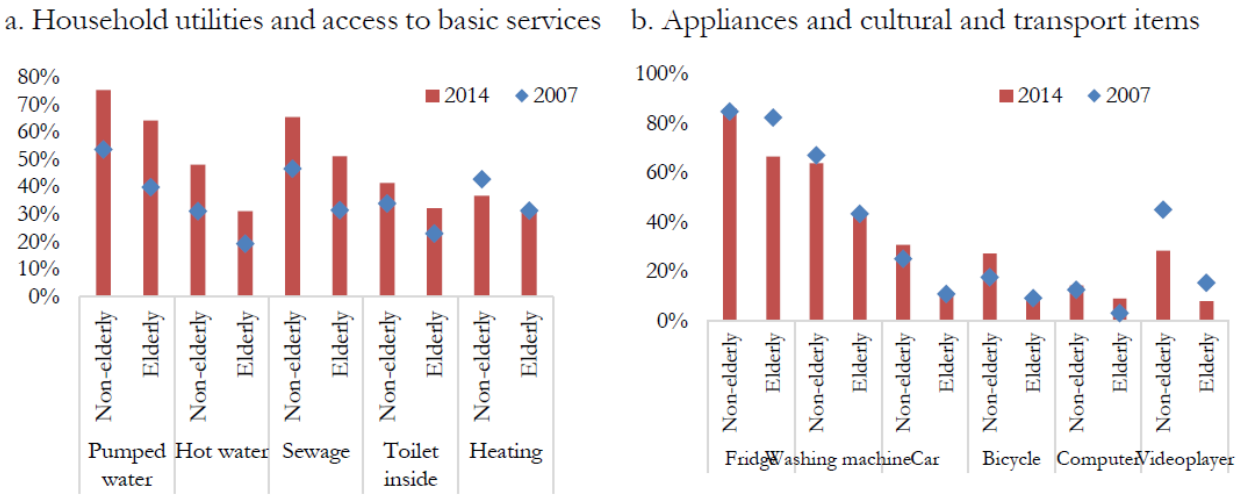
Elderly people face challenges in maintaining and increasing their income due to health problems that may limit their ability to manage households and participate in agricultural activities. As a result, they may cut back on spending on food and medicine, which can affect their health and make them even more vulnerable.

Health conditions and risks

Health conditions of the elderly are a significant concern, with chronic diseases such as cardiovascular diseases, diabetes, and arthritis being prevalent. Elderly people are particularly vulnerable to weather and climate conditions, including heat stress, due to the higher risk of cardiovascular disease and blood pressure.

The quality of health services in Moldova is also a major concern, as the country's health system is under-resourced, leading to inadequate diagnosis and treatment. Financial constraints prevent many elderly individuals from seeking the necessary medical care (Holla, et al., 2017).

Elderly households have less access than other households to basic utilities and services, which impacts both health and wellbeing, making them more vulnerable to water shortages, extreme temperatures (both hot and cold), and other adverse climatic conditions (Figure 48).



Source: Calculations based on the Household Budget Survey.

Figure 48. Household access to basic services by age in Moldova (Holla, et al., 2017)

Social status and roles

Older persons in Moldova often face social exclusion and discrimination. While traditional family-based care systems are weakening due to high emigration rates of younger generations, many elderly individuals in Moldova experience social isolation and feelings of uselessness and depression due to their withdrawal from active social roles. Structural barriers and widespread ageism hinder their full participation in society. Societal perceptions often depict the elderly as dependent and a drain on resources, leading to their needs being ignored in modernization processes. This perception further isolates them socially and economically (Mahler, 2023).

Participation in decision-making

Older persons have limited participation in decision-making processes. Social and institutional barriers hinder their involvement in policy-making and community activities, preventing them from having a say in decisions that affect their lives. Existing policies tend to view them as beneficiaries of social welfare rather than as active rights-holders (Holla, et al., 2017).

At the same time, respondents expressed an interest in getting involved in community activities, including environmental and social programs. Many respondents in the 60+ age group have taken personal action to combat climate change. Some individuals engage in activities such as walking to work, minimizing car use, and taking part in tree planting initiatives to contribute to cleaner air and reduce carbon emissions.

Some people, particularly those in education-related professions, play a role in informing and educating others about climate change, leading discussions, and involving students in environmental initiatives. Some people admit to being involved in community-based initiatives such as organizing round tables, training sessions, and waste recycling programs, and stress the importance of collective efforts involving government agencies, NGOs, and educational institutions.

Climate risk awareness and access to information

Awareness of climate risks and access to information are critical to the adaptive capacity of older people. Lack of information affects their ability to adapt and respond effectively to climate-related challenges and other risks, but there is limited data on how effectively older people are involved in climate risk communication and adaptation strategies (Holla, et al., 2017). Improving their access to information and involving them in climate resilience planning is essential for their protection.

According to the survey responses, some individuals demonstrate a deeper understanding based on various sources of information and personal observations. Many respondents are generally aware of environmental changes such as droughts, floods, landslides, global warming, and air pollution. Some associate climate change with negative impacts on health and quality of life and have observed changes in the climate in recent years, such as higher temperatures, dry periods, and sudden wet periods. People in roles such as librarians, cultural workers, and teachers are more active in seeking information and training. Several participants expressed a need for specialized training on climate change and environmental issues.

Television and newspapers are common sources of information, and some respondents have access to the internet, either at home or through local facilities such as libraries. Other sources of information include participation in community activities, meetings, or town hall sessions related to environmental discussions. Local authorities and educational institutions are trusted sources of information.

Regional disparities

Regional disparities significantly impact socio-economic conditions of older persons in Moldova. Rural areas often experience higher levels of poverty and less access to services compared to urban centres. Economic opportunities and health services are disproportionately concentrated in urban areas, leaving rural elderly populations more vulnerable, especially in remote areas facing higher levels of social and economic exclusion.

Rural elderly have lower income and less access to utilities and basic assets (Holla, et al., 2017) (Figure 49, 50).

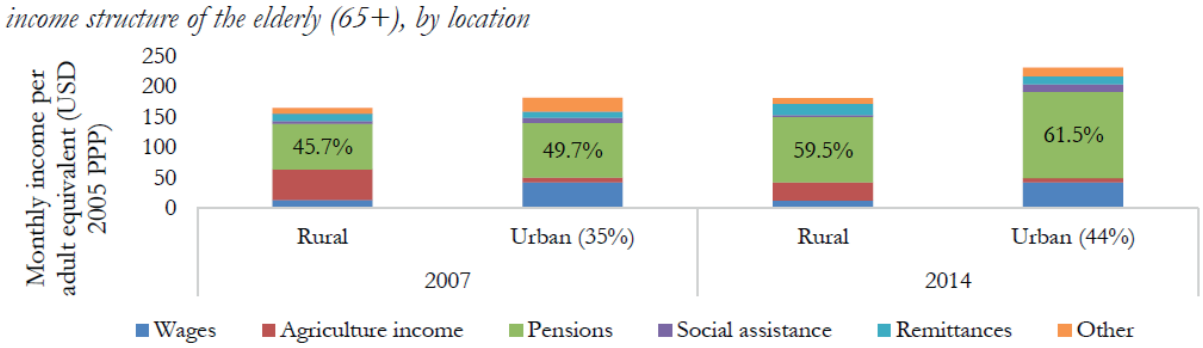
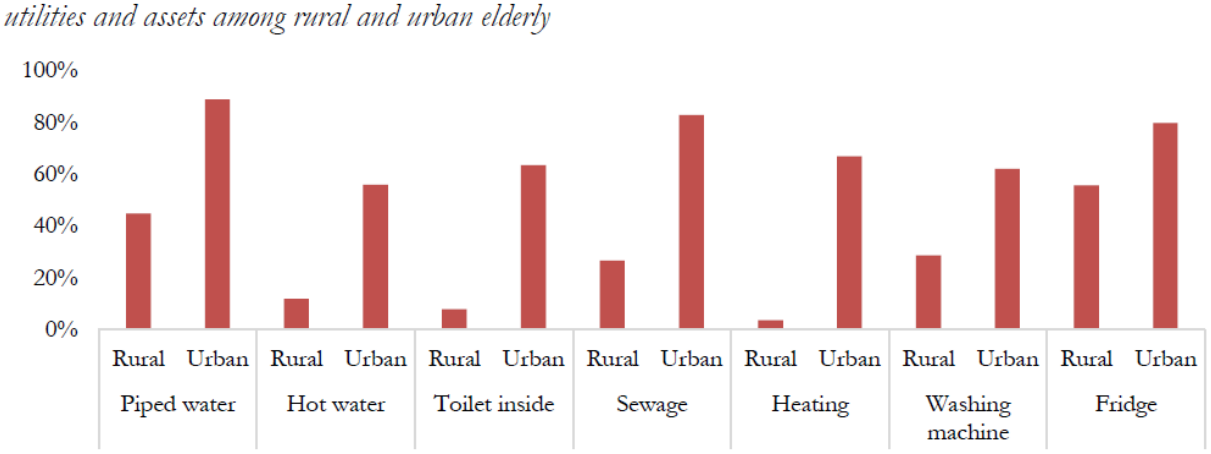


Figure 49. Income structure of the elderly (65+) people in Moldova (Holla, et al., 2017)



Source: Calculations based on the Household Budget Survey.

Figure 50. Access to utilities and assets by urban and rural elderly (Holla, et al., 2017)

Gender aspects

The aging in Moldova is particularly challenging for women. The average pension for women is significantly lower than that for men. Women make up a larger proportion of the elderly population and are more likely to suffer from disability in old age.

Rural women are particularly vulnerable, facing higher risks of disability and poorer health outcomes due to limited access to health services. Women's longer life expectancy means they are more likely to live alone in old age, increasing their risk of social isolation, economic insecurity, and resulting vulnerability to climate-related risks (NIRAS, 2021).

People with disabilities

Characteristic of the group

In 2022, about 162,000 people (6.5% of the population) lived in Moldova, of whom 10,900 were children aged 0-17 years (1.9% of the child population). The share of men amongst persons with disabilities is about 53%, and women make up 47% (NBS, 2024). 62% live in rural areas, and 32% reside in urban areas (Statistica Moldovei, 2023) (UN PRPD, 2021) (Figure 51).

Figure 51. People with disabilities in Moldova (Statistica Moldovei, 2023)

Climate change exposure and impacts

Persons with disabilities are particularly vulnerable to the effects of climate change. These impacts include increased exposure to extreme weather events such as heatwaves, floods, and droughts, which can exacerbate existing health conditions and mobility problems. People with disabilities may be more vulnerable to natural disasters due to physical, sensory, cognitive, and psychosocial impairments that may affect their ability to evacuate, seek shelter, and access emergency services.

The exposure of this group to climate change is similar to that of other vulnerable groups, as there is no data on the spatial distribution of this group.

Impact on health

Climate change can exacerbate existing health conditions and create new health challenges.

Extreme heat in summer affects health, causing discomfort, and reducing overall well-being. Heatwaves can be particularly dangerous for people with certain disabilities who have difficulty regulating their body temperature or who rely on electrical medical equipment that can fail during power outages. Heatwaves can also worsen chronic health conditions, particularly cardiovascular and respiratory diseases, which are more prevalent among people with disabilities (Jodoin, et al., 2023).

Floods and other disasters are particularly dangerous for groups with limited mobility, limited access to information and emergency services (e.g. due to mental psychosocial conditions, learning and cognitive impairments), and for those dependent on others such as social workers, family members, and others. Disasters can cause physical and psychological harm and be life-threatening. People with disabilities are 2 to 4 times more likely to die or be injured during disasters (Jodoin, et al., 2023).

Survey respondents living with disabilities, both male and female, mentioned health problems related to climate change, such as headaches, insomnia, increased tension, elevated blood pressure, and a general feeling of lack of energy.

Impact on water supply and quality

Lack of rainfall and droughts, which affect water levels in wells, make it difficult to obtain drinking water and irrigate crops. The drying up of wells poses a threat to water supplies, especially for people with limited mobility who have difficulty fetching water from other, more distant sources.

Climate change affects the availability and quality of water and food. People with disabilities, especially those living in poverty, are more vulnerable to food and water insecurity due to their limited access to resources and services (Jodoin, et al., 2023).

Impact on economic activities, incomes and assets

Disruptions to agriculture due to climate change particularly affect those in rural areas who depend on agriculture for their livelihoods. Changes in rainfall patterns and extreme heat affect crop yields and quality. When agricultural production is affected (e.g. vegetables grown for personal consumption), households have to spend extra money on food.

People with disabilities may face increased economic hardship during climate crises and disasters due to their limited alternative employment opportunities (Jodoin, et al., 2023).

Impacts on wellbeing and security

Extreme weather events can lead to disruptions in critical services, including healthcare, transportation, and communication, which are vital for the well-being of people with disabilities. Floods and heavy rains can damage infrastructure, making it difficult for individuals with mobility issues to navigate their environment and access necessary services, putting them at higher risk of injury or death (Jodoin, et al., 2023).

Socio-economic determinants of vulnerability and resilience to climate change risks

People with disabilities in Moldova are disproportionately affected by climate change due to a combination of socio-economic, environmental, and systemic factors.

Economic conditions and income level

Economic disadvantages often limit the ability of people with disabilities to prepare for and recover from climate-related events.

People with disabilities are more likely to experience poverty and unemployment, reducing their financial capacity to prepare for, respond to, or recover from climate-related impacts.

The main sources of income of persons with disability in Moldova include monthly salaries, pensions, occasional income, and social assistance. Some families have multiple sources of income, such as both spouses working, occasional work, or income from abroad. Agricultural activities, such as selling crops, are mentioned as a source of income for some households.

The insufficient access of people with disabilities to the labour market makes them vulnerable to the risks of marginalization, poverty, and exclusion. In 2009, poverty in households with persons with disabilities was 28.6%, which is higher than in other households (Jodoin, et al., 2023).

Lower income levels can restrict their access to resources such as air conditioning during heatwaves, adequate housing, home modification, and emergency supplies. Economic hardship also affects their capacity to relocate or retrofit homes to withstand extreme weather or cover winter expenses, including higher heating costs (Jodoin, et al., 2023).

Health and mobility conditions

People with disabilities are particularly vulnerable to natural disasters and their impacts, including disruptions to food and water supplies and damage to infrastructure, as well as limited ability to relocate and resettle (Figure 52).

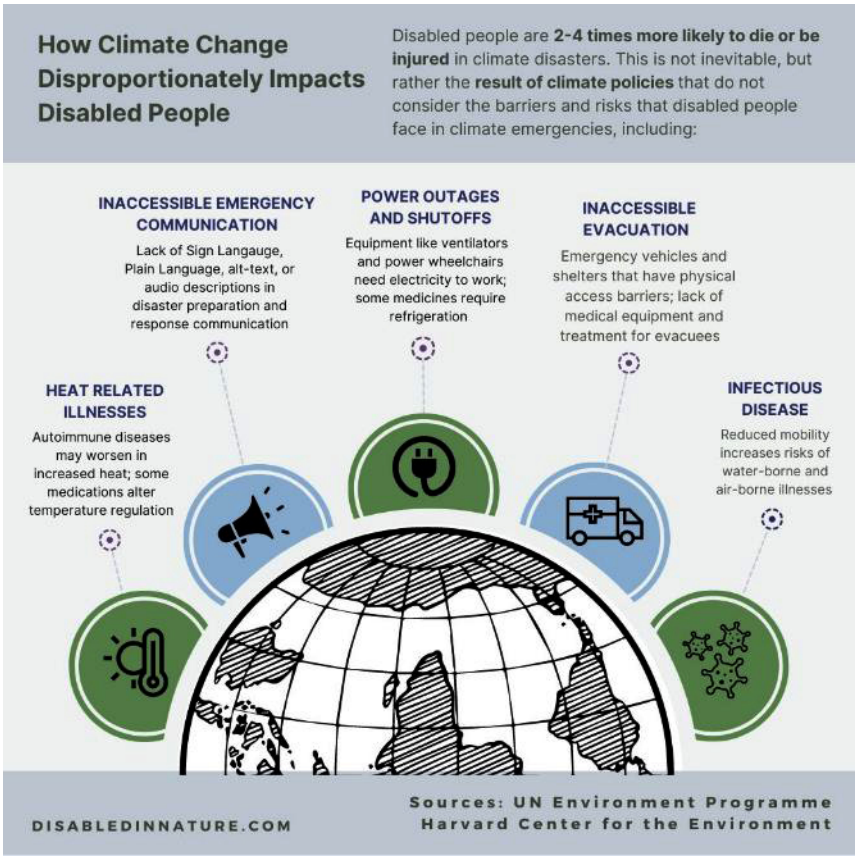


Figure 52. Impacts of climate change on people with disabilities (Disabled in nature, 2024)

Many people with disabilities have underlying health conditions that can be aggravated by climate change impacts. For instance, extreme heat can exacerbate cardiovascular and respiratory problems, while flooding can lead to waterborne diseases.

Limited access and insufficient quality of healthcare services, particularly in rural areas, further heightens vulnerability. Disruptions in healthcare services or damage to healthcare facilities can be life-threatening for those reliant on continuous medical care and medications (Jodoin, et al., 2023).

Physical barriers in the built environment, such as inaccessible buildings, streets, and public transportation, significantly increase the vulnerability of people with disabilities during climate-related events, increasing vulnerability to heat stress, cold spells, and frosts. Physical barriers also restrict the ability to evacuate during emergencies, access shelters, or utilize climate-resilient infrastructure. This increases vulnerability to climate hazards such as floods and extreme weather events (Jodoin, et al., 2023).

Social status and roles

Many people with disabilities actively participate in both work and household responsibilities. Seasonal gardening is a recurring activity for both genders in Moldova, especially in rural areas, which can be challenged by adverse weather.

People with disabilities are highly dependent on social services to provide food, healthcare, and help with household chores. These professionals – mostly women – are also affected by weather conditions, visiting several clients a day, traveling by public transport or on foot, and carrying heavy loads. Family support is also evident, with daughters often assisting mothers with daily activities.

People with disabilities may face social isolation. They have smaller social networks and less social support, making it difficult to receive timely assistance during emergencies. Isolation can also hinder access to information and resources needed for disaster preparedness and response.

Belonging to other vulnerable groups, such as migrants, old age, and ethnic minorities further increase social pressure, stigma, and risks during adverse climate conditions.

Participation in decision-making

Inadequate consideration of disability-specific needs in climate adaptation and disaster risk reduction policies further exacerbates the risks faced by people with disabilities. Emergency response plans and public information campaigns often do not adequately address the accessibility requirements of people with disabilities, limiting their effectiveness in reaching and assisting this vulnerable group (Jodoin, et al., 2023).

It can be quite challenging for individuals or organizations representing people with disabilities to participate in decision-making at the local and national levels, given that they often have limited skills in analysing policies and plans and drafting amendments to legislative and policy documents. The physical spaces where discussions are held, and decisions are made – in addition to public transport to reach them – may not be accessible. In addition, OPDs may have limited access to electronic platforms. These also constitute barriers to participation in the decision-making process (UN PRPD, 2021; Jodoin, et al., 2023).

Several survey respondents in Moldova stress the need for shared responsibility to address climate events and reduce the risks for people with disabilities. Several people emphasize the importance of cooperation among the government, public associations, and NGOs. The government (both central and local) should bear the primary responsibility for tackling climate change, identifying environmental problems, proposing solutions, and implementing measures. Some, particularly women in the 60+ age group, mentioned the importance of individual and community efforts in tackling climate change and involvement in activities such as planting trees, using alternative energy, and promoting responsible behaviour at the grassroots level.

Climate risk awareness and access to information

People with disabilities often face barriers in accessing timely and accurate information on climate risks and disaster preparedness. This information gap can lead to inadequate preparedness and delayed responses during emergencies. Emergency communications and notices may not be accessible to people who are deaf, hard of hearing, blind, or have intellectual disabilities.

The main sources of information for disabled people in Moldova are television, internet, and social media, newspapers, and radio, especially for older age groups.

Some respondents expressed the need for more detailed information from public authorities to improve their understanding of climate change.

Regional disparities

People with disabilities living in urban and rural areas may face different challenges. In rural areas, where most people with disabilities live, access to and quality of services and infrastructure, including transport, water and sanitation, health and social services, and others, is limited.

At the same time, several respondents mention that the quality of the environment (e.g., air quality, comfort in extreme heat) is higher in rural areas, where people also have access to outdoor activities such as gardening and foraging.

The quality of services and access to infrastructure is higher in urban areas. However, people with reduced mobility may find it difficult to get out of their homes and spend more time indoors, leading to greater dependence on family and social services and isolation.

Gender aspects

The reproductive health of women with disabilities is an ongoing issue in the Republic of Moldova due to the stigmatization of women with disabilities and their limited access to health services. There is clearly more violence against women with disabilities, forced treatments, and less access to justice (UN PRPD, 2021).

The gender factors affecting vulnerability to climate change in other groups (women, children, elderly) are also relevant to people from this group.

Other vulnerable groups

Climate change amplifies pressure on the economy and society and creates additional risks for all areas, groups, and individuals facing socio-economic difficulties (Rakhimova, Falaleeva, Ponedelnik, & others, 2023). Moldova is one of the poorest counties of Europe facing one of the highest climate-relate risk in the region. This puts additional pressure on groups who already face serious difficulties and further multiplies risks for people who belong to several vulnerable groups, including the elderly, children, people with disabilities, and women.

Economically disadvantaged people

In 2021, about one-quarter of the population faced poverty. Poverty rates are higher among the rural population. 35% of rural people experienced absolute poverty, and 14% extreme poverty, compared with 15% and 5% in urban areas. Women are at higher risk of poverty, with 26% of women in absolute poverty compared to 23% of men. The highest absolute poverty rate (36.9%) is registered in households with three or more children. About 60% of the country lives in energy poverty, spending about 10% of their budgets to cover energy costs (UNDP Moldova, 2022; FAO, 2022) (Figure 53) The income level and economic wellbeing are key factors defining adaptive capacities. This makes people with lower incomes more vulnerable to all the adverse effects of climate change.

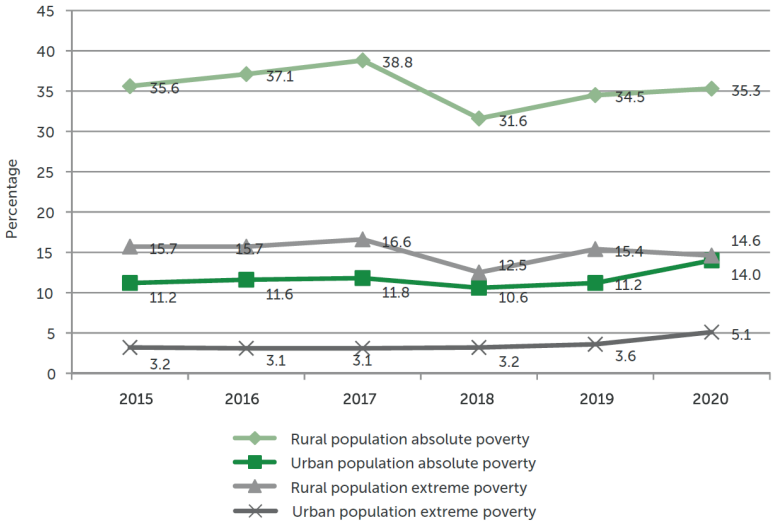


Figure 53. Rates of absolute poverty and extreme poverty for rural and urban populations, 2015–2020 (FAO, 2022)

Note: In 2019, the absolute poverty line was on average MDL 2 095.1 per person/month; the extreme poverty line was on average MDL 1 689.7 per person/month.
Sources: National Bureau of Statistics of the Republic of Moldova. 2020f. Informații statistice cu privire la indicatorii sărăciei în funcție de caracteristicile de bază ale gospodăriilor și ale populației (Anexă) [Statistical information on poverty indicators according to the basic characteristics of households and the population (Annex)] from Nivelul sărăciei în Republica Moldova în anul 2019 [Poverty level in the Republic of Moldova in 2019]. In: *National Bureau of Statistics of the Republic of Moldova*, 31 December 2020. Chisinau. Cited 29 January 2022. https://statistica.gov.md/newsview.php?l=ro&idc=168&id=6865&parent=0 [in Romanian]; additional data provided by the National Bureau of Statistics of the Republic of Moldova.

Rural communities

About 58% of people in Moldova live in rural areas (NBS, 2022), with a relatively even distribution of the rural population (considering people living outside urban settlements) across the country (Figure 54).

Agriculture, one of the key sectors of the Moldovan economy and a dominant occupation in rural areas, is highly dependent on climatic conditions. Certain sectors may be more vulnerable than others to the adverse effects of climate-related challenges. For example, rainy summers and cold springs have a negative impact on beekeeping, while frosts can be critical for fruit production and crops. Prolonged heat can increase the demand for additional irrigation. Small-scale agricultural producers and landowners are particularly vulnerable. Women, elderly, children, and people with disabilities (addressed in previous sections) face particular pressure.

Changing climatic conditions, such as heavy rainfall and flooding, affect harvests, production, and businesses in rural areas. This affects not only farmers and business owners, but also seasonal and informal workers, including local women and young people engaged in cash-in-hand seasonal work such as harvesting and fruit picking. Their lack of formal employment exacerbates their vulnerability, as adverse climatic conditions can affect their working hours and income.

Low income and unemployment rates are often correlated, with the vulnerability further increased by additional factors, such as households with dependent people (children, elderly, people with disabilities), single-parent households, and others. Nevertheless, unemployed people (especially women) may be involved in household work, provide support, and increase adaptive capacities for families.

Women, elderly, children, and people with disabilities (addressed in the previous sections) face particular pressure. However, other rural residents also face vulnerability to climate change due to their involvement in climate-sensitive activities such as agriculture and forestry.

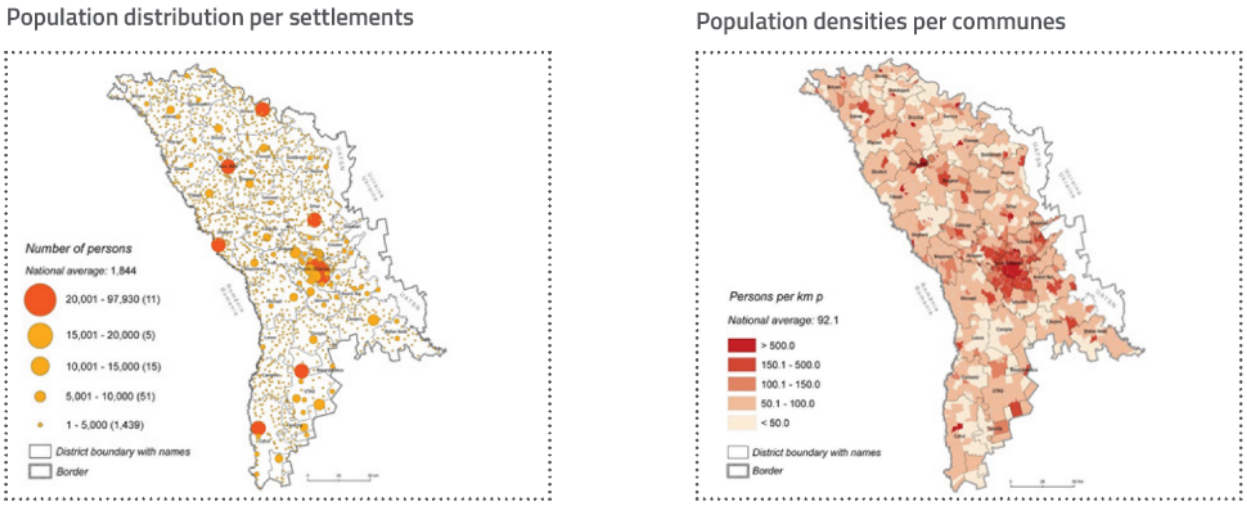


Figure 54. Distribution of population in Moldova (Dumitrescu, 2019)

Migrants

The political crisis in the region, including the conflict in Transnistria and the war in Ukraine, has made Moldova one of the main destinations for refugees in Europe. This puts additional pressure on the country's communities, public services, health system, and infrastructure, which already face a number of economic, environmental, and climate risks challenges. About 1 million Ukrainians arrived in the country in 2022, and about 116,000 remain, of whom only 1% are officially employed in Moldova (Project HOPE, 2024). About 80% of refugees are women, many of whom have multiple vulnerability factors, including traveling with young children, the elderly, people with serious health conditions or special needs, including disabilities, or belong to ethnic minority groups such as Roma (Figure 55) (IOM Moldova, 2022).

Economic and social disadvantages, especially high levels of insecurity, inappropriate housing conditions, lack of access to basic services and hygiene, and psychological pressures, make migrants particularly vulnerable to climate change. The areas of primary concern for refugees—health services and medicines, sanitation, and hygiene—are severely affected by adverse climatic conditions such as heatwaves, cold spells, droughts, and floods. Migrants have less access to information, evacuation routes, transport, and shelters during climate disasters. Access to limited facilities can also lead to conflicts with the local population.

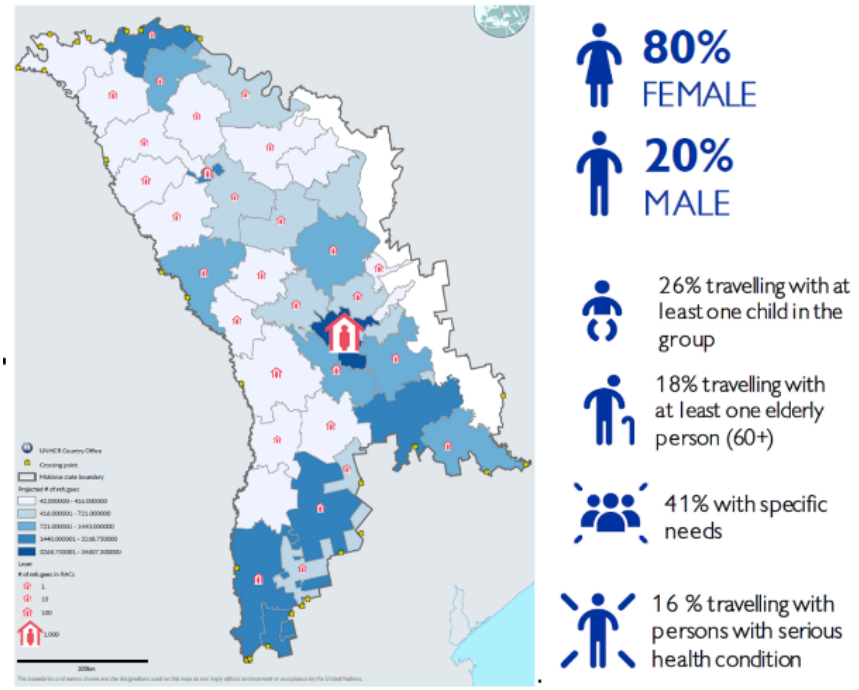


Figure 55. Distribution of Ukrainian refugee population in Moldova, 2022. Source: left (UNHCR, 2022), right (IOM Moldova, 2022)

Ethnic minorities

Moldova is a multinational country with several ethnic communities. Roma people make up about 0.3% of the country's population and are mainly concentrated in the north-west of the country (Figure 56). Roma people are considered one of the most vulnerable ethnic and social groups in Moldova. Typical challenges for women, the elderly, children, and people with disabilities in Roma communities include access to hygiene and medical products, lower access to education compared to other groups, child development needs, and access to information and communication. A major challenge is inadequate housing, with weak structures, poor insulation, and sanitation. Traditional social norms and isolation prevent active participation in decision-making, especially for women, and limit access to information and education, particularly for girls (ACTED, 2023).

Social and economic pressures put Roma communities at risk from climate change. Inadequate housing increases the risk of natural disasters such as flooding. Both excessive heat and cold can have significant health impacts, exacerbated by the lack of sanitation and hygiene facilities.

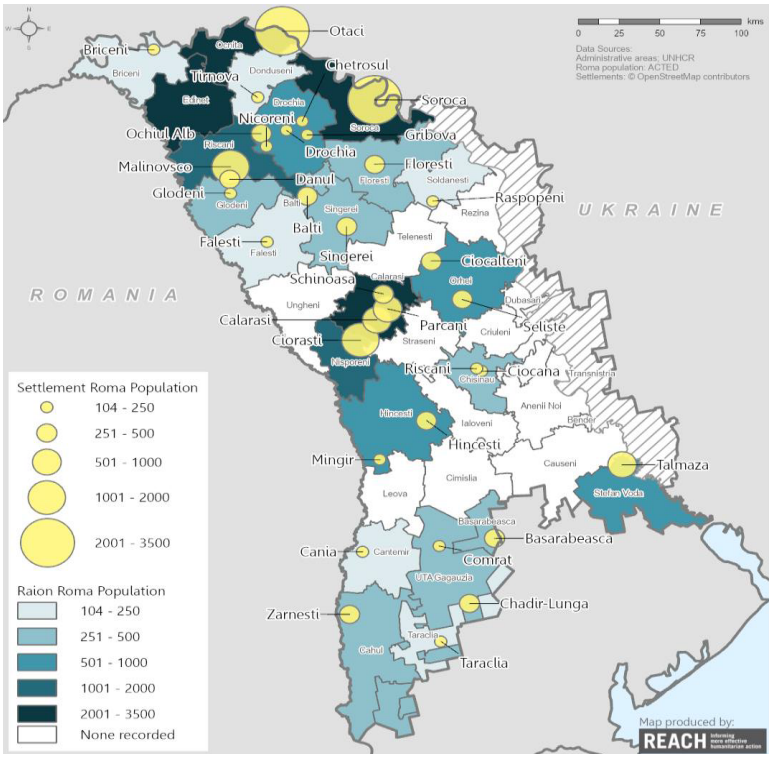


Figure 56. Locations and size of Roma populations in Moldova (ACTED, 2023)

Other

Other particularly vulnerable groups may include people facing permanent or temporary pressures related to any extreme deficit of adverse conditions: pregnant women, homeless people, prisoners, and other groups (Rakhimova, Falaleeva, Ponedelnik, & others, 2023).

Despite the high level of climate impacts, physical and economic risks, people from vulnerable groups of all kinds are likely to be under-represented in decision-making and have limited access to information due to lack of capacity – lower levels of education, access to information, social stigma and exclusion, and lack of skills and confidence to participate.

Social stigma and exclusion can seriously limit access to information on climate change, including risk prevention and mitigation. Vulnerable communities and the social workers and organizations that support them may perceive climate change risks as distant and unimportant compared to more acute needs: shelter, food, sanitation, energy, and health care.

Climate change exposure and impacts

Exposure to climate risks and economic vulnerability define the level of climate risks for the whole population and economy (Figure 57). A combination of factors makes several regions of Moldova particularly vulnerable to climate change.

The south-east faces the highest risk due to natural disasters (floods and droughts), higher levels of poverty, and a higher concentration of vulnerable groups—migrants, rural communities, and ethnic minorities. The northern rural communities are particularly vulnerable to flooding. The centre and Chisinau, with its dense population, face the risk of flooding, urban heatwaves, and additional impacts such as air pollution. At the same time, adaptive capacity in the central regions may be higher due to developed infrastructure in urban areas.

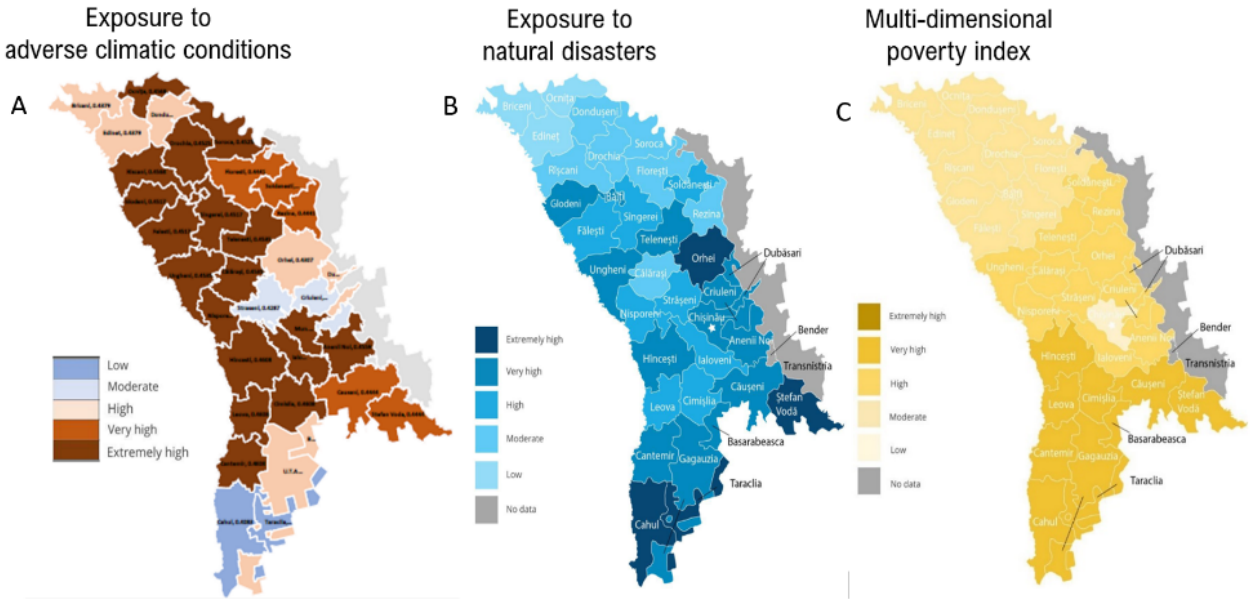


Figure 57. Climate risk determinants for vulnerable groups in Moldova: exposure to climate-related stressors (A, B) and socioeconomic vulnerability (C). Source: A (Gutium & Țăranu, 2021), B & C (UNICEF, 2023).

4 Part 4. POLICIES AND MEASURES FOR THE ADAPTATION TO CLIMATE CHANGE OF THE MOST VULNERABLE GROUPS IN MOLDOVA

Policy documents addressing climate change and socio-economic vulnerabilities in Moldova

Addressing the needs of vulnerable groups in the context of climate change requires a combination of research, policy, and practical activities in all areas—developing climate change scenarios at national and regional levels, assessing risks and impacts on the population, defining a range of factors causing vulnerability of specific groups, and developing responses to reduce risk. A wide range of institutions and organizations need to be involved in this process at national and local levels. Traditionally, social protection, economic development, and climate change have been addressed by different actors and institutions.

There is a need to harmonise and streamline policies and actions across all sectors, including economic development, social protection and health, and climate change policies and actions, in order to address these challenges. This requires work in both directions:

- Mainstreaming climate change adaptation and mitigation considerations into social and economic policies.
- Integrating social and gender considerations into climate change adaptation and mitigation policies and plans at all levels.

Annex 2 summarises the main resources and information materials available in Moldova on the risks faced by the most vulnerable groups in the context of climate change, with a particular focus on gender issues.

National initiatives and experiences on the intersection of climate change, socio-economic resilience and gender equality

In recent years, there have been active developments in policymaking, research, and practical action in the areas of climate change, socio-economic development, and gender equality. This process is largely driven by the implementation of **international agreements** and supporting agencies. UN agencies (UNDP, UN Women, UNECEF, FAO, and others), the World Bank, IFAD, GIZ, and the Governments of Sweden, Austria, and others provide support for policy development, analysis and research, technological and financial assistance, and implementation of climate risk mitigation and adaptation initiatives. The process of EU integration and harmonization of legislation and practices provides a particular and essential impetus for action at the national level.

The latest documents on climate change in Moldova, including **the Fifth National Communication of the Republic of Moldova under the UNFCCC** (Government of the Republic of Moldova, 2023) and **NAP-2** (Government of the Republic of Moldova, 2020), provide a solid basis for assessing climate risks at the national level, including impacts on different sectors, social and gender impacts. However, the integration of this information into policy and planning, especially in areas not directly related to the environment and climate, remains a challenge.

Several national documents and studies address the **social and economic vulnerability** of different population groups: women, children, the elderly, persons with disabilities. Most of these documents are produced by international programs, focus on specific groups, and do not include climate change as a risk factor. There are examples of intersectoral analysis for climate impacts on women in the context of different sectors (e.g. two comprehensive reports on climate change impacts on children by UNICEF,

World Bank/UNECEF). Several local-level climate risk assessments (e.g. SEACAPs under the Covenant of Mayors) include an assessment of climate risks for specific social groups, but such examples are unique. There is no comprehensive assessment at the national level that provides an overview of climate impacts and risks for vulnerable groups.

National policies, programs, and supporting documents such as the National Development Strategy "Moldova 2030" increasingly mention the need to address social vulnerability/gender aspects and climate change risks as a context for national development. At the same time, social policies (e.g., gender policies, policies for the well-being of children, the elderly, people with disabilities, migrants) make little or no mention of climate risks for their target groups. Social and climate risks remain largely disintegrated in sectoral policies, although national-level recommendations on mainstreaming climate and gender into sectoral policies are suggested.

The need to mainstream climate, social, and gender considerations into the design and implementation of **financial programs** is increasingly recognized (e.g., through gender-responsive budgeting). However, there is little guidance or experience on gender and climate budget mainstreaming. There are no funding and support programs at the national level that support and promote both climate risk reduction and social/gender vulnerability.

Information, education, and training materials are an essential part of adaptive capacity, especially at the local and individual levels. Education and information campaigns are usually targeted and have the potential to translate scientific and policy messages into everyday practice, using relevant messages and language. Several educational resources address both climate change and gender issues (e.g., the series of publications on gender and climate change in different sectors produced by the UNDP NAP-1 project). Some initiatives supporting vulnerable groups (e.g., international projects working with rural women, DRR services, and others) include climate change aspects. Notwithstanding these efforts, there is a lack of educational initiatives and materials that specifically address social/gender vulnerability and climate change risks.

Despite challenges, some initiatives are pioneering an integrated approach to risk management, addressing climate and social/gender aspects together. Examples include CPIU IFAD programs on rural resilience and sustainable agriculture and the UNDP project on resilient communities through women's empowerment.

International and agencies and programmes

UNDP, FAO and others are among the main drivers of the climate and gender agenda at the national level. Gender is integrated into decision-making through gender-balanced expert and stakeholder teams, guidelines, training, and recommendations. Social vulnerability and gender issues have been included in the selection and prioritization of several technical assistance and support programmes.

One of the first efforts in the area of climate change and gender was the Guidelines for Integrating Gender into Climate Risk Assessment and Adaptation Planning at the Sectoral Level (NAP-1 project). UNDP's NAP-2 project works at the national level and focuses on integrating the interests of vulnerable groups into Moldova's national decision-making process. Among other things, the project aims to promote inclusive policy development and address the intersection of climate change and social justice.

While **UN Women Moldova** does not have a specific programme on the gender aspects of climate change, it actively supports gender-related initiatives and policies. This includes providing technical assistance, expertise, and financial support to various gender-related projects, such as education programmes for rural women and gender mainstreaming recommendations for disaster risk reduction.

The **EU Delegation** and national embassies provide technical and financial support to national and local development projects. The EU Delegation is responsible for supporting the approximation of national legislation and practices, thus promoting approaches accepted by EU countries, including human rights, gender equality, inclusion, and integration of the interests of vulnerable groups in decision-making (EU4Gender Equality, EU4Youth programmes, and others). The EU Delegation also supports the development of environmental and climate policies and measures and assists in their implementation (EU4Climate, EU4Environment, and other programmes).

Gender-responsive budgeting is one of the key mechanisms to ensure gender equality. Recommendations and analyses on gender-responsive budgeting have been made by experts supporting the national policy-making and international initiatives. Several training sessions have been organized for representatives of national ministries, supported by national and international initiatives, including the EU4Gender Equality Helpdesk. The helpdesk also provides support for gender screening of policy documents and budgets of national agencies upon request. Several ministries have successfully used these services, while others have shown little interest.

The **Embassy of Sweden** is active in implementing programmes on sustainable development, gender equality, and climate resilience. "Sustainable and Resilient Communities for Women's Employment" is a joint programme of the Swedish Embassy and UNDP. The initiative focuses on supporting female-headed households, in line with the broader objectives of sustainable and resilient communities. "The Greening SME programme provides mandatory training for grantees (including youth and women) on financial and business literacy, management, and environmental risks and impacts (e.g., waste management, water, energy efficiency, air pollution impacts and reduction). "The Women in Business programme aims to support women-owned businesses, although the eligibility criteria do not prioritize vulnerable groups (e.g., rural women or women heads of household).

The **Covenant of Mayors (CoM)** is one of the first and most active international initiatives in Moldova to support the implementation of climate policies at the local level in municipalities. Operated by the EU CoM East project and the Moldovan National Focal Point, CoM works with around 330 municipalities in Moldova, including six cities. This cooperation includes the provision of technical assistance, training and support for practical actions. Participating municipalities commit to reducing greenhouse gas emissions by 30%, increasing energy efficiency and building climate resilience. Participating municipalities commit to develop and implement Sustainable Energy and Climate Action Plans (SECAPs). Of the 35 SECAPs presented, only 15 include a section on climate risk and adaptation, with a predominant focus on water, forest management, waste, and energy efficiency. Social aspects, risks to vulnerable groups, agriculture, and urban planning remain under-represented. This imbalance is mainly due to a lack of understanding and experience in climate risk assessment and adaptation.

Currently, CoM East, UNDP and others are establishing collaborations to support communities in their climate adaptation efforts. These initiatives provide training and expert support to enable municipalities to develop comprehensive SECAPs and robust climate adaptation measures.

National and local actors and initiatives

The Ministry of Environment addresses vulnerable groups and gender issues in the National Adaptation Plan (NAP-2). EU requirements encourage the integration of gender issues and the interests of vulnerable groups in all policy and planning documents, including ongoing gender screening of activities and key documents.

The Ministry of Labour and Social Protection oversees the implementation of national policies on social development, protection of vulnerable groups, and gender equality. The Department of Gender coordinates initiatives on domestic violence, human trafficking, and related issues. It supports training and information events and gathers relevant information from other ministries. Thirty-three gender focal points in various ministries and government agencies are tasked with planning and implementing gender-responsive policies and assessments at the sectoral level.

Municipalities that have signed the Covenant of Mayors are undertaking climate change planning and action at the local level. Initiatives include projects on smart urban lighting, urban greening, and climate adaptation plans. Challenges include a lack of information on climate vulnerability and a lack of expertise on climate adaptation. Local experts involved in SECAP development acknowledge the current lack of information on climate vulnerability and vulnerable groups. Several national NGOs provide support to CoM municipalities on various aspects of climate adaptation planning and support for vulnerable groups. However, the lack of a systematic and informed approach to risk assessment and gender mainstreaming remains an issue.

National NGOs play a crucial role in environmental education, social and economic development, and climate resilience. However, the intersection of climate, gender, and social issues is often overlooked in

NGO work due to their focus on specific target groups and projects (e.g., youth, migrants, women, rural communities).

Actors responsible for data collection and management

The National Bureau of Statistics (NBS) plays a key role in aggregating information provided by national authorities and organizations involved in data collection, including the State Hydrometeorological Service (SMS), ministries, and local authorities. However, there is a need for additional data categories related to climate change and vulnerability.

The NBS is not directly involved in collecting data on climate change and does not apply any classification or definition of 'vulnerable groups'. Although Moldova has gender-disaggregated statistics, including the Gender Pulse Platform (demographic statistics, age, income, participation in decision-making, and leadership), these data are not sufficient for detailed analysis and gender-oriented research. NBS has clear procedures and protocols for data collection that can be used when new data categories are introduced. The examples of data related to climate change and vulnerability can be found in the international statistical standards (e.g., UN Stat); additional information on this is needed. The process of introducing new data categories into the NBS system usually takes 3 to 5 years.

The NBS is a focal point for collecting information on the SDGs, information on SDG indicators will be available on the national SDG data portal, which will be launched soon. Information on SDG indicators is submitted to SGD by relevant ministries, NBS does not analyse this information, including intersectional analysis and correlations of data among different SDGs.

Ministries contribute to data, including gender-disaggregated statistics, which need to be made more accessible and available for research purposes. Cooperation among ministries and the NBS should ensure the availability of detailed data for research purposes.

Local public administrations are crucial for collecting data at the local level on climate risks and impacts on vulnerable groups. LPAs should identify the specific needs of particular groups and actively participate in adaptation planning, supported by clear guidelines and protocols.

Experts, social and health workers, NGOs are professionals from different sectors working at the grassroots level. They have direct knowledge of the living conditions and problems of vulnerable groups.

> *"We know our information and our people. We can give this information to experts [on adaptation planning] and save 50% of work for the external experts to do". (Respondent, Local Authority)*

5 Part 5. RECOMMENDATIONS

Recommendations for capacity development for strengthening resilience of the vulnerable groups in the context of climate change

Integrate climate and social/gender considerations into planning and actions:

- Mainstream climate change and social/gender considerations at the initial planning stage of projects and as criteria for access to support and funding;
- Continue efforts to mainstream gender into policies and programmes but adapt gender mainstreaming programmes to the organisational and local context (e.g. avoid recommendations such as equal participation of men and women if an organisation cannot implement them);
- Provide training on social inclusion and gender issues to decision-makers, experts and practitioners involved in climate-related policies and projects;
- Provide training on climate change risks and impacts to decision-makers, experts and practitioners involved in sectoral, social, gender and other policies and projects;

Science-based climate risk assessment and data collection:

- Establish a robust knowledge base and science-based risk assessment methodologies to inform decision-making on climate-related initiatives, which will allow identifying vulnerable social groups including at the local level;
- Integrate social and climate vulnerability criteria into technical and financial assessments to ensure they guide programme selection and prioritisation;
- Support data collection and analysis of risks: who are the vulnerable groups and what can be done for them?
- Based on research and analysis of needs, special facilities (e.g. information platforms, help desks) can link the risk profile of a vulnerable group with the resources available for them.

Gender equality and women's empowerment:

- Integrate gender considerations into all policies, including climate adaptation, focusing on practical implementation rather than formal requirements;
- Implement measures to improve women's resilience to climate change, including better understanding through data collection, women's empowerment and support for entrepreneurial skills;
- Work to improve gender balance in all sectors, including higher income sectors such as STEM;
- Support financial education and capacity building for women and other vulnerable groups;
- Develop financial products and programmes for women and other vulnerable groups;

Practical measures and pilot projects at local level:

- National and international agencies should provide financial support for pilot projects in both rural and urban areas that demonstrate effective strategies for reducing vulnerability to climate impacts;
- Implement practical measures at the local level, such as developing green spaces in cities to reduce the impact of heat waves;

- Emphasise the importance of data collection and analysis in understanding and addressing risks to vulnerable groups;
- Coordinate efforts at the local level involving different agencies, including local government, health authorities, transport and other departments, which requires coordination and requires human and financial resources;

Finance and budgets:

- Provide vulnerable groups with access to finance and resources to build resilience and compensate for losses by (1) integrating climate vulnerability criteria into assistance programmes; (2) providing dedicated funds for loss compensation;
- Develope insurance schemes specifically designed to support vulnerable groups in climate-vulnerable areas;
- Make information on financial support and programmes widely available to all social groups;
- Incorporate the principles of gender budgeting into national and international programmes, sectoral budgets and national financial legislation to allocate resources in ways that benefit vulnerable groups;
- Establish government support schemes, such as subsidies, to deal with crises, for example to subsidise the rising cost of energy during hard times;

Incentives for vulnerable businesses and businesses employing vulnerable groups:

- Provide more incentives for social enterprises with a focus on sustainable green development to encourage their growth and support (e.g. organic agriculture, women-led small businesses, employment of people with disabilities and provision of jobs in rural areas);
- Facilitate access to markets, including international markets, for small and medium-sized enterprises (SMEs) to encourage increased production;
- Improve government support for SMEs and ensure that they have the necessary infrastructure to connect to markets;
- Develop solutions to reduce the economic vulnerability and insecurity of seasonal and illegal workers by providing them with social benefits;

Stakeholder engagement:

- Encourage environmental and climate NGOs and practitioners to integrate social and gender aspects into their work;
- Information and education;
- Develop and implement programmes of information and education initiatives for vulnerable groups to enable them to understand and adapt to the impacts of climate change;
- Raise awareness through targeted information campaigns and practical demonstration projects showing effective adaptation measures - children, women, older people;
- Develop and deliver training on social inclusion and gender issues for specialists designing and implementing climate and social policies at all levels, national advisors and practitioners working in all related sectors - energy, transport, spatial planning, technical assistance, and others;
- Introduce training on climate and gender mainstreaming as part of mandatory training for decision-makers;

> *"We need detailed research on impacts for different groups. Not only count men and women, but do research on how climate change impact them" (Respondent, UNDP)*

Recommendations for collecting and managing data reflecting climate change risks for vulnerable groups

A collaborative and systematic approach, together with capacity building and clear guidelines, is essential for comprehensive data collection that reflects the real situation and needs of vulnerable groups, particularly in the context of gender and climate change. Consistent and regular data collection is necessary to analyse and compare how vulnerability changes over time. Informants provide views on the types of data needed and approaches to data collection and management.

Types and content of data for assessing social vulnerability to climate change

Data on climate change impacts:

- Vulnerability assessments at the national level need to be translated into practical information at the regional level. Climate profiles for each community can assist in risk assessment;
- Clear and transparent information on climate change impacts needs to be provided to local administrations, avoiding information overload and in the form of practical guidelines. For example, SMS can develop a clim ate change and impact profile for each municipality or region (South, Centre, North, which can further be used for risk assessment).

Data on social vulnerability and climate change:

- Data on access to resources, such as account ownership by women/men and business ownership, need to be collected at national and regional levels. Collaboration with national banks can facilitate this. Such collaboration can help inform decisions, including how to create and promote financial instruments to support the most vulnerable groups and promote gender equality;
- Data collection on social groups can also be improved to include gender aspects, such as parental leave and who takes it, men's and women's roles in childcare and other activities;
- Cooperation between the National Bureau of Statistics (NBS) and Local Public Actors (LPAs) is essential for effective data collection. LPAs should be supported with guidelines and protocols to answer questions such as what data to collect, their capacity to collect it, and how to submit information for analysis and aggregation;
- Consistent and regular data collection is necessary for longitudinal analysis and comparison of changes in vulnerability over time.

Gender-disaggregated data:

- Detailed gender-disaggregated data is lacking for comprehensive analysis. For example, gender-disaggregated statistics collected by ministries are not always available on the NBS website, which hampers gender-oriented research;
- Specific projects or working groups are needed for gender data collection in various sectors, including climate change. Clear guidelines for the collection of gender statistics are needed to ensure consistency and accuracy;

Business and land ownership and management data:

- Criteria for identifying women-owned businesses and households are crucial. For example, National Bureau of Statistics (NBS) criteria currently include households where a woman has a higher income;
- Clear information on business structures and ownership is needed to understand the impact on vulnerable groups (e.g. rural women, elderly) within the business sector;
- Information on the use of financial products is needed, including how many women apply for and receive government subsidies or bank loans.

Data collection at local level:

- Local actors, including LPAs and social workers, play a key role in data collection. Social workers in particular can provide valuable insights into the living conditions and problems of vulnerable groups;
- Representatives of vulnerable groups should be directly involved in data collection. National research, including interviews with these representatives, can help to define risks and needs. Universities and students can be involved in carrying out such research.

Recommendations for data collection

Data management and guidance at national level

- Clear guidance at national level is needed to organise a structured process of data collection and integration. This guidance should address all levels of government and provide a standardised approach;
- Collaboration among the NCCC, national ministries and local actors is essential for comprehensive data collection;
- Protocols should be developed for consistent and effective data collection, ensuring that all stakeholders understand the process;
- Intersectional analysis should be incorporated into data collection, taking into account the linkages among different Sustainable Development Goals (SDGs). This will provide a more holistic understanding of vulnerability;
- There is an established system of information and data transfer in emergency situations (e.g. SMS sends data to emergency departments and they inform the population and municipal administrations. A similar system can be established for climate and meteorological risks, including heat waves;
- The Ministry of Labour and Social Protection needs to be involved in the work of defining vulnerable groups and developing protocols for data collection.

Data collection at the local level:

- Local actors, including LPAs and social workers, play a key role in data collection. Social workers can provide valuable insights into the living conditions and problems of vulnerable groups;
- Representatives of vulnerable groups should be directly involved in data collection. National research, including interviews with these representatives, can help to define risks and needs. Universities and students can be involved in conducting such research.

Capacity building for timely and relevant information

- Capacity building is needed, especially for LPAs and local actors, to improve their ability to collect relevant data. Guidelines, protocols and tools should be provided to facilitate the process;
- Clearly formulated requests for data from relevant services, such as health services, are essential to ensure that the information collected is timely and meets specific needs;
- Special projects or working groups should be initiated for cross-sectoral data collection on data disaggregated by gender and vulnerable groups. Involving representatives of vulnerable groups in the research process ensures a more accurate representation of their needs.

Recommendation for division of responsibilities among different actors to reduce climate impacts on vulnerable groups

The division of responsibilities among different actors to reduce the impact on vulnerable groups requires a multi-level approach, with specific roles assigned to national, local, sectoral and international bodies. The general view expressed by the informants was that the involvement of all levels of government is essential. Most informants stressed the important role of local authorities and local actors, who may have direct contact with vulnerable groups and their needs. However, local authorities need to be supported and equipped with guidelines, tools and resources to fulfil their role.
The following comments and suggestions were made by the informant regarding the roles and responsibilities of key stakeholders:

National Climate Change Committee (NCCC):

Role: The NCCC serves as the central coordinating body for climate change adaptation planning. It focuses on addressing intersectional issues such as gender and social vulnerability mainstreaming.

Potential responsibilities:

- Establish operational units responsible for coordinating climate policy, gender and social issues and equality at national, sectoral and regional levels to facilitate effective coordination;
- Initiate programmes to train and equip staff within these units to address intersectional climate change, gender and social challenges;
- Initiate climate risk assessment and data collection programmes for specific groups and areas;
- Coordinate with national and international economic support programmes to integrate climate considerations into financial and other support mechanisms, and to integrate gender and social considerations into climate risk financing programmes (loss compensation, climate action support, and others); promote the integration of gender-responsive budgeting into climate policies;
- Support LPAs with the resources and mandate to develop and implement climate actions, including the appointment of dedicated staff to work on action programmes for 3-4 years;
- Formulate requests for research on climate vulnerability among different vulnerable groups and in different regions.

Ministry of Environment:

Role: The Ministry of Environment coordinates the work on the development and implementation of climate change adaptation and mitigation policies and other environmental policies.

Potential responsibilities:

- Supporting coordination efforts on climate change planning and action at the national level through projects such as NAP-2, including addressing the needs of vulnerable groups;
- Provide guidance to regional administrations and sectors on climate risk assessment and adaptation planning;
- Facilitating support mechanisms for adaptation planning at different levels;
- Formulate requests for practical research on climate vulnerability among different groups and in different regions, and data collection by NBS and other agencies;

Ministry of Labour and Social Protection and its Gender Department:

Role: The Ministry of Labour and Social Protection, together with its Gender Division, is responsible for gender mainstreaming at the national level, ensuring that gender considerations are integrated into sectoral and regional plans and actions, including climate action.

Potential responsibilities:

- Participate in the NCCC to ensure that a gender and social perspective is integrated into national climate change efforts;
- Supporting the national coordination mechanism for gender mainstreaming;
- Supporting gender focal points in sectoral ministries and national agencies and advising them on climate change risks as a key driver of gender and social vulnerability;
- Developing training and educational materials on gender, social issues and climate in collaboration with climate specialists;
- Formulating requests for practical research on climate vulnerability among different groups and in different regions, and data collection by NBS and other agencies.

Local Public Authorities - LPAs:

Role: LPAs play a crucial role in implementing and building climate and social resilience at the local level.

Potential responsibilities:

- Developing and implementing climate action plans and measures tailored to the local context;
- Establishing specialised intersectoral groups within LPAs responsible for climate risk assessment, communication and implementation of adaptation measures;
- Engage in data collection, planning and resource mobilisation for climate and social initiatives;
- Obtaining support and resources from national and international levels to strengthen local efforts;
- Communicating risks to the community and businesses;
- Supporting stakeholder engagement and participation of vulnerable groups in problem identification, data collection and decision-making and implementation (including volunteers and local NGOs);
- Formulating requests for practical research on climate vulnerability among different groups and in different regions, and data collection by NBS and other agencies.

International agencies:

Role: International agencies contribute by providing expertise and support to enhance the effectiveness of climate, social, and gender initiatives. UNDP supports climate risk assessment and data collection at the national level. UN Women focuses on coordinating gender-related activities and ensuring gender equality in the context of climate resilience.

Potential responsibilities:

- Working with local authorities, including rural urban areas, to address climate challenges;
- Contribute to the development and implementation of climate action strategies;
- Ensuring the sharing of expertise and resources between national and regional levels;
- Implementing grant schemes to fund climate-related projects;
- Supporting local demonstration projects that showcase effective climate adaptation strategies, with clear communication of the “before and after” results of climate initiatives to ensure transparency and public awareness;
- Supporting climate-resilient decision-making by transferring new practices to sectoral ministries and regional administrations (UNDP);
- Provide methodological support to align economic support programmes with climate vulnerability criteria and analyse existing programmes for their eligibility criteria (UNDP);

- Develop guidelines for the regional administration and sectors on climate risk assessment and adaptation planning, including social and gender aspects (UNDP);
- Engaging all levels of government in gender-responsive climate change initiatives (UN Women);
- Coordinate efforts to promote gender equality in climate-related activities (UN Women);
- Focus activities on specific targets, such as building climate resilience from a gender perspective (UN Women);

Civil society

Role: Civil society organisations (NGOs or CSOs) working in the areas of environmental protection, policy, and education, as well as social organisations working with vulnerable groups and communities, implement projects at both the local and national levels. NGOs often have direct access to and are trusted by vulnerable groups, which defines their unique role in distributing information about climate change and climate change risks within such communities. Several NGOs provide expertise in climate policy, planning, and communication to governmental and sectoral agencies.

Potential responsibilities:

- Coordinate efforts to promote gender equality in climate-related activities at the community level;
- Collect, analyse and interpret information about climate-related aspects of vulnerability of their target groups and translate this information to climate adaptation planning at the national level;
- Provide information and education on climate change, present and future climate impacts to the vulnerable groups and develop solution;

Co-develop and assist in implementation of the practical initiative to mitigate climate risks and build adaptive capacities.

Conclusions

The report has provided a comprehensive analysis of the impacts of climate change on vulnerable groups in Moldova, emphasising the need for targeted adaptation strategies to enhance resilience and equity. The conclusions summarise the key findings and suggest directions for future action.

Key Findings

Moldova faces some of the highest climate change impacts and risks in Europe. Rising temperatures, changing rainfall patterns, and more frequent extreme weather events such as floods, droughts, and hailstorms are having a profound impact on various sectors of the economy, particularly agriculture, water resources, and public health. The most vulnerable people, communities, and social groups are disproportionately affected by climate change, while national and local climate adaptation planning often fails to identify, understand, and address these impacts.

Women (52% of the population) in Moldova face significant socio-economic challenges exacerbated by climate change, including increased health risks, economic instability, and reduced access to resources. The intersection of gender and climate vulnerability highlights the need for targeted support measures.

Children and young people (21.4% of the population) are particularly vulnerable due to their dependency and limited coping mechanisms. Climate change impacts, such as disruptions in education and increased health risks, significantly affect their development and well-being.

Elderly people (23.8% of the population) are more susceptible to health issues and economic hardships, with fixed incomes and physical limitations exacerbating their vulnerability to climate change.

People with disabilities (6.5% of the population) face compounded risks due to physical constraints, social exclusion, and inadequate support systems. Their unique needs must be addressed in climate adaptation strategies.

Further research is needed to detail the impacts on other vulnerable groups such as **rural communities** (58% of the population) **ethnic minorities,** and **low-income households**, ensuring comprehensive coverage of all vulnerable populations.

The main factors defining vulnerability to Moldova's population and economy to climate change include:

Economic vulnerability is one of the key factors defining climate risks. Moldova's heavy reliance on agriculture makes it particularly susceptible to climate variability. Crop failures and reduced yields pose serious threats to food security and livelihoods. The agricultural sector needs robust climate adaptation measures to mitigate these risks.

Social inequality as the existing social and economic inequalities intensify the vulnerability of certain groups. Addressing these disparities is essential for effective climate adaptation. Policies must focus on reducing inequality to enhance resilience.

Infrastructure deficits and inadequate infrastructure, particularly in rural areas, hamper the ability to respond to and recover from climate events. Investment in resilient infrastructure is critical for protecting communities and reducing economic losses.

Policy and governance do not adequately address climate, gender, and social vulnerability. While international and national climate adaptation policies are in place, the integration of gender and social vulnerability considerations remains insufficient. Effective adaptation requires robust governance frameworks and cross-sectoral coordination.

Recommendations for future action:

1. Developing methodologies and guidelines

Create detailed methodologies and guidelines for identifying and assessing climate-related risks for vulnerable groups. These should include both qualitative and quantitative criteria, leveraging existing data at local and national levels.

2. Enhancing data collection and management

Emphasise the role of the National Bureau of Statistics (NBS) and other relevant actors to propose (a) existing indicators that require gender and social disaggregation, and (b) additional indicators related to climate change vulnerability that can be progressively adopted.

3. Capacity building

Strengthen the capacity of local administrations, development project teams, and sectoral projects to address climate-related risks. This includes training and resources to enhance resilience among vulnerable groups.

National and international agencies should provide financial support for pilot projects in both rural and urban areas that demonstrate effective strategies for reducing vulnerability to climate impacts.

4. Policy integration and coordination

Ensure that climate adaptation strategies are inclusive and gender responsive. This requires integrating social vulnerability into climate policy frameworks and improving coordination among different government levels and sectors.

5. Finance and investment

Invest in resilient infrastructure to better cope with climate-related events. Prioritise areas with high vulnerability and inadequate existing infrastructure. Provide vulnerable groups with access to finance and resources to build resilience and compensate for losses by integrating climate vulnerability criteria into assistance programmes and provide dedicated funds for loss compensation. Develop insurance schemes specifically designed to support vulnerable groups in climate-vulnerable areas.

6. Engaging Stakeholders

Foster active participation from vulnerable groups in climate adaptation planning and implementation. This involves engaging local communities, NGOs, and international agencies to ensure that adaptation measures are inclusive and effective.

7. Information and Education

Develop and deliver training on social inclusion and gender issues for specialists designing and implementing climate and social policies at all levels. Introduce training on climate and gender mainstreaming as part of mandatory training for decision-makers.

Addressing the impacts of climate change on vulnerable groups in Moldova requires a multi-faceted approach that integrates social, economic, and environmental considerations. The Republic of Moldova can enhance its resilience to climate change, ensuring that the most vulnerable populations are protected and supported. This effort will require sustained collaboration among national and local governments, international organisations, and civil society to build a more resilient and equitable future.

By focusing on the needs of the most vulnerable, this report aims to contribute to a more resilient and equitable future for Moldova. The recommendations outlined provide a roadmap for strengthening resilience, promoting social equity, and ensuring that climate adaptation efforts are inclusive and effective.

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ANNEXES

Annex 1. Climate change impacts on the key sectors of economy in Moldova (adopted from NAP-2 and NDC)[56].

Climate hazards	Impact on Agriculture	Social/Economic impacts
AGRICULTURE		
Increasing temperatures, heat stress	Changes in water requirements	• Increased demand for irrigation; • Decreased yield of crops; • Changes (positive and negative) in distribution, introduction of new crop varieties.
	Changes in agricultural pests and diseases	• Reduced water quality from increased use of pesticides; • Decreased yield and quality of crops; • Increased economic risk; • Loss of rural income.
	Changes in crop growth conditions	• Pollution by nutrient leaching; • Loss of indigenous crop varieties; • Changes (positive and negative) in seed production and seedling requirement.
	Changes in optimal conditions for livestock production	• Changes in optimal farming systems; • Loss of rural income.
	Changes in crop distribution	• Changes in crop and livestock production activities; • Relocation of farm processing industry; • Loss of rural income; • Increased economic risk; • Shift of labour to other sectors.
Change in precipitation patterns	Changes in the hydrological regime; Increased water shortages.	• Risks of water quality degradation; • Increased risk of soil salinization; • Conflicts among water users; • Increased groundwater extraction, water depletion and reduced water quality.
Extreme weather events: **heat waves frost droughts floods winds, hailstorms**	Changes in soil fertility, salinity and erosion; Crop failure; Yield decrease; Competition for water; Increased risk of desertification.	• Reduced water quality due to fertiliser runoff; • Reduced crop income; • Land abandonment and labour migration to other sectors; • Increased spending on emergency and remedial actions; • Poor food security in areas with low economic development; • Higher food prices.

[5] Government of the Republic of Moldova. (2023). Fifth National Communication of the Republic of Moldova : Developed to be reported to the United Nations Framework Convention on Climate Change / coordinators: Suzanne Lekoyiet, Raisa Leon ; synthesis team: Marius Țaranu, Mihai Tîrșu, Lilia Țaranu, Dorin. Public Institution "Environmental Projects Implementation Office", Environment Agency of the Republic of Moldova, United Nations Environment Programme.

[6] Government of the Republic of Moldova. (2023). *Moldova National Climate Change Adaptation Programme until 2030 and Action Plan.*

ENERGY		
High temperatures and heat waves	Increased demand for electricity due to greater need for air conditioning and cooling in industrial processes; Increased consumption of natural gas due to increased demand for electricity; Increased water needs for thermal power plants.	• Access to air conditioning only available for higher income households; • High demand and increased demand during peak hours, being a challenge for transmission and distribution systems; • Low amounts of energy generated.
Changes in precipitation regime and water regime	Lower electricity generation capacity caused by reduced water flow in Prut and Nistru rivers; Low hydropower generation; Reduction of biomass harvest.	• Hydropower generation can be seriously affected by droughts (10-30% reduction expected); • Potential competition between energy and non-energy crops for land and water resources; • Threats to energy production due to biomass reduction.
Extreme phenomena: **-Droughts** **-Flood** **Winds, Hail** **- frosts**	Reduced resilience of energy sector infrastructure, including lifetime assets, higher capital expenditure and administration and maintenance costs; Reduction of the share of electricity generation in RES due to reduced reserve of balancing energy.	• Threat to electricity transmission and distribution; • Increased uncertainty regarding energy production and line repair cost; • Low electricity production from RES.
FORESTRY		
High temperatures, heat waves	Longer vegetation period; Negative consequences for species sensitive to temperature changes; Increased vulnerability to forest fires.	• Reducing the volume of wood production; • Transition to other forms of energy; • Additional costs for the population.
Change in precipitation indices	Change in phytosanitary status of forests; Change in species composition in forests; Change in types and incidence of pests and diseases in forests.	• Reduced capacity of forest habitat to maintain biological diversity, protect the environment and ensure specific socio-economic functions.
Extreme phenomena: droughts, fires, floods and windstorms	Low biomass growth and production; Increase in forest fires; Increased mortality rate of forest seeds.	• Economic losses in the forestry sector; • Displacement of persons; • Forced migration of people seeking alternative income opportunities in urban centres.

HEALTH SECTOR		
High air temperatures and heat waves	Increased morbidity and mortality rate from heat waves; Increased incidence of hyperthermia and sunburn, especially among people working outdoors and the elderly; Impaired health of people with chronic cardiovascular, respiratory and kidney diseases; Increasing incidence and spread of infectious diseases transmitted through water and food; Increased incidence of vector-borne diseases.	• Reduced labour activity, including among migrant workers and reduced economic output; • Absent school days (due to increased morbidity); • Increased burden of diseases and conditions, including allergic diseases; • Increased cost in healthcare of people, especially vulnerable groups; • Increased mental and behavioural disorders due to stress; • Reduced access to food and rising prices due to reduced agricultural productivity; • Population displacement.
Flood	Increased number of deaths and injuries; Increased number of waterborne diseases.	
Droughts	Affecting food security and exacerbating malnutrition and malnutrition; Increasing incidence and spread of infectious diseases; transmitted through water and food.	
Low temperatures and cold waves	Increased incidence of acute respiratory diseases and exacerbation of chronic respiratory diseases; Increased incidence of hypothermia and frostbite, especially among homeless people and the elderly; Increased trauma from falls due to frost; Reduced access to healthcare due to road blockages during heavy snowfall.	

TRANSPORT		
High temperatures and heat waves	Changes in pavement integrity, e.g. softening and migration of liquid asphalt, furrows formed by vehicle wheels; Bridge expansion/deformation; Deformation of railway tracks; Damage to airport runways ; Overheating of vehicles and damage to engines or overheating of equipment (e.g. engine ventilation, air conditioning); Reduced life cycle of asphalt road surfaces; Degradation of runways and runway foundations; Reduced life cycle of paved surfaces and transport goods;	• Accelerated deterioration of transport infrastructure; • Restriction of transportation of heavy loads (affecting the revenues of transport companies); Speed limits; • Increased fuel consumption and higher emissions; • Limitation of construction activity periods; • Increased capital investment costs and costs of operating and maintaining transmission systems; • Increased indirect costs for public and private transport users, as well as road infrastructure charges.
Heavy rainfall and flooding	Flooding of land/ship/rail infrastructure; Damage to transport and cargo infrastructure; Collapse of bridges; Flooding of underground; Frequent landslides; Increased delays due to weather conditions; Increased traffic disruption; Disruption of construction activities; Disruption of maintenance and safety operations.	• Deteriorated transport infrastructure and restricted movement, which could negatively affect the delivery of material aid and assistance to the displaced population; • Low revenues from transport activities; • Interruptions in the supply of goods; • Increased costs for maintenance and operation of transport; • Increased costs for transport services; • Rural communities could be isolated from the rest of the country.
Low rainfall	Low humidity of the caldera, especially in spring and autumn; Restricted development of river transport.	• Reduced vessel circulation; • Increased operational costs; • The need for additional engineering work.
Frequent extreme winds	Damage to infrastructure on roads, railways, pipelines, ports, airports; Damage to cable bridges, signs, railway signs, overhead cables; Disturbance of safety of means of transport.	• Suspension and interruption of transport services; • Disruption of the commercial activity of transport operators, affecting the revenues of transport companies; • Increased infrastructure maintenance costs;

WATER		
Increased annual temperatures **(Effect: warmer waters)**	LowerO-2 level in water pools (mainly in lakes in summer); Increased ammonia concentration; Increased algae bloom; Loss of temperature-dependent freshwater organism species; Replacement of native aquatic species by invasive species; Increased levels of pathogens in water; Disruption of the spawning season; Increased evaporation.	• Reduced water availability; • The cost of drinking water increases (treatment of drinking water imposes additional costs); • Ecosystem services are affected; • Human health affected; • Recreation areas (tourism) are affected; • Drying up small rivers and ponds.
	Decrease in surface flow; Decrease in annual runoff; Groundwater lowering; Reduced water availability in summer.	• Vegetation(s) affected due to low groundwater level; • Drying shallow wells; • Soil erosion; • Clogging rivers and ponds; • Contamination of surface waters with pollutants due to runoff caused by heavy rainfall competition among water users.
Extreme weather events: spring floods / summer floods	Deterioration of social infrastructure; Pollution of ponds/rivers (chemical, bacteriological, physical pollution); Clogging of rivers, ponds, reservoirs.	• Damage to water supply and irrigation infrastructure; • Loss of human and animal life, material damage; • Damage to agricultural land and destruction of crops; • Health problems caused by waterborne diseases; • Rescue costs; • Population displacement / forced migration.
Extreme weather events: droughts	Drying up of rivers; Groundwater lowering.	• Shortage of drinking water for humans and animals; • Loss of harvests; • Remedial/mitigation costs; • Migration to identify sources of income.

Annex 2 Documents and materials on climate change, impacts, vulnerabilities and adaptive capacities of the most vulnerable groups

The table summarises and describes the documents and materials related to climate change risk assessment and policy in Moldova, with a focus on climate change adaptation and the factors affecting the social and economic conditions of the most vulnerable groups. The documents are assessed for their level of integration of gender and climate aspects.

*Gender inclusion:

"-" – gender is not addressed;

● – gender aspects are mentioned;

●● – gender aspects are discussed;

●●● – gender is the main focus of the document

**Climate Change (CC) inclusion:

"-" – CC is not addressed;

● – CC aspects are mentioned;

●● – CC aspects are discussed;

●●● – CC is the main focus of the document

Document / Data set	Climate change addressed	Vulnerable groups / gender / vulnerability factors addressed	Gender inclusion*	Climate Change inclusion**
International Documents and Programs				
UNFCCC Paris Agreement and related documents	Key international policy documents on climate change defining directions on national policies and setting global goals.	• Climate vulnerability is considered as human right issue; • Necessity of support and involvement of the vulnerable groups.	●	●●●
Lima Work Program on Gender (LWPG) and Gender Action Plan (GAP) and working programs	Necessity of integration between gender and CC Call for international and national efforts; Importance of capacity-building, impact assessment and finance.	5 priority areas of action for streamlining CC and gender issues.	●●●	●●●
The 2030 Agenda for Sustainable Development	SDG 13 Climate – priorities and targets for CC mitigation and adaptation	SDG 1 – No poverty, SDG 2 – Zero Hunger, SDG 3 – Good Health and Wellbeing, SDG 5 – Gender Equality, SDG 6 – Water and Sanitation, SDG 7 – Affordable and Clean Energy, SDG 8 – Work and Economic Growth, SDG 10 – Reduced Inequalities, SDG 16 – Peace, Justice, and Strong Institutions.	●●	●●

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)[7]	CC are not directly addressed; can be considered in the context of well-being.	Basis for realising equality between women and men through ensuring women's equal access to, and equal opportunities in, political and public life (e.g. the right to vote, education, health and employment and others).	🔴🔴🔴	-
UN Convention on the Rights of the Child (UN-CRC)[8]	CC are not directly addressed; can be considered in the context of well-being.	Basis for realising children's rights related to: survival and development, adequate living conditions, health care, water quality, food, safe environment, education and others.	-	-
UNDP Gender Equality Strategy[9]	CC are directly addressed e.g. in the context of Resilience and Environment, specifically mentioned: • Implementing gender equality commitments and climate actions and plans; • Climate finance for gender equality	6 priority areas: Poverty and Inequality; Governance; Resilience; Environment; Energy; Gender equality.	🔴🔴🔴	🟢🟢
GCF Gender Policy and Gender Action Plan 2020-2023	Directly addresses CC; Supports implementation of UNFCCC, PA and related document.	• Recognizes the importance of gender considerations in terms of impact and access to climate funding; sets up requirements for partners and grantees; • 5 priority areas: Governance; Competencies and capacity development; Resource allocation, accessibility and budgeting; Operational procedures; Knowledge generation and communications.	🔴🔴🔴	🟢🟢🟢
National Data Sources and Statistics				
State Hydro-meteorological Service web-site[10]	Weather conditions; Meteo and hydrological data and observations; Short- and medium term (month, season) observations and forecasts; Information on Moldova climate (long-term observation); Annual agro-meteo forecasts; Weather risk warnings; Hydrological risks (floods) warning; Risk of environmental (air) pollution; List of paid services.	No specific information on the impacts to vulnerable groups.	-	🟢🟢🟢

7 United Nations (1979), Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).

8 United Nations (1989), *Convention on the Rights of the Child*, https://treaties.un.org/doc/Treaties/1990/09/19900902%2003-14%20AM/Ch_IV_11p.pdf

9 https://genderequalitystrategy.undp.org

10 http://www.meteo.md/index.php/ru

Climate change Moldova	Climate change projections and scenarios for Moldova; Information about climate change international and national organisations, relevant documents.	No specific information on the impacts to vulnerable groups.	-	●●●
Climate Atlas of Moldova	GIS of climate parameters and trends in Moldova; Long-term climate observation and characteristics (maps); Climate change scenarios (maps) Impacts of climate change;	No specific information on the impacts to vulnerable groups.	-	●●●
National Bureau of Statistics NBS[11]	National data on Environment, Meteorological parameters and Climate.	National data on socio-economic indicators, including region, social and demographic groups and economy sectors.	●	●
Gender Pulse NBS[12]	CC is not mentioned.	Dedicated section of NBS portal on gender statistics Demography, income, education, participation in decision-making and other parameters.	●●●	-
An indicator set to monitor the National Disability Inclusion Strategy 2017-2021[13]	CC is not mentioned.	Need for gender disaggregated indicators are mentioned.	●	
Statistical Yearbook of the Republic of Moldova[14]	Main meteorological parameters – temperature, precipitation; Environmental and land-use parameters.	• Socio-economic indicators: demography, income, dwellings and unities, education, social protection, healthcare, sectoral development data, investment, technology, international trade, finance; • Several indicators are gender disaggregated at the national level.	●●	●●
Sectoral agencies data and reports (Environmental Agency, Apele Moldovei, Moldsilva, GIES, Transport Agency, etc.)	Statistic and reporting collected by sectoral agencies on relevant indicators reflecting climate-related impacts and loss/damage.	Statistic and reporting collected by sectoral agencies on relevant indicators reflecting socio-economic indicators, some gender disaggregated .	●	●
LPAs data and reports	Statistic and reporting collected by LPAs reflecting climate-related impacts and loss/damage.	Statistic and reporting collected by sectoral agencies on relevant indicators reflecting socio-economic indicators, some gender disaggregated.	●	●

[11] National Bureau of Statictics https://statistica.gov.md/ru

[12] National Bureau of Statictics. Gender Pulse https://genderpulse.md/en

[13] NDA, 2018. An indicator set to monitor the National Disability Inclusion Strategy 2017-2021. Retrieved from: https://nda.ie/uploads/publications/An-Indicator-Set-to-Monitor-the-NDIS-2017-2021.pdf

[14] Статистический ежегодник Республики Молдова, 2020-2022 г. Available at: https://statistica.gov.md/ru/moldova-v-cifrax-9877_59483.html

Climate Impacts and Exposure				
National Climate Change Adaptation Programme until 2030 and Action Plan (NCCAP and NAP)	Key national CC adaptation planning documents Current and future climate risks; Impacts on priority sectors – agriculture, water resources, health, forestry, energy, transport and road infrastructure); Adaptation planning and responsible authorities for priority sectors; Adaptation plans and actions, division of responsibilities, cost estimation.	• NCCAP contain information on the importance on integrating interests of vulnerable groups and gender issues; • NAP directly address the need for vulnerable groups inclusion through mainstreaming and targeted actions, with specific mention of gender and migration issues.	🔴🔴	🟢🟢🟢
Fifth National Communication of the Republic of Moldova under the UNFCCC[15]	National assessment of climate vulnerabilities and impacts; Climate trends and scenarios– past and present observations of the weather and climate characteristics (temperature, precipitation, wind, extreme events, etc.); Climate impacts for regions and sectors Integrated indices of CC exposure, sensitivity and per regions; Adaptive capacities and barriers assessment; Data and information.	• Impacts on vulnerable groups are mentioned, impact assessment and indicators are not disaggregated for specific groups / gender; • Gender issues are integrated into proposition for adaptive capacities and actions, including national policies and sectors; • Analysis on mainstreaming CC into gender and economic development policies; • Specific chapter on gender aspects of CC policies for sectors	🔴🔴	🟢🟢🟢
Vulnerability Assessment and Climate Change Impacts in the Republic of Moldova: Researches, Studies, Solutions (2018)[16]	Detailed analysis of CC impacts for Moldova Scenarios and trends; Impact and risk assessment for sectors: Agriculture and agro-climate conditions, Water recourses, Health, Forestry.	No specific mention of vulnerable groups or gender.	-	🟢🟢🟢
Vulnerabilities, Risks and Opportunities				
Summary Vulnerability Study "Taxonomy and possible decentralization policy implications for vulnerable groups in Moldova" (2021)[17]	CC is not mentioned.	• Criteria of social vulnerability; • Overview of the main vulnerable groups in Moldova; • Impacts of decentralisation and local actions to work with vulnerable groups (arguments for more active local.	🔴🔴🔴	-

[15] Fifth National Communication of the Republic of Moldova : Developed to be reported to the United Nations Framework Convention on Climate Change / coordinators: Suzanne Lekoyiet, Raisa Leon ; synthesis team: Marius Țaranu, Mihai Tîrșu, Lilia Țaranu, Dorin Dușciac, Lidia Trescilo, Alecu Reniță ; [translator: Svetlana Chirita] ; Public Institution "Environmental Projects Implementation Office", Environment Agency of the Republic of Moldova, United Nations Environment Programme. – Chisinau : S. n., 2023 (Bons Offices). – 431 p. : fig., tab.

[16] Vulnerability Assessment and Climate Change Impacts in the Republic of Moldova: Researches, Studies, Solutions / Lilia Taranu, Dumitru Deveatii, Lidia Trescilo [et al.] ; ed.: Vasile Scorpan, Marius Țaranu; Climate Change Office, Min. of Agriculture, Regional Development and Environment of the Rep. of Moldova, United Nations Environment Programme. – Chisinau: S. n., 2018 (Tipogr. "Bons Offices"). – 352 p

[17] https://www.undp.org/sites/g/files/zskgke326/files/migration/md/taxonomia-eng.pdfv

Women				
National gender profile of agriculture and rural livelihoods – The Republic of Moldova, FAO.[18]	CC adaptation and resilience is mentioned as one of the risk factors; Several areas of vulnerability assessment for rural women can be related to CC (droughts, natural hazards, etc.).	• Detailed analysis of the risks, risk factors and vulnerabilities to women in rural areas; • Analysis of the national gender statistics	●●●	●
Country Gender Profile. Republic of Moldova. EU4Gender project. (NIRAS, 2021)[19]	CC is mentioned as an area of interest; current lack of studies and information admitted.	• Detailed analysis of the current situation and statistics on gender and age groups, including demographic data, health, life expectancy, income, occupation and others; • Information for sectors of economy	●●●	●
Children and Youth				
Child Centred Climate Vulnerability Assessment, Republic of Moldova, (UNICEF, 2017)[20]	CC trends and impacts in Moldova; Detailed analysis of the impacts on children and youth, including for regions and sectors; Policy recommendations;	• Analysis of vulnerability factors for children and youth, including per regions and sectors; • Detailed analysis of the impacts on children and youth, including for regions and sectors.	●	●●●
A Climate Landscape Analysis for Children in Moldova (UNICEF, 2023)[21]	CC trends and impacts in Moldova; Detailed analysis of the impacts on children and youth, including for regions and sectors; Policy recommendations.	• Analysis of vulnerability factors and impacts for children and youth, including per regions and sectors.	●	●●●
Elderly people				
UN Expert recommendation on human rights by older persons (2023)[22]	CC is not mentioned.	• Analysis of vulnerability factors for older people in Moldova; • Challenges and policy recommendations.	●	-

[18] FAO. 2022. National gender profile of agriculture and rural livelihoods – The Republic of Moldova. Country Gender Assessment Series – Europe and Central Asia. Budapest. https://doi.org/10.4060/cb9555en

[19] NIRAS 2021. Country Gender Profile. Republic of Moldova. EU4Gender project

[20] UNICEF, 2017. Child Centred Climate Vulnerability Assessment, Republic of Moldova. UNICEF. Available at: https://www.unicef.org/moldova/media/1261/file/Child-Centered-Climate-Vulnerability-assesment.pdf

[21] UNICEF, 2023. A Climate Landscape Analysis for Children in Moldova. UNICEF. Available at: https://www.unicef.org/moldova/media/11811/file/A%20CLIMATE%20LANDSCAPE%20ANALYSIS%20FOR%20CHILDREN%20IN%20MOLDOVA.pdf

[22] Claudia Mahler, 2023. Preliminary findings and recommendations of the United Nations Independent Expert on the enjoyment of all human rights by older persons, Dr. Claudia Mahler, at the end of her official visit to the Republic of Moldova. https://www.ohchr.org/sites/default/files/documents/issues/olderpersons/statements/20231115-eom-statement-moldova-ie-older-en.pdf

A human rights-based approach to the economic security of older people in Moldova, World Bank[23]	CC is not mentioned.	• Analysis of vulnerability factors for older people in Moldova: physical and mental health, income, employment; • Demographic patterns; • Challenges and policy recommendations for healthy, secure and productive aging.	🔴	-
Aging in Moldova: A Country With Orphan Older Adults[24]	CC is not mentioned.	Analysis of vulnerability factors for older people in Moldova.	🔴	-
People with disabilities				
Situation analysis it the rights of persons with disabilities in Moldova. Country brief[25]	CC is mentioned as important but not addressed due to lack information and data.	Necessity to address gender aspects and suggestions are integrated.	🔴🔴	🟢
Adaptive Capacities and Capacity Building				
National policies and programs				
• Climate change				
The National Climate Adaptation Program until 2030	See description above.	See description above.	🔴🔴	🟢🟢🟢
Updated Nationally Determined Contribution of the Republic of Moldova[26]	National strategies for GHG emission reduction (mitigation); Current and future climate risks; Impacts on priority sectors – agriculture, water resources, health, forestry, energy, transport and road infrastructure); Vision and objectives of national climate adaptation; Adaptation plans and actions.	• Mentions risks and needs for vulnerable groups and gender issues; • Integrates risks for vulnerable groups and gender aspects in plans and decisions;	🔴🔴	🟢🟢🟢

[23] Holla,Alaka; Brown,Bethany; Nguyen,Tu Chi; Dávalos,María Eugenia; Smolyar,Julia; Seitz,William Hutchins. A human rights-based approach to the economic security of older people in Moldova : A Human Rights-Based Approach for the Economic Security of the Elderly in Moldova (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/806881510349769013/A-Human-Rights-Based-Approach-for-the-Economic-Security-of-the-Elderly-in-Moldova

[24] Tatiana Cojocari, Radu Cupcea, Aging in Moldova: A Country With Orphan Older Adults, *The Gerontologist*, Volume 58, Issue 5, October 2018, Pages 797–804, https://doi.org/10.1093/geront/gny055

[25] UN PRPD, 2021. Situation analysis it the rights of persons with disabilities in Moldova. Country brief. Retrieved from: https://www.undp.org/sites/g/files/zskgke326/files/2023-02/Situation_Analysis_CountryBrief_Moldova_0.pdf

[26] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Republic%20of%20Moldova%20First/MD_Updated_NDC_final_version_EN.pdf

The Governmental Decision 444 on establishing a mechanism for coordination and activities in the area of climate change[27]	Coordination on national activities on CCA planning and implementation; Climate Change Coordinating Mechanism (CCCM) for coordinating information and activities, data collection and transfer; Defining responsibilities of sectoral ministries, agencies and LPAs for climate adaptation planning and management; Defining responsibility of sectoral authorities for collecting and provision of CCA and DRR information.	• Promotes cross-sectoral coordination; • Addresses gender issues and vulnerable groups; • Establishes the National Committee for Climate Change involving representatives of sectoral ministries, gender and social organisations.	🔴🔴	🟢🟢🟢
• Economic development and social policies, strategies and supporting documents				
National Development Strategy "Moldova 2030"[28]	CC is directly mentioned as a development context and related objectives; CC is addressed in Objective "Supporting right for save and healthy environment;" CC adaptation does not reflect in indicators.	• Defines socio-economic baselines and targets; • Defines vulnerable groups, risk factors, direction of actions and monitoring indicators for all Objectives, including "Supporting right for save and healthy environment".	🔴🔴	🟢🟢
EU - Moldova Association Agreement and Association Agenda (2021-2027)[29]	Requires harmonisation of legislation, standards and practices between EU and Moldova, including the objective Environment and Climate Change.	Requires harmonisation of legislation, standards and practices between EU and Moldova, including gender equality, equal treatment, rights of children and human rights.	🔴🔴	🟢🟢
United Nation Sustainable Development Cooperation Framework. The Republic of Moldova 2023-2027[30]	CC and environment directly addressed as respective SDGs and as cross-cutting issue; Priority area: Green Development, Sustainable Communities and Disaster and Climate Resilience.	• Socio-economic interests related to the status of vulnerable groups and gender issues are addressed as respective SDGs and as cross-cutting issue; • Priority area: Just and Inclusive Institutions and Equal Opportunities for Human Development.	🔴🔴	🟢🟢
Nationalization of indicators for Sustainable Development Goals (SDG)[31]	National indicators on all SDGs including SDG13.	• National indicators on all SDGs; • Gender mainstreaming of SDG indicators (does not include CC and SDG13).	🔴🔴	🟢🟢

27 The Governmental Decision 444 from 01.07.2020 on establishing a mechanism for coordination and activities in the area of climate change. Available at: https://www.legis.md/cautare/getResults?doc_id=122314&lang=ru

28 GoM 2028. Directive No1083 On a project of the Law on acceptance of the National Development "Strategy Moldova 2030" Available at: https://faolex.fao.org/docs/pdf/mol191490.pdf

29 European Comission Decision COM(2022) 69 final 2022/0049(NLE) Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=COM:2022:69:FIN

30 UN Moldova 2022. Nationalization of indicators for Sustainable Development Goals (SDG) Available at: https://unsdg.un.org/sites/default/files/2023-11/Moldova_Cooperation_Framework_%202023_2027%20f.pdf

31 GoM, UN Moldova, 2017. Nationalization of Sustainable Development Goals (SDG) Available at: https://moldova.un.org/en/23602-nationalization-indicators-sdg

• Social and gender policies				
Law on Ensuring Equality (2012)[32]	CC is not mentioned.	• Prevents and combats "discrimination and ensure equality of all persons in Moldova in political, economic, social, cultural and other spheres of life, irrespective of race, colour, nationality, ethnic origin, language, religion or belief, sex, age, disability, opinion, political affiliation or any other similar criteria."	●●	-
National Human Rights Action Plan for 2018–2022[33]	CC is not mentioned.	• Promotes human right approach to social and economic policy and planning; • Promotes gender rights, rights of children, elderly, people with disability; • Action plans.	●●	-
Law on Ensuring Equal Opportunities for Women and Men (2006, amended in 2023)[34]	CC is not mentioned.	Promote gender equity and equal opportunities between women and men in all spheres.	●●●	-
Strategy on Ensuring Equality between Women and Men in the Republic of Moldova for 2017–2021 and its Action Plan [35]	Mentions CC as a development problem and risk for gender equality; Promoted gender mainstreaming into CC policies and actions.	Promote gender mainstreaming into development and sectoral policies, including CC policies and actions.	●●●	●
The Action Plan on the implementation of the National Strategy for the Development of **Youth** for 2020 and implementation evaluation[36]	CC is not specifically addressed.	Priorities and need for youth development: Youth participation, Services for young people, Economic opportunities for young people, Strengthening youth sector.	●	-

32 Moldova: Law No. 121 of 2012 on Equality [Republic of Moldova], 25 May 2012, Available at: https://www.refworld.org/docid/55099c374.html [accessed 17 December 2023]

33 National Human Rights Action Plan for 2018–2022 Availiable at: https://www.coe.int/t/commissioner/source/NAP/Moldova-National-Action-Plan-on-Human-Rights-2018-2022.pdf

34 Republica Moldova PARLAMENTUL LEGE Nr. LP5/2006 din 09.02.2006 cu privire la asigurarea egalit ii de anse ntre femei i b rba i. Available at: https://faolex.fao.org/docs/pdf/mol221239.pdfv

35 Government Decision no. 259 of 28.04.2017 approving the Strategy for ensuring equality between women and men in the Republic of Moldova for 2017-2021 and the Action Plan on its implementation, Official Gazette no. 171-180 of 02.06.2017, art. 410, <https://www.legis.md/cautare/getResults?doc_id=99875&lang=ro>

36 Alexei Buzu, Rodica Ivașcu, Natalia Covrig, Igor Ciurea, Florin Gîsca, 2021 Final Evaluation Report of the National Strategy for Youth Sector Development 2020. Available at https://mecc.gov.md/sites/default/files/final_evaluation_report_of_the_national_strategy_for_youth_sector_development_2020.pdfv

Government Programme for Active and Healthy **Ageing** for 2023-2027	CC is not specifically addressed.			-
National Programme for the Social Inclusion of Persons with **Disabilities** for 2017-2022[37]	CC is not specifically addressed.			-
• Sectoral and Regional strategies and plans				
Sustainable Energy and Climate Action Plans (SEACAPs)[38]	CC is directly address by SEACAPs with stronger focus on climate mitigation; Climate risk assessment and adaptation is less developed.	Several SEACAPs mention vulnerable groups, however, more detailed assessment is needed.	🔴	🟢🟢🟢
• Institutional and decision-making practices				
The Governmental Decision 444 on establishing a mechanism for coordination and activities in the area of climate change[39]	See above.	See above.	🔴🔴	🟢🟢🟢
Guidelines on Climate Change Vulnerability and Risk Assessments for Moldova: Sector-level[40]	Principles of CC risk and vulnerability assessment Guidance for Conducting Climate Change Vulnerability and Risk Assessments (CCVRA) at the Sector Level and Local Level.	Addresses the need for inclusion of vulnerable groups and gender aspects.	🔴	🟢🟢🟢
• Access to finance				
Republic of Moldova. Moldova Climate Adaptation Investment Planning Technical Assistance[41]	Assessment of climate risks and vulnerabilities for sectors of economy in Moldova; Assessment of financial loss and cost of inaction for climate impacts; Financing for climate adaptation .	Gender and social dimension of climate impacts.	🔴	🟢🟢🟢

37 https://social.desa.un.org/sites/default/files/inline-files/Republic%20of%20Moldova_0.pdf

38 http://www.com-east.eu/en/about-us/covenant-of-mayors-east/moldova/

39 The Governmental Decision 444 from 01.07.2020 on establishing a mechanism for coordination and activities in the area of climate change. Available at: https://www.legis.md/cautare/getResults?doc_id=122314&lang=ru

40 UNDP Moldova 2023. Guidelines on Climate Change Vulnerability and Risk Assessments for Moldova: Sector-level. Prepared by: Clare Bastable

41 World Bank, 2016. Republic of Moldova. Moldova Climate Adaptation Investment Planning Technical Assistance. Available at: https://documents1.worldbank.org/curated/en/469311500273762091/pdf/ACS18562-WP-P154652-PUBLIC-MoldovaClimateAdaptationInvestmentPlanning.pdf

Methodological Guidelines on Climate Tagging of the National Public Budget. Support Document for the Mainstreaming of Climate Change Adaptation into the National Budget[42]	Methodological Guidance for technical planners to systematically identify and prioritize climate related programs, activities and projects in its sectoral budget proposals.	Vulnerable groups and gender aspects are not directly addressed.	-	🟢🟢🟢
Recommendations on gender-responsive budgeting in the RoM[43] and analysis of gender mainstreaming in public budget[44] [45]				
• Capacity building, educational and communicational programs				
Integrating Climate Change into Moldova´s Plans, Policies and Strategies: A simplified User´s Guide[46]	Theory and methods of climate adaptation planning; Methods for vulnerability and risk assessment Stakeholder engagement; Climate adaptation planning, developing and prioritisation of actions; Monitoring and evaluation; Overview of climate impacts on different sectors.	• Vulnerable groups and gender aspects are not directly discussed; • Vulnerable groups addressed as part of stakeholder analysis.	🔴	🟢🟢🟢
Gender equality and climate change in the field of **transport**[47]	Impacts of CC for the sector.	• Gender aspects of CC for the sector – vulnerabilities and current status; • Recommendation for gender equality actions for the sector.	🔴🔴🔴	🟢🟢🟢

42 Yovel, Ephrat. (2016). Methodological Guidelines on Climate Tagging of the National Public Budget. Support Document for the Mainstreaming of Climate Change Adaptation into the National Budget. Project: Supporting Moldova´s National Climate Change Adaptation Planning Process. Climate Change Office, UNDP: Chisinau Available at: https://www.adaptation-undp.org/sites/default/files/resources/methodological_guidelines_on_climate_tagging_of_the_national_public_budget.pdf

43 Petroia, Andrei Constantin, 2014 On the Introduction of gender-responsive budgeting into the budgetary process in the Republic of Moldova. Analele ASEM, ediția a XII-a. Nr.1. Available at SSRN: https://ibn.idsi.md/sites/default/files/imag_file/On%20the%20introduction%20of%20gender%20responsive%20budgeting%20into%20the%20budgetary%20process%20in%20the%20RM.pdf

44 Petroia, Andrei Constantin, Gender Analysis of Social Security and Welfare Public Policies in the Republic of Moldova (February 27, 2023). Analele ASEM, ediția a XII-a. Nr.1. Available at SSRN: https://ssrn.com/abstract=4371914 or http://dx.doi.org/10.2139/ssrn.4371914

45 Petroia, Andrei Constantin, Gender analysis of budget expenditures in the Republic of Moldova (August 5, 2021). Available at SSRN: https://ssrn.com/abstract=3899904 or http://dx.doi.org/10.2139/ssrn.3899904

46 Yovel, E and Santos, S.T. (2016). Integrating Climate Change into Moldova´s Plans, Policies and Strategies: A simplified User´s Guide. Project: Supporting Moldova´s National Climate Change Adaptation Planning Process. Climate Change Office, UNDP: Chisinau. Available at:

47 https://www.adaptation-undp.org/sites/default/files/resources/bodrug-lungu_leaflet_gen_transport_2015.pdf

Gender equality and climate change in the field of **forestry**[48]	Impacts of CC for the sector.	• Gender aspects of CC for the sector – vulnerabilities and current status; • Recommendation for gender equality actions for the sector.	🔴🔴🔴	🟢🟢🟢
Gender equality and climate change in the field of **health**[49]	Impacts of CC for the sector.	• Gender aspects of CC for the sector – vulnerabilities and current status; • Recommendation for gender equality actions for the sector.	🔴🔴🔴	🟢🟢🟢
Gender equality and climate change in the field of energy[50]	Impacts of CC for the sector.	• Gender aspects of CC for the sector – vulnerabilities and current status; • Recommendation for gender equality actions for the sector.	🔴🔴🔴	🟢🟢🟢
Strengthening Moldova's Disaster Risk Management and Climate Resilience, World Bank (2020)[51]	Analysis of the existing systems of DRM in Moldova, including CC-related risks; Available financing mechanisms for risk reduction; Measures for advancing DRM and risk reduction.	Few mentions of vulnerable groups, no specific suggestions.	-	🟢🟢
FAO. 2023. Comprehensive analysis of the **disaster risk reduction** system for the agriculture sector in the (IPCC, 2014)Republic of Moldova.[52]	Assessment of disaster risks include CC-related risks; Links to the NAP-2.	Gender and social vulnerabilities are mentioned.	🔴	🟢
Institutional capacity assessment for CAA in Moldova[53].	Analysis of capacities of national sectoral institutions for developing and implementing climate adaptation responses and plans. Action plan for capacity building for five sectors.	Gender and social vulnerabilities are mentioned.	🔴	🟢🟢🟢
Educational programmes for DRR officers	Educational programmes for DRR offices addressing climate-related disasters and climate change.	No information.	-	🟢🟢🟢

[48] https://www.adaptation-undp.org/sites/default/files/resources/bodrug-lungu_leaflet_gen_silvicultura_2015.pdf

[49] https://www.adaptation-undp.org/sites/default/files/resources/bodrug-lungu_leaflet_gen_sanatatea_2015.pdf

[50] https://www.adaptation-undp.org/sites/default/files/resources/bodrug-lungu_leaflet_gen_energia_2015.pdf

[51] Baeumler,Axel E. N.; Kerblat,Yann; Ionascu,Alexei; Kull,Daniel Werner; Gobjila,Anatol; Kindap,Ahmet. Strengthening Moldova's Disaster Risk Management and Climate Resilience : Facing Current Issues and Future Challenges (English). Washington, D.C. : World Bank Group. http://documents.worldbank.org/curated/en/767811616046683526/Strengthening-Moldova-s-Disaster-Risk-Management-and-Climate-Resilience-Facing-Current-Issues-and-Future-Challenges

[52] FAO. 2023. Comprehensive analysis of the disaster risk reduction system for the agriculture sector in the Republic of Moldova. Budapest. https://doi.org/10.4060/cc4759en

[53] Bettinger K. (2021), Institutional capacity assessment. Final draft report. UNDP Moldova NAP-2 project report.

Climate Box[54]	Educational support for students and teachers; Educational materials, tests and games; Methodological guidance for teachers; Wall map of the effects of climate change; Poster with guidance for reducing carbon footprint.	Aimed at vulnerable groups education.	●●	●●●
• Monitoring and evaluation				
Monitoring and evaluation framework for the national adaptation plan in the Republic of Moldova	Analysis and selection of indicators for implementation of the NAP in Moldova – macro, meso and micro level; impacts and risks, adaptation actions and results, adaptation process; sectors; Roadmap for operationalization of the CCA M&E framework.	Gender and social vulnerabilities are mentioned.	●	●●●
• Relevant projects and case studies				
Sustainable and resilient communities through women empowerment. Project[55]	CC is directly addressed as risk and resilience factor.	• Promoting sustainable climate resilient practices for rural economy; • Building capacities for NGOs and LPAs to promote climate resilience and gender inclusiveness; • Small grant programmes for women; • Education and capacity development programme for women in climate-resilient practices, business and gender aspects.	●●●	●●●

[54] Climate Box. Educational resource. Available at: https://www.environment.md/en/climate_box

[55] https://info.undp.org/docs/pdc/Documents/MDA/00118991_ProDoc_ResComWomEmp.pdf

CPIU IFAD programmes on rural resilience and sustainable agriculture[56]	CC is directly addressed as risk and resilience factor.	• Series of supporting programmes (IFAD 4-8) for farmers for development and implementing sustainable agriculture practices and rural resilience, including climate adaptation; • Guidelines for adaptation techniques and practices for agriculture; • Financial support (grant) for farmers supporting climate adaptation e.g. irrigation, conservation agriculture, agroforestry; • Education programmes and trainings for farmers; • Video-tutorials for farmers.	🔴🔴🔴	🟢🟢🟢
Women Entrepreneurship Support Programme[57]	CC is not directly addressed.	Funding and capacity building support for women-entrepreneurs, in the areas of: STEM, education services, food business, care business, consultancy and support.	🔴🔴🔴	-
EU4 Gender Equality Reform Helpdesk[58]	CC is not directly addressed.	• Consultation and education support for women; • Technical and advisory assistance; Capacity building, training for ministries and NGO; research and analysis; regional activities.	🔴🔴🔴	-

[56] CPIU CPIU IFAD website: http://www.ucipifad.md/en/

[57] https://www.oda.md/ro/media-page/presa/comunicate-de-presa/programul-de-sustinere-a-antreprenoriatului-feminin-prezentat-la-antreprenor-expo

[58] https://euneighbourseast.eu/news/publications/eu4gender-equality-reform-helpdesks-support-2021-2022-for-moldova/

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