



European Union
Civil Protection

Union Civil Protection Mechanism -
Peer Review Programme
for disaster risk management



Peer Review report

Republic of Moldova 2023

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Figure 1: The peer review team, representatives of the General Inspectorate for Emergency Situations at the national level and for the Ștefan Vodă fire station. From left to right: Karl Topping (peer), Monica Eberle (CMCC), Letizia Monteleone (CMCC), Elisabeth Rouvier (DG ECHO), Giulio Zuccaro (University of Naples Federico II), Veronica Casartelli (CMCC), Jaroslav Mysiak (CMCC), Alexandr Tatarov (GIES), Judith Sørensen (DG ECHO), Adam Wiśniewski (peer), Thorsten Ridder (peer), Laurent Alfonso (peer), Uldis Kēvers (peer), Silviu Stoian (peer), Oleg Topor (GIES), Cristina Brailescu (DG ECHO), Ghenadie Cuciuc (GIES), Sergiu Chihai (GIES).

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Figure 2: The peer review team and representatives of the General Department for Emergency Situations. From left to right: Chirill Mura (GIES), Cristina Brailescu (DG ECHO), Thorsten Ridder (peer), Uldis Kevers (peer), Adam Wiśniewski (peer), Laurent Alfonso (peer), Karl Topping (peer), Nadejda Chetraru (GIES), Judith Sørensen (DG ECHO), Monica Eberle (CMCC), Veronica Casartelli (CMCC), Silviu Stoian (peer), Letizia Monteleone (CMCC).

GIES requested to undergo a peer review on disaster risk management in the Republic of Moldova within the UCPM Peer Review Programme 2020-2024. This is a comprehensive review, focusing on all the thematic areas of disaster risk management.

The infographic below highlights the thematic areas (hexagons) and topics (wedges) of the Peer Review Assessment Framework (PRAF) covered in this report.

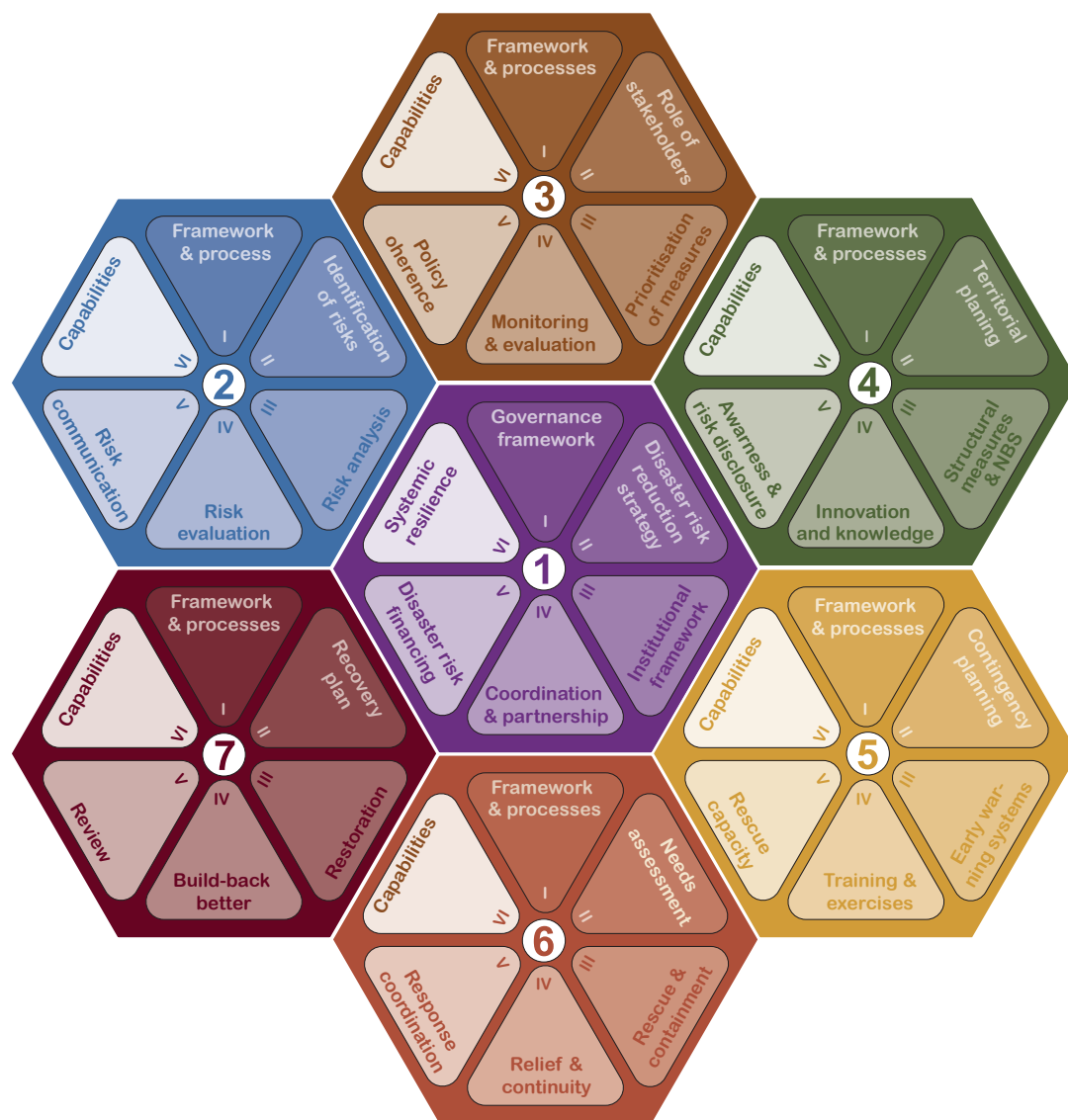


Figure 3: Peer Review Assessment Framework.



Executive summary

The Moldovan civil protection system is a hierarchical organisation mainly focused on emergency response, which has proven effective in recent emergencies, such as that of the large influx of refugees from Ukraine, the Covid-19 pandemic, and the current energy crisis.

Building on this, the General Inspectorate for Emergency Situations' (GIES) strong commitment to enhancing disaster resilience by shifting from a disaster management to a disaster risk management (DRM) approach is shown in the *Programme for prevention and management of emergency situations 2022-2025* (hereafter "the Programme"). Actions to develop risk assessments, improve risk prevention and preparedness phases and increase response capabilities across the country are already planned and/or under way thanks to both national and international funding.

Besides improving the overall governance of DRM by increasing the efficiency, transparency, and accountability of the Moldovan civil protection system, GIES pursues the alignment of the country's regulations with the Union Civil Protection Mechanism (UCPM, the Mechanism) framework, in order to join the Mechanism as a Participating State.

Existing strengths and recommendations of the Moldovan DRM system are detailed in the report in seven sections that follow the structure of the [Peer Review Assessment Framework](#): governance of disaster risk reduction, risk assessment, risk management planning, risk prevention, risk preparedness measures, emergency response, recovery and lessons learned.

The key strengths are summarised below:

GOVERNANCE

- Moldova's legislative framework for disaster risk management is mainly focused on the response phase. The **new legislation** being drafted provides an **excellent opportunity** to improve the country's DRM system, align it to the UCPM terminology and fine tune its institutional framework.
- The **National Commission for emergency situations** is well structured, involves all key ministries, and has demonstrated a good level of administrative efficiency during recent emergencies. It provides an excellent opportunity for engaging other DRM stakeholders (such as civil society, the private sector, and research and academia) and building a whole-of-society approach pending the establishment of a National Platform for Disaster Risk Reduction.
- Its **effective collaboration and cooperation with Local Authorities, Civil Society Organisations (CSOs) and citizens** have been shown in recent emergencies, especially during the large influx of refugees fleeing Ukraine due to Russian war of aggression, providing excellent opportunities to be formalised and further exploited across the whole Disaster Risk Management Cycle (DRMC).

RISK ASSESSMENT

- Although an overall **risk assessment process** is still not in place, GIES recognises the strategic importance of identifying, analysing and evaluating risks, as shown by its **commitment to capacity building** activities organised within the *Prevention, Preparedness and Response to natural and man-made disasters in Eastern Partnership countries – phase 3* (PPRD East 3) programme on this topic.
- GIES's statistical office collects, analyses and shares a list of **disaster loss data (DLD)**. Indicators and trends are regularly published on the GIES website and represent a good source of information for developing risk assessments and informing policy-making processes at different levels.
- An effective process for systematic data collection and indicator analysis is currently implemented by the **Ministry of Agriculture and Food Industry** with the frequent support of CSOs, and could be replicated in other sectors.

RISK MANAGEMENT PLANNING

The following strengths are focused on the Programme, addressed in detail during the peer review mission.

- The Programme is a **well-structured planning document** that fulfils all the legislative requirements concerning public policy documents.
- The **self-assessment** included in the Programme identifies areas of improvement in the existing DRM system and provides a strong basis for identifying measures targeted to current needs.
- A law on the structure, contents, drafting and monitoring process of **public policy documents** is in place. Furthermore, a specific office in the Ministry of Finance in charge of its enforcement ensures robustness and consistency in the policy-making process.

RISK PREVENTION

- Moldova has recently recognised the strategic importance of risk prevention. The **Programme identifies prevention actions** mainly focused on risk awareness campaigns and communication activities. The implementation of three regional mobile prevention modules is planned to reach remote areas of the country.
- **Comprehensive risk awareness campaigns** at the national and sub-national levels have been organised and implemented by GIES, which considers these prevention measures key to increasing the resilience of communities.
- Moldova is voluntarily implementing the European Floods Directive (Dir. 2007/60/EC) and has drafted **two Flood Risk Management Plans (FRMPs)** that include a list of budget-allocated structural and non-structural measures, including Nature-Based Solutions. Similarly, the **National Forest Extension and Rehabilitation Program for 2023-2032** is a comprehensive document that includes prevention measures for dealing with wildfire risks.

- The **Security School for young students**, and the **public guide to actions** to be taken in the first 72 hours of a crisis are excellent examples of knowledge dissemination on correct behaviour to be adopted during emergencies.

RISK PREPAREDNESS

- A huge effort is devoted to **implementing early warning systems (EWSs)**, in particular for hydro-meteorological hazards and wildfires, and to developing a **public alerting system** based on cell-broadcast technology.
- Since 2010, GIES has been involved in **several international exercises** and has been able to capitalise on the resulting lessons learned to improve its system.
- The implementation of **international modules currently under development (Urban Search and Rescue - USAR, High-Capacity Pumping - HCP and Ground Forest Fire Fighting Using Vehicles - GFFFV)** will further improve Moldova's response capacities. GIES takes well into account the operational needs of these specific modules and allocates sufficient technical and financial resources for their implementation.
- The establishment of **volunteer fire units supported by the local administration** is crucial to providing timely first response measures to emergencies and promoting disaster risk prevention initiatives at the local level.

EMERGENCY RESPONSE

- The existing legislative framework for emergency response is based on the **principle of subsidiarity**. The **response command and control system is well structured and hierarchical**. As proven by recent events, the National Commission is capable of managing multiple emergency situations, and its collaboration with the Public Health Emergency Extraordinary Commission is efficient, as shown during Covid-19 emergency.
- The establishment of **crisis management centres** to support the Commissions at different territorial levels is an added value for coordinating disaster response activities.
- The **112 number and its three dispatch centres** (Chişinău, Bălţi, Cahul) are well organised and efficient, with a good interoperability and backup system. In Bălţi, all emergency services are integrated in the same dispatch centre, which greatly increases the effectiveness of response operations.
- The **TETRA network** (Terrestrial Trunked Radio - a global land mobile radio open standard for digital trunked radio technology) is highly developed and efficient, covering about 90% of Moldovan territory.
- The existing **collaboration between GIES and the media** in emergency communication is excellent.
- Although the business continuity concept is not developed in the legislation, the **state and mobilisation reserves** are an effective reliance tool for ensuring response operations, as well as supporting the economic and social activities.

- Moldova's DRM system was able to **promptly adapt to the specific needs** of intervention and **cooperate with national and international stakeholders as well as with CSOs in recent emergencies**, as shown by the establishment of the Palanca refugee camp and the temporary bus station.
- Its well-established collaboration with Romania is a strong example of **good cross-border cooperation between neighbouring countries**.
- **The Host Nation Support (HNS) concept** has already been included in the legislation, and Standard Operating Procedures (SOPs) are in place.

RECOVERY AND LESSONS LEARNED

- Although there is still no regulatory framework governing a lessons-learned process, the Moldovan DRM system **has recently improved thanks to a spontaneous and informal review process** conducted on a number of topics, especially with regard to response activities and procedures.

The key recommendations are summarised below:

GOVERNANCE

- The new legislation on DRM should **align its terminology with the UCPM and clarify key definitions** to enable a common understanding of the different DRMC phases and rebalance the current response-focused governance framework in favour of prevention and preparedness.
- **Roles and responsibilities** of key entities and stakeholders in the different phases of the DRMC should be clarified. To ensure sustainability and effectiveness, **excessive fragmentation and frequent changes** should be avoided.
- **The GIES staff needs to be** expanded in number and technical capacities in order to efficiently support Moldova's DRM system.
- The engagement of the **private sector, research and academia, CSOs and the public** should be further promoted to favour the adoption of a whole-of-society approach. Specifically, the linkages with the scientific community should be strengthened to ensure an **evidence-informed governance of Disaster Risk Reduction (DRR)**.
- The **establishment of a permanent National DRR Platform** is recommended to improve the vertical and horizontal collaboration and cooperation among key entities involved in DRM and to facilitate the adoption of a whole-of-society approach.
- **The Sendai Framework for DRR** should be considered as a tool for strengthening Moldovan DRR capacities. Engaging with other countries in the UNDRR - United Nations Office for Disaster Risk Reduction - Regional office for Europe and Central Asia (ROECA) network and with the European Forum for DRR (EFDRR) dialogue process could help in realising its implementation.

- The Programme should be linked to a **strategic high-level document**, drafted in consultation and collaboration with all key DRM stakeholders, with the aim of defining a clear and coherent vision for Moldova's civil protection and DRM system in the years to come.
- A **clear process for allocating funds and budget** should be defined at the government level on a multi-annual basis, based on the needs and priorities identified for each DRMC phase and in accordance with governance responsibilities. A methodology for tracking and recording DRR/DRM budget allocation across the national system should be developed and then replicated at the local level.
- To optimise the use of DRM funds, a **stakeholder and project mapping** is crucial for avoiding activity overlaps in external fundings. It would also be useful to establish a unit/office/department to ensure coordination and communication between actors and to optimise technical and financial efforts. Additionally, new sources of **funding from the private sector** (especially the insurance sector) should be explored.

RISK ASSESSMENT

- It is crucially important to establish an overall risk assessment process and a National Risk Assessment (NRA) for improving the current system. The future **national guidelines on risk assessment developed in the framework of the regional civil protection programme PPRD East 3** provide an opportunity to clarify the methodology, responsibilities and the multiple purposes of these processes across the whole DRMC.
- The **Sendai framework indicators** should be considered while defining the risk assessment analytical process, to ensure an adequate level of consistency in the data and report progress within the Sendai monitor.
- The authorities in charge of conducting risk assessments should allocate **technical, administrative and financial resources** for their implementation and regular revisions. Risk assessments should be considered a basis for identifying key measures, allocating funds in prevention and preparedness, and for developing emergency response plans.
- An in-depth **collaboration** between research entities, academia and GIES could capitalise on the available technical knowledge for risk assessment and DRM.
- It would be highly useful to implement a **GIS platform** (Geographic Information System platform) for collecting and sharing information needed to develop risk assessments and their future results, as well as to stimulate consistent, comparable analyses and collaborations among key institutions at different territorial levels.
- **Climate change and multi-risk considerations** should be included in future risk assessments, as well as **local knowledge and memory** of past events.
- An **overall framework for identifying, collecting and sharing DLD** should be developed and formally adopted. A **centralised repository of georeferenced DLD** should

be implemented with the aim of making DLD available to key authorities and informing evidence-based decision-making processes.

RISK MANAGEMENT PLANNING

The following recommendations are focused on the Programme, which was addressed in detail during the peer review mission.

- **The DRM terminology** used in the Programme, particularly in relation to prevention, preparedness and recovery, should be clarified and aligned with the UCPM framework.
- To ensure the Programme's effectiveness, a dedicated multi-annual budget allocation in the entities responsible for implementing the measures and a process for monitoring expenditures should be established. Moreover, **optimising the exploitation of external funding** is key to achieve the overall objectives.
- A successful implementation necessitates efficient **coordination among different entities** in charge of the actions in the Programme. **Roles and responsibilities** should be well understood by all the stakeholders engaged in the process.
- Sectoral plans and programmes should be **better aligned** with each other and with the Programme in order to avoid gaps and/or overlaps. The establishment of a **National Platform for DRR could facilitate** the implementation of cross-sectoral strategies and foster policy coherence.

RISK PREVENTION

- An **overall legal framework for prevention** is crucial for clarifying activities, roles and responsibilities among key entities on a range of hazards. Also, the **concept of prevention** in the Moldovan DRM system needs to be further clarified and its terminology aligned with the UCPM framework.
- **Coordination and collaboration on prevention** among key entities/stakeholders should be improved. The National Commission could initiate a fruitful joint discussion on how to identify, implement and finance prevention measures until the eventual establishment of a National Platform for DRR.
- A process for linking territorial planning with risk assessments should be **defined by law and regulated by implementing guidelines** at the national level. To facilitate this process, it is important to **implement a cadastre and a common geoportal**.
- A legal framework dealing with **territorial planning for prevention and DRM** should be drafted. **The central government should adopt guidelines for local authorities** on how to develop land use regulations and territorial/master plans linked to civil protection plans.
- The **National Territorial Development Plan** should consider the risk prone areas and DLD related to both natural and human-induced hazards.

- Innovation and knowledge services made available at the European level could be further exploited. For instance, the country **could greatly benefit from using Copernicus services** to identify and implement prevention activities and, more in general, to support the overall DRM phases and related activities, including the development of risk assessments. In particular, the **Copernicus Risk and Recovery mapping** should be activated to collect information and data in support of land use, territorial planning and all DRMC phases.
- The implementation of **Nature-Based Solutions** should be favoured whenever possible.
- The **topics to be addressed in the awareness campaigns** should be prioritised on the basis of the key risks identified and the statistical data available at the national and sub-national level.
- To **further boost the effectiveness of risk communication campaigns**, it is important to modernise the *Security School* and finalise scholastic curricula on disaster risk topics. **Evaluating communication efforts** could help GIES in monitoring their impact on communities.

RISK PREPAREDNESS

- The ongoing process for **updating civil protection plans at the local level** provides an opportunity to involve citizens and the general population in disaster risk planning and connecting contingency plans to EWSs.
- A **regulatory framework for EWSs and public alerting systems should be included in the new legislation** clarifying roles and responsibilities, the link between early warning-early actions, laying the basis for the development of SOPs and guidelines for managing both types of systems, and disseminating warnings/alerts.
- There is an urgent need to **clarify the definitions** of *early warning system* and *public alerting system* both in the new legislation and in the Programme.
- **Reaching out to other countries** that have already implemented a **public alerting system** based on cell-broadcast technology (e.g. Romania) could provide an opportunity to encourage good practices. It is important to conduct a proper feasibility study as planned in the Programme, in order to identify the characteristics of the system and the financial resources to allocate to such a tool.
- For **hydro-meteorological hazards**, it is crucial to acquire **new software and hardware tools**, such as new sensors and models. In addition, **technical training of personnel in EWS activities and an improvement of working conditions and salaries** should be put in place to enlarge the State Hydrometeorological Service (SHS) staff and its capacities.

- Additional financial resources should be allocated toward implementing and operationalising a multi-hazard, impact-based EWS, and consideration should be given to **external partners and the private sector** as potential sources of funding.
- The **coordination between the SHS and GIES could be strengthened**, especially in the preparedness phase. Joint meetings and the systemic involvement of SHS representatives in the National Commission could help in fostering collaboration.
- To further increase response capacities, **cooperation with the army** should be explored. Also, **collaboration between the Mobile Emergency Service for Resuscitation and Extrication Service (SMURD) and the Ministry of Health's** emergency capacities should be improved to reduce response time during operations.
- The adoption of a **clear training framework** is key for developing and maintaining GIES's capabilities, which need to be further improved by increasing staff and updating their technical skills. It would be useful to develop common training curricula for GIES and to **modernise existing training modules** by adding new IT and English language e-learning tools.
- The future **training centre that will be built in Răzeni** could be used as a national civil protection training facility, offering training on various topics, including advanced civil protection skills.
- Allocating financial support from the national level to the local level to **support volunteer units and ensure a minimum standard of capabilities** is key to improve emergency response.
- A key measure for attracting volunteers would be the development of a **clear legal framework** regulating their status, and a grassroots volunteer culture. **Taking inspiration from other countries** with a similar volunteering culture (such as Poland and Czech-Republic) is to be encouraged.

EMERGENCY RESPONSE

- The new legislative framework currently being developed should provide for **declaring a state of emergency before a hazardous event strikes**, to allow a timely activation of committees and response teams.
- The formal adoption of procedures through regulations or guidelines is encouraged to ensure an **efficient vertical and horizontal information management** during emergencies.
- The Moldovan response system could be **further strengthened** by adopting a **whole-of-society approach** and engaging CSOs and volunteers with different specialisations, depending on the needs and the relevant types of activation.

- The existing good collaboration between GIES and the media in emergency communication could be further strengthened and extended to non-emergency time, in supporting prevention and preparedness activities. Dedicated tools to ensure **reaching out to the most vulnerable groups** should be implemented.
- The **concept of business continuity** should be included in the DRM legislation to begin building a structured framework aimed at ensuring the continuity of critical entities, essential services and business activities.
- To ensure an effective response to likely or unforeseen future events, it is important to conduct **risk analyses and procure/store suitable relief supplies** at the national level.
- The Material Resource Agency identifies **recruitment and adequate salaries for attracting qualified personnel** as an area that needs improvement if state reserves are to be managed more efficiently.
- A clear legal framework would be beneficial for **ensuring a unified methodology and clear roles in carrying out needs assessments** in the aftermath of an emergency.
- A **database including a list of CSOs** that could support the institutional system in all stages of DRMC should be implemented.
- The **HNS procedures should be updated** according to the lessons learned highlighted in recent emergencies and exercises.
- Procedures for **decision-making and financing of deployments** of Moldovan teams to third countries should be clarified. To accelerate this process, consideration may be given to the legislative amendment proposed by GIES after the mission in Türkiye.
- **Investments in professional firefighting equipment** are urgently needed to improve team safety and response efficiency operations. Local technical, financial, and administrative capabilities for dealing with emergencies should be also strengthened by building up volunteer fire fighting units, especially in rural areas.

RECOVERY AND LESSONS LEARNED

- To ensure a continuous improvement of the DRM system, it is important to **develop, adopt and implement a lessons learned process** addressing the whole DRMC.
- The concept and UNDRR definition of **Build Back Better should be formally included** in the legal framework, establishing a clear link with the implementation of the Sendai framework.

Sumar executiv

Sistemul de protecție civilă din Moldova este o organizație ierarhică axată în principal pe răspunsul la situații de urgență, care s-a dovedit eficientă în situații de urgență recente, cum ar fi afluxul mare de refugiați din Ucraina, pandemia Covid-19 și actuala criză energetică.

Pornind de la aceasta, angajamentul ferm al Inspectoratului General pentru Situații de Urgență (IGSU) de a spori reziliența la dezastre prin trecerea de la o abordare de gestionare a dezastrelor la o abordare de gestionare a riscurilor de dezastre este demonstrat în Programul de prevenire și gestionare a situațiilor de urgență 2022-2025 (denumit în continuare „Programul”). Acțiunile de dezvoltare a evaluărilor de risc, de îmbunătățire a fazelor de prevenire și de pregătire a riscurilor și de creștere a capacităților de răspuns în întreaga țară sunt deja planificate și/sau în curs de implementare datorită finanțării naționale și internaționale.

Pe lângă îmbunătățirea guvernantei generale a gestionării riscurilor de dezastre prin creșterea eficienței, transparenței și responsabilității sistemului de protecție civilă din Moldova, Inspectoratul General pentru Situații de Urgență urmărește alinierea reglementărilor țării la cadrul Mecanismului Uniunii de protecție civilă („Mecanismul”) pentru a adera la Mecanism în calitate de stat participant.

Punctele forte și recomandările existente ale sistemului moldovenesc de gestionare a riscurilor de dezastre sunt detaliate în raport în șapte secțiuni care urmează structura cadrului de evaluare inter pares: guvernanta reducerii riscurilor de dezastre, evaluarea riscurilor, planificarea gestionării riscurilor, prevenirea riscurilor, măsurile de pregătire pentru riscuri, intervenția în caz de urgență, recuperarea și lecțiile învățate.

Principalele puncte forte sunt rezumate mai jos:

GUVERNANȚĂ

- Cadrul legislativ al Republicii Moldova pentru gestionarea riscurilor de dezastre este axat în principal pe faza de răspuns. **Noua legislație** în curs de elaborare reprezintă o **oportunitate excelentă** de a îmbunătăți sistemul de gestionare a riscurilor de dezastre al țării, de a-l alinia la terminologia mecanismului de protecție civilă al Uniunii și de a perfecționa cadrul instituțional al acestuia.
- **Comisia națională pentru situații de urgență** este bine structurată, implică toate ministerele-cheie și a dovedit un nivel bun de eficiență administrativă în timpul situațiilor de urgență recente. Ea reprezintă o bună oportunitate pentru implicarea altor părți interesate în gestionarea riscurilor de dezastre (cum ar fi societatea civilă, sectorul privat, precum și cercetarea și mediul academic) și pentru construirea unei abordări la nivelul întregii societăți, în așteptarea înființării unei platforme naționale pentru reducerea riscurilor de dezastre.
- **Colaborarea și cooperarea eficientă cu autoritățile locale, organizațiile societății civile și cetățenii** au fost demonstrate în situații de urgență recente, în special în timpul afluxului mare de refugiați care au fugit din Ucraina din cauza războiului de agresiune al Rusiei, arătând oportunități excelente pentru a fi formalizate și exploatate în continuare în întregul ciclu de gestionare a riscurilor de dezastre.

EVALUAREA RISCURILOR

- Deși nu există încă un **proces general de evaluare a riscurilor**, Inspectoratul General pentru Situații de Urgență recunoaște importanța strategică a identificării, analizei și evaluării riscurilor, după cum arată angajamentul său față de activitățile de **consolidare a capacităților organizate** în cadrul programului Prevenirea, pregătirea și răspunsul la dezastrele naturale și provocate de om în țările Parteneriatului Estic - faza 3 (PPRD East 3) pe această temă.
- Biroul statistic al Inspectoratului General pentru Situații de Urgență colectează, analizează și împărtășește o listă de date privind **pierderile cauzate de dezastre**. Indicatorii și tendințele sunt publicate în mod regulat pe site-ul web al Inspectoratului General pentru Situații de Urgență și reprezintă o bună sursă de informații pentru elaborarea evaluărilor de risc și pentru fundamentarea proceselor de elaborare a politicilor la diferite niveluri.
- Un proces eficient de colectare sistematică a datelor și de analiză a indicatorilor este implementat în prezent de **Ministerul Agriculturii și Industriei Alimentare** cu sprijinul frecvent al organizațiilor societății civile și ar putea fi reprodus în alte sectoare.

PLANIFICAREA GESTIONĂRII RISCURILOR

Următoarele puncte forte se concentrează asupra programului, care a fost abordat în detaliu în timpul misiunii de evaluare inter pares.

- Programul reprezintă un **document de planificare excelent**. Acesta este bine structurat și îndeplinește toate cerințele legislative privind documentele de politică publică.
- **Autoevaluarea** inclusă în program identifică domeniile de îmbunătățire a sistemului existent de gestionare a riscurilor de dezastre și oferă o bază solidă pentru identificarea măsurilor orientate către nevoile actuale.
- Există o lege privind structura, conținutul, elaborarea și procesul de monitorizare a **documentelor de politici publice**. În plus, un birou specific din cadrul Ministerului Finanțelor însărcinat cu aplicarea acesteia asigură robustețea și coerența procesului de elaborare a politicilor.

PREVENIREA RISCURILOR

- Moldova a recunoscut recent importanța strategică a prevenirii riscurilor. **Programul identifică acțiuni preventive** axate în principal pe campanii de conștientizare a riscurilor și pe activități de comunicare. Este planificată implementarea a trei module mobile regionale de prevenire pentru a ajunge în zonele îndepărtate ale țării.
- **Campanii bune de conștientizare** a riscurilor la nivel național și subnațional au fost organizate și implementate de Inspectoratul General pentru Situații de Urgență, care consideră aceste măsuri de prevenire esențiale pentru creșterea rezilienței comunităților.
- Moldova implementează în mod voluntar Directiva europeană privind inundațiile (Dir. 2007/60/CE) și a stabilit **două planuri de gestionare a riscurilor de inundații** care

inclus o listă de măsuri structurale și nestructurale, cu alocare bugetară, inclusiv soluții bazate pe natură. În mod similar, Programul național de extindere și reabilitare a pădurilor pentru perioada 2023-2032 reprezintă un document foarte bun care include măsuri de prevenire pentru a aborda riscul de incendii.

- Școala de securitate **pentru tinerii elevi și ghidul public privind acțiunile** care trebuie întreprinse în primele 72 de ore ale unei crize reprezintă exemple excelente de diseminare a cunoștințelor privind comportamentul corect care trebuie adoptat în situații de urgență.

PREGĂTIREA PENTRU RISCURI

- Un efort uriaș este dedicat punerii în **aplicare a sistemelor de avertizare timpurie**, în special pentru riscurile hidrometeorologice și incendiile de vegetație, precum și dezvoltării unui **sistem de alertă publică** bazat pe tehnologia de difuzare celulară.
- Din 2010, Inspectoratul General pentru Situații de Urgență a fost implicat în **mai multe exerciții internaționale** și a reușit să valorifice lecțiile învățate în urma acestora pentru a-și îmbunătăți sistemul.
- Punerea în aplicare a **modulelor internaționale aflate în curs de dezvoltare (căutare și salvare în mediul urban, pompă de mare capacitate și combaterea incendiilor forestiere la sol cu ajutorul vehiculelor)** va îmbunătăți și mai mult capacitățile de răspuns ale Republicii Moldova. Nevoile operaționale ale acestor module specifice sunt bine înțelese de Inspectoratul General pentru Situații de Urgență, care alocă resurse tehnice și financiare pentru implementarea acestora.
- Înființarea unităților de **pompieri voluntari susținute de administrația locală** este crucială pentru a oferi un prim răspuns în timp util la situațiile de urgență și pentru a promova inițiativele de prevenire a riscurilor de dezastre la nivel local.

INTERVENȚIE ÎN CAZ DE EMERGENȚĂ

- Cadrul legislativ existent pentru intervenția în situații de urgență se bazează pe **principiul subsidiarității. Sistemul de comandă și control al răspunsului este bine structurat și ierarhic**. După cum au dovedit evenimentele recente, Comisia Națională este capabilă să gestioneze situații de urgență multiple, iar colaborarea sa cu Comisia extraordinară pentru situații de urgență în domeniul sănătății publice este eficientă, după cum s-a demonstrat în timpul emergenței Covid-19.
- Înființarea **centrelor de gestionare a crizelor** pentru a sprijini comisiile de la diferite niveluri teritoriale reprezintă o valoare adăugată pentru coordonarea activităților de răspuns la dezastre.
- Numărul **112 și cele trei centre de dispecerat ale acestuia** (Chișinău, Bălți, Cahul) sunt bine organizate și eficiente, cu o bună interoperabilitate și un sistem de rezervă. În Bălți, toate serviciile de urgență sunt integrate în același centru de dispecerat, ceea ce sporește considerabil eficiența operațiunilor de răspuns.

- **Rețeaua TETRA** (Terrestrial Trunked Radio - un standard deschis global de radiocomunicații mobile terestre pentru tehnologia radio digitală trunchiată) este foarte dezvoltată și eficientă, acoperind aproximativ 90% din teritoriul Republicii Moldova.
- **Colaborarea existentă între Inspectoratul General pentru Situații de Urgență și mass-media** în comunicarea în situații de urgență este excelentă.
- Deși conceptul de continuitate a activității nu este dezvoltat în legislație, **rezervele de stat și de mobilizare** reprezintă un instrument eficient pe care se poate conta pentru a asigura operațiunile de răspuns, precum și pentru a susține funcționarea activităților economice și a societății.
- Sistemul de gestionare a riscurilor de dezastre din Moldova a fost capabil să se **adapteze prompt la nevoile specifice** de intervenție și să **coopereze cu părțile interesate naționale și internaționale**, precum și cu **organizațiile societății civile** în situații de urgență recente, după cum o demonstrează crearea taberei de refugiați de la Palanca și a stației temporare de autobuz.
- Colaborarea bine stabilită cu România este un exemplu puternic de **bună cooperare transfrontalieră între țările vecine**.
- **Conceptul de sprijin al națiunii-gazdă** a fost deja inclus în legislație, iar procedurile standard de operare sunt în vigoare.

REDRESARE ȘI LECȚII ÎNVĂȚATE

- Deși nu există încă un cadru de reglementare care să reglementeze un proces de învățare a lecțiilor învățate, sistemul de gestionare a riscurilor de dezastre din Moldova **s-a îmbunătățit recent datorită unui proces de revizuire spontan și informal** desfășurat pe o serie de subiecte, în special în ceea ce privește activitățile și procedurile de răspuns.

Principalele recomandări sunt rezumate mai jos:

GUVERNANȚĂ

- Noua legislație privind gestionarea a riscurilor de dezastre ar trebui să își **alinieze terminologia la Mecanismul de protecție civilă al Uniunii** și să clarifice definițiile-cheie pentru a permite o înțelegere comună a diferitelor faze ale ciclului de gestionare a riscului de dezastre și pentru a reechilibra actualul cadru de guvernare axat pe răspuns în favoarea prevenirii și pregătirii.
- Ar trebui clarificate **rolurile și responsabilitățile** principalelor entități și părți interesate în diferitele faze ale ciclului de gestionare a riscului de dezastre. Pentru a asigura durabilitatea și eficacitatea, ar trebui să se evite **fragmentarea excesivă** și schimbările frecvente.

- **Personalul Inspectoratului General pentru Situații de Urgență trebuie să fie sporit în continuare** în ceea ce privește numărul și capacitățile tehnice pentru a sprijini în mod eficient sistemul ciclului de gestionare a riscului de dezastre din Moldova.
- Ar trebui promovată în continuare implicarea **sectorului privat, a cercetării și a mediului academic, a organizațiilor societății civile** și a publicului pentru a adopta o abordare la nivelul întregii societăți. În mod specific, legăturile cu comunitatea științifică ar trebui să fie consolidate în favoarea **unei guvernante a reducerii riscurilor de dezastre bazate pe dovezi**.
- Se recomandă înființarea unei platforme naționale permanente **a reducerii riscurilor de dezastre** pentru a îmbunătăți colaborarea și cooperarea verticală și orizontală între entitățile-cheie implicate în gestionarea riscurilor de dezastre și pentru a facilita adoptarea unei abordări la nivelul întregii societăți.
- **Cadrul Sendai pentru reducerea riscurilor de dezastre** ar trebui să fie considerat ca un instrument de consolidare a capacităților de a reduce riscurile de dezastre din Moldova. Implicarea cu alte țări în rețeaua UNDRR - Biroul Organizației Națiunilor Unite pentru Reducerea Riscului Dezastrelor - Biroul regional pentru Europa și Asia Centrală și cu procesul de dialog al Forumului European pentru **reducerea riscurilor de dezastre** ar putea contribui la luarea de măsuri în vederea implementării acestuia.
- Programul ar trebui să fie legat de un document **strategic la nivel înalt**, elaborat în urma consultării și colaborării cu toate părțile interesate cheie din domeniul gestionării a riscurilor de dezastre, care ar trebui să aibă drept scop definirea unei viziuni clare și coerente pentru sistemul de protecție civilă și gestionarea a riscurilor de dezastre din Moldova în anii următori.
- Ar trebui definit la nivel guvernamental un **proces clar de alocare a fondurilor și a bugetului** pe o bază multianuală, pe baza necesităților și priorităților identificate pentru fiecare fază a ciclului de gestionare a riscului de dezastre și în conformitate cu responsabilitățile de guvernare. Ar trebui elaborată o metodologie de urmărire și înregistrare a alocării bugetului pentru reducerea riscurilor de dezastru/gestionarea riscurilor de dezastre în sistemul național, care să fie apoi reprodusă la nivel local.
- Pentru a optimiza utilizarea fondurilor pentru gestionarea riscurilor de dezastre, se recomandă cu insistență realizarea unei **cartografieri a părților interesate și a proiectelor**, astfel încât să se evite suprapunerea activităților implementate prin finanțări externe. Înființarea unei unități/oficiu/departament care să asigure coordonarea și comunicarea între actori ar putea fi, de asemenea, benefică pentru optimizarea eforturilor tehnice și financiare. În plus, ar putea fi explorate noi surse de **finanțare din partea sectorului privat** (în special sectorul asigurărilor).

EVALUAREA RISCURILOR

- Stabilirea unui proces global de evaluare a riscurilor și a unei evaluări naționale a riscurilor este esențială pentru îmbunătățirea sistemului actual și ar trebui să fie prioritară. Viitoarele **orientări naționale privind evaluarea riscurilor, elaborate în cadrul**

programului regional de protecție civilă East 3, reprezintă o oportunitate de a clarifica metodologia, responsabilitățile și scopurile multiple ale acestor procese în cadrul întregului ciclu de gestionare a riscurilor de dezastre.

- **Indicatorii cadrului Sendai** ar trebui să fie luați în considerare la definirea procesului analitic de evaluare a riscurilor, pentru a asigura un nivel adecvat de coerență a datelor și a raporta progresele înregistrate în cadrul monitorului Sendai.
- Autoritățile însărcinate cu efectuarea evaluărilor de risc ar trebui să aloce **resurse tehnice, administrative și financiare** pentru punerea în aplicare și revizuirile periodice ale acestora. Evaluările de risc ar trebui să fie considerate o bază pentru identificarea măsurilor-cheie, pentru alocarea de fonduri în domeniul prevenirii și al pregătirii și pentru elaborarea planurilor de intervenție în caz de urgență.
- O **colaborare aprofundată** între entitățile de cercetare, mediul academic și Inspectoratul General pentru Situații de Urgență ar putea valorifica cunoștințele tehnice disponibile pentru evaluarea riscurilor și gestionarea riscurilor de criză.
- Punerea în aplicare a unei **platforme GIS** (platformă de sistem informațional geografic) pentru colectarea și partajarea informațiilor necesare pentru elaborarea evaluărilor de risc și a rezultatelor viitoare ale acestora ar fi extrem de benefică pentru a stimula analize și colaborări coerente și comparabile între instituțiile-cheie de la diferite niveluri teritoriale.
- **Schimbările climatice și considerațiile privind riscurile multiple** ar trebui să fie incluse în viitoarele evaluări ale riscurilor, precum și **cunoștințele locale și memoria evenimentelor din trecut**.
- Ar trebui elaborat și adoptat în mod oficial **un cadru general pentru identificarea, colectarea și partajarea** date privind pierderile în caz de dezastru. Ar trebui să se pună în aplicare un **depozit centralizat de date privind pierderile în caz de dezastru georeferențiat**, cu scopul de a pune datele privind pierderile în caz de dezastru la dispoziția autorităților-cheie și de a informa procesele decizionale bazate pe dovezi.

PLANIFICAREA GESTIONĂRII RISCURILOR

Următoarele recomandări se concentrează asupra programului, care a fost abordat în detaliu în timpul misiunii de evaluare inter pares.

- **Terminologia gestionării a riscurilor de dezastre** utilizată în cadrul programului, în special în ceea ce privește prevenirea, pregătirea și recuperarea, ar trebui clarificată și aliniată la cadrul Mecanismului de protecție civilă al Uniunii.
- Pentru a asigura eficacitatea programului, ar trebui să se stabilească o alocare bugetară multianuală dedicată în cadrul entităților responsabile de punerea în aplicare a măsurilor și un proces de monitorizare a cheltuielilor. În plus, **optimizarea exploatării fondurilor externe** este esențială pentru atingerea obiectivelor generale.

- O **bună coordonare între diferitele entități responsabile** de acțiunile din cadrul programului este necesară pentru o punere în aplicare cu succes. **Rolurile și responsabilitățile** ar trebui să fie bine înțelese de toate părțile interesate implicate în proces.
- Planurile și programele sectoriale ar trebui să fie **mai bine aliniate** între ele și cu programul, pentru a se evita lacunele și/sau suprapunerile. Înființarea unei **platforme naționale pentru** reducerea riscurilor de dezastre ar putea facilita punerea în aplicare a strategiilor intersectoriale și ar putea favoriza coerența politicilor.

PREVENIREA RISCURILOR

- Este extrem de necesar un **cadru juridic general pentru prevenire**, pentru a clarifica activitățile, precum și rolurile și responsabilitățile între entitățile-cheie cu privire la diferite riscuri. De asemenea, **conceptul de prevenire** în sistemul moldovenesc de gestionare a riscurilor de dezastre trebuie să fie clarificat în continuare, iar terminologia acestuia trebuie aliniată la cadrul Mecanismului de protecție civilă al Uniunii.
- **Coordonarea și colaborarea în materie de prevenire** între entitățile/participanții cheie ar trebui să fie îmbunătățite. Discuții comune fructuoase privind modul de identificare, implementare și finanțare a măsurilor de prevenire ar putea începe să aibă loc în cadrul Comisiei Naționale și până la crearea Platformei Naționale pentru RRC, în cazul în care aceasta din urmă va fi implementată.
- Un proces de corelare a planificării teritoriale cu evaluările de risc ar trebui să fie **definit prin lege și reglementat prin orientări de punere în aplicare** la nivel național. Pentru a facilita acest proces, se recomandă **punerea în aplicare** a cadastrului și a unui geoportal comun.
- Ar trebui elaborat un cadru juridic care să se ocupe de **planificarea teritorială pentru prevenirea și gestionarea riscurilor de dezastre**. Ar trebui adoptate de către guvernul central **orientări pentru autoritățile locale** cu privire la modul de elaborare a reglementărilor privind utilizarea terenurilor, a planurilor teritoriale/master planurilor legate de planurile de protecție civilă.
- **Planul național de dezvoltare** teritorială ar trebui să ia în considerare zonele predispușe la risc și datele privind pierderile cauzate de dezastre legate atât de riscurile naturale, cât și de cele provocate de om.
- Serviciile de inovare și de cunoaștere puse la dispoziție la nivel european ar putea fi exploatate în continuare. De exemplu, țara ar putea beneficia în mare măsură de utilizarea serviciilor Copernicus pentru a identifica și a pune în aplicare activități de prevenire și, mai general, pentru a sprijini etapele generale ale gestionării a riscurilor de dezastre și activitățile conexe, inclusiv elaborarea de evaluări ale riscurilor. În special, **cartografierea Copernicus a riscurilor și a recuperării** ar trebui activată pentru a colecta informații și date în sprijinul utilizării terenurilor și al planificării teritoriale și al tuturor fazelor ale ciclului de gestionare a riscului de dezastre.

- Ar trebui să se favorizeze, ori de câte ori este posibil, punerea în aplicare a **soluțiilor bazate pe natură**.
- **Subiectele care urmează să fie abordate în cadrul campaniilor de sensibilizare** ar trebui să fie prioritizate pe baza principalelor riscuri identificate și a datelor statistice disponibile la nivel național și subnațional.
- Pentru a **spori și mai mult eficiența campaniilor de comunicare a riscurilor**, se recomandă modernizarea Școlii de Securitate și finalizarea programelor școlare pe teme de risc de dezastre. Evaluarea **eforturilor de comunicare** ar putea ajuta Inspectoratul General pentru Situații de Urgență în monitorizarea impactului acestora asupra comunităților.

PREGĂTIREA PENTRU RISCURI

- Procesul în curs de **actualizare a planurilor de protecție civilă la nivel local** reprezintă o oportunitate de a implica cetățenii și populația în planificarea riscurilor de dezastre și de a conecta planurile de urgență la sistemele de alertă timpurie.
- În noua **legislație ar trebui să fie inclus un cadru de reglementare pentru sistemele de alertă pentru populație și pentru sistemele de alertă**, care să clarifice rolurile și responsabilitățile, legătura dintre alertă timpurie-acțiuni timpurii și să pună bazele pentru elaborarea de Proceduri standard de operare și orientări pentru gestionarea ambelor tipuri de sisteme și pentru difuzarea de avertizări/alerte.
- Este nevoie urgentă de o **clarificare a definițiilor de sistem de avertizare timpurie și de sistem de alertă publică** atât în noua legislație, cât și în program.
- **Atingerea altor țări** care au implementat deja un **sistem de alertă publică** bazat pe tehnologia de difuzare celulară (de exemplu, România) ar putea reprezenta o oportunitate de inspirație în ceea ce privește bunele practici. Se recomandă realizarea unui studiu de fezabilitate adecvat, așa cum este prevăzut în program, pentru a identifica caracteristicile sistemului și resursele financiare care trebuie dedicate unui astfel de instrument.
- Pentru **riscurile hidrometeorologice**, se recomandă cu insistență achiziționarea de **noi instrumente software și hardware**, cum ar fi noi senzori și modele. În plus, ar trebui încurajată **formarea tehnică a personalului în activitățile de sisteme de alertă timpurie** și o îmbunătățire a condițiilor de lucru și a salariilor pentru a crește personalul și capacitățile ale Serviciului Hidrometeorologic de Stat.
- Ar trebui alocate resurse financiare suplimentare pentru punerea în aplicare și operaționalizarea unui Sistem de alertă timpurie bazat pe riscuri multiple și impact, luând în considerare faptul că **partenerii externi și sectorul privat** ar putea reprezenta o bună sursă de oportunități de finanțare.

- **Coordonarea dintre Serviciul Hidrometeorologic de Stat și Inspectoratul General pentru Situații de Urgență ar putea fi consolidată**, în special în faza de pregătire. Reuniunile comune și implicarea sistemică a reprezentanților ale Serviciului Hidrometeorologic de Stat în Comisia națională ar putea contribui la promovarea colaborării.
- Pentru a spori în continuare capacitățile de răspuns, ar trebui explorată **cooperarea cu armata**. De asemenea, ar trebui îmbunătățită **colaborarea dintre Serviciul Mobil de Urgență pentru Serviciul Mobil de Resuscitare și Descarcerare** și capacitățile de urgență ale Ministerului Sănătății pentru a reduce timpul de răspuns în timpul operațiunilor.
- Adoptarea unui **cadru clar de formare** este esențială pentru dezvoltarea și menținerea capacităților ale Inspectoratului General pentru Situații de Urgență, care trebuie îmbunătățite în continuare prin creșterea numărului de angajați și a competențelor tehnice ale acestora. Ar fi benefice programe de formare comune pentru Inspectoratul General pentru Situații de Urgență și **modernizarea modulelor de formare existente** prin adăugarea de noi instrumente IT/e-learning și a limbii engleze.
- Viitorul **centru de formare care va fi construit la Răzeni** ar putea fi utilizat ca centru național de formare în domeniul protecției civile, oferind formare pe diverse teme, inclusiv furnizarea de educație de nivel superior pentru domeniul protecției civile.
- Alocarea de sprijin financiar de la nivel național la nivel local pentru a **sprijini unitățile de voluntariat și pentru a asigura un standard minim de capacități** este esențială pentru îmbunătățirea răspunsului în situații de urgență.
- Un cadru juridic clar care să reglementeze statutul voluntarilor și o cultură a voluntariatului de la bază sunt esențiale pentru a atrage voluntari. Este încurajată **inspirația din alte țări cu o cultură similară a voluntariatului** (cum ar fi Polonia și Republica Cehă).

INTERVENȚIA ÎN CAZ DE URGENȚĂ

- În noul cadru legislativ aflat în curs de elaborare, ar trebui să existe o dispoziție care să permită **declararea stării de urgență înainte de producerea unui eveniment periculos**, pentru a permite activarea în timp util a comitetelor și a echipelor de intervenție.
- Este încurajată adoptarea formală a procedurilor prin regulamente sau orientări pentru a asigura o **gestionare eficientă a informațiilor pe verticală și orizontală** în timpul situațiilor de urgență.
- Sistemul de răspuns din Moldova ar putea fi **consolidat în continuare** prin adoptarea unei **abordări la nivelul întregii societăți** și prin implicarea **organizațiilor societății civile** și a voluntarilor cu diferite specializări în funcție de nevoile și tipurile de activare necesare.

- Buna colaborare existentă între Inspectoratul General pentru Situații de Urgență și mass-media în domeniul comunicării în situații de urgență ar putea fi consolidată în continuare și extinsă și în afara perioadelor de urgență pentru a sprijini activitățile de prevenire și pregătire. Ar trebui puse în aplicare instrumente dedicate pentru a asigura ajungerea la **grupurile cele mai vulnerabile**.
- **Conceptul de continuitate a activității** ar trebui să fie inclus în legislația privind gestionarea riscurilor de dezastre pentru a începe crearea unui cadru structurat care să asigure continuitatea entităților critice, a serviciilor esențiale și a activităților de afaceri.
- Pentru a asigura un răspuns eficient la evenimente viitoare probabile sau neprevăzute, se recomandă efectuarea de **analize de risc și achiziționarea/stocarea de ajutoare adecvate** la nivel național.
- **Recrutarea și atractivitatea salariilor pentru personalul calificat** reprezintă un domeniu de îmbunătățire identificat de Agenția pentru Resurse Materiale pentru a gestiona mai eficient rezervele de stat.
- Un cadru juridic clar ar fi benefic pentru asigurarea **unei metodologii unificate și a unor roluri clare în realizarea evaluărilor nevoilor** în urma unei situații de urgență.
- Ar trebui implementată o **bază de date care să includă o listă a organizațiilor societății civile** care ar putea sprijini sistemul instituțional în toate etapele ale ciclului de gestionare a riscului de dezastre.
- **Procedurile de sprijin al națiunii gazdă ar trebui să fie actualizate** în funcție de lecțiile învățate evidențiate în situații de urgență și exerciții recente.
- Ar trebui clarificate **procedurile de luare a deciziilor și de finanțare** a detașărilor echipelor moldovenești în țări terțe. Pentru a accelera acest proces, poate fi luată în considerare modificarea legislativă propusă de Inspectoratul General pentru Situații de Urgență după misiunea din Turcia.
- **Investițiile în echipamente profesionale de stingere a incendiilor** sunt necesare de urgență pentru a îmbunătăți siguranța echipelor și eficiența operațiunilor de intervenție. Capacitățile locale (tehnice, financiare și administrative) de a face față situațiilor de urgență ar trebui, de asemenea, să fie consolidate prin crearea de unități de pompieri voluntari, în special în zonele rurale.

REDRESARE ȘI LECȚII ÎNVĂȚATE

- Pentru a asigura o îmbunătățire continuă a sistemului de gestionare a riscurilor de dezastre, se recomandă **elaborarea, adoptarea și punerea în aplicare** a unui proces de lecții învățate care să se adreseze întregului ciclul de gestionare a riscului de dezastre.

- Conceptul și definiția Biroului Națiunilor Unite pentru Reducerea Riscului Dezastrelor de „**Build-Back-Better**” ar trebui să fie incluse în mod oficial în cadrul juridic, stabilind o legătură clară cu punerea în aplicare a cadrului Sendai.

1 | Introduction

1.1 - Peer review of disaster risk management capabilities

Peer review is a common working method for assessing policy performance and implementation. The European Union's Civil Protection Mechanism (UCPM) introduced peer review as a means for improving risk management capabilities¹, stimulating exchange of knowledge, identifying good practices of policy and operations, and fostering integration of risk prevention, preparedness and response. The European Commission's (EC) General Directorate for Civil Protection and Humanitarian Aid Operations (ECHO) operates the [UCPM peer review programme](#). Since 2013, fifteen countries have completed the voluntary peer review assessment, with the objective of facilitating the sharing of good practices in disaster risk management (DRM) through an analysis carried out by experts (the "peers") selected from different UCPM countries.

1.2 - Scope of the review in the Republic of Moldova

The Republic of Moldova (hereafter "Moldova"), represented by the General Inspectorate for Emergency Situations (GIES), submitted a request for UCPM peer review in October 2022. The scope of the assessment was co-designed through dialog and consultations that involved organisations and stakeholders of the national civil protection system. ECHO subsequently appointed six peers through a call for interest circulated among the UCPM countries. During a field visit organised by GIES and held in April 2023, the peers engaged in discussions with representatives of more than 20 ministries, specialised agencies, academic institutions and Civil Society Organisations (CSOs).

The 2021 [Peer Review Assessment Framework](#) elaborates on the thematic areas and topics pertaining to risk management capabilities. Countries may choose between a comprehensive review of all areas (see Figure 3): risk governance, risk assessment, risk management planning, risk prevention, risk preparedness, emergency response, recovery and lessons learned – or a tailored thematic review focusing on a relevant selection of these. Moldova chose a comprehensive review of its risk management capabilities, therefore, in this report each chapter focuses on a specific thematic area. The peer review process also focused on natural hazards, on the basis of information shared before, during, and after the mission, and of the stakeholders that GIES engaged in the process.

UCPM peer review in the context. The UCPM Peer review is not the only initiative for assessing the progress made on disaster risk reduction (DRR) in Moldova. The ongoing *Prevention, Preparedness and Response to natural and man-made disasters in Eastern Partnership countries – phase 3* (PPRD East 3) – the 3rd phase of the homonymous programme funded by the European Union (EU) – assessed the state of Moldova's civil protection system across the thematic areas critical for the programme's implementation. Additionally, in 2019, the United Nations Office for Disaster Risk Reduction (UNDRR) conducted an assessment of Moldova's 2015 DRR Strategy draft. The UCPM Peer Review is complementary to these initiatives. It addresses accomplishments under the Sendai Framework, but only in the context of existing operational arrangements under the UCPM and other European DRR policies. The good practice examples

¹ Risk management capabilities are defined as the ability of a Member State or its regions to reduce, adapt to or mitigate risks, identified in its risk assessments to levels that are acceptable (UCPM Article 4, point 8).

and recommendations described hereafter can serve as inspiration and practical guidance for implementing the DRR Strategy and Plan.

1.3 - Moldova – economy, society, and environment

Moldova is a member state of the Council of Europe and, since June 2022, is an official candidate for membership in the EU. Furthermore, the EU cooperates with Moldova in the framework of the European Neighbourhood Policy and its eastern regional dimension, the Eastern Partnership. In September 2022, Moldova formally requested to join the UCPM.

- **Administrative government.** Moldova is a Parliamentary Republic. The President is elected by the Parliament; the 101 members of its single-chamber parliament are elected for a four-year term. The intermediate administrative-territorial level is made up of 32 districts, 13 municipalities (including Chişinău), 1 territorial unit, and 1 autonomous territorial unit – Transnistria (Administrative-Territorial Units of the Left Bank of the Dniester) self-proclaimed its independence in 1990, although it is not recognised by any state. Local government operates at two levels: the first level consists of public bodies with general or special powers functioning on the territory of a village or town/municipality; the second level consists of public bodies that have special powers on the territory of rayons (districts), the Chişinău municipality and the special legal-status autonomous territorial units.
- **Economic development.** Moldova is an upper-middle-income economy and has a high Human Development Index – ranked 80th in 2021. In 2022, its GDP was 13.7\$ billion; however, despite its recent economic performance since the 2000s, Moldova remains one of the poorest countries in Europe. Moreover, the pandemic, the energy crisis, and the refugee crisis caused by the Russian invasion of Ukraine brought significant challenges to the country. GDP decreased by 0.9% in the second quarter of 2022, totalling zero percent growth in the first half of the year. The current account deficit doubled in the first quarter of 2022, reaching 17.1 % of GDP while the cost of energy imports quickly expanded; also, remittances declined by 9.4 %. Growth is expected to slowly rebound to 2.6 % in 2023, and not reach its potential until 2024. According to the World Bank, strong inflationary pressures will persist through 2023, with the inflation rate still above the National Bank of Moldova's target of 5% +/-1.5%². Since 2019, the EU-funded EU-4Environment Programme has been supporting Moldova – along with the other Eastern Partner countries – in pursuing a path of green transformation.
- **Social cohesion.** The current population of Moldova is 2.6 million, down from 2.9 million in 1990. Data expectancy at birth is 70 years. The number of emigrants has significantly diminished since 2013, and this is evidenced by the net migration index – the net total of migrants during the period, that is, the number of immigrants minus the number of emigrants, including both citizens and noncitizens – decreasing from -90,637 to -14,278³. The Multidimensional Poverty Index value for the country is 0.004. The absolute poverty rate in Moldova is 24,5% (2021): most of the poor live in rural areas (32,8%), while 11,9% of them reside in urban areas. Women have a higher poverty risk

² <https://www.worldbank.org/en/country/moldova/overview#3>

³ <https://data.worldbank.org/country/moldova>

than men: 23,6% (men) versus 26,3% (women). According to a recent United Nations Development Programme (UNDP) report, Moldova is one of the countries most affected by the cost-of-living crisis caused by the Russian war of aggression against Ukraine⁴. Moreover, another study carried out by UNDP found that 60% of Moldova's population lives in energy poverty and devotes more than 10% of its budget to paying energy bills⁵. Data from before the war in Ukraine show that income distribution had decreased in the last decades, with a Gini Index passing from 36.4 in 2000 to 26.0 in 2019⁶.

- **Environmental capital.** Moldova is rich in species diversity in spite of the absence of mountains and moderate variations in climate; 88% of the total area of the country lies between the Prut and the Dniester rivers, with the exclusion of Transnistria (east of the Dniester); Moldova has access to the Danube for only about 480m. Between 2000 and 2019, Moldova's renewable water resources remained stable at around 12.3 billion cubic metres per year. The country is landlocked, though close to the Black Sea. The total forest cover in Moldova corresponds to 11.8% of the country's land surface (2020). In recent years Moldova has made substantial progress in expanding its protected land areas, passing from 4.2% (of the country's total area) in 2020 to 11.4% in 2021⁷. With the aim of reforming its environmental sector in harmony with EU standards, Moldova developed an Environmental Strategy for 2014-2023 and an Action Plan for its implementation⁸.
- **Ongoing situation.** The refugee crisis caused by the Russian war of aggression against Ukraine can be considered among the main crises that Moldova is currently experiencing. Since the beginning of the war, Moldova has received 750,000 Ukrainian refugees, in addition to more than 90,000 third country nationals. As of July 2023, around 103,000 of them have decided to remain in the country and around 3,000 have been accommodated in Refugee Accommodation Centers (RACs); around 50,000 people are under the age of 18 years old. Besides providing refugees with shelter, the humanitarian partners have supported various needs of the country's vulnerable population (both refugees and Moldovan families), including protection services, health, education, livelihoods and multipurpose cash. As of March 1st, the Government has implemented temporary protection for displaced persons from Ukraine, approved through Government Decree (GD) 21/2023. Moldova is currently at high risk of a drought crisis. Drought is one of the most common and devastating extreme climate events in Moldova, partially due to the geographical location of the country, which is in a water insufficiency climate zone – a substantial part of Moldovan territory (74.5%) is made up of dry sub-humid and semiarid lands. Drought accounts for 13% of the total number of hazards and corresponds to 67% of the total economic losses from weather and climate related risks. The current situation is aggravated by the fact that the agricultural sector is the backbone of the economy, employing up to 30% of the total population.

4 "Addressing the cost-of-living crisis in developing countries: Poverty and vulnerability projections and policy responses", 2022.

5 "Report on Energy Poverty Assessment and Support Mechanisms in the Republic of Moldova", 2023.

6 <https://databank.worldbank.org/reports.aspx?source=2&type=metadata&series=SI.POV.GINI>

7 <https://data.worldbank.org/country/moldova>

8 <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=352740>

2 | Governance of Disaster Risk Reduction

2.1 - Governance Framework

- The Moldovan **legislative framework** for DRM is **strong, politically and hierarchically developed**, and mainly focused on the **response phase**.
- The DRM terminology is not fully aligned with the UCPM legislation and key reference documents. A **clarification on the definitions** is needed to build an effective DRM system.
- The ongoing development of a **new legal framework** provides an excellent opportunity to further align the system with the UCPM environment and rebalance it towards a more **prevention-oriented approach**.
- Despite its key role in DRM activities, the **local level suffers from a lack of** technical, administrative and financial **capabilities**.

Moldova has a unitary form of government, with a hierarchical administrative structure that ranges from the national to the local level. At the local level, Moldova is divided into administrative units, which include districts, municipalities and communes. Each administrative unit has its own elected council and mayor, who are responsible for local governance and decision-making. The local government is primarily responsible for providing services such as healthcare, education, and public utilities.

The governance structure of DRR in Moldova is hierarchically developed, headed by the Prime Minister, under whom the Ministry of Internal Affairs (MIA) is responsible for DRM. Operating under the MIA, and regulated by GD 137/2019, GIES is the main civil protection agency. GIES is divided into three directorates - response, prevention and strategic planning - and is responsible for all hazard emergency response and for overseeing planning, coordinating and managing disaster preparedness and emergency management (see also Section 2.3 for more details).

In addition, the National Commission for Emergency Situation (hereafter, the National Commission) is a permanent body made up of representatives of key ministries and sectors (including private companies managing essential services). It is headed by the Prime Minister of Moldova, who is the chair of the National Commission, while the Deputy Prime Minister, the State Secretaries of the MIA, and the head of GIES are deputy chairs (see also Section 2.3).

The DRM's governance structure is response-centred. While prevention is not a priority in the current framework, Moldova recognises the importance of strengthening prevention/preparedness as it demonstrates its GIES structure and the existence of GIES prevention officers within territorial divisions. The DRM governance also follows the principle of subsidiarity, where the responsibility for disaster and DRM expands from the local to the county and to the national/international level, as the structure of both GIES and the National Commission is mirrored at the subnational and local levels. Despite this structure, the local level suffers from a lack of resources and of technical, financial, and administrative capabilities.

DRM's legal framework is well established, based on the following main legal acts: the Law on Civil Protection (Law 271/1994), which lays down the principles at the basis of the DRM

organisation; Law 212/2004, which regulates the state of emergency, martial law and war; GD 1076/2010, which classifies emergency situations and the procedures for collecting and relaying information in emergency situations; GD 1340/2001, which establishes and regulates the Commission of Emergency Situations of Moldova; GD 846/2022, which approves the *Programme for prevention and management of emergency, and exceptional situations for 2022-2025* (hereafter, “the Programme”).

The DRM terminology used in the Moldovan legislation needs to be clarified. For example, the concepts of risk and prevention, as well as the different phases of the Disaster Risk Management Cycle (DRMC) and the terminology used in the public warning system, should be further aligned with the UCPM environment in order to rebalance the system towards a more prevention-oriented approach.

Moldova is a member state of the Council of Europe. It was also granted candidate country status to EU Membership by the European Council on 24 June 2022. In September 2022, Moldova formally applied to join the UCPM.

2.2 - Disaster Risk Reduction Strategy

- The Moldovan **DRR Strategy** was drafted in 2015, assessed by UNDRR in 2019 and never formally adopted. It is now **replaced by the Programme for prevention and management of emergency and exceptional situations**, based on the Strategy and approved in 2022.
- The **Sendai Framework is not actively implemented** and the Moldovan focal point, currently under the State Hydrometeorological Service, suffers from a lack of resources needed to fulfil its obligations.

Since 2015, Moldova has been in the process of developing a national DRR strategy. A draft document of the National Strategy for Disaster Risk Management for 2015-2020 (dated 2015, the Strategy) addresses four objectives: understanding disaster risk; strengthening governance; increasing resilience; improving disaster preparedness. The 2015 draft of the Strategy was subsequently assessed by UNDRR in 2019. The assessment provided recommendations on the Strategy’s directions and shortcomings, such as increasing the risk prevention focus and broadening the national DRR community by allocating actions, responsibilities, and investments to a greater number of actors and institutions.

Currently, while the Moldovan DRR Strategy is still the drafting stage, efforts on strategic DRM planning have been devoted to drafting the Programme approved by GD 846/2022. The Programme is built upon the draft DRR Strategy and will replace it. The Programme provides the strategic vision for the country’s developmental direction with regard to emergencies and exceptional situations, and includes specific DRM actions (see Chapter 4). While the Programme’s actions are well structured and comprehensive, the development of a strategic document/framework to be linked to it would be beneficial in setting forth the country’s vision and long-term DRM and DRR objectives. It is essential that the strategic high-level document be drafted in consultation and collaboration with DRM key stakeholders, and it can differ from the DRR Strategy currently being drafted.

The Sendai Framework is not actively implemented in Moldova. The State Hydrometeorological Service (SHS) under the Ministry of the Environment (MEnv) is the designated Sendai focal point. However, the SHS has noted difficulty in fulfilling its obligations under the Sendai Framework, due to limited resources, but it recognises the potential of engaging with the Sendai process and of collaborating with GIES in its implementation.

2.3 - Institutional framework

- The **Ministry of Internal Affairs** is responsible for DRM. Operating under the Ministry, the **General Inspectorate for Emergency Situations** is the main civil protection agency.
- The **roles and responsibilities** of different institutions/entities in all disaster risk management cycle phases **have not been clearly defined**, especially as concerns risk assessment, prevention and recovery activities related to different hazard-types.
- The **National Commission for emergency and exceptional situations is well structured**, involves all key ministries, and **has demonstrated a good level of administrative efficiency during recent emergencies**.

No overall legal act clarifies roles and responsibilities of institutions in DRMC phases for different hazards.

The institutional framework lacks a clear distinction and detailed specification of the competences/ responsibilities of entities for the full DRMC and for the different hazards. The legal and institutional DRM framework is mainly organised for emergency response rather than for prevention, preparedness and recovery. The existing institutional arrangements for DRM in Moldova are shown in Figure 4.

The ministry responsible for DRM is the MIA. GIES operates under the MIA, and is regulated by GD 137/2019. As such, it is the main civil protection agency, responsible for all hazard emergency response and for overseeing planning, coordinating and managing of disaster preparedness and emergency management. GIES coordinates the activities at the national and regional (district) levels, through 19 sub-divisions.

The GIES subunits include rescue units and firefighting stations in cities, towns, and rural areas. At the regional (district) level, disaster management is conducted by heads of civil protection, while at the local (municipality) level, civil protection is under the responsibility of local authorities, even though GIES also has offices at this level, as some fire stations respond to local authorities while others work under the central administration. GIES's mandate is regulated by Law 93/2007, but due to a lack of details on GIES's role in different types of emergencies, Article 8 of this legislation needs to be clarified.

Another body operating in DRM is the National Commission. It manages the activities of state executive organs during major emergencies and during the implementation of prevention actions through long-term programmes, such as risk awareness campaigns.

The National Commission is made up of representatives of key ministries and sectors (including private companies managing essential services) and is headed by the Prime Minister of Moldova, who is the chair of the National Commission, while the Deputy Prime Minister,

the State Secretaries of the MIA, and the head of GIES are deputy chairs. The National Commission is a permanently operating entity that meets twice a year and is activated in case of large-scale emergencies affecting two or more regions. The tasks of the National Commission generally include: verifying the intervention capacity of the management structures, including the training and use of their forces and their necessary resources; and ensuring the protection of the population, territory, environment and heritage in case of danger or emergency. The basic operational document of the National Commission is the Civil Protection Plan.

The structure and tasks of the National Commission is mirrored at sub-national (district) and local levels. Sub-national and local level commissions are also permanent bodies that are activated in the response phase to coordinate activities, respectively headed by the district chief and mayor, both elected officials, and made up of GIES representatives at each level, together with representatives of other institutions and economic operators involved in DRM. Because of a lack of financial resources necessary for a proper risk management governance, territorial and local commissions are dependent on the support received from the national government.

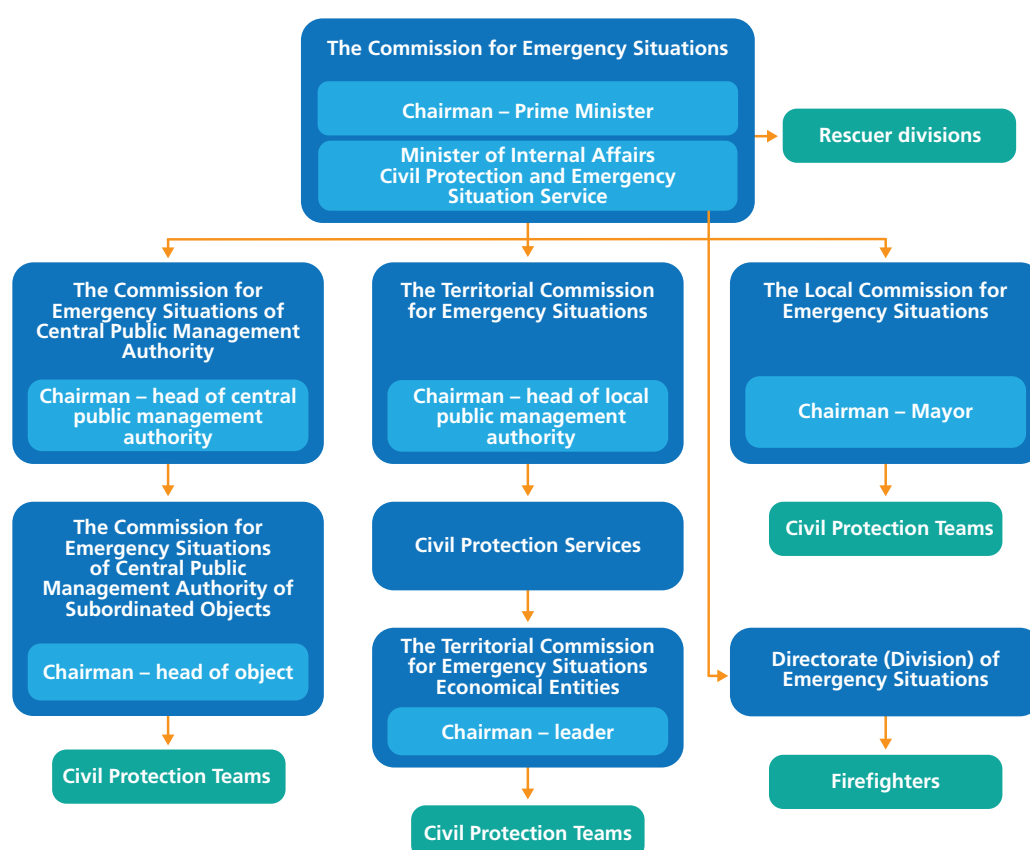


Figure 4: Institutional arrangements for Disaster Risk Management in Moldova. Source: Own elaboration from PPRD East 3 - Assessment Report Moldova (2023).

2.4 - Coordination and partnership

- A **National DRR Platform does not exist at the moment**. However, the government is well aware of its importance, and intends to implement the platform in the coming years. To date, **the National Commission for Emergency Situations is the country's main interinstitutional DRM tool**.
- While a well organised vertical cooperation exists among different levels of government, there is **room for improvement in the horizontal collaborations** among different entities and key stakeholders.
- An **effective collaboration with the population and Civil Society Organisations** was demonstrated during recent emergencies, especially during the large influx of refugees fleeing Ukraine due to Russian war of aggression (refugee crisis). This fruitful cooperation should be **formalised** and **further explored** in the whole disaster risk management cycle.
- A coherent and integrated **whole-of-society approach is needed** to strengthen the DRM in Moldova. The private, research and academia sectors, Civil Society Organisations and the general public should be further engaged in DRM's activities.

In Moldova, no National Platform for DRR is in place. The National Commission provides structured horizontal collaboration among all key actors representing the public and private sectors. The National Commission is used as a sort of National Platform for DRR, but GIES is interested in implementing a National Platform. At different territorial levels, coordination among representatives of key institutions and economic operators is structured into district and local commissions. Despite the implementation of these commissions, the coordination between State agencies and the flow of information is clearly defined neither within the legislation nor by guidelines or GDs. As a consequence, issues with coordination persist in mandates between agencies.

Processes for vertical coordination are in place and seem to be more efficient than for horizontal coordination. However, this is undermined by the lack of administrative, technical and especially financial capabilities at the local level. In general, both horizontal and vertical coordination address mainly the response phase, and additional effort is needed to improve coordination and collaboration among different territorial levels and across different sectors and ministries.

Collaboration with CSOs is not regulated by a clear legal framework, but through bilateral cooperation agreements or partnerships between ministers and Non-Governmental Organisations (NGOs), as in the case of the Ministry of Health's connections with the Red Cross Society of Moldova. While the involvement of CSOs in DRM - and specifically in disaster risk prevention and preparedness - is limited, excellent results of CSO engagement are to be found in the response phase to the country's recent refugee crisis (see Chapter 8).

GIES is aware of the advantages and importance of involving CSOs in DRM, and one of the Programme's objectives is to increase CSO and citizen engagement in DRM.

The engagement of citizens in DRM activities can be improved, starting with the future implementation of a process to involve the general population in drafting DRR/DRM plans at the local level. In the current framework, citizen engagement revolves around training, exercises and risk awareness campaigns. The Programme recognises this weakness and the need to improve the public's awareness by highlighting the importance to act and building on community resilience. In recent years, citizens have become more open and engaged, for example when public authorities have suggested using alternative energy sources and reducing energy consumption on account of Russian war of aggression against Ukraine.

In the current system, collaboration between GIES and research and academia actors working in the DRM field is weak, partly due to a lack of GIES awareness of the work carried out by research actors, and partly to a limited dissemination of research findings in the policy sphere. The development of these linkages would allow the spread and use of the scientific knowledge developed by research institutions, such as the assessments of natural and human-induced risk factors by the Institute of Ecology and Geography (IEG), part of the Academy of Science. In this view, within the revision of the current legislation, the creation of technical scientific groups in support of the National Commission, including representatives of academia and research, would provide a framework for collaboration.

The involvement of the private sector in DRR/DRM is limited.

2.5 - Disaster risk financing

- **No multi-annual budget lines devoted to disaster risk management cycle phases** exist in key ministry budgets to implement DRR measures. A specific needs-assessed budget for prevention measures is strongly recommended to strengthen resilience.
- Most DRM measures are implemented with **external funding**. It is crucial to conduct a **stakeholder and project mapping to avoid overlapping** and ensure an efficient targeted use of international funds.
- **The UCPM tools and instruments already accessible for Moldova should be further exploited** to support the improvement of technical and financial capacities in DRM.

The structure of Moldova's State Budget follows Law 181/2014, which regulates public finance and establishes budget allocations, procedures and responsibilities in public finance. Budget planning is coordinated by the Inter-ministerial Strategic Planning Committee. It starts with mid-term planning (every three years) and continues with annual budget planning for the fiscal year. This structure does not foresee individual allocation to disaster risk prevention, preparedness or response. Only civil protection funding has devoted contingency funds, governed by Law 271/1994, which also regulates funding responsibilities of various actors. GIES does its own budget planning according to a three-year financial strategy, but funds are often limited to covering salaries and operational costs of civil protection organisations, leaving out DRR activities, training and equipment upgrades.

In general, neither the central nor local level authorities have specific budget lines allocated to prevention activities.

At the local level, authorities can decide autonomously to use their own budget for response or prevention. In addition, prevention activities such as awareness campaigns are funded by the institution/ministry within their technical domain. For example, the Ministry of Health runs its own public health campaigns. When some prevention measures are put in place with the scope of mitigating an immediate disaster risk not foreseen in the annual budget plan, these are financed by the emergency response fund.

In Moldova, there are laws and governmental decisions in place for emergency fund management. The annual state budget includes a reserve fund and a response fund, which are designated for urgent expenditures that cannot be anticipated or included in the annual plan. The response/intervention fund is used to cope with natural and human-induced disasters, and decisions on its use fall under the National Commission for Emergency Situations or the National Commission for Public Health Emergencies, or the Prime Minister's Office. The intervention funds are used to cover urgent needs and to repair any damage caused by emergencies. The reserve fund is only available for urgent situations that occur during the year and could not be anticipated, and when there are no reserves for these situations in the state budget. Both funds are approved on the basis of the state budget, but can be supplemented by donations if they are targeted to the purpose for which the funds have been established. Central and local public organisations, budget institutions, and non-profit organisations can request financing from these funds. Natural persons who are not legal entities can request funds through public entities.

If commissions at the local/regional level state that funds are not sufficient to cover emergency costs, central/local public authorities will request further funds from the National Commission. The allocation of emergency funds is pursuant to government decisions developed by central public authorities according to the area of competence. Natural Catastrophe (NatCat) insurance does not exist except for subsidised agricultural insurance.

The insurance market is not well-developed in the country, and Moldova currently lacks regulations or national programmes to provide disaster insurance. Consequently, disaster costs represent an implicit liability for the government. The only existing insurance scheme is an agricultural insurance (which does not cover drought) offered for a limited list of crops and regulated under Law 243/2004, which provides that the government subsidises 50% of the insurance premium, depending on the quantity of outputs, not on quality or price. However, market penetration of insurance is very low among farmers. Additionally, the National Health Insurance Company also has a fund for both prophylactic aims and response to public emergencies, which was used during the Covid-19 emergency to complement the emergency fund.

There are some funds that can be provided for prevention, but they still need to satisfy the requirement that the expenditure could not have been foreseen. Ecological funds are managed by the MEnv, while the Ministry of Agriculture and Food Industry (MAFI) has a fund for subsidising agriculture. Currently, there is no budget line for early warning systems (EWSs), and external funding is being sought for a feasibility study and implementation.

In general, most DRM measures in Moldova are implemented through international projects with external funding (see Annex 2). Different entities are responsible for different projects, and with no unit in place to ensure coordination and communication between actors, this leads to the risk of activity overlaps and reduced effectiveness of funds.

2.6 - Systemic Resilience

- Although the concept of systemic resilience is not addressed in the legal framework, Moldova has been **demonstrating a certain level of systemic resilience while responding to recent and ongoing compound events** (energy crisis, refugee crisis, Covid-19). The government clearly recognises the importance of a cross-sectoral approach in DRM.

In Moldova, no specific actions or procedures are in place to strengthen systemic resilience. This might be a consequence of the fact that the concept of systemic resilience is new and not completely clear. However, the importance of a cross-sectoral approach is recognised and confirmed by the management of recent events (energy crises, refugee crisis, Covid-19) which all have cross-sectoral impacts on society. The setup of the National and subnational commissions of emergency situations as inter-ministerial tables establishes a basis for improving systemic resilience.

2.7 - Conclusions

Moldova's legislative framework for DRM is mainly focused on the response phase and is still not fully aligned with the UCPM terminology. The new legislation, currently being drafted, provides an excellent opportunity to further improve the country's DRM system and to fine tune its institutional framework. More in general, it is of crucial importance to plan a formal revision of the DRM legal framework on a regular basis and especially after major emergencies, with a view to shaping an adaptive governance that considers and builds on lessons learned.

The updated legal framework should include and clarify key definitions to enable a common understanding of the different DRMC phases. This step is crucial for rebalancing the current response-focused governance framework in favour of prevention and preparedness to build an effective DRM system and increase resilience at the different territorial levels.

Roles and responsibilities of key entities and stakeholders in the different phases of the DRMC should be clarified, along with processes and Standard Operating Procedures (SOPs), to ensure horizontal and vertical cooperation and coordination. Special attention should be given to risk assessment and prevention, which suffer from major weaknesses. To ensure sustainability and effectiveness, excessive fragmentation and frequent changes in the overall institutional structure should be avoided.

Along with key institutions, the engagement of other relevant stakeholders, including the private sector, research and academia, CSOs and the general public, should be further promoted to adopt a whole-of-society approach in DRM activities. An effective collaboration and cooperation with CSOs and citizens have already been experienced during recent emergencies, in particular the large influx of refugees fleeing Ukraine due to Russian war of aggression, showing excellent opportunities to be formalised and further exploited across the whole DRMC. Linkage with the scientific community is still weak, representing a major gap that undermines the implementation of an evidence-informed governance and policy making process (see BOX 2).

A good opportunity to start building effective collaborations can be found in the National Commission, which is well structured, involves all key ministries, and has shown a good level of administrative capabilities during recent emergencies. CSOs could be invited to the National Commission and scientific groups could be established to provide technical support. It is also important to establish a permanent National DRR Platform to improve vertical and horizontal collaboration and promote a whole-of-society approach. The implementation of the Platform could help engage key stakeholders that are currently not systematically involved, and the existing National Commission could provide a good basis for building upon the Platform structure. To ensure its functionality and efficiency, the Platform should be structured into two main components: a political/decision-making component and an operational/technical component.

At the present moment the Sendai Framework for DRR is insufficiently implemented in Moldova, mainly because of a lack of technical and financial resources. However, the government recognises its importance as a tool for strengthening capacities at the national and subnational level. Exchanging with other countries in the ROECA network and engaging more with the EFDRR roadmap action-oriented dialogue process could help hasten its implementation. Similarly, taking inspiration from UNDRR and other Member States' best practice examples in prevention and preparedness could support the integration of the Sendai Framework goals in GIES activities.

The National DRR Strategy, currently still being drafted, has been replaced by the Programme. However, a strategic high-level document drafted in consultation and collaboration with all key DRM stakeholders should be developed and linked to the Programme with the overall aim of defining a clear and coherent vision in DRM governance (see BOX 1).

One of the major challenges in implementing DRM activities is related to the lack of financial resources. A clear process for allocating budget funds should be defined at the governmental level on a multi-annual basis, based on identified needs and priorities, and in accordance with governance responsibilities. Multi-annual budget lines devoted to different DRMC phases in each Ministry are needed to ensure effective Programme implementation and DRM's overall measures at the national and sub-national level. Roles and responsibilities in allocating funds and budget lines should be clarified and a monitoring process should be in place to verify Programme expenditures.

Moreover, since most DRM measures are implemented with external funding, it is crucial to conduct a stakeholder and project mapping, to avoid overlapping activities and to maximise a strategic, efficient use of such funds. It would be useful to develop a project implementation unit/office/department with personnel trained to manage and coordinate all EU and external funded projects, as well as capability development projects in the DRM field. Also, new sources of financing could be explored from private organizations, especially the insurance sector. The available UCPM tools and instruments already accessible to Moldova should be further exploited to improve its DRM technical and financial capacities. UCPM grants, exchange of expert programmes, cross-border and transnational cooperation programmes are good and already available opportunities.

BOX 1 - *The importance of adopting both strategy and action plans*

A **strategy** outlines the broad goals and objectives of a policy, as well as the key challenges and opportunities involved. It also identifies the key stakeholders, resources, and timelines needed to achieve those goals. A strategy is essential for ensuring that all the relevant factors are taken into account, and that the policy is based on a clear and coherent vision.

An **action plan**, on the other hand, specifies the specific steps and tasks that need to be taken to implement the strategy. It outlines the roles and responsibilities of different actors and provides a timeline for achieving policy objectives. **An action plan is critical for ensuring that the strategy is translated into concrete actions and that progress is tracked and monitored.**

Skipping the strategy phase and going straight to an action plan can result in a policy that lacks coherence and direction. Without a clear strategy, it can be difficult to ensure that the action plan is aligned with the broader policy goals.

BOX 2 - *The Centres of Competence in the Italian civil protection system.*

The **integration of technical-scientific knowledge into the operational component** of the civil protection system is key to achieving effective DRM. A good example of the involvement of the scientific community in DRR/DRM is the **Italian model of Centres of Competence**. In the Italian Civil Protection Code, this model of collaboration between science and civil protection authorities is regulated by Legislative Decree 1/2018.

The Centres of Competence are made up mainly of research bodies and institutes, consortia and university structures, which make their knowledge available and supply products deriving from research and innovation activities, to be integrated into civil protection activities. The Centres of Competence thus carry out a public function under the coordination of the National Civil Protection Service. Among other activities, they contribute to implementing the national EWS by developing technical tools and the development of risk assessments in the aftermath of disasters. The Centres of Competence also provide information, data and technical-scientific knowledge in relation to the different types of hazards in line with their areas of specialisation as defined by the National Civil Protection Service legislation.

According to the art. 19 of the aforementioned code, the activities of the Centres of Competence are categorised as follows: ordinary and operational activities, which include monitoring and surveillance of events; development of databases and activities related to emergency management and risk forecasting and prevention; production of scientific knowledge aimed at developing products to support risk management activities and scenario development. They also collaborate on drafting technical regulations dealing with civil protection issues, and are often involved in emergency activities to conduct real-time risk assessments. In addition, they also participate in the organisation of training activities for civil protection experts and risk awareness campaigns for citizens.



Figure 5: Plenary session during the peer review mission.

3 | Risk Assessment

3.1 - Legislative framework and processes

- Moldova **lacks a National Risk Assessment**, and the current legislation **does not regulate** its process. In 2019, International Standards on the risk assessment process (International Organisation for Standardisation 31000) were adopted but they are not mandatory. A document providing recommendations on risk assessment methodology is available for the local level.
- **A national methodology for disaster risk assessment**, based on national PPRD East 3 programme guidelines, is slated to be developed by the end of 2025 and integrated into the Programme.
- The GIES's statistical office regularly collects and analyses a list of **disaster loss data**, and can be considered a preliminary source of information for developing risk assessments and informing policy-making processes at different levels.

Moldova does not have a National Disaster Risk Assessment (NRA). The existing legislation does not require entities or institutions to be responsible for risk assessment, and no authority has been designated to develop a national disaster risk assessment methodology at the national level. For this reason, the Association Agenda of the Chapter on Civil Protection of the EU-Association Agreement of Moldova considers the development of a NRA as one of its priorities.

As of today, the main GD in this field is number 1076/2010 "On the classification of emergency situations and the procedures for collecting and submitting information in the field of population and territorial protection in case of emergency situations". The resolution identifies and classifies Moldova's hazards according to specific evaluation criteria, and provides guidelines on the information that each entity should submit to the Civil Protection and the MIA in case of an emergency. In line with these guidelines, the GD provides a list of institutions/entities responsible for collecting information on a specific risk.

In 2015, GIES attempted to develop a more comprehensive approach to risk assessment, and issued a non-mandatory Methodological Recommendations⁹ on the elaboration of risk assessments in 32 districts, established by GD 136D/2015 "On identifying and evaluating emergency situations at the district and municipal levels". The development of the Methodological Recommendations was guided by the provisions of the international standards on risk management (International Organisation for Standardisation - ISO 31000). Following these Methodological Recommendations, local/district authorities should develop risk assessments for possible emergencies with associated response plans. However, the Recommendations mainly focus on an analysis of historical disasters, rather than on a complete risk assessment.

Starting in 2019, national standards on risk assessment process, terminology, disaster and crisis management and sustainable development of communities have been adopted. In 2022, a risk assessment was carried out according to these standards, in which a risk matrix was used to allocate risk levels to various districts on a national map of the country, based on historical

⁹ Methodological Recommendation on the elaboration of the Analysis of Possible Emergency Situation at the level of District, Municipalities, UTA Găgăuzia (autonomous territory) and the impact on population, economy, and environment.

data and disaster frequency. However, because these standards have never been approved by law, they are not mandatory and remain a recommendation.

Under objective number 2 of the Programme regarding prevention measures¹⁰, the development of a NRA methodology is foreseen and needs to be approved by 2025. Currently, the PPRD East 3 programme supports Moldova in achieving this objective, and develops guidelines for conducting a NRA as one of its priorities. To this end, in February 2023, the project carried out a Training of Trainers (ToR) on risk assessment methodology in Chişinău¹¹, aimed at creating national risk assessment guidelines based on the regional guidelines developed in 2021 and 2022 following the UCPM guidance. Among the outcomes of the ongoing project are the establishment of ToT for a regional technical expert network on disaster risk assessment.

Disaster Loss Data

Regulated by GD 1076/2010, the Disaster Loss Data (DLD) collection is led by GIES, in collaboration with other public authorities. GIES makes historical data available to stakeholders through the GISCUIT Disaster Loss Database, which was developed in collaboration with UNDP and has a time span of 20 years. Local authorities have access to the GISCUIT database in view-mode, while GIES's statistical department is responsible for uploading the data on crisis situations. Data is provided to GIES by local, national, and international stakeholders, who collaborate with the local/territorial commission for emergency situations in drafting an electronic damage report. For instance, under the suggestion of the MAFI, after an emergency ad hoc commission may contact food industries and agriculture producers to collect data on material losses.

The reporting of data follows the 139/2012 regulation and is based on 60 indicators recording damages to people, material losses for 8 types of emergencies. However, it is not aligned with international indicators, such as the Sendai Framework, and thus cannot be internationally comparable. Moreover, the costs of responding to emergencies are not included, and the DLD collection system lacks a section on data disaggregation.

From the GISCUIT database, tables and reports are created and the analysis of statistical data on emergencies is annually provided by GIES's statistical department to local and central authorities. The reports are also conveyed to the MIA and published on GIES's website¹². No clear process is in place for using DLD statistics in informing the decision-making process of DRM.

3.2 - Risk Identification

- **No risk identification has been conducted** and no processes or methodologies are in place.
- GD 1076/2010 **lists the country's key risks** and provides a classification of emergencies according to their type and magnitude.

¹⁰ In Moldova, since 2019, risk assessment is considered part of risk prevention.

¹¹ During the ToT, 22 public authorities were trained in disaster risk assessment.

¹² https://www.dse.md/ro/date_statistice

In Moldova, no overall risk identification process has been conducted. The key risks affecting the country are identified and listed in GD 1076/2010, which classifies emergencies according to the scale and severity of consequences, and the type. According to the scale, emergencies can be object-related, local, regional or transboundary. Categories of emergencies are identified by type as follows: technological (12 types), such as transport accidents, explosions, fires, radioactive spills, electrical faults; natural (10 types), such as geophysical and hydrological phenomena, wildfires, change in biosphere composition; social-biological (6 types), including epidemics, and zoonosis.

In the draft DRR Strategy 2015, the hazards affecting the country are identified by an analysis of historical data on disasters and losses. Among the identified technological emergencies of greatest impact are airplane crashes, explosions at industrial and residential sites and power grid accidents. Among natural emergencies, hoarfrost, drought, heavy rains with hail, frosts and strong blizzards are highlighted, along with floods, wildfires, landslides and earthquakes. In terms of biological emergencies, agricultural crop diseases caused the greatest damage; however, the Strategy was drawn up before the Covid-19 outbreak. Other disasters identified in the DRR strategy that would affect Moldova from foreign territory are radioactive contamination, exotic infectious diseases, cosmic emergencies, and artificial objects. Fire emergencies are frequent and mostly affect the housing sector.

In Moldova, the highest economic losses are caused by extreme weather events. Besides these, high-impact, low-frequency seismic events produce enormous damage. In addition, climate change is not identified as a catalyst or risk amplifier, but the Programme identifies climate change as an emerging risk.

As the first step in the flood risk assessment, significant flooding events were identified on the basis of historical data on maximum flow rate and the size of the rivers.

3.3 - Risk Analysis

- Different institutions carry out **risk analysis at the sectoral level**; however, the processes are not harmonised and lack an overall coordination.
- The **Institute of Ecology and Geography** develops hazard and risk mapping for **several natural hazards** by using data recorded on GIES's Disaster Loss Data database, among other sources. The **Institute of Geology and Seismology** produced **seismic zonation maps** in 2013, and detailed data on building structures is needed for improved risk analysis.
- Flood risk assessment used **hydraulic modelling** to develop hazard and risk maps at the national level, in line with the EU directive.

Although a national risk assessment has not yet been completed, the Methodological Recommendations document for risk assessment at the level of districts and municipalities suggests that administrations gather data on historical disasters, and assess risks through a risk matrix on the basis of historical data. The topic of existing risk assessment tools at the local level and their use in contingency plans was not explored in detail during the peer review mission.

In relation to risk analysis, academic and research studies that analyse risk resulting from specific hazards are available. Under the Academy of Sciences of Moldova, the Institute of Ecology and Geography (IEG) carries out hazard identification: mapping vulnerable areas; assessing the related risk and impacts on social and economic structures; and producing forecasts and scenarios on the evolution of risk.

With regard to natural hazards, the IEG investigates droughts, heavy rains and floods, high winds, landslides and erosion processes. The IEG has developed exposure maps for torrential rains, flooding, landslides, and late spring frosts by district on the basis of the recorded property damages from the GIES database. The use of Geographic Information Systems (GIS) in natural hazard analysis, the creation of an information database for the implementation of [INSPIRE Directive](#), and the assessment of flood risk using hydraulic modelling are among the activities of the Landscape Ecology Laboratory, a IEG sub-unit. Another division within IEG is the Laboratory on Climatology and Environmental Risks, which focuses on climate change research and climate related risks. Despite IEG's important ongoing work, the collaboration between academia and GIES is still poor. Nonetheless, there is hope for a more in-depth collaboration with GIES in the near future.

In general, some hazard maps exist, but most of them are outdated. In addition, with the exception of flood risk mapping, risk assessments that include exposure and vulnerability components are limited.

Wildfires

Static wildfire hazard maps have been produced within the PPRD East 3 programme and are available on the webGIS visualisation platform myDEWETRA. Dynamic wildfire risk maps will be developed and made operational under future PPRD East activities.

Floods

Following the harmonisation of Moldova's flood management legislation with the EU Directive, flood hazard and flood risk maps were developed and used to draft the Flood Risk Management Plans (see Chapter 4). Through the application of a hydraulic model developed with the support of the European Investment Bank, flood hazard maps were developed at the national level. The flood depth function was then used to estimate damage and risk of flooding as a combination of the probability of occurrence and its consequences on the population, the economy and the environment. A total of 4300 km of high flood risk rivers were identified within the boundaries of the Danube – Prut and Black Sea and the Nistru Hydrographic Basin Districts. The results of the risk assessment carried out with the aid of GIS produced a map of the Areas at Significant Risk of Flooding classified into three risk categories – high, medium and low.

Another document that describes all possible flooded areas is the Operational Manual elaborated by GIES. The Manual describes the flood dynamics for the Dniester, Danube-Prut and Black Sea hydrographic basins, with the aim of ensuring all actors are aware of the existing flood risk and their responsibility in its prevention and reduction.

Earthquakes

The Institute of Geology and Seismology (IGS) is responsible for monitoring the seismic activity. In 2013, the IGS produced seismic zonation maps, using the Medvedev-Sponheuer-Karnik (MSK-64) scale of intensity, based on the Romanian and Carpathian faults, and some historical data about past earthquakes. The IGS institute also developed a methodology of seismic microzonation and is elaborating microzoning maps at urban scale for some towns. At the moment, maps for the municipalities of Chişinău and Cahul are available; these, however, are outdated. In general, a lack of funding is hindering the activity carried out by the Institute, and the use of this knowledge for developing prevention actions and civil protection plans is not being systematised.

A structural characterization of the main elements at risk in urbanised areas, such as buildings and infrastructures, is not available, with the exception of public hospitals. An inventory of public hospitals, assessing structural, non-structural and functional safety of these buildings, was carried out in 2010, and identified approximately 56% hospitals as safe; 32% with an average score, and 12% with a low score.

The absence of these data for building types and structures is an obstacle for carrying out a detailed seismic risk assessment. While IGS has produced risk maps for population and infrastructures at the national scale, these mainly consist of an overlapping of the hazard zonation with the density of population/infrastructure. The Eurocode 8 standard has no official use in Moldova, and it is only applied to inform the construction sector.

3.4 - Risk Evaluation

- **No risk evaluation process is in place**, and the existing risk maps seem not to be considered in decision making processes.

Since no proper risk assessment exists, there is no evaluation process. Moreover, identified risks and existing risk maps seem to have a very low impact on the decision-making process.

3.5 - Risk communication and the role of stakeholders

- While some sectoral risk assessments have been carried out, **a common repository** for risk assessments does not exist and the results are not shared among key institutions.
- Communication of the results of risk assessment carried out by academic institutions could be improved by setting up a **process of dissemination towards public administrations** and to the wider public.

A common repository for risk assessment does not exist. While some risk assessments are carried out, these are neither shared nor unified. One of the activities envisaged by the PPRD East 3 programme on the implementation of the Electronic Regional Risk Atlas (ERRA) could not be implemented due to technical issues.

The IEG develops scientific thematic atlases which are publicly available on its website. These include Climate Resources of the Republic of Moldova Atlas; Natural and Anthropogenic Risk Factors Atlas; Thermal and rainfall regime in the South of the Republic of Moldova; Geomorphology of the Republic of Moldova. Other scientific results on risk assessments from IEG are disseminated via international conferences and academic publications, leaving room for improvement in the collaboration between academia and governmental agencies.

3.6 - Conclusions

No overall risk assessment process or NRA document is yet in place in Moldova. However, GIES recognises the importance of identifying, analysing, and evaluating risks as a strategic milestone in constructing an efficient DRM system. Since 2015, a document providing recommendations on a risk assessment methodology has been available for the local and district levels. In 2019, International Standards on the risk assessment process (ISO 31000) were adopted, and a national methodology based on PPRD East 3 programme's regional guidelines is expected to be developed by the end of 2025.

These national guidelines on risk assessment are planned under objective 2 of the Programme and provide an opportunity to clarify the methodology, the roles/responsibilities and the multiple purposes of risk assessment processes at the different territorial levels in all DRMC phases. Technical recommendations/standards for conducting risk assessments at sub-national levels should also be integrated in the methodological guidelines. While defining the risk assessment analytical process, the Sendai framework indicators should also be considered to ensure both an adequate level of consistency in the data and that results can be used to report progress in the Sendai monitor.

Currently, some entities, including academic and research institutions, carry out risk analyses for different natural and human-induced related risks. The IEG under the Academy of Science develops hazard and risk mapping for several natural hazards, using data recorded on GIES's DLD database, among other sources. The IGS produced seismic zonation maps in 2013. Hydrological and hydraulic models were used by a technical assistance project financed by the European Investment Bank to develop flood hazard and flood risk maps at the national level, in line with the EU Floods Directive.

The establishment of a deep collaboration between research entities, academia and GIES could capitalise on this available technical knowledge for risk assessment and DRM. The proper activation of the Copernicus programme could also become an excellent tool for collecting important data to inform the process. Along with the use of Copernicus data, the implementation of a shared GIS platform to collect important information to develop risk assessments and share their future results would be highly beneficial in stimulating substantial comparable analyses among key institutions at different territorial levels. The existence of this kind of platform could help the different institutions/entities, particularly at the local level, to familiarise and use the already available data.

To improve the risk assessment analysis, climate change and multi-risk considerations could be included in future assessments. According to recent WHO studies, a special focus should be placed on future impacts on health and their related risk mana-

gement system, to rapidly identify action priorities. Local knowledge and memory of past events should also be considered in risk assessment, along with available data. Existing risk assessments and analyses should be collected and shared at the national and sub-national level with key DRM authorities and stakeholders. Disaster Risk Management Knowledge Centre (DRMKC)'s Risk Data Hub offers a reference approach in terms of frameworks, policies and risk data sharing. The integration of this platform at the national level could help to achieve national consistency in terms of risk assessment.

The communication of the results of risk assessment carried out by academic institutions could be improved by setting up a process of dissemination towards public administrations and to the wider public. The GIES's statistical office collects and analyses a list of DLD on a regular basis and can be considered as a preliminary source of information for developing risk assessments and informing policy making processes at different levels. By using the GISCUIT tool, implemented and made available by UNDP, indicators and trends are published on GIES's website on a regular basis and can be considered a good source of information for carrying out risk assessments and informing policy making processes at different levels.

To further develop this already well-designed system, an overall framework for identifying, collecting, and sharing DLD could be formally adopted. Among the advantages of the establishment of a framework is the clarification of the multiple purposes of DLD in relation to DRM governance and all DRMC phases. The implementation of a centralised repository of georeferenced DLD should be considered with the aim of making DLD available to key authorities at different territorial levels and informing evidence-based decision-making processes and DRM activities. The inclusion in the repository of further information on slow-onset disasters, and on forensic investigations data after wildfires, along with the triggering causes and the characteristics of the events, and the costs of response operations, would enhance the quantitative basis for assessing threats. An effective process for systematic collection, data and indicator analysis is currently implemented by the MAFI with the frequent support of CSOs. This approach could be duplicated in other sectors.

Lastly, key ministries and institutions involved in DRM activities should conduct risk assessments on major hazards at an appropriate scale, useful for risk management and territorial planning at the sub-national level. Risk assessment should be considered a basis for identifying measures, allocating funds in prevention and preparedness and for covering the identified risks with efficient and tangible emergency response plans (see BOX 3). As a first step, the authorities in charge should allocate technical, administrative and financial resources for implementing risk assessments and regular revisions. The high interest and commitment in capacity building activities organised within the PPRD East 3 programme on the risk assessment topic demonstrates the willingness of the Moldovan institutions to improve this process.

BOX 3 - National Disaster Risk Assessment: a first step in DRM planning

A **national disaster risk assessment (NRA)** is crucial in developing effective DRR strategies and plans. NRA evaluates the potential risks and hazards faced by the entire country and provides a comprehensive overview of the various risks, their cascading and spillover effects across geographic and functional geographies. In contrast, sectoral risk assessments focus on specific sectors, such as agriculture, transportation, or healthcare. While sectoral assessments are useful in identifying risks within specific sectors, they may not account for the interconnectivity and interdependence of different sectors. A national risk assessment provides a more holistic view of risks and enables policymakers to identify and prioritise areas of high risk and develop comprehensive strategies that consider the potential impacts on all sectors. NRA should inform the development of national policies and strategies that address risk reduction, disaster preparedness, response, and recovery. It is vital for prioritising investments in DRR.

The importance of a NRA is also highlighted in Decision 1313/2013/EU on a Union Civil Protection Mechanism. Article 6 of the Decision requires Member States and Participating States to develop risk assessment at the national or appropriate subnational level and to update them every three years.



Figure 6: Visit at the Temporary Refugee Centre in Palanca during the peer review mission.

4 Risk Management Planning

4.1 - Legislative framework and processes

- The Programme for the prevention and management of emergency and exceptional situations 2022-2025 was approved by GD in 2022 and is an **excellent, structured document** that identifies major weaknesses in Moldova's disaster risk management system, setting **priorities for actions**, and assigning the **roles and responsibilities** of key stakeholders as well as the **timeline** and **financial resources** required for implementing key measures.
- **Sectoral programmes and plans** linked to disaster risk management are drafted and implemented by different ministries. No overall coordination process is in place to ensure consistency and coherence among those plans and programmes.

In December 2022, the Programme was approved by GD 846/2022. The document lays out the state of the art and an analysis of the areas of improvement of the country's DRM system from historical data and other sources. For example, it highlights the reduced capabilities of local authorities, the lack of an EWS, the underdevelopment of the volunteer system and outdated regulatory framework, among others. To target these weaknesses, the Programme sets forth general and specific medium-term objectives for developing the DRM system and includes an Action Plan to be carried out at the local and national levels. These aim at strengthening the role of authorities in facing emergency situations; taking more effective measures to prevent emergency and exceptional situations; modernising the preparedness system; and increasing the operational and response capacity to deal with emergency situations¹³.

The achievement of these objectives would comply with those of the Association Agenda between Moldova and the EU (2021-2027) and align Moldova's regulatory framework with EU standards, considered a Programme priority. The implementation of the Programme and its Action Plan are split into two stages, the first taking place during the years 2022-2023 and the second in 2024-2025. The financing of most actions is planned in the 2022-2025 Medium-Term Budgetary Framework and is estimated to be around RON 2 million. Costs that exceed the Budgetary Framework will be covered by external funding, international donors and projects, as detailed in the document.

GIES annually drafts an activity plan on the activities to be carried out by the institution during the year. The main objective, priorities and result indicators are defined at the beginning of the document. The activities to be carried out under each objective, their deadline for completion/reporting, monitoring indicators, responsible institutions, costs and references to legislation are specified, along with the potential risks related to their implementation. In addition, Moldova has drafted and has been activating sectoral plans linked to DRM. Below is a summary of the key plans and programmes currently under implementation.

National Climate Change Adaptation Programme

In November 2021, the MEnv announced the beginning of the National Climate Change Adaptation Program (NCCAP) up to 2030. The scope of the NCCAP is to increase the capacity of Moldova to adapt and respond to the effects of climate change, including the integration

¹³ The just-mentioned objectives are the four general objectives of the Programme, as reported in the official document.

of climate change adaptation into existing and future sectoral strategies, while guaranteeing synergy with existing planning documents. The NCCAP focuses on six priority sectors: agriculture, health, transportation, energy, water, and the forestry sector. The action plan is divided into two phases: 2022-2026 and 2027-2030.

The NCCAP, supported by UNDP, the Austrian Development Agency and funded by the Green Climate Fund, guides Moldova in the second phase of the National Adaptation Planning (NAP) process. NAP2 builds on the results achieved in NAP1 (2013-2017), such as elaborating the Climate Change Adaptation Strategy until 2020 and contributing to Moldova's NDC¹⁴ (2020).

The [EU4Climate Initiative](#), got under way in 2019 with EU funding, which also supports Moldova in dealing with climate change. In particular, it helps the country to elaborate its long-term low emission development strategy in accordance with the requirements of the Paris Agreement. One of the planned activities for 2023 is to formulate a climate law.

National Forest Extension and Rehabilitation Program

Pursuant to Article 5(a) of Law 136/2017, the National Forest Extension and Rehabilitation Program (NFERP) for 2023-2032 was adopted on 17 February 2023. The Moldsilva agency, subordinated to the MEnv, is responsible for its implementation. The NFERP was developed within the EU4Environment Programme, which supports the Eastern Partnership countries in identifying innovative financing schemes for the sustainable management of forests and ecosystem services. The purpose of the NFERP is to develop the forestry sector, through the conservation and expansion of national forest resources for increasing long-term climate resilience. To achieve this, expansion (through afforestation) and rehabilitation (through reforestation) actions will be carried out. Specific objectives and related actions are specified in the first action plan for the period 2023-2027, attached to the program; the second action plan - not included in the NFERP yet - will include objectives and actions for the years 2028-2032.

Flood Risk Management Plans

The implementation, on a voluntary basis, of the EU Floods Directive 2007/60/EC at the national level is represented by the [Flood Risk Management Plans \(FRMPs\)](#). Specifically, pursuant to Article 7 (1) of the Water Law 272/2011, the Flood Risk Management Plan for the Dniester River Basin District and the Flood Risk Management Plan for the Danube-Prut River and Black Sea Basin District were approved by GD 562/2020. The FRMPs aim to reduce and prevent flood risk and to increase institutional capacity in this field. Specific objectives in the FRMPs include strengthening flood protection infrastructures; increasing the resilience of people and the environment; providing institutional support through technical assistance; and updating flood legislation (etc). In the cross-border areas shared with Ukraine and Romania, two commissions – one for the Nistru river basin and one for the Danube basin district – made up of institutions responsible for flood response in these countries, meet regularly to guarantee bilateral cooperation in the two basin districts. The same institutions are responsible for the trilateral coordination process between Moldova, Romania, and Ukraine. Moreover, in the context of this Plan, the Flood Protection Group was established within the International

14 https://eu4climate.eu/wp-content/uploads/2023/05/1_draft_changed_MOLDOVA_EU4Climate_2023.pdf

Commission for the Protection of the Danube River and contributes to ensuring flood risk prevention in the area. For Moldova, the national focal point is the representative of the Hydrology Directorate of the SHS.

Other legislation concerning the management of flood risk in Moldova include: Law 440/1995 on water protection zones and strips of rivers and water bodies; GD 664/1992 (or GD 1030/2000 on approving the plan to protect Moldovan settlements from flooding) on measures to protect settlements located on flooded territories.

National Drought Plan

In 2019, under the United Nations Convention to Combat Desertification (UNCCD) Drought Initiative, the SHS and the Research and Project Center Eco Logistica drafted the [National Drought Plan](#) (NDP) of Moldova, with the support of the UNCCD secretariat and the Global Mechanism. The drafting of the plan aimed to create a substantial framework for integrated actions to reduce drought risk and improved preparedness based on adaptation and resilience. The plan identifies a set of recommendations and actions focused on prevention and adaptation practices as well as mitigation activities and investments across the vulnerable sectors for implementation in the near-term to mid-term future.

In March 2023, the MEnv initiated a procedure to amend the GD 779/2013 for approving the Regulation on drought management planning. For this purpose, a Working Group was created with specialists from different institutions, including GIES. A draft of a new decision is currently being prepared.

Food security strategy and Action plan

The MAFI led the development of a national Food Security strategy¹⁵ for 2023-2030 and its Action Plan, approved by GD 775/2022. The purpose of the Strategy is to guarantee food supply and stable economic conditions for the food production sector, and to improve the response mechanism of the food market to exceptional situations. Specific objectives include improving food security governance and legislation, facilitating international trade of agri-food products, developing an efficient local market, and developing mechanisms to reduce food insecurity for vulnerable groups. The objectives are aligned with the Sustainable Development Goals (SDGs) of the Sustainable Development Agenda 2030. The implementation of the Strategy is supported by its Action Plan, which specifies the activities foreseen under each objective, any monitoring indicators, and the leading institution and funding source. Some of the actions planned include: implementing an Agricultural Market Information System; systematising weather forecast information to prevent damage caused by climatic events; promoting campaigns of healthy and sustainable food consumption, as well as of food waste prevention. The Strategy calculates the costs for its implementation, identifying financial means both from the state budget, such as the National Fund for the Development of Agriculture and the Rural Environment and from other sources, such as sectoral programmes and external donors.

National Strategy for Radioactive Waste Management and Action plan

Nuclear and Radiological risk, in particular the risk generated from radioactive waste, is managed by the National Agency for Regulating of Nuclear and Radiological Activities (NARN-

¹⁵ <https://www.fao.org/faolex/results/details/es/c/LEX-FAOC215849/>

RA) under the MEnv. Moldova has adhered to several international agreements in this field and at the national level. The National Policy in Radioactive Waste (RW) management from 2012 provides the key principles for the management and disposal of RW. Besides these, the National Strategy for RW Management, and its Action Plan for the period 2017-2026 were developed with the EU support and approved by Law 68/2017 with the objectives of minimising waste and reducing its impact on the population. According to the Strategy and Plan, the National RW Management Operator subordinate to GIES is involved in activities of storage, treatment, decommissioning of radiological facilities, and in responding to radiological accidents. The Action Plan includes details on financing activities and planning investments from the State budget as well as projects through international funding.

4.2 - Roles of stakeholders

- The drafting of the **Programme** for the prevention and management of emergency and exceptional situations 2022-2025 was not accompanied by an extensive consultation process. The document clearly identifies entities that are in charge of implementing each action. However, it is **unclear whether they are aware of their roles and responsibilities**.
- Many sectoral planning documents went through a **consultation process** before being finalised. For example, the **National Forest Extension and Rehabilitation Program** was drafted by the Ministry of Environment in collaboration with the World Bank and in consultation with key stakeholders, while a wide range of stakeholders at the national, sectoral and sub-national levels, as well as the private sector, Civil Society Organisations, and local communities have been involved in developing and adopting the public policy document of the **National Climate Change Adaptation Programme**.

GIES and MIA drafted the Programme. The drafting process did not include a wide consultation with other institutions, CSOs, research or the private sector. It is thus unclear to what extent the several public authorities and stakeholders with designated actions in the implementation of the Programme's Action Plan are informed of their role. The stakeholders with appointed involvement include the Ministry of Justice, the Ministry of Health, the Ministry of Infrastructure and Regional Development (MIRD), the Ministry of Education and Research, the Ministry of Foreign Affairs and European Integration, the Ministry of Finance, MAFI, MEnv, the Information Technology and Cybersecurity Service, the National Agency for Regulation in Electronic Communications and Information Technology, the National Food Safety Agency, the National Agency for Public Health (NAPH), the Public Property Agency, and the local public authority administrations. For example, specific roles in sectoral actions have been given to the Ministry of Health for disease monitoring, and MAFI for emergency situations and food safety. In addition, GIES, together with the Ministry of Education and Research, are responsible for updating the regulation on volunteers, while the Ministry of Foreign Affairs and European Integration is involved in conducting international exercises in Moldova. Additionally, organisations representing the non-governmental sector will take part in information, training, piloting, research and communication activities; international and local development partners – such as UNICEF and the World Bank – will also be involved.

National Climate Change Adaptation Programme

A wide range of stakeholders at the national, sectoral and sub-national levels, as well as the

private sector, CSOs, women, vulnerable groups and local communities have been involved in the process of developing and adopting the NCCAP. Moreover, in February 2023, representatives of NGOs, the business environment, and central public authorities participated in a public consultation event organised by the MEnv and were able to present suggestions for improving the document presented.

Key stakeholders in the field of climate change, including sectoral ministries, NGOs, academia, research, private sectors, civil society representatives and women's associations are part of the National Commission on Climate Change (NCCC), which is a permanent, independent body that advises the government on how to prepare for climate change and produces reports on the progress of NAP implementation. The NCCC is under Moldova's Climate Change Adaptation Coordination Mechanism, which oversees adaptation planning and actions among all government parties. The National Office for implementing environmental projects, under the MEnv, collaborated with the NCCC in implementing climate change projects.

National Forest Extension and Rehabilitation Program

The NFERP was drafted by the MEnv in collaboration with the World Bank and in consultation with key stakeholders. The responsibility for implementing this program rests with the Government and the MEnv, in the role of coordinator, and its subordinate structures (in particular, the Moldsilva Agency and the Apele Moldovei Agency, etc.); local public administration authorities, the private sector and civil society (non-governmental organisations, community members, citizens) will have specific powers according to their assigned duties or role. The National Forestry Consultancy Office, attached to the Institute of Forestry Research and Development (Chişinău Forestry Research and Development Institute, subdivision of the Moldsilva Agency), is the operational management unit of the activities of this program, with responsibilities for ensuring the necessary human resources and the day-to-day implementation of tasks.

Flood Risk Management Plans

The MEnv, through the Moldovan Water Agency, led the process of the FRMPs and involved key stakeholders (such as local administration, river basin authorities, and public institutions) in identifying the actions in the plan through a public consultation. In addition, the plans were published on the Ministry's website for wider public consultation, according to existing legislation on transparency for public decision-making. The Ministry is also responsible for monitoring the plans, with the contribution of other institutions in implementing measures such as the Environment Agency; Moldsilva Agency; the Land and Land Registry Agency; GIES; the SHS; the Environmental Protection Inspectorate; and Local Public Administration Authorities. In the case of the Flood Risk Management Plan for the Danube-Prut River and Black Sea Basin District, two further institutions were added to this group, namely the Public Property Agency and the Public Services Agency. Regarding the bilateral and trilateral cooperation in the cross-border areas, the Moldovan institutions and authorities responsible for the coordination process include the National Commission, GIES, MEnv, the Moldovan Water Agency, SHS, NAPH, the MIRD, the Environment Agency - the Environment Protection Inspectorate, and Local Government Authorities.

National drought plan

The drafting of the NDP was carried out in a process of collaboration between the UNCCD, SHS, and the Research and Project Center Eco Logistica. Other key stakeholders took part in the preparation, including representatives from MAFI, the MIRD, and MEnv, the Institute of Pedology, Agrochemistry and Soil Protection, the National Institute of Hydrology (India), the Department of Geography & Environmental Studies (Canada) and the State Agency Moldsilva.

Food security strategy and Action plan

The authority responsible for implementing the Food Security Strategy is the MAFI, jointly with the Ministry of Economy and in collaboration with the competent authorities with responsibilities in the field: the MEnv, the Ministry of Health, through NAPH, the MIA, the Ministry of Defense, the Ministry of Finance, through the Customs Service, the National Agency for Food Safety, the National Bureau of Statistics, and the Agency for Material Reserves. The process of implementing the Strategy will involve other central and local public administration authorities, non-governmental organisations, as well as international development partners. The Strategy identifies areas for improvement in the insufficient communication and collaboration between these actors, such as low decision-making capability, overlapping of roles, inefficient management of human and financial resources, discrepancies in communication and low reaction time. Hence, it suggests the creation of an inter-ministerial working committee for promoting synergies and an integrated approach to food security.

National Strategy for Radioactive Waste Management and Action plan

In implementing the Action Plan for RW management, the NARNRA collaborates with various institutions, such as the MIA, the Ministry of Health, GIES, the SHS, and the Academy of Science.

4.3 - Prioritisation of measures

- On the basis of identifying the major weaknesses of Moldova's DRM systems, the **Programme for prevention and management of emergency situations 2022-2025** identifies general and specific objectives and a list of actions to be implemented for achieving them. The **prioritisation method of the key measures is unclear**.
- Several **methods and approaches to prioritise measures** and actions are included and applied in some sectoral planning documents. For instance, the **Flood Risk Management Plans** systematically prioritise key measures on the basis of the following elements: degree of urgency, magnitude of the risk, cost-benefit analysis, and integrity of the flood risk management system.

The Programme provides an analysis of the current state of the art of the country's DRM system, and outlines weaknesses and areas for improvement. It also presents historic and recent data on hazard, emergencies and response effectiveness. While the use of specific criteria (such as cost-benefit analysis or win-win approaches) in defining the Programme's priority measures is not specified, the actions selected in the Plan target the areas for improvement that have been identified.

National Climate Change Adaptation Programme

The adaptation priorities in Moldova, outlined by the First Nationally Determined Contributions (NDCs) and picked up in the NAP processes, followed the assessment of the vulnerability of key economic sectors. Six sectors identified for priority climate change adaptation actions are: agriculture, water resources management, health, forestry, energy and transport. Adaptation investment priorities were identified on the basis of reviewing national and sectoral development policies and plans, along with the results of an extensive consultation process ensured by a wide representation of stakeholders across sectors and levels of governance, in particular, representatives of central and local public authorities, the private sector, the civil society, academia and women's associations, who contributed different types of knowledge in the area of climate change adaptation.

National Forest Extension and Rehabilitation Program

The NFERP for 2023-2032 provides an overview of the issues related to forest areas and forestry sectors, such as forest degradation, woodland deficit, soil erosion, forest distribution, and the effects of climate change. NFERP's actions take shape in response to these issues, but a clear prioritisation methodology is not applied.

Flood Risk Management Plans

In the FRMPs, a set of structural and non-structural measures were identified according to specific principles, such as sustainable development and cross-border and inter-institutional coordination. These measures can be divided into those applicable at the national level, consisting of non-structural measures that deal with institutional capacities, and at the level of river basin distribution, including non-structural and structural measures addressing concrete aspects such as the construction or rehabilitation of infrastructures. The process of prioritisation of measures was carried out on the basis of the following criteria: degree of urgency; magnitude of risk; cost-benefit analysis; and integrity of the flood risk management system.

National drought plan

The NDP recognises the importance of directing human and economic capital towards implementing mitigation/adaptation strategies that are relevant, targeted and effective, especially as the funding is limited. The plan's mitigation and adaptation options address climate risk challenges that local rural communities face and prioritise, considering the maximum return on investment from an economic, social and environmental standpoint. However, the plan does not specify the method for calculating a return on investment.

Food security strategy and Action plan

The Strategy for Food Security identifies priority investment proposals for each objective, though the process for identifying priorities is not clear.

4.4 - Monitoring, evaluation and reporting

- A **clear monitoring and reporting process** is described in the Programme. A list of **indicators** has been identified to support the monitoring of the implementation of key actions and evaluating the effectiveness of the programme itself. **Mid-term and final reports** will be drafted by the MIA with the support of the implementing authorities, and published on the website.

- Key sectoral planning documents foresee a monitoring and evaluation process, such as the **National Climate Change Adaptation Programme**, the **Food Security Strategy and Action Plan**, and the **National Strategy for Radioactive Waste Management and Action plan**.

During the period of Programme implementation (stage I 2022-2023; stage II 2024-2025), a monitoring and reporting process will establish the degree of implementation of its actions. In the Programme and its Action Plan, monitoring indicators are specified for each objective and action. Results of the implementation will be included in the progress report, which the MIA will prepare annually on the basis of the information submitted by the implementing authorities/institutions. In addition, a mid-term evaluation report after stage I, and a final report after stage II will be prepared by the Policy Analysis, Monitoring and Evaluation Unit of the MIA with the support of implementing authorities, and will be published on the MIA website.

National Climate Change Adaptation Programme

As reported in the concept document of 2021, the monitoring of the implementation of the NCCAP up to 2030 will be carried out by the MEnv. Each year in the 2022–2030 period, a monitoring report will be prepared on the implementation of actions and objectives based on results and impact indicators. The public policy document will be evaluated twice: a mid-term evaluation will be published for 2025-2026; on the basis of this, the second phase of the Action Plan can be adjusted, and its implementation will be assessed through a final evaluation regarding the years 2030-2031.

National Forest Extension and Rehabilitation Program

The monitoring of NFERP's implementation is ensured by the MEnv through the Moldsilva Agency. To guarantee the implementation of the Action Plan, the MEnv, together with other central administrative authorities responsible for the implementation of this program, will elaborate and approve, by order, annual operational plans. In addition, the MEnv will prepare annual monitoring reports of the Action Plan to be submitted to the Government and the Presidency; these will include information on the degree of achievement of monitoring indicators and the level of achievement of specific objectives. The Ministry will also produce and submit by June 2028 the intermediate evaluation report; the final evaluation report will be prepared for June 2033. Both monitoring and evaluation reports, as well as current information on the progress made, will be published on the MEnv's official web page. The civil society and local public administration authorities will be able to make suggestions and comment on the progress of this Program.

Flood Risk Management Plans

The authority responsible for monitoring and reporting (to the two designated committees) the implementation of the FRMPs is the MEnv, through the Moldovan Water Agency. The institutions responsible for carrying out the measures are also responsible for their monitoring and evaluating processes. For each measure of the first cycle (2020-2025), a set of indicators was defined to assess the progress of implementation. Results of the implementation of the previous year's measures are included in an annual report submitted to the State Chancellery by the MEnv. Because of the difference in the years of approval (2017 and 2018), the two Plans will be updated in parallel starting from the next cycle, to ensure proper management and coordination of the planned activities within both basin districts.

National Drought Plan

According to a government decision, a dedicated National Working Group carries out overall monitoring and coordination of NDP implementation, and organises the production and presentation of reports to Government agencies and to the public. The activity of the NWG and implementation of its decisions is coordinated by the MEnv and National and Focal Point to the UNCCD. A list of involved institutions and subordinated agencies in drought monitoring, risk assessment and management is provided in the Plan.

Food security strategy and Action plan

The Strategy for Food Security provides result indicators for monitoring and evaluating the actions in each field of intervention. MAFI is responsible for the Strategy's monitoring and evaluation process with the support of the Ministry of Economy and other public authorities. Annual progress reports will be developed, which will include information on the implementation of the actions provided for in the Action Plan of the Strategy, and data on the financial resources allocated during the year.

National Strategy for Radioactive Waste Management and Action plan

The implementation of the Action Plan for RW management is monitored by reports annually prepared by the institutions involved. Annual reports include information on the implementation of indicators for each action. Additionally, every 3 years assessment and progress reports are also drawn up to determine the impact of the activities carried out in a certain period of time and the level of implementation of the set objectives. The monitoring and evaluation reports are submitted to the Monitoring Group (consisting of representatives of NARNRA, Civil Protection and legal persons authorised in the RW management field) for generalisation and submission to the Government.

4.5 - Policy coherence

- The characteristics concerning the structure, contents, drafting and monitoring process of public policy documents are defined by **law**. The **Ministry of Finance is in charge of ensuring compliance** of planning and policy documents with the legal framework.
- The **Programme complies** with the above mentioned legislation, fulfilling all its requirements.
- Sectoral planning documents include references to international frameworks, such as SDGs, the Paris Agreement and the Sendai Framework, **demonstrating efforts to ensure policy coherence across sectors**.

Law 100/2017 on legislative acts and GD 386/2020 on the planning, preparation, approval, implementation, monitoring and evaluation of public policy documents provide the requirements for the structure and content of public policy documents. A dedicated office under the Ministry of Finance is in charge of ensuring compliance with the legal framework, though it is not clear to what extent these requirements are implemented. The recently approved Programme complies with these legislations.

Sectoral policies and plans are in turn developed to transpose international guidelines, global SDGs and Sendai goals into national planning.

- The actions of the Programme are planned in coordination with the implementation of the following SDGs of the Sustainable Development Agenda 2030: SDG 1 “No poverty”; SDG 11 “Make cities inclusive, safe, resilient and sustainable”; SDG 13 “Limit climate change and its impacts”.
- The FRMPs implement the Floods Directive 2007/60/EC of the European Parliament and the Council on assessing and managing flood risks at the national level.
- NDP is prepared under UNCCD’s Drought Initiative. The legal framework addressing drought preparedness and response, as well as protecting water resources, implements environmental quality standards according to the European Water Framework Directive (WFD, 2000/60/EC) principles.
- The NAP, and consequently the NCCAP, developed within this process are aligned with the implementation of the Paris Agreement, the Sendai Framework and the 2030 Agenda. Specifically, the concept document (2021) of NCCAP reports the aim of the programme to contribute, directly or indirectly, to achieving specific targets of the following SDG goals: SDG 1 “No poverty”; SDG 6 “Ensure access to water and sanitation for all”; SDG 9 “Build resilient infrastructure, promote sustainable industrialisation and foster innovation”; SDG 11 “Make cities inclusive, safe, resilient and sustainable”; SDG 13 “Limit climate change and its impacts”; and SDG 15 “Life on land”.
- The NFERP aligns its goals with European and global commitments and trends on forests and land use, such as the Glasgow Leaders’ Declaration on Forests and Land Use and the UN Strategic Plan for Forests 2017-2030. As reported in the official document, Moldova aims to restore its forests and ensure sustainable forest ecosystems in line with the [European Green Deal](#); specifically, the programme reports the objectives laid out in the EU forest strategy, which emphasises the role of forests and forest-based value chains in achieving a sustainable and climate-neutral economy by 2050 and protecting and strengthening the resilience of ecosystems. At the same time, NFERP implementation aims to bolster economic growth and secure livelihoods and well-being for its people. The programme is committed to implementing four SDGs: SDG 1 “No poverty”; SDG 5 “Achieve gender equality and empower all women and girls”; SDG 13 “Limit climate change and its impacts”. and SDG 15 “Life on land”.
- The Food Security Strategy ensures the necessary cohesion between Government actions and the commitments undertaken by Moldova to achieve the Sustainable Development Agenda 2030, including through the lens of the “No one should be left behind” principle, creating the right context for achieving a number of sustainable development objectives, such as SDG 1 “No poverty”, SDG 2 “Zero hunger” or SDG 12 “Responsible consumption and production”. Additionally, the Food Security strategy recognises the importance of an inter-sectoral, integrated approach to food security in Moldova and the need for synergistic and cohesive linkage of state policies in the areas of rural and

agricultural development, social protection and health. The Strategy refers to the Horticulture Development Programme 2021-2025, the Land Improvement Programme 2021-2025 and the National Strategy for Agricultural and Rural Development 2022-2027.

4.6 - Conclusions

In Moldova, a number of sectoral plans drafted by different entities are linked to DRM. These should be better aligned among them and with the Programme in order to avoid gaps and overlaps. The implementation of a National Platform for DRR could improve this alignment by providing the appropriate context for discussing cross sectoral strategies and fostering policy coherence.

The Programme represents an excellent planning document and fulfils all the requirements concerning public policy documents defined and approved by law. It sets priorities for actions, identifies the roles and responsibilities of key stakeholders, and the timeline and financial resources required for implementing key measures. These are based on the identification of major weaknesses in the country's DRM system, as described in the self-assessment included in the Programme itself. The identification of areas for improvement can be considered a solid basis for selecting measures targeted to Moldova's current needs.

The attribution of roles and responsibilities to key stakeholders provided in the document is important for a successful implementation of the Programme. However, it is equally important to ensure proper coordination among the different entities in charge of the actions identified. This should be guaranteed by MIA through the organisation of inter-institutional coordination meetings to guide the overall process.

The Programme clearly identifies the financial needs for implementing key actions, and highlights the lack of coverage for a list of measures. In this regard, as already mentioned in Chapter 2, the development of a dedicated multi-annual budget allocation in the implementing entities may ensure the Programme's effectiveness. At the same time, optimising the exploitation of external funding could also help achieve the objectives identified.

5 | Risk Prevention Measures

5.1 - Legislative framework and processes

- Moldova has recently **recognised the strategic importance of prevention** in dealing with natural and human-induced hazards, as well as related disasters. A strong effort is now being made to understand how to improve and strengthen the prevention phase at the national and sub-national scale.
- The **concept of prevention** in Moldova's DRM system needs to be clarified and aligned with UCPM legislation. There is a lack of common understanding of the meaning of prevention and its related key measures.
- Moldova suffers from the **lack of an overall legal framework** to deal with prevention and, as a main consequence, **roles and responsibilities** for implementing prevention measures for key risks are not clearly defined.
- The Programme identifies major prevention actions to be implemented to strengthen resilience, mainly associated with **risk awareness campaigns and communication activities**.

Moldova lacks a specific legal framework for prevention and the allocation of roles in risk prevention for each hazard is not clearly defined. Some prevention actions are included in sectoral strategies that have been developed to mitigate the major hazards Moldova faces. For example, the Environmental Strategy for 2014–2023, FRMPs, NDP and NFERP. Fire protection Law 267/1994 also establishes the legal, economic and social bases for fire insurance and fire protection, including the obligations for each public and private institution to keep automatic fire prevention systems and technical equipment for extinguishing fires in working condition and for ensuring personnel training. The Programme highlights the need to develop a comprehensive legislative framework that would clarify prevention processes and responsibilities.

The terminology associated with Moldova's risk prevention is not completely in line with the UCPM legislation and guidelines. For example, risk prevention measures in the Programme's Action Plan include communication, risk awareness campaigns and the operationalisation of the national EWS. While the Programme recognises the importance and cost-effectiveness of investing in prevention, risk prevention is not yet a priority for the country, which focuses on response. Other factors contributing to this are the absence of a culture of prevention, and of dedicated budget lines to prevention activities in GIES and the central and local administration's budgets.

An ongoing effort is devoted to supporting local authorities in assessing risks and developing their own preparedness and prevention plans, since currently local authorities rely on the central government for these activities and for financing prevention measures. At the local level, authorities can annually request funding from the National Commission based on their risk assessment. Local administrations can decide autonomously to use their own budget for response or prevention.

5.2 - Territorial planning

- A clear link between territorial planning and disaster risk management is **not formally established** in the Moldovan legal framework and not technically implemented, partly because of existing weaknesses in risk assessments at an appropriate scale.

Currently, technical regulations for construction and urban development in Moldova do not incorporate climate and disaster risks. Only 61% of urban settlements and 5% of rural settlements have developed Master Plans that integrate risk with planning and zoning. For instance, the Municipality of Chişinău has a map of dangerous geo-environmental processes whose usefulness and functionality are limited by the fact that the city's Master Plan does not incorporate the information contained therein¹⁶.

Under a contract with the former Ministry of Regional Development and Construction, IGS has developed a methodology of seismic micro-zonation and elaborated maps for three urban territories, among which the Municipalities of Chişinău and Cahul, which contain important information on seismic risk and can be used for authorising new constructions. Because of the lack of funds, the activity has slowed down, and in the areas where no seismic micro-zoning maps have been developed, local authorities do not take any measures to ensure seismic safety.

No link is established by law between territorial planning and flood risk/hazard maps, such as those developed in FRMPs. However, regulation NCM B.01.05:2019 on the "Systematization and local accommodation of urban and rural communities" states that the construction of building and transport infrastructure is prohibited in areas of potential flooding where the flood depth reaches 1.5 metres or more, and in areas that might be affected by landslides and mudflows.

In general, to inform territorial planning with disaster risk information/evaluation it is key to have conducted adequate risk assessments.

5.3 - Structural measures and nature-based solutions

- Sectoral plans and programmes for specific hazards include both **structural and Nature-Based Solutions**, such as Flood Risk Management Plans, a Drought Plan, and a National Forest Extension and Rehabilitation Program.
- With reference to **seismic risk**, there is an ongoing effort to adopt Eurocodes and conduct vulnerability assessments of buildings in risk prone areas.

Floods

A set of structural and non-structural measures have been identified in FRMPs under each general and specific objective.

The proposed structural measures include reinforcement of flood protection infrastructure, such as reconstructing protective embankments; maintaining dykes and existing draina-

¹⁶ World Bank, Strengthening Moldova's Disaster Risk Management and Climate Resilience, 2020.

ge channels and pumping stations; cleaning riverbeds and fortifying dam protection; and drafting a feasibility study on the displacement/relocation of floodplain buildings. Moldova's Water Agency under the MEnv is responsible for monitoring risks of structures such as dams and dykes, requesting financing for repairs and proposing decisions on relocation of villages/areas after a flood and in prevention of similar future events, as in the case of the village of Cotul Morii. Following a GD, in 2021 a task force carried out controls on flood infrastructures and reported the most vulnerable points. The implementation of the identified measures in FRMPs are assigned to different stakeholders in collaboration with the Moldova Water Agency, including the Environmental Agency Protection, the SHS, and the Moldsilva Agency.

Non-structural measures include ensuring cooperation with Ukraine on water resource management, increasing technical capacities in water management through LiDAR scanning, improving the hydrological monitoring system (preparedness), and a communication plan and flood emergency procedures to assist affected populations. Some Nature-Based Solutions are also planned, such as afforestation of areas and woodland within river basin districts, improvement of forest and protective forest curtains, and the creation of wetlands in specific regions.

A number of flood prevention measures, which include Nature-Based Solutions, have been adopted in Chişinău to regenerate the River Bic. The €20 million [project](#), funded by the European Bank for Reconstruction and Development, the European Investment Bank and the Green Climate Fund, aims to improve stormwater run-off management, flood water management, and water quality. The project also includes retrofitting 90 rain gardens and 85 tree pits, focusing on climate adaptation, water quality, and climate-resilient blue-green infrastructure.

Earthquakes

With the support from the EU, Moldova drafted a new Urban and Construction code, to adapt its legislation to reflect EU building code standards for seismic design. There is an ongoing effort to adopt Eurocode 7 "Geotechnical design" and Eurocode 8 "Design of structures for earthquake resistance". Currently, no structural characterization is available to identify the main risk elements in urbanised areas, such as buildings and infrastructures.

IGS has completed a rough vulnerability classification, according to the European Macro-seismic Scale EMS'98 (Vulnerability Classes: A, B, C, D, etc.), but these results have not been disseminated. Furthermore, some technical issues in the mapping have not been clearly addressed, such as the intrinsic uncertainty of the Vulnerability Class Assessment in the European Macro-seismic Scale EMS '98, and detailed georeferentiation of the impact expected at the urban scale has not been shown. This represents an important knowledge gap for prevention, since the quantification of expected damages and related scenarios are essential for addressing civil protection plans and/or programme of mitigations measures.

The MIRD, within the Technical Committees, examines the harmonisation of building regulations according to the Eurocodes. Technical Committees include representatives from GIES, and seismic research institutions are represented by IGS.

Technical Committees are examining Eurocode 7 and Eurocode 8, which are in the process of transcription.

At the same time, the last passporting (evaluation/characterization) of buildings (all types of constructions) was carried out in the municipality of Chişinău in 2005. At the moment, possibilities of financing the work to carry out passporting are still in the searching process. The draft of the Urban Planning and Construction Code was elaborated by the MIRD and is currently submitted for repeated approval with a 28.07.2023 deadline.

Drought

Moldova has improved its irrigation services, promoted climate-smart agriculture practices, such as a moisture-preserving tilling and water collection/capture infrastructure, and strengthened the existing agriculture insurance scheme to reduce the agricultural sector's vulnerability to climate change. Many pilot demonstrations have been set up in recent years, and there is a need to streamline these practices into agricultural funding programmes. For example, under the UNDRR-funded project "Promotion of climate change and DRR solution in the water and civil protection sectors for enhanced rural resilience" 2019-2022, 9 water storage basins were built in 5 districts, with a storage capacity of 119,150 m³, which can ensure the irrigation of an area of 177 ha¹⁷.

Wildfires

Measure 5.3 of the NFERP for 2023-2032 focuses on preventing fire risks. To avoid possible losses in the forested areas created or rehabilitated under the program, the aforementioned measure aims at strengthening the system of fire management through the development of fire management plans, the classification of forest lands into fire danger classes, the determination of risk areas and the establishment of fire protection protocols. At the same time, the creation of the following measures is taken into account: fire-fighting infrastructures - monitoring and intervention equipment; water supply sources, mineralised strips, access roads, watchtowers and monitoring, etc.

5.4 - Innovation and knowledge services

- The Moldovan system **could further exploit** innovation and knowledge services made available at the European level. In particular, the Copernicus programme could help support several activities related to the whole disaster risk management cycle.

So far, Moldova has never activated Copernicus Emergency Management Service (Copernicus EMS). However, in 2020 Romania activated Copernicus EMS for floods affecting Moldova, and Moldova made use of those maps. Similarly, the Risk Data Hub platform is not used in DRM, and neither is the Global Floods Awareness System (GLOFAS), but training on Copernicus and GLOFAS was attended by some GIES colleagues.

In 2018, Moldova received a grant from the World Bank and developed a National Framework for Climate Services and its Action Plan¹⁸, which provides the enabling environment for user-focused scale-specific climate products in important economic and security sectors.

¹⁷ [Promotion of climate change and disaster risk reduction solution in the water and civil protection sectors for enhanced rural resilience | United Nations Development Programme](#)

¹⁸ Kull, Daniel Werner. Concept and Action Plan for Climate Services in Moldova (Romanian). Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/663401577717007409/Concept-and-Action-Plan-for-Climate-Services-in-Moldova>

The [Climate Change Knowledge Portal](#) is currently under construction and a test platform is used for the SHS to develop the portal. The final format and product users are still to be decided. During this process, the main challenge is updating the server that will be used to publish climate information, including long-term projections.

5.5 - Awareness and risk communication

- The Programme highlights the **importance of risk awareness and communication activities**. GIES **has already implemented** several **good initiatives** at the national and sub-national scale to enhance community resilience.
- **A good, fruitful collaboration between GIES and the Ministry of Education and Research** is in place to jointly develop and implement school curricula on disaster risk topics.

The civil protection legislation defines how awareness raising about disasters must be provided to the population. Through mass media, civil protection authorities (GIES) must provide information on specific hazards, on the actions people should take in a specific situation and on the measures to be taken to protect them. In the Programme, risk awareness campaigns and risk communication are the only prevention activities envisaged. The GIES's Directorate General for Prevention, which includes territorial prevention officers, leads activities such as direct and indirect communication, information and education campaigns, open-door day events, contests, training within the Republican Training Centre, and visits to the *Security School* (see BOX 4).

In 2019-2022, GIES conducted 11 annual thematic campaigns to prevent seasonally related risks, informing over 2 million people and promoting a culture of risk awareness in the society with regard to domestic risks. These campaigns cover the following topics: risks of explosions/fires caused by liquefied gas cylinders and natural gas installations; prevention of burning dry vegetation; risk of drowning in summer; risk of fires in educational establishments and prevention of poisoning following wine fermentation; fire risks and poisoning from stagnant products during the cold period of the year. In addition, GIES has created and published action guidelines to be followed during risk situations to increase the public's knowledge of adequate behaviour during emergencies. In 2019-2022, the *Security School* trained 15,000 children from all districts with the necessary skills to prevent and reduce risks associated with everyday life. GIES staff also created preparedness video campaigns on a voluntary basis, featuring a simple language and examples of prevention behaviour for the general public. The videos are easily accessible through social media and the GIES website. GIES has also developed action guidelines for different risk situations, providing information on how to behave in the first 72 hours of a crisis to minimise risks that may arise from natural and human-made hazards. The guide is available electronically on the GIES website.

While no interministerial risk communication actions or procedures are in place, a collaboration between GIES and the Ministry of Education and Research is ongoing, with the aim of integrating safety and security issues in scholastic curricula. Additionally, the Ministry of Health leads a programme of First Aid for the population, focused on identifying the first signs of heart attack and intervention of medical workers within the first hour.

One of measures identified in the Programme to increase risk awareness is the creation and operationalisation of three *regional mobile prevention modules*. Through these modules, GIES will travel all around the country, educating the population on how to behave in case of civil protection emergencies.

BOX 4 - The Security school in Chişinău (field visit)

During the mission, the Peer Review team visited the *Security School* in Chişinău. This school is an awareness raising centre run by GIES to train children on disaster risks associated with key hazards, such as floods and earthquakes, and on appropriate behaviours to be adopted for self-protection during such events. In 2019-2022 the *Security School* trained 15,000 children from all districts. The *Security School* is well structured, covering all major risks, for which dedicated rooms are organised with panels, photos and objects from real emergencies. Educational institutions from all over the country visit the *Security School*, and almost every day different classes are trained there. The *Security School* has proven its effectiveness in disseminating knowledge on disaster risk among young students and raising interest on this subject even through competitions. An upgrade of the tools and materials, with the inclusion of digital solutions, is recommended for making the *Security School* more attractive for new generations.



Figure 7: Visit at the Security school in Chişinău during the peer review mission.

5.6 - Conclusions

Moldova has recently recognised the strategic importance of prevention in dealing with natural and human-induced hazards, as well as related disasters. A concerted effort is now devoted to understanding how to improve and strengthen the prevention phase at the national and sub-national scale, including addressing the lack of an overall legal framework dealing with prevention, which is essential for clarifying activities, roles and responsibilities among key entities/institutions on different hazards.

The Programme identifies major prevention actions to be implemented to strengthen resilience, such as risk awareness campaigns and communication activities. However, the concept of prevention in the Moldovan DRM system needs to be further clarified and its terminology aligned with the UCPM policy framework.

While some prevention actions have been developed in sectoral strategies to mitigate the major hazards Moldova faces, the coordination and collaboration on prevention among key

entities needs improvement. A joint discussion on how to identify and implement prevention measures could begin with the National Commission, where key ministries are represented, until a National DRR Platform is established, if it ever will be. In that instance, multi-annual budget lines devoted to prevention should be allocated within each key ministry playing a role in the prevention phase.

It is important to set in motion a process for integrating and linking territorial planning with risk assessment to avoid increasing exposure and vulnerabilities of communities. To foster its implementation, this process should be defined by law and regulated by implementing guidelines at the national level. The creation of a publicly accessible cadastre and a common geoportal would provide an excellent tool to facilitate and support an effective territorial planning that takes into account the outcomes of risk assessments conducted at different scales. A legal framework dealing with territorial planning for prevention and DRM should be drafted. The central government should adopt guidelines for local authorities on how to develop land use regulations and territorial/master plans linked to civil protection plans. The National Territorial Development Plan should consider the risk prone areas and the DLD related to both natural and human-induced hazards.

The Environmental Strategy, FRMPs, NDP, and NFERP are sectoral policy documents for specific hazards that include both structural and Nature-Based Solutions. The 2023-2032 NFERP is a very effective document for tackling wildfire risk, considered key in the Country, especially in view of future climate change projections. Moldova is voluntarily implementing the EU Floods Directive, according to which a list of prevention measures is planned and their budget is allocated. These measures include Nature-Based Solutions, whose implementation should be favoured wherever possible. With reference to seismic risk, there is an ongoing effort to adopt Eurocodes and conduct vulnerability assessments of buildings in risk prone areas.

Innovation and knowledge services made available at the European level could be further exploited. For instance, the country could greatly benefit from using Copernicus services (see BOX 5) to identify and implement prevention activities and, more in general, to support overall DRMC phases and related activities, including development of risk assessments, as already mentioned in Chapter 3. In particular, the Copernicus Risk and Recovery mapping should be activated to collect information and data in support of land use, territorial planning and the whole DRMC phases.

To improve GIES's substantial effort in risk awareness, the topics to be addressed in the campaigns should be prioritised on the basis of the key risks identified and the statistical data available at the national and sub-national level. For example, covering risks from larger impacts, such as floods, wildfires, earthquakes and technological risks, could further improve existing public knowledge on domestic risks. Conducting surveys after risk awareness initiatives could also help GIES in monitoring their impact on the communities and its effectiveness. More in general, evaluating communication efforts and identifying lessons learned could help to further improve these activities.

Excellent examples of knowledge dissemination and public awareness on common behaviour during emergencies are the *Security School* for young students and public guidelines for

actions to be taken in the first 72 hours of a crisis. The modernisation of the *Security School*, the implementation of three regional mobile prevention modules to reach remote areas foreseen in the Programme, along with the finalisation of the school curricula on disaster risk topics in collaboration with the Ministry of Education and Research, are recommended to further boost the effectiveness of risk communication campaigns and communication initiatives.

BOX 5 - Copernicus Emergency Management Service

The Copernicus Emergency Management Service uses satellite imagery and other geospatial data to provide a no-cost mapping service in cases of natural disasters, human-made emergency situations and humanitarian crises throughout the world. It covers, for example, floods, earthquakes, landslides, fires, tsunamis, and other disasters.

The Copernicus EMS tool can provide mapping during all phases of the emergency management cycle following a request of activation from an entity/authorised user. The maps are produced in two temporal modes: Rapid Mapping and Risk and Recovery Mapping.

Rapid Mapping provides geospatial information within hours or days from activation in support of emergency management activities immediately following a disaster. Standardised mapping products are provided, for example, to ascertain the situation before an event (reference product), to roughly identify and assess the most affected areas (first estimate product), to assess the geographical extent of the event (delineation product) or to evaluate the severity of the damage resulting from the event (grading product).

The Risk and Recovery Mapping provides on-demand geospatial information in support of Disaster Management activities not related to immediate response. This applies in particular to activities dealing with prevention, preparedness, DRR and recovery phases. There are three broad product categories: Reference Maps, Pre-disaster Situation Maps and Post-disaster Situation Maps.

The users of the service include entities and organisations at the regional, national, European and international levels active in the field of emergency management. The EMS can be triggered only by or through an Authorised User (AU). Authorised Users include National Focal Points in the EU Member States and UCPM Participating States, as well as European Commission services and the European External Action Service (EEAS). In the case of Moldova, which does not yet have a nominated National Focal Point, the activation of EMS can be requested through the EU Emergency Response Coordination Centre (ERCC).

Beside the on-demand mapping, Copernicus also has two other components: Early Warning Systems and Global Human Settlement Layer. In terms of EWS, the European and Global Floods Awareness System monitors and forecasts floods (EFAS/GloFAS); the European and Global Forest Fire Information System supports services in charge of forest fire protections, and provides updated, reliable information on wildland fires in Europe (EFFIS/GWIS); and the European and Global Drought Observatory provides drought-related information, early-warnings and short analytical reports in anticipation of an imminent drought (EDO/GDO).

The Global Human Settlement Layer provides data, tools and analytics on population presence and activity.



Figure 8: GIES exercise in Romania (Credits © General Inspectorate for Emergency Situations, 2023).

6 | Risk Preparedness Measures

6.1 - Legislative framework and processes

- The **Programme addresses several preparedness measures** that should be implemented to strengthen institutional resilience at different territorial levels, such as the implementation of a national public notification system, teams of volunteers, training activities and exercises.
- Every year, GIES develops a **calendar plan for civil protection preparedness activities** at all administrative levels, with approval by GD.

The Programme includes a list of preparedness measures aimed at strengthening the institutional and community coping capacity at different territorial levels. Among the major ones, several activities deal with implementing a national public notification system, training volunteer teams, developing training activities and organising/participating in exercises.

GD 823/2022 “On civil protection preparedness measures of Moldova for the year 2023” approves the calendar plan for civil protection preparedness activities and the Plan for the addition of auditors to the National Training Centre for the year 2023. The calendar plan includes preparedness activities at all levels (national, district, local), approved within the annual budget. These include various training programmes in the field of notification and alerting, as well as checkups on civil protection equipment, appliances and conditions of infrastructures.

6.2 - Contingency planning

- Besides the National Civil Protection Plan, **emergency plans at the district and local levels** have to be drafted by respective authorities in collaboration with GIES.
- The existing contingency plans are outdated and do not include scenarios, risk assessments nor SOPs. A new approach for the **updating of civil protection plans** is in progress including methodological recommendations by GIES for a unique format of the plans.

The National Civil Protection Plan provides guidelines for developing emergency plans at the district and local levels. At the district level, emergency plans are drafted by region heads, while at the local level, the responsibility rests with city mayors; in both cases, GIES supports the drafting of plans. The existing civil protection plans at all levels (from asset/site to local, district and national) are outdated and in the process of being updated. Also, they do not include scenarios, early-action procedures linked to the existing EWSs, communication flows and/or SOPs. Some guidance, rather than specific procedures to follow, is provided by the existing legislative framework.

The National Civil Protection Plan is currently being updated and a new approach in drafting civil protection plans at different territorial levels is underway. According to the new methodology, a risk assessment chapter with risk maps for different hazards will be introduced. Also, prevention measures will be introduced in the plans to complement response ones. Once the national plan is finalised, the local plans will be updated accordingly, adopting the same approach.

GIES will draft methodological recommendations for updating civil protection plans based on the new approach to have homogeneous plans at different territorial levels. Some planning guidelines are already provided by regulation 136D/2015 "On identifying and evaluating emergency situations at the district level, municipality", which gives general information on how to use multi-hazard risk assessments for planning purposes. However, according to the PPRD East 3 Assessment Report, the technical and scientific framework needs to be improved. For this reason, the PPRD East 3 is in the process of improving Moldova's emergency planning on the national and transboundary levels. Sorocca has been selected as a pilot area to operationalise the multi-risk response planning approach.

Inter-ministerial plans for disaster preparedness and response are developed and coordinated within GIES. For instance, The Ministry of Defence cooperates with GIES within the framework of the Contingency Plan for Cooperation, designed to coordinate activities in the event of emergencies. This also includes cooperation with other parts of the armed forces under the coordination of GIES, in accordance with the Law on Civil Protection and the Decision of the National Commission. However, coordination remains at the level of central authorities and is not fully transformed into consolidated efforts at lower levels.

With regard to **health emergencies**, in 2020 a Plan of preparedness and response for 2023-2027 was approved. The Plan, drafted by the Ministry of Health in collaboration with the MIA, aims to implement international health regulations and includes actions at the territorial level. In addition, every medical institution is required to have a contingency emergency plan. The collaboration with GIES is well-established and there are SOPs in place in case of mass casualty accidents, where GIES and medical emergency teams are required to intervene.

Developed by the MAFI and approved through GD 680/2018, the General Plan for Crisis Management in the **Food and Feed Sector**, transposes Decision 2004/478/EC concerning the adoption of a general plan for **food and feed crisis management**. The Plan defines a clear process for managing crisis situations, from the observation of indicators, assessment of the crisis situation and alerting on the potential crisis, to the planning and execution of response options.

At the **cross-border level**, as part of the project on hazard and crisis management in the **Danube Delta** (2010-2016), a draft Joint Contingency Plan for the Danube Delta region for Moldova, Romania, and Ukraine was developed. It lays out procedures for joint intervention in case of an emergency situation in the Danube Delta. The emergency services of the neighbouring countries were involved in the process.

6.3 - Early warning systems

- No multi-risk impact-based EWS currently exists in Moldova. However, individual governmental organisations are in **the process of developing EWSs targeted to different hazards**: the State Hydrometeorological Service for hydro-meteorological hazards; the Institute of Geology and Seismology for seismic threats; the National Agency for Public Health for health emergencies; and the National Agency for Food Security for threats to food security.

- With support of the PPRD East 3 programme, the implementation of an EWS for wildfires with the aim of issuing a **national wildfire bulletin** (including bush fires, agricultural and vegetation fires) is underway.
- The process for **alerting the population** currently relies on GIES forces and mass media due to a lack of specific alerting tools. The implementation of a public alerting system based on cell-broadcast, similar to the RO-ALERT in Romania, is planned for the future. A **good relationship between GIES and mass media** exists to ensure reliable public information broadcasts during emergencies.
- The State Hydrometeorological Service of Moldova is a Cooperating Member of EUMETNET, and part of the Meteoalarm system (multi-hazard warnings).

A national multi-risk and impact-based EWS is still not developed in Moldova. Also, the current legal framework does not cover the development and management of EWSs in the Country. Individual governmental organisations are in the process of developing EWSs targeted to different hazards: the SHS for hydro-meteorological hazards; the IGS for seismic threats; and the NAPH for health emergencies; the National Agency for Food Security for threats to food security.

An overall framework for developing EWSs is highly needed to clarify roles and responsibilities, ensure consistency across implementing activities and foster collaborations among key institutions. Also, the terminology should be clarified and a clear distinction between EWSs and public notification (cell-broadcast) systems should be included in the EWS regulatory framework currently being developed, and expected to be adopted by December 2023.

Hydro-meteorological hazards

According to GD 1536/1998 (amended in 2021), the hydrometeorological activity in Moldova is carried out by the SHS (Figures 9 and 10). It is the only legal entity in Moldova issuing forecasts and warnings on hydrometeorological phenomena for different sectors (e.g. transport, energy, agriculture).

In the last decade, several improvements have been made in the software/hardware infrastructure available at SHS. In 2010, an [EUMETCast](#) station was installed at SHS within the [DAWBEE](#) project (Data Access for Western Balkan, Eastern European and Caucasian Countries) to support operational access to [EUMETSAT](#) data and products. In 2013, the DWSR-3501C Doppler Radar, a meteorological radar with double polarisation, was installed and purchased through the “Disaster and Climate Risk Management in Moldova” project, enabled by a financing agreement signed between Moldova and the World Bank. With the support of Meteo France International, the SYNERGIE and METEOfactory computer system for the visualisation, processing, editing and automated development of weather forecast data was installed in 2016.

Through UNDP’s “Support to the National Adaptation Planning Process of the Republic of Moldova to Climate Change” project and its partnership with colleagues from ZAMG (Austrian Institute of Meteorology and Geodynamics), SHS has been a co-member (Cooperating Member) of the [EUMETNET](#) programme (EMMA/Meteoalarm and OPERA) since 1 January 2016.

With the support of ZAMG experts, the [SHS website](#) was updated and daily bulletins for meteorological and hydrological hazards are now published in Moldovan, Russian and English, using colour codes (green, yellow, orange, and red) as well as scenario descriptions.

Managed by the SHS and upgraded in 2016, the National Weather Observation Network is now made up of 18 conventional weather stations (of which 14 are automated weather stations - AWS); 34 mini-automatic weather stations - miniAWS; 2 hydrological stations; 53 hydrological posts (of which 30 are automated); 16 agrometeorological stations; and 1 Doppler RADAR. The World Bank is currently working on the development of a roadmap for modernising SHS.

Despite recent improvements, the hardware and software infrastructure available at SHS needs further improvement. More automatic hydro-meteorological stations and an additional doppler radar are needed to improve the quality of both the monitoring and the forecasting phase. The acquisition of the radar has been included in the Programme as a key action to improve EWS. In 2022, Moldova signed a new cooperation agreement with the World Meteorological Organisation to set up new observation points.

Currently, the SHS has at its disposal only meteorological global numerical models. Limited-scale models are greatly needed to develop and provide better forecasts at a smaller scale. The SHS budget is insufficient to become part of a consortium and thus acquire limited-scale models. However, thanks to a fruitful collaboration with Romania, the SHS regularly receives useful information and images from the Romanian hydro-meteorological institute, which is part of the Cosmo consortium.

The forecasting and monitoring of flash floods needs to be implemented, as they represent key risks in several areas of the Country. In autumn 2022 a study visit at the Swedish hydro-met service was organised and a joint project on flash flood modelling modelling will start soon.

Besides this, the staff doing meteorological and hydrological forecasting and monitoring needs to be increased. Currently, only 6 meteorological and 5 hydrological forecasters work within the SHS. Unfortunately, no institution/university in Moldova is available to train students in these topics. To overcome this gap, the SHS has tried to train young people inside the agency itself, without success. In addition, students are not attracted to become meteorologists and hydrologists because of the bad working conditions and low salary. Last year some experts went to Romania for further training.

The SHS is in charge of sending alerts and warnings to government entities. In addition, private entities managing essential services/critical entities are also reached by messages from the SHS. Alert levels are also sent in CAP and xml format to be shared within the Meteoalarm platform. The general public is informed through the the SHS website, but currently it has no other tools (such as the SMS tools and cell-broadcasting systems) with which to make direct contact with the population. Warnings and alerts are then spread by the media, while messages on how to react to different types of alert levels are broadcast by radio. A common alerting protocol is expected to be adopted by 2025.

GIES is in charge of spreading information on warnings/alerts at sub-national levels to GIES sub-sections and local administrations.

The PPRD East 3 programme has also developed an Impact-Based Forecasting (IBF) tool, using the high resolution model ICON (Icosahedral Nonhydrostatic with resolution of 2.5 km grid, by the European Centre for Weather Forecasting) to facilitate risk-informed planning and delivery of international assistance. The goal is to strengthen national capabilities in mapping and monitoring hydro-meteorological hazards and risks in the context of the current crisis and to take prevention actions. The tool develops 2-day forecasting bulletins combining geophysical hazard threats with vulnerability and the country's exposure (at border crossings, reception centres, and among IDPs/Refugees). The information produced includes forecasts for temperature, wind, wind-chill, and humidex, and neither is it meant for public dissemination nor does it substitute official hydro-meteorological forecasts.



Figures 9 and 10: Visit at the SHS during the peer review mission.

Wildfires

PPRD East 3 is in the process of developing an impact-based EWS for wildfires (including bush fires, agricultural and vegetation fires). They are mapping the territory of Moldova: maps will be essential both for the implementation of EWS and for planning actions.

Currently, PPRD East 3 is supporting the integration of early warning information into its emergency planning and procedures. A wildfire propagation model has been developed and is already operational, and the soon to be developed dynamic wildfire model RISICO will provide daily runs that can be used for issuing a national wildfire bulletin.

In 2022 PPRD East 3 provided a GIS web platform programme for visualising wildfire models and data. However, the platform is not operational, as the Moldovan experts have not yet received adequate training.

In addition, the project recently developed a SOP flow chart to warn and alert the population about what to do in case of wildfire events.

Earthquakes

The monitoring of seismicity is carried out by the Moldova Digital Seismic Network, operated by IGS. Operating under the Academy of Sciences of Moldova, the institute controls the monitoring system and its 6 automatic stations. In addition, one of the expected results of

the EU-funded REDACT (Rapid Earthquake Damage Assessment Consortium) project is the creation of a Smartphone application able to provide education and quick communication alerts in case of seismic events.

Health

Under the NAPH, the Department for public health emergencies ensures communication to the population, elaborates weekly and daily bulletins on public health events and hazards in the country and abroad, sourcing from various national and international databases and platforms. There are three alert levels, according to GD 1431/2016, from possible danger to confirmed hazard. The Department of public health emergency is available 24/7 and collects and registers data on the impacts of disasters on human health and damage to the healthcare system and medical facilities.

The Emergency Response Centre, established under the MAFI's National Agency for Food Security, monitors the food security situation in the country by receiving primary information from proper authorities and the National Rapid Alert System for Food and Feed. A primary assessment of a potential incident informs the necessity of activating early warning. If the initial assessment identifies a major crisis situation, the Director of the National Agency for Food Security, with support of its Advisory Board, activates the National Crisis Cell.

Public notification system

GD 1076/2010 on the "Classification of emergency situations" lays down the criteria for classifying an emergency situation, responsibilities for punctually notifying the public, as well as procedures for collecting and presenting information to the public in the event of emergencies.

GD 1048/2005 approved the "Regulation concerning the organisation of a system of alert and communications in the event of a threat or emergency situation"; it demanded inter-agency communication and the operation of frequent tests of the system. However, GD 405/2021 repealed GD 1048/2005, which provided for an outdated emergency notification system designed to notify the public in the event of military risks and air strikes. The civil protection notification system in Moldova, which was designed and built in 1980, no longer met the requirements and tasks of civil protection, and could be neither upgraded nor integrated with existing environments and technologies. As stated in GD 405/2021, the financial means used for maintaining the former functional system would be directed, in future, toward creating a modern public warning and notification system.

Because of the lack of an alerting system and specifically related tools (such as public warning sirens, cell broadcast messages, SMS, mobile applications), GIES, which is in charge of alerting the public, warns of imminent emergencies through mass media channels. A tool for emergency communication already available and used by some European countries that might be useful in Moldova is [VOST](#) (Virtual Operation Support Teams). Through VOST, countries inform citizens of DRM and preparedness topics, and support official entities in case of natural and human-induced disasters, with information gathering and dissemination of official information.

One of the Programme objectives is to implement a new public notification and alert system with 100% coverage of the population. The previous alert system is no longer operational, as it was developed in 1980 and cannot support any upgrade. As already implemented in other European countries, e.g. [RO-ALERT system](#) in Romania, the implementation of a MOLD-ALERT is planned for the future. A feasibility study has still to be conducted and operational procedures will have to be defined, together with the responsibilities for managing the system.

6.4 - Training and exercises

- Moldova suffers from a lack of a training framework. However, **new training facilities, curricula and programmes** are foreseen in the Programme and will be implemented in the near future. Thanks to **good cross-border collaboration**, most of GIES staff receive specialised training in the field of civil protection in Romania.
- Since 2010, GIES has participated in several **international exercises**, and has made good use of the lessons learned following the exercises to improve their system.

Training

Moldova lacks a training framework. According to legislation, GIES is responsible for organising multilateral training of the population and response teams¹⁹ in case of emergency situations and fires. Both GIES employees and volunteer firefighters attend specialised courses in basic firefighting skills and technologies. In addition, civil protection courses are mandatory for anyone holding management positions in central/local institution administrations and public entities. Non-mandatory civil protection courses are organised for the general public, most of them with a pedagogical purpose. There are no clear selection criteria for accessing those courses.

The training framework, including its management regulations, was updated in 2020 and is still to be implemented. GIES evaluates the effectiveness of the training programme and identifies training needs. Inspections within municipalities are jointly organised with the Ministry of the Economy on a regular basis and after major emergencies, with the aim of detecting weaknesses in the personnel's capabilities and selecting topics that should be addressed in the training programmes.

Proper facilities to train GIES staff and DRM authorities are lacking in the country; for this reason, most of GIES staff receive specialised civil protection training in Romania. As reported in the Programme, the Republican Training Centre, one of the three existing civil protection-related training centres, does not meet the current training needs due to insufficient public investment.

The absence of adequate accommodation conditions, insufficient facilities, and specially equipped rooms and spaces to simulate emergency situations have contributed to a dramatic reduction of the training capacities in civil protection. The situation is even getting worse because of the increasing trend in number and types of interventions being registered in recent years. For these reasons, a new GIES training centre is currently under construction in Răzeni.

¹⁹ Including Civil Protection, rescue and fire service, specialised central bodies of the public administration, institutions, and organisations.

Some EU-funded projects and one project with Polish bilateral support are supporting Moldova in developing and strengthening its training capacity. In addition, the project “Promotion of climate change and disaster risk reduction solutions in water and civil protection sectors for enhanced rural resilience” (2019-2022), provided 177 volunteers (women and men) with professional capacity-building training in the area of climate and disaster risk prevention and response. Among the outcomes of the project, a training curriculum for community volunteer rescuers and firefighters was developed and approved, incorporating specific aspects for such non-professional intervention groups.

In 2022, Moldova took part in the regional training program offered by PPRD East 3. Eight participants were introduced to the principles of the UCPM through the UCPM Basic Training. In total, since 2016, ten Moldovan experts have been trained under the UCPM training programme.

Exercises

In recent years, Moldova has been making a huge effort to implement and participate in international, national and sub-national exercises.

In 2010, within the PPRD East Programme, Moldova tested its coping capacities through a Table-top exercise (TTX) that took into consideration five different scenarios that occurred in the past. The aim of the exercise was to test the preparedness and response system of the country, especially in the field of information management, decision-making, and coordination during a disaster situation with secondary impacts. It also aimed at evaluating existing SOPs and guidelines for intervention at the strategic, tactical, and operational levels.

After that, Moldova participated in the following international exercises: 2010 NATO exercise in Armenia – 21 Moldovan rescuers; 2018 NATO exercise in Serbia – 28 Moldovan USAR rescuers and 1 from K9; 2019 EU MODEX BG in Bulgaria – 57 USAR rescuers and 2 from K9; in North Macedonia (2021); the 2021 EU-CHEM-REACT 2, consisting of TTX, CPX, and FSX exercises in Belarus, Moldova and Ukraine – 34 people from CBRN; the 2021 EU-ROMODEX PITESTI and the 2022 EU-ROMODEX SIBIU in Romania – 36 Moldovan rescuers participated in both exercises on HCP module.

Moreover, in 2011 and 2017, two international exercises were carried out in Moldova: the CODRII-2011 (ERCC/NATO) involving more than 1000 participants from 33 countries, and the full-scale exercise EU MODEX 2017 with 600 participants from 27 countries, testing the HNS SOPs.

In February 2023, a TTX was conducted in Chişinău under the [EU HNS project](#). The exercise covered all the main elements of a mission cycle, including the activation and handover phases. The exercise scenario was simulated using virtual reality tools. The TTX provided the platform for testing HNS procedures and interoperability with national and international actors.

In June 2023, teams from Moldova participated in the full-scale [TbiEx2023](#) exercise on forest fires organised by the PPRD East 3 programme outside Tbilisi to practise the early warning early action-based civil protection approach in Armenia, Azerbaijan, Georgia, Moldova and Ukraine.

6.5 - Rescue capacity

- Over the years, **GIES's staff** has been considerably reduced, despite the increase in the number of interventions. In accordance with the identified risks in the country, three types of **rescue modules** are in the process of being made operational, in line with the needs of the country: Medium Urban Search and Rescue, High-Capacity Pumping and Ground Forest Fire Fighting using Vehicles.
- The **volunteer system** is not adequately developed and the role of volunteers in emergency situations is not clearly defined by law. GIES recognises the **need to transform the volunteer culture and improve the organisation** of the volunteer system, and identified good examples to follow from other European countries.

Despite the number and complexity of interventions that have increased over the years, the GIES staff has been considerably reduced from 3121 in 1997 to its present 2467. Besides this, the effort to increase human resources is hindered by the 200 frozen positions in GIES, as reported during the peer review mission. Therefore, the workload of a rescuer and a firefighter has considerably increased, becoming the highest in the region (2573 citizens per rescuer and firefighter in Moldova against 716 in Romania, 778 in Ukraine, and 804 in Estonia).

Search and Rescue (SAR) and Urban Search and Rescue (USAR), as well as evacuation activities, are among the main competences of the emergency services. Fire-brigades (even volunteer firefighters) are responsible for USAR, SAR, and Flood Rescue using Boats (FRB) activities. Under the overall coordination of the emergency management system, local governments are responsible for managing activities to support people in need in the aftermath of disasters (e.g. ensuring food security and providing shelters).

Under GIES there are two SAR General Directorates, 7 Fire and rescue Detachments, 40 Fire and Rescue Units at the territorial level, and 12 Fire and Rescue Units at local level. Under local authorities, 68 Volunteer Fire Stations are in place.

Moldova is currently working on creating and making operational three types of **UCPM modules**: Medium USAR, High-Capacity Pumping (HCP) and Ground Forest Fire Fighting using Vehicles (GFFFV). This approach shows a full understanding of the responsibilities involved in the process of setting up but also of sustaining operational readiness. It is recognised that these types of specialisations are developed to ensure preparedness for disasters that are most likely to take place in Moldova, and can be used to bring the acquired knowledge to the field. The creation of the modules is being organised to avoid engaging the same rescue resources (units) in more than one specialisation while the management of the units will be from GIES's national headquarter, which is an efficient approach. At the moment, there is a high rotation rate of the involved and trained personnel, which is a drawback. There is a critical turnover in GIES staff, which raises significant challenges for their work and for the sustainability of many of their initiatives.

In general, Moldova has good interaction with UCPM and recognises the importance of capability building through the deployment of modules abroad.

In terms of **medical resources**, emergency pre-hospital services have 6000 employees at the national level; each of the 40 districts has one ambulance, and there are 1 to 5 emergency assistance units at the community level. While the human resources in Moldova's health sector are sufficient, there is a low rate of doctors in rural areas. There are ongoing discussions about decentralising hospitals from Chişinău to bring them closer to the population in rural areas and to implement telemedicine, but no actions have yet been taken in this direction.

On the basis of cooperation protocols signed between the MIA and the Ministry of Health on joint response to medical and surgical emergencies, SMURD began its activities in 2014, after being trained in Romania. Despite the fact that SMURD Service is equipped with 5 ambulances and 136 rescuers holding paramedical certificates, it is not involved in joint interventions with the specialised emergency crews of the National Emergency Care Centre of the Ministry of Health. As reported in the Programme, this would be due to the perception of the role of SMURD and a reluctant attitude at the Ministry of Health, which does not accept its services in this sector of activities, on the ground that the Ministry receives cash allowances from the National Medical Insurance Company on the basis of the number of interventions carried out by the National Emergency Care Centre. Another issue with SMURD intervention is the lack of a regulatory framework for transporting Moldovan citizens in medical emergencies across the country's borders by SMURD crews. The low involvement of SMURD results in its medical and paramedical staff losing their qualifications and in a decrease in the number of interventions.

Volunteer system

In Moldova, the volunteer system is not properly developed. Currently, out of 78 total posts, 66 are active and provide interventions in over 300 localities; 19 are on a voluntary basis (8 in the North; 8 in the Centre; 3 in the South).

Two types of volunteer fire brigades are present in the country. The first is established and financed by local authorities (Primarias – lowest level of the administrative division) with full-time employees. In this case, according to the provisions of the legislative framework, the creation of territorial rescue and fire stations is planned at the behest of the local public administration in cooperation with GIES, based on the financial possibilities of each municipality. These fire units are set up in the immediate vicinity of the municipality, which constitutes the intervention area. The second relates to volunteer fire brigades whose genesis stems from bottom-up initiatives and that brings together people with similar interests and fully operates on a voluntary basis (see BOX 6).

The task of the volunteer units is to engage in immediate firefighting actions until the arrival of the professional on site GIES units. Other activities in which volunteers are involved include informing and training local communities on fire safety measures and rules; organising promotional events to encourage volunteering; participating in missions; providing psychological assistance to emergency victims.

Nonetheless, the role of volunteers in emergency situations is not clearly defined by law. The law on Volunteering 121/2010 does not address the implementation of volunteering in the field of civil protection and emergency situations (such as volunteer fire units). As such, the insurance, remuneration and organisation of these units is done on an ad-hoc basis.

The lack of a regulatory framework and financial resources, the low participation of the civil society in voluntary actions, and outdated intervention equipment and machinery hinder the

efficiency of volunteer activities. As such, a plan to set up 114 volunteer fire stations was announced in 2013 and was to be achieved in 2020. One of the main reasons for creating a network of volunteer fire stations is the need to reduce the time of intervention to 15 minutes. The goal was only partly achieved because of the lack of budget lines for that purpose both at the local and state level.

Considering the outdated equipment and technology and the lack of funding currently at disposal, the development of a future concept for the volunteer fire department by GIES is needed. In particular, the scope of the local fire volunteer units should be clarified to identify the level of technical standards and the equipment needed to implement their activities.

Despite the efforts and interest by GIES in transforming the culture of volunteering in the country, GIES struggles to make volunteering a national priority, changing the legislative basis for volunteering and securing budgetary support for volunteers. The creation of units financed by local governments is a confirmation of good cooperation and common understanding and recognition of the problem by both IGSU and local authorities. Such units provide an important complement to those created by GIES. Clarity in the role, mandate and safety for these units is needed.

BOX 6 - Ștefan Vodă fire and rescue unit and Crocmaz volunteer fire station (field visit)

During the mission the Peer Review Team visited the Ștefan Vodă fire and rescue unit and the Crocmaz volunteer fire station to understand how the national emergency response and the volunteer system work at the local level.

The Ștefan Vodă fire station is a new building constructed with the support of the United States Agency for International Development (USAID), which invested over US\$ 650 thousand in the project, together with the contribution of the Government of Moldova and the District Council providing MDL 1.8 million and MDL 1.2 million respectively. The station was made operational in December 2022, and the final work is expected to be completed by December 2023.

The strategic location of these new headquarters aims at reducing the response time in emergency situations and ensuring efficient, prompt action of the GIES detachment, which provides assistance to 65 thousand inhabitants of the 26 villages of the district. The fire station is well designed and equipped with generators as a back-up source of energy. The unit also benefits from a meeting room, two rooms to temporarily house citizens in need of emergency shelter, and a basement space which in case of emergency will be turned over to the district command centre, which currently meets in a district school.

The duties of the GIES's unit of rescuers and firefighters in Ștefan Vodă district covers response as well as a number of risk prevention activities. For example, in recent years some of the key operations have included participating in the construction of the Crocmaz dyke on the Dniester river (2019); supporting the quarantine regime for villages during Covid-19 (2020); rescue interventions during a big snowfall (2021); and the managing the refugee crisis in the region and the organisation of the Palanca Temporary Refugee Camp and Temporary Transit Centre (2022).

The fire station has 4 fire engines and up to 4 staff members per shift. Additional personnel and equipment are needed in Ștefan Vodă, which currently suffers from a lack of resources to meet its operational activities.



Figures 11 and 12: Visit at the Ștefan Vodă fire and rescue station during the peer review mission.

Volunteer fire posts located in different parts of the district, such as the existing fire station in Crocmaz, are implemented with the financial support of the local authorities to increase the local response system and ensure timely first interventions.

The staff of these volunteer posts are employed by the local authority, which also provides for equipment maintenance, while GIES ensures and finances one fire engine for each volunteer work point. Often in these volunteer fire stations the 112 emergency dispatch number is not used, as in Crocmaz. Here, citizens can use a direct phone line to contact the volunteer personnel, who in turn alert the mayor, who lets 112 know.

If the technical and logistic capacity of the voluntary station is insufficient during a response operation, support is provided by the Ștefan Vodă fire station. Establishing agreements between local authorities to facilitate the mutual support of volunteer posts could increase local resilience by optimising resources and response time operations.

The visit to the Crocmaz station showed an excellent spirit of solidarity among the population, who volunteer to run the local posts with the final aim of supporting the protection of their communities. However, volunteer personnel are often retired, and engaging future personnel is key to ensure the continuity of operations. Implementing educational campaigns on the importance of volunteer services in the communities is a way to promote volunteerism. Also, it is highly recommended for GIES to create a database with all the capabilities from national and local authorities, the private sector and the civil society that can be relied on in future disasters, in order to plan for response operations and optimise future investments.



Figure 13: Visit at the Crocmaz volunteer fire station during the peer review mission.

6.6 - Conclusions

The ongoing process for updating civil protection plans at the local level is an opportunity to involve citizens and the population in disaster risk planning. While the current framework regulates that all policy papers must be published for public consultation, risk reduction and contingency plans at the local level are drafted by the mayor without the obligation to carry out a public consultation process. While some general guidelines on how to use multi-hazard risk assessment for planning purposes (regulation 136D/2015) exist, the technical and scientific framework should be improved to increase planning quality. The first step is the introduction of risk assessments and scenarios (see BOX 7), from which preparedness and response plans can be developed.

A link between contingency plans and EWSs in place in a country is needed to ensure a timely, gradual activation of adequate early actions. Moldova is currently making a huge effort to implement EWSs, in particular for hydro-meteorological hazards and wildfires, and is about to start implementing a public alerting system.

There is an urgent need to clarify the definitions of *early warning system* and *public alerting system* both in the new legislation and in the Programme. Also, roles and responsibilities of the institutions involved in their implementation and management should be distinguished. The existing collaboration between GIES and the media in emergency communication is excellent. However, the development of a public alerting system based on cell-broadcast messages is crucial and already among the priorities of the Programme, also due to the current lack of any notification system. Reaching out to other countries that have already implemented such a tool (e.g. Romania, RO-ALERT) could represent an opportunity for inspiration on good practices. Conducting a proper feasibility study as planned in the Programme is recommended to identify the characteristics of the system and the financial resources to devote to such a tool. The allocation of funds to develop and maintain the system should be detailed in the Programme and included in specific multi-annual budget lines of the different institutions involved.

The implementation of an impact-based EWS is already under way, with the technical support of the PPRD East 3 programme for wildfire risk. A regulatory framework should be included in the new legislation currently under development, with the aim of clarifying the roles and responsibilities, the link between early warning-early actions, and laying the basis for the development of SOPs and guidelines for managing the system and disseminating warnings/alerts. For hydro-meteorological hazards, the existing EWS managed by SHS suffer from a lack of trained personnel and limited technical resources. The acquisition of new software and hardware tools, such as new sensors and models, is highly recommended. In particular, the use of limited-scale meteorological models would allow for more accurate forecasts, representing a significant improvement to better and more timely preparation for emergencies and potential saving of lives. In addition, technical training of personnel in hydro-meteorological monitoring and forecasting activities, and an improvement of working conditions and salaries should be encouraged to increase human resources. To support those activities, additional financial resources should be allocated to the implementation and operationalisation of a multi-hazard and impact-based EWS, since external partners and the private sector could be a good source for funding opportunities.

Although the collaboration between the SHS and GIES during the response phase has been effective in the past, the coordination between the two institutions could be strengthened, especially in the preparedness phase. Joint meetings and the systematic involvement of the SHS representatives in the National Commission could help to foster the collaboration.

Since 2010, GIES has been involved in several international exercises, and training and has been able to capitalise on the resulting lessons learned to improve the system. However, the demand for training opportunities is high, due to the frequent rotation and turnover of GIES personnel.

The adoption of a clear training framework is key for developing and maintaining GIES's technical capacities. A common curriculum for GIES firefighters and rescuers to improve the interoperability of the teams in terms of equipment and SOPs is highly needed to strengthen preparedness and response capacities. Also, it would be beneficial to modernise existing training modules with the introduction of new IT/e-learning tools and English language training courses, in order to facilitate the operations of teams abroad. The three ongoing projects financed by the EU and with bilateral support from Poland aimed at developing new training modules could be an excellent opportunity and, therefore, the allocation of funds for ensuring their sustainability over time is highly recommended. Furthermore, considering the current lack of adequate training facilities, the future training centre that will be built in Răzeni could be used as a national civil protection training centre, offering training on various topics, including the provision of higher-level education in the civil protection field. When possible, the provision of basic training for professional and volunteer firefighters close to the participants' home locations should be considered. This would reduce accommodation and travel costs.

Recent emergencies have shown good response capacities of Moldovan firefighting and rescue teams, which will be further improved with the implementation of the international modules currently under development (USAR, HCP and GFFFV). The operational needs and requirements of these specific modules are well recognised and understood by GIES, which is devoting technical and financial resources to their implementation. To further increase response capacities within the country, cooperation with the armed forces should be explored and, regarding the health sector, collaboration between SMURD Service and the Ministry of Health's emergency capacities should be improved to reduce response time during operations. The outpatient clinics still available for the purpose of SMURD could be used to improve the quality of healthcare.

To maximise the efficiency of the response capacities, GIES makes a huge effort to manage and systematise the units, with the aim of covering the whole national territory and limiting the response time with excellent results, given the technical and geographical conditions. Volunteer fire brigades already exist in all parts of the country and are supported by the village communities. The volunteer fire units supported by the local administration are crucial to provide prompt first response to emergencies and to promote initiatives at the local level. Particularly for large and rural areas, the volunteer fire department system could offer a cost-effective way to establish a first line of intervention nationwide. Allocating financial support from the national level to the local level to support volunteer units is key to improve the response capacities. Taking into account the limited resources, it is recommended to consider upgrading the existing units to a minimum standard or increasing the capabilities based on priorities.

GIES recognises the pivotal importance of improving the volunteer system in the country and has conducted a systematic review of volunteer fire brigade systems in different EU countries to identify partner countries with comparable conditions in terms of voluntary commitment among the population. Being inspired by other countries with a similar volunteer culture (such as Poland and Czech-Republic) is encouraged to identify good practices on harmonisation, training, material, equipment, guidelines, recruitment, level of response and costs.

As evident from existing volunteer firefighting systems in other countries, a clear legal framework is key to attracting sufficient volunteers. This should regulate the status of volunteers, insurance in the event of an accident, wage compensation or expense allowance, incentive measures (retirement bonification, education, careers) on a uniform national basis. In the long term, financial compensation may not be sufficient to sustain a high level of volunteerism. Instead, it is better to build a volunteer culture from the bottom up. Suggestions to enhance it may be the implementation of recognition mechanisms such as awards and medals; the creation of a national federation of firefighter volunteers; launching a national flagship campaign on volunteerism; building a multi-stakeholders volunteerism platform involving NGOs per sector; and increasing the involvement of young people and women.

BOX 7 - Risk scenarios for civil protection plans and contingency planning

Developing scenarios for the national civil protection plan is an important step in ensuring that the country is prepared for emergencies. The development of an earthquake scenario and a corresponding national response action plan is a good example of this.

Small-scale scenarios can be helpful for understanding specific aspects of emergency response, but developing a scenario in full depth can provide a more comprehensive understanding of the potential impacts and how to address them. Therefore, it is important to develop in-depth scenarios to ensure that emergency response plans are comprehensive and effective in protecting the population.

A scenario-building initiative is also taking place at the UCPM level, under Article 10 of the Decision 1313/2013/EU. The overall goal of the initiative is to lay a more systematic foundation for evidence-informed decision-making for UCPM, in the areas of disaster prevention, preparedness and response. The scenario-building initiative will also provide Member and Participating States with access to relevant Union wide, cross-sectoral and multicounty transboundary scenarios that could benefit different work strands at the national level, by further informing national risk assessments, capacity gap analyses, and prevention, preparedness and response arrangements.

7 | Emergency response

7.1 - Legislative framework and processes

- Moldova has a consolidated approach to emergency response, based on the **principle of subsidiarity**. Depending on the magnitude and the scale of the event, and on the coping capacities, the response system is activated at **the different territorial levels**.
- The overall coordination of response activities is ensured by the emergency commissions. **Collaboration between the National Commission for Emergency Situations and the Public Health Emergency Extraordinary Commission** has proven to be strong and efficient.
- The existence of the **Crisis Management Centre** ensuring the unified management of the forces and resources of the various institutions involved is an added value to disaster response.

In the event of an emergency, Law 212/2004 On Declaring the State of Emergency, Curfew and War regulates the conditions under which a state of emergency or war is declared by the Parliament, and how it affects citizens' rights and obligations as well as the enforcement of other laws. Similarly, GD 1076/2010 on the "Classification of emergency situations" and the collection and presentation of information, among other points, lays down a methodology aiming at assessing an adequate response in case of emergency situations, as well as the roles of stakeholders in communicating the emergency to the civil protection and MIA.

The governance of emergency response follows the principle of subsidiarity, where the responsibility for responding to disasters expands from local to county to national/international level, depending on the magnitude and type of the emergency and the resources available at different administrative levels. The activity of the territorial fire and rescue stations is framed by a set of laws – such as GD 595 of 26.06.2018 – and partnership agreements that organise their functioning and operations. When a disaster strikes, GIES district representatives and members of local emergency commissions meet to evaluate the threat. Different scales of emergencies have been classified according to GD 1076/2010, and the appropriate emergency commission is activated accordingly. All forces involved in emergency response are coordinated by the relevant entity level. At the district level, a formal decision is required from the regional administration before any actions are taken, while at the municipality level the local commission is led by the mayor. This ensures that emergency response efforts are organised with clear communication and coordination between all levels of government. If additional resources are needed to respond to the threat, the emergency commission at a higher level is activated. When required, the National Commission gathers and decides which stakeholders should be involved, and invites representatives from relevant ministries, other government agencies, private businesses, and NGOs.

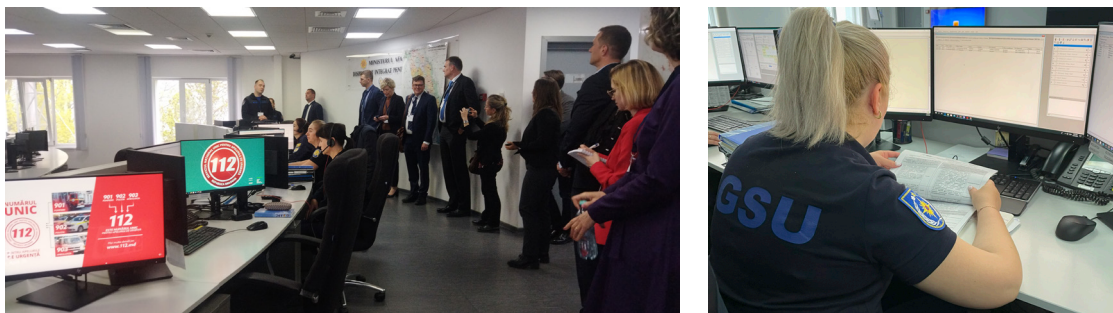
As proven in recent events during the health emergency due to the pandemic, as well as the recent refugee and energy crises, the National Commission is able to manage multiple emergency situations efficiently. However, the local level suffers from a lack of resources and capabilities (technical, financial, and administrative).

In case of a **public health emergency**, the Public Health Emergency Extraordinary Commission is activated. This Commission is responsible for managing these types of emergencies, works closely with the National Commission for Emergency Situations and has overlapping members. The Public Health Emergency Extraordinary Commission is made up of experts from various fields, including health, emergency response, and public administration. The national structure of the Extraordinary National Public Health Commission is mirrored at the local level of the administration. In Moldova, a state of emergency can be declared by Parliament, while a state of public health emergency can be declared by the Public Health Emergency Commission. These declarations are made when there is a need for urgent action to address an emergency situation or to prevent the spread of disease or other public health risks. The relevant authorities work together to manage the emergency and take appropriate measures to protect the population.

Besides the commissions for emergency situations, the Crisis Emergency Management Centres are operational at the national and territorial level. At the national level, the Crisis Emergency Management Centre (CEMC) coordinates all resources during the emergency. The CEMC was created by GD 803/2018 and operates within the GIES of MIA as an inter-institutional decision-making support structure of the National Commission, for the integrated management of exceptional national or cross-border situations. Among CEMC's other functions are the coordination function, which ensures unified management of the forces and resources of the various institutions involved, and monitoring of the implementation of the National Commission's decisions and instructions; the information management function, which ensures the collection, centralisation, and dissemination of information on an exceptional situation; the communication function, which ensures that administrative authorities, the population and the media are informed of the danger of the outbreak or consequences of an exceptional situation, its evolution, and the measures taken to manage the situation.

The adoption of the Law 174/2014 on Approving and Operation of the Unique Emergency Call Service 112, and GD 174/2018 on 112 Service and Specialised Emergency Services Coordination created the appropriate legal framework for introducing a single emergency number, in line with the European system, which has been operational in Moldova since March 2018. The response system has three dispatchers: in the north, centre and south of the country (Chişinău, Bălţi, Cahul) (see Section 7.3 Rescue and Containment Operations, and Figures 13 and 14).

The legal and institutional framework for HNS in Moldova is defined by Governmental Regulation 408/2017. Additionally, the draft law on Exemption of Taxes and Legal Fees Connected to the Entry/ Exit Into/ From Moldova of International Intervention Teams/ Modules was adopted in 2020 to facilitate arrival and departure procedures for international intervention teams (developed with the support of PPRD East 2 after identified need during the EU MOLDEX). HNS SOPs are in place and an HNS team has been established, though it does not meet on a regular basis.



Figures 13 and 14: Dispatch Centre in Chişinău visited during the peer review mission.

7.2 - Needs assessment

- Needs assessments are carried out by **local/national commissions**. A clear legal framework would be beneficial for ensuring unified methodology and clear roles in conducting post-disaster needs assessment.

In the event of an emergency, needs assessments are carried out by the local/county commissions in charge of the emergency management, in collaboration with GIES. In general, there is the lack of a unified methodology and a clear legal framework for conducting post-disaster needs assessment providing a division of responsibilities to conduct damage and needs assessments.

7.3 - Rescue and containment operations

- A **Single National Emergency Call Service 112** has been active since 2018 and is currently under the Ministry of Economy.
- The **response system is well organised**, with three dispatchers in the north, centre and south of the country (Chişinău, Bălţi, Cahul) having a good interoperability between them.
- In the south all emergency services are integrated in the same **dispatch centre**, which greatly increases the effectiveness of response operations. The **construction of a new building** for the Bălţi dispatch centre shows GIES's commitment in increasing the resilience of the emergency response system.

In Moldova a Single National Emergency Call Service 112 has been active 24/7 since 2018. The 112 system is currently with the Ministry of the Economy, though there are internal discussions to move it under the MIA's responsibility. The response system is well organised, with three dispatchers in the north, centre and south of the country (Chişinău, Bălţi, Cahul) having a good interoperability between them. Even though the location of the dispatcher is adequate to also host, besides fire and rescue, response forces from the police, carabinieri and ambulances, only one of the dispatchers (in the south) is fully integrated, bringing together all the agencies. The planning for the construction of a new building in Bălţi for the dispatcher shows GIES's ongoing involvement to enhance the emergency response system. Once dispatchers receive emergency calls, the duty officers take appropriate actions, and re-direct the need for actions to the police, carabinieri, fire and rescue, and ambulance services. On a higher level, the CEMC has duty officers who have a mandate to make decisions and

activate a broader response to the situation, as needed. At the same time there are procedures in place for sending requests for resources or other requests. This system is also used as a communication system between the actors.

There is a lack of SOPs, but there is a procedure for first responders on coordination, which is structured as follows: depending on the request, which is sent electronically, it is decided who should be involved in the response; responders communicate directly and coordinate amongst themselves. An IT-system is used (since a new emergency number was established) for information sharing amongst Duty Officers (first responders). All have contact data of other responders, which is updated by GIES if one stakeholder changes number or contact details. During the mission, the Ministry of Health reported that about 30% of the calls to the 112 hotline are false calls and often there are issues in determining whether the emergency calls require medical intervention.

At the moment, dedicated tools fostering emergency response communication with the most vulnerable groups are not in place. An example comes from France, which has a dedicated 114 emergency number for deaf and hard of hearing people²⁰.

In terms of response operations, in recent years, an increase in response time has been recorded from 15,13 minutes in 2019 to 19,24 minutes in 2021. The main causes being: an increase in the rate of defects in the intervention equipment by 350%, of which 50% dates back to Soviet production technology; and the rundown road infrastructure, especially in rural municipalities.

Another factor influencing the duration of the response time is the uneven geographical distribution of the rescue and fire brigade units. Due to long distances to rural localities, the average response time for subdivisions of the Inspectorate is currently 29,43 minutes for municipalities that are more than 20 km away. This is twice the 15-minute target set in the Government's Action Plan of the Programme.

The TETRA network is highly developed and efficient, covering about 90% of Moldovan territory.

7.4 - Relief and business continuity

- The business continuity concept is not developed in the legislation, but the **state and mobilisation reserves** managed by a dedicated agency are an effective tool for ensuring operational intervention, population protection and stable functioning of the national economy and infrastructure.
- Following the start of the Russia's war of aggression and the consequent refugee crisis in 2022, several normative reforms in the field of state and mobilisation reserves were carried out, **increasing budget allocations and purchasing of goods in every sector**.

State and mobilisation reserves are created to ensure the operational intervention of the State to protect the population and the territory, to ensure the stable functioning of the national

²⁰ <https://handicap.gouv.fr/le-114-le-numero-durgence-pour-personnes-sourdes-ou-malentendantes>

economy and to defend the country in emergency and exceptional situations. State reserves are a special fund of material assets, predominantly for civilian use, while mobilisation reserves are stocks of special-purpose material created for the purpose of organising the defence of the country. The Material Reserves Agency is the administrative authority subordinate to the MIA, which administers and controls the mobilisation reserve and material reserve funds (Law 104/2020). The Agency is responsible for proposing legislation changes, regulating and replenishing the assets in accordance with public procurement guidelines, ensuring their adequate storage and the reception and preservation of humanitarian aid received by the country in emergency. The Ministry of Finance ensures the financing of activities and allocations to the Agency, and collaborations with other public institutions for identifying goods needed, and agreements with specialised economic agents for preserving and inventorying goods that are in place.

Following the refugee crisis, support was provided through the distribution of goods for creating a refugee camp in Palanca and the Accommodation Centres. During 2022, several normative reforms in the field of state and mobilisation reserves were carried out, developing 15 operation plans and increasing budget allocations and purchasing of goods in every sector, following the assessment of needs and risks posed by the current situation of the country.

The recruitment and attractiveness of salaries for qualified personnel is an area of improvement identified by the Material Resource Agency in order to increase the efficiency of the management of state reserves. Additionally, according to estimates in the Programme on prevention and management of emergency 2022-2025 document, approximately RON 800 million (at current prices) is needed to ensure that State Reserves are fully filled.

7.5 - Response coordination

- Moldova's response to the refugee crisis has demonstrated the good capabilities of its DRM system, which was able to **promptly adapt to the specific needs** of intervention and **cooperate with national and international stakeholders**.
- The strong and effective collaboration with Romania and the civil society during the refugee crisis is an excellent example of **cross-border cooperation between neighbouring countries**.
- **The HNS concept** has already been included in the legislation, and SOPs are comprehensive and well structured, although they need to be fine-tuned and updated on the basis of the lessons learned highlighted within recent emergencies and exercises.

The National Government and GIES are the providers of response and recovery activities in case of emergency and exceptional situations. The main institution in charge of response coordination is GIES. GIES is the operational point for the National Command Centre, and ensures the coordination of interinstitutional disaster response efforts, with a focus on information management. Regional and local governments are also involved in coordination with GIES and other local departments, as well as in mobilising local funds and other resources for relief and recovery operations. Additionally, the National Commission is the main entity responsible for managing the activities of state executive organs during major emergencies.

All municipal emergency plans contain names of duty holders, phone numbers and procedures that each duty holder should implement in case of activation. In the event of an emergency, the local and regional commissions can request assistance from the National Commission. The procedure for requests and coordination is mostly paper-based; telephone contact is a first step.

The CEMC provides a structure and methodology for inter-agency coordination. The CEMC was established within the framework of the World Bank Disaster and Climate Risk Management Project, aimed at strengthening Moldova's capability to manage emergencies and effectively coordinate disaster response actions among various levels of government agencies. In particular, the Task force of CEMC includes the national coordination sub-group, made up of permanent representatives of the Centre from the specialised central bodies of the public administration, other central administrative authorities, experts in the fields, and, depending on the complexity and specific features of the situation, experts and/or specialists from other fields, with the task of analysing the evolution of the exceptional situation and submitting proposals for carrying out work to prevent and/or liquidate the consequences, and for training forces and resources.

At the beginning of the Covid-19 emergency, the coordination of the response was led by GIES and the National Commission, and a State of Emergency was declared by Parliament, under request of the National Commission. In a second stage, the Public Health Emergency Extraordinary Commission was set up, with stakeholders from 17 institutions/authorities, also represented in the National Commission. The Public Health Emergency Commission, headed by the Ministry of Health, is responsible for declaring a Public Health State of Emergency. The collaboration between the two emergency commissions is very robust and smooth, and was successfully tested during the Covid-19 crisis. In response to medical emergencies, while SOPs are in place for multiple accidents requiring the intervention of GIES and medical ambulances, the collaboration between emergency capabilities under the Ministry of Health and the SMURD units presents some challenges (see also Section 6.5 Rescue Capacity). Intersectoral coordination and mobilisation of resources were identified as areas of improvement by the Ministry of Health during the mission. The National Guide for Emergency Medical Assistance, which includes information on triage process, is delivered to all stakeholders with responsibilities. The Guide presents all the measures that should be taken on site, prehospital and hospital.

HNS legislation is well developed and tested, and 10 representatives of GIES have been trained in HNS procedures under the UCPM. However, the Moldovan HNS still suffer from a lack of clear task allocation and information management between different governmental actors, which is a major obstacle observed during the assistance received in the refugee crisis (see also Chapter 8).

Regional and international cooperation is very important, especially for cross-border emergencies. The country is involved in regional and international cooperation activities of the EU PPRD East, the UCPM and NATO. Since 2016, Moldova has requested international assistance from the UCPM 9 times. Moldova was involved in the 2021 humanitarian mission on providing medical system support in the fight against Covid -19, in the city of Iași in Romania; in

the firebreaks mission covering large areas on the island of Evia, Greece; and annually participates in cross-border missions to transport victims (citizens of Moldova) following road accidents abroad.

Following the devastating earthquake on 06/02/2023, Moldova sent an urban search and rescue team of 55 rescuers and two search dogs to Türkiye. This mission made it possible to test all procedures for international deployments and offered a very good opportunity for training the team in USAR missions. The USAR team is currently in the process of being strengthened, with a view to becoming a certified INSARAG team by 2025, with the bilateral support of Polish colleagues (see Section 8).

Following the unprecedented influx of refugees leaving Ukraine after the Russian invasion, humanitarian partners, under the overall leadership of host governments (including the Government of Moldova) launched the Inter-Agency Regional Refugee Response Plans (RRRP) 2022, appealing for sustained financial support to help the over 200,000 refugees, and the Moldovan families hosting them. A new RRRP for 2023 was published on February 15th 2023. The plan targets 200,000 individuals among the refugee population and 120,000 host community members, for a total financial ask of USD 427 million. The response involves a total of 73 humanitarian partners on the ground, including 76 international organisations and 26 local organisations²¹, providing humanitarian, logistical and psychological support. To deal with this crisis the Moldovan emergency commission opened a single crisis management centre to coordinate the Moldovan response. The visit to the Palanca Temporary transit centre and the Palanca temporary bus station shows the existence of a very good bilateral collaboration with Romania (see BOX 8).

21 <https://reliefweb.int/report/poland/ukraine-situation-regional-refugee-response-plan-january-december-2023>

BOX 8 - Refugee emergency crisis, Palanca refugee camp and temporary bus station/transit centre (field visit)

GIES has demonstrated remarkable capability and resilience in its response to the large influx of refugees fleeing Ukraine due to Russia's war of aggression, jointly with other subdivisions of the MIA. Through efficient coordination, collaboration with national and international CSOs, and a steadfast commitment to high standards of refugee facilities and treatment, the MIA has set a commendable example.

Despite the challenges posed by the crisis, the Ministry has consistently demonstrated its ability to effectively manage and coordinate the humanitarian response efforts on different domains relating to this crisis, including the competence domain of GIES. The leadership of the MIA in facilitating the provision of essential services, such as shelter, food and medical care, has been invaluable in supporting the refugees and ensuring that their basic needs are met. By collaborating with CSOs and leveraging their expertise, the agency has been able to provide a comprehensive response that addresses the multifaceted needs of the refugees. The basis for organising the prompt response to the crisis was the GD 1146/2017 regarding the approval of the National Mechanism of unitary and coherent management of the situation in the possibility of an increased influx of foreigners.

The Palanca Temporary Refugee Camp was set up on February 24th 2022 and shortly afterwards, on March 5th 2022, the Palanca Temporary Transit Centre/Bus Station/Bus Terminal was organised. The management of the Refugee Camp and Bus Terminal is under the responsibility of the MIA, namely GIES and the General Inspectorate for Migration (GMI). At the beginning of Russia's war of aggression against Ukraine, the crisis management centre was activated and a plan detailing responsibilities of each GIES's division and GIM was agreed upon. In collaboration with many NGOs and international organisations, and thanks to the support received by other countries, the MIA has been able to accommodate up to 360 people in the temporary refugee camp at once, providing a field canteen, toilet services, internet connection, and medical and psychological support at the temporary bus station. Every day, a meeting with all the organisations and personnel involved has been taking place to assess the needs, allocate resources and agree on joint operations. At the temporary bus station, more than 38000 refugees have been directed from Palanca to other regions of Moldova and to Romania with over 1700 bus trips organised by GIES and by international organisations such as the International Organisation for Migration (IOM) and the United Nations Office of the High Commissioner for Refugees (UNHCR).

The timely implementation of the Palanca Temporary Refugee Centre/Camp and Palanca Temporary Transit Centre/Bus Station/Bus Terminal has shown great cooperation between different agencies of the MIA, central and local authorities and the civil society. Creating a database with all the NGOs identified at the national level that can support authorities in DRM processes, and conducting a joint lessons learned process on the response to the refugee crisis could represent a good opportunity to formalise and strengthen the successful cooperation recently experienced.



Figures 15, 16 and 17: Visit at the Palanca Temporary Bus Station (left and centre) and at the Palanca Temporary Refugee Centre (right) during the peer review mission.

7.6 - Conclusions

The existing legislative framework for emergency response supports a consolidated approach based on the principle of subsidiarity. According to this, the response system is activated at different territorial levels, depending on the magnitude and the scale of the emergency, and on the available coping capacities. In the ongoing process of updating the legislative

framework, GIES should, whenever possible, consider the possibility of declaring a state of emergency before an adverse event strikes. This would allow the activation of committees and response teams and the preparation for/to mitigate impacts in a timely manner.

The response command and control system are well structured and hierarchical. All forces involved in emergency response are coordinated by the relevant entity level, while the overall coordination of response activities is ensured by the emergency commissions. As proven in recent events, such as the Covid-19 pandemic, as well as in the recent refugee and energy crises, the National Commission is capable of managing multiple emergency situations. The existing cooperation between the National Commission and those at the territorial level facilitate the flow of information during emergencies, which could further benefit from the formal adoption of SOPs to ensure an efficient vertical and horizontal information management. Also, the collaboration between the National Emergency Commission and the Public Health Emergency Extraordinary Commission has proven to be strong and efficient. The establishment of crisis management centres that support the emergency commissions at different territorial levels and ensure the unified management of the resources of the institutions involved is an added value for coordinating disaster response activities.

At the international level, the well-established collaboration with Romania is a strong example of cross-border cooperation between neighbouring countries.

In Moldova, the TETRA network is highly developed and efficient, covering about 90% of Moldovan territory and a Single National Emergency 112 Call Service has been active since 2018. This service and the existing emergency response system could be enhanced by using dedicated tools to ensure contact with the most vulnerable groups. Three dispatch centres in the north, centre and south of the country (Chişinău, Bălţi, Cahul) are well organised and efficient, characterised by interoperability, redundancy and backup system. In Bălţi all emergency services are integrated in the same dispatch centre, a practice that greatly increases the effectiveness of response operations, and should be replicated in other centres. The construction of a new building for the Bălţi dispatch centre also shows the government's commitment in increasing the resilience of the emergency response system. To this end, the integration of SMURD ambulances and facilities in the dispatch centres and in first aid operations is an opportunity to address the current shortage of ambulances, and to improve the overall quality of care.

In the aftermath of an emergency, local and national emergency commissions carry out needs assessments. A clear legal framework would be beneficial for ensuring unified methodology and clear roles in conducting these assessments and estimating response needs.

Also, the inclusion of the concept of business continuity in the DRM legislation could be a first step in planning measures to restore the operation of essential services and business. In this area, the state and mobilisation reserves are an effective tool to rely on to ensure response operations and protect the population, the environment and infrastructure, as well as to ensure the functioning of the economic activities. Following the start of the Russia's war of aggression and the consequent refugee crisis, in 2022, several normative reforms in the

field of state and mobilisation reserves were carried out, increasing budget allocations and purchasing of goods in every sector. To ensure an effective response to likely or unforeseen future events, it is recommended to conduct risk analyses and procure/store suitable relief supplies at the national level. Additionally, the recruitment and attractiveness of salaries for qualified personnel is an area of improvement identified by the Material Resource Agency to increase the efficiency of the management of state reserves.

Moldova's response to the refugee crisis has demonstrated the good capabilities of its DRM system, which was able to promptly adapt to the specific needs of intervention and cooperate with national and international stakeholders. The implementation of the Palanca refugee camp and the temporary bus station demonstrated a good level of cooperation between central, local authorities and CSOs and are therefore good examples of efficient response operations. To further build upon the cooperation started in recent emergencies, a database including a list of CSOs that could support the institutional DRM system in all phases (prevention, preparedness, response, recovery and lessons learned) could be implemented at the national and sub-national level. In general, adopting a whole-of-society approach, by engaging more CSOs and different types of volunteers depending on the specific needs, would further strengthen the already well-organised response system.

The HNS concept has already been included in the legislation, and SOPs are comprehensive and well structured, although these need to be fine-tuned and updated on the basis of the lessons learned highlighted within recent emergencies and exercises. The legislative amendment to streamline the decision-making procedure and the financing of missions abroad of Moldovan teams proposed by GIES after the deployment in Türkiye should be promptly considered and analysed by the central government. This lessons-learned process could lead to a substantial improvement in the process of activating and deploying teams in international missions. Additionally, investments in professional firefighting equipment are urgently needed to improve the teams' safety and the efficiency of response operations, and an increase of resources and capabilities (technical, financial, and administrative) at local level is desired.



Figure 18: GIES's annual award ceremony, dedicated to individuals who have distinguished themselves during 2022 in rescue missions and intervention in risk situations. The peer review team participated in the event during the peer review mission (Credits © General Inspectorate for Emergency Situations, 2023).

8 | Recovery and lessons learned

8.1 - Legislative framework and processes

- **No overall regulatory framework** for the recovery and lessons learned phase is available in the Moldovan DRM system.

No comprehensive legislative framework for recovery and lessons learned phase is available in the Moldovan DRM system. However, this topic was not examined in depth during the mission.

8.2 - Recovery plan

- **Procedures are in place for compensation** of damages following a disaster. If the National Commission acknowledges the need to allocate money, the economic losses are quantified and the government approves the allocation of funds.
- A clear process to develop recovery plans in the aftermath of disasters is lacking.

The procedures for allocating funds from the reserve and intervention funds in the aftermath of a disaster are developed by the central government ministries according to their jurisdictions. For example, the Ministry for Infrastructure and Regional Development is responsible for railway damage, and the Energy Ministry is responsible for supplying power. Central and public organisations are required to submit a request from the president of the commission for exceptional emergency situations, which is followed by the minutes of the emergency commission's session. The minutes prove that there is a need to allocate funds, and the amount is quantified. Thus, a draft governmental decision is shared with all members of the emergency commission. After their approval, the decision is authorised by the government and the funds are released. If the public authority at a certain level of administration does not have sufficient funds to cover the request, a request is forwarded to the next higher administrative level for the difference to be supplemented.

Central and local public organisations, budget institutions, and non-profit organisations can request financing from these two government funds also as a way of compensation. Natural persons who are not legal entities can request funds through public entities.

About 70% of the reserve fund goes to compensate losses from natural hazards, and its allocation can be increased by transfers from other budget lines. Since financial resources are limited, people affected rarely receive financial compensations after disasters, and the government normally appeals to the international community.

8.3 - Restoration

- **No clear framework to deal with restoration processes** is available in the Moldovan DRM system.

There is no clear framework to deal with restoration processes in the Moldovan DRM system. However, this topic was not discussed in detail during the mission.

8.4 - Build Back Better reconstruction

- **The Build Back Better concept is not included** in the Moldovan legal framework. However, in a few cases this key **concept has already been applied in practice**, such as the relocation of Cotul Morii village after major flood events.

The Build Back Better (BBB) concept is not included in the current terminology covering DRR in Moldova and it was not specifically addressed during the mission. However, an example of the application of this principle is the reconstruction and relocation of the Cotul Morii village 15 km from its original site in the high flood risk area, following the devastating floods in 2010 and 2014.

8.5 - Lessons learned

- A regulatory framework dealing with lessons learned processes does not exist. However, the Moldovan DRM system has already started an **informal review process that has resulted in tangible improvements**, especially with regard to the response phase.

While Moldova does not have a formal review process in place to identify good practices and areas for improving the system after a disaster, integration of lessons learned into the current framework have been carried out informally. A brief description of some recent examples is provided below.

- Assessment reports are drafted after major events to evaluate response readiness, including the functioning of the **National, territorial and local commissions**, and the availability of proper equipment. From these, specialised and targeted training activities are organised to improve the system, such as training of mayors or for specific sectors.
- In relation to the **HNS**, the framework was changed after testing the procedures in the international EU MOLDEX exercise. The law on Exemption of Taxes and Legal Fees Connected to the Entry/Exit Into/From Moldova of International Intervention Teams/Modules was adopted in 2020 to facilitate arrival and departure procedures for international intervention teams.
- From the current emergency of **influx of refugees** from Ukraine, Moldova has quickly incorporated lessons learned into the current response coordination framework. The Moldovan emergency commission has opened a single crisis management centre to coordinate the Moldovan response ensuring access to basic needs such as emergency, accommodation, food, clothing, basic necessities, consular services and psychological assistance.
- To deal with the **Covid-19 emergency**, the National Centre of Public Health Emergencies (funded by WHO and EU) was activated under the Department of Health Emergency to ensure operational coordination of response actions. An Extraordinary National Health Commission was also established as a coordination mechanism for addressing public health emergencies, ensuring intra and intersectoral coordination.

- During GIES's international mission in support of **Türkiye** in the aftermath of its 2023 earthquake, some issues related to the financing and reimbursement of GIES's missions abroad were identified. Proposals to address these issues were afterwards submitted to the Prime Minister to make formal decisions and set up SOPs for activating the process and budgeting for it in case of missions abroad.

8.6 - Conclusions

Despite no overall regulatory framework for the recovery and lessons learned phase is currently available, the Moldovan DRM system has recently improved thanks to a spontaneous and informal review process conducted on a number of topics, especially with regard to response activities and procedures. However, it is highly recommended to develop, adopt, and implement a lessons learned process to address the whole DRMC (see BOX 9).

While in a few cases it has been applied in practice, as in the case of the relocation of Cotul Morii village after major flood events, the BBB concept should be formally included in the legal framework, establishing a clear link with the implementation of the Sendai framework.

BOX 9 - Example of the lessons learned process in Germany and France

At the beginning of July 2021 western and central Europe was hit by intense rainfall due to the "Bernd" low-pressure system, which caused severe floods in Belgium, Germany, Luxembourg and the Netherlands as well as in other European countries (Thieken, A. H. et al, 2023). In Germany, 189 people lost their lives and around EUR 33 billion of economic losses were recorded (Munich RE, 2022). After the flood, **Germany** conducted a lessons learned process and highlighted some weaknesses in its overall DRM system, especially related to the preparedness of the population, the EWS and SOPs in place, and the volunteer system. As a result, measures to overcome the major gaps were identified to strengthen resilience and improve the country's DRM system. For instance, to efficiently disseminate timely warning messages, a public alert system based on cell-broadcast technology linked to the central EWS has been implemented and has been available throughout Germany since February 2023.

France has a permanent system of lessons learned and experience sharing, based on regulations and a national framework. For events where the incident commander assesses the need for an in-depth lessons learned process or even an investigation, the General Directorate for civil security also has an inspection service in charge to conduct the analyses with the final aim of identifying the key conclusions, evaluating the regulatory framework in place and, if necessary, distributing information notes. A second process is currently being implemented, without regulatory support, which aims to evaluate the cost of the "saved".

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Annexes

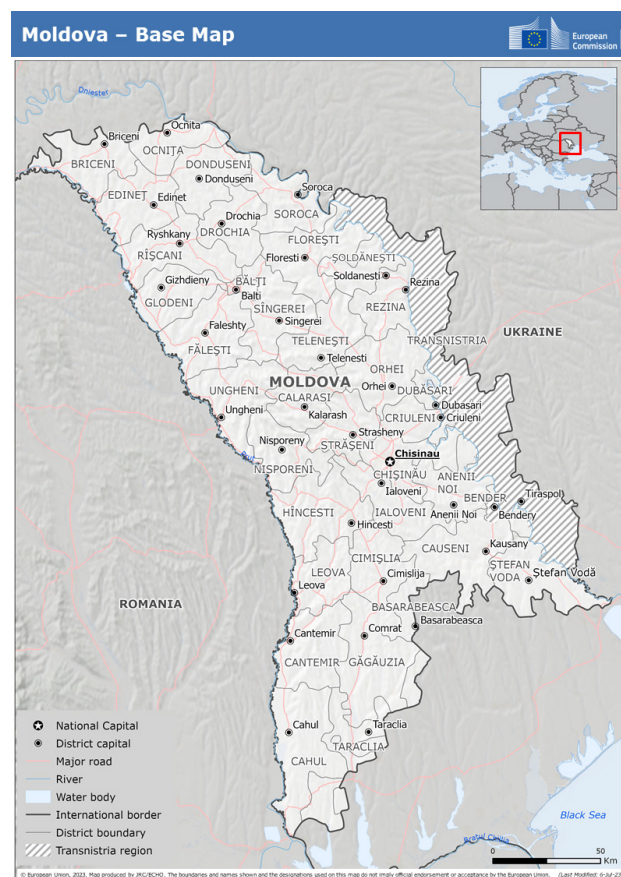
Annex 1: the Republic of Moldova Country Profile

Overview

The Republic of Moldova (hereafter “Moldova”) is located in the Eastern Europe region and shares borders with Ukraine and Romania (Figure a). It is a small, upper-middle-income economy with a high Human Development Index. Despite this, it remains among the poorest countries in Europe. Moldova is a parliamentary republic with a president as head of state and a prime minister as head of government. It is divided into 32 districts, 13 municipalities – including Chişinău, which is the capital and largest city – 1 territorial unit, and 1 autonomous territorial unit – Transnistria (Administrative-Territorial Units of the Left Bank of the Dniester) self-proclaimed its independence in 1990, although it is not recognised by any state.

Moldova counted around 2.6 million inhabitants in 2022 (World Bank estimate, excluding Transnistria region). The total area is 33 846 km². In 2022, the GDP was 13.7\$ billion.

Moldova joined the United Nations on March 2, 1992. In November 2022, Moldova and the United Nations signed the United Nations – Republic of Moldova Sustainable Development Cooperation Framework 2023-2027 (UNSDCF), a commitment to expand joint cooperation and help address the country’s development challenges and barriers to more inclusive social and economic development in line with the national priorities outlined in the National Development Strategy (NDS) “European Moldova 2030”. The Cooperation Framework puts strong emphasis on the transformative nature of the Sustainable Development Goals (SDGs). Moldova is also a member state of the Council of Europe.



Moldova became an official candidate for membership in the EU in June 2022. The EU cooperates with Moldova in the framework of the European Neighbourhood Policy and its eastern regional dimension, the Eastern Partnership. EU assistance to Moldova supports the renewed agenda for the Eastern Partnership focusing on recovery, resilience, and reform, which was agreed upon at the 2021 Eastern Partnership Summit in Brussels. More generally, EU assistance has been linked to the country’s reform commitments under the Association Agreement between the EU and Moldova, and the European Atomic Energy Community and their Member States. Moldova formally applied to join the UCPM in September 2022.

Figure a - Map of Moldova. Source: European Commission (2023).

Moldova 2022

Population (million)	2.6 ²²
Capital city	Chişinău
Life expectancy at birth (2020) (females/males, years)	75.9 / 67.4
Language	Moldovan/Romanian
National currency	Moldovan Leu (MDL)
Time difference	UTC+2

Table a - Moldova baseline data. Source: UN Data <http://data.un.org/en/iso/md.html> and World Bank.

The largest area of the country (around 88% of the area) lies between the Prut and the Dniester rivers, while a narrow strip in the east is located in Transnistria (east of the Dniester). The western border of Moldova is formed by the Prut River, which joins the Danube before flowing into the Black Sea. Moldova has access to the Danube for only about 480 m. In the east, the Dniester is the main river, flowing through the country from north to south. The country is landlocked, despite being close to the Black Sea.

Although most of the country is hilly, elevations never exceed 430 m: Moldova's hills are part of the Moldovan Plateau, which geologically originates from the Carpathian Mountains. The country has a small flatland in the south, the Bugeac Plain. The territory of Moldova located on the eastern side of the Dniester River is split between the Podolian Plateau and the Eurasian Steppe.

Moldova has a moderately continental climate. Its proximity to the Black Sea makes for a mildly cold climate in autumn and winter and a relatively cool one in spring, with warm, long summers. Temperatures average about 20°C in summer, while in January they average -4°C. Annual rainfall can vary greatly and heavy summer rains often cause erosion and flooding. The heaviest rainfall occurs in early summer and in October; heavy showers and thunderstorms are common, as well as long dry spells. According to the Moldovan Environmental Agency²³, in the last 132 years (1887-2019), the country has recorded an average temperature increase of over 1°C and a precipitation increase of only 51.3 mm. In more recent years (1981-2010), average temperatures increased especially during the warm season, with a 0.5°C increase in the winter months per decade. The frequency of drought has also been recorded to have increased during the 1990-2012 period, affecting over 70% of the country in 2007 and 2012 – the drought of 2007 was recorded as the worst in Moldova's recent history – and led to a significant reduction in harvests. In Moldova, agriculture is the backbone of the economy, employing as much as 30% of the population; for this reason, droughts had drastic impacts on the country's socio-economic system in the past²⁴.

Disaster risk profile

Moldova is at risk of a range of hazards, including natural ones (floods, wildfires, earthquakes, droughts, landslides), technological ones (transport accidents, explosions, fires, radioactive spills, electrical faults), and biological ones (Figure b, c, Table b).

²² Population value excludes estimates for Transnistria region.

²³ https://am.gov.md/sites/default/files/document/attachments/535782_md_bur3_ro_211211_compressed_0.pdf

²⁴ <https://thedocs.worldbank.org/en/doc/7bf12b95f10a3daf7b570718b2100e15-0080012021/related/MEU-DRM-Special-Topic-May-2021-FINAL-eng-Copy.pdf>

In line with the topics of this report and of the Peer Review in Moldova, this section will focus on natural hazards. Specifically, in the country, hydro-meteorological hazards have become more frequent and intense in the last few decades. Since more than half of the Moldovan population is rural and dependent on agriculture, the country's economy is highly vulnerable to weather-related natural hazards.

Frequency of disaster type 1994-2022

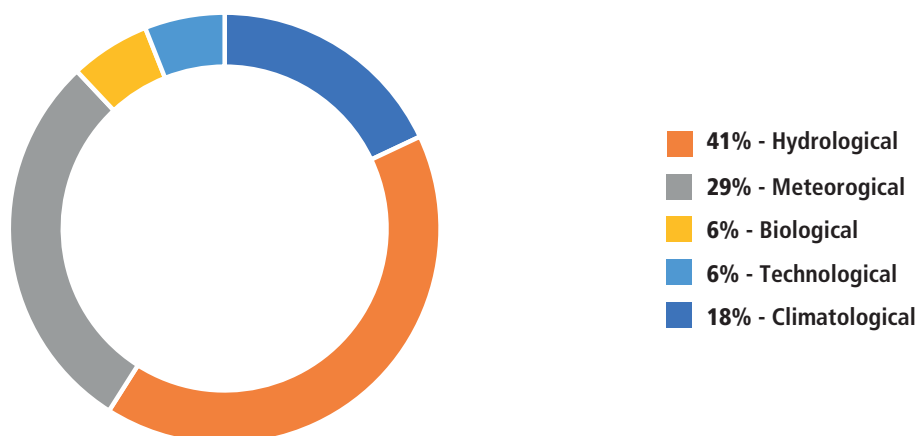


Figure b - Disasters in Moldova by disaster type, 1994-2022. Earthquakes do not figure in this map because they occurred before 1994. Source: EM-DAT.

Frequency of disaster type 1994-2022

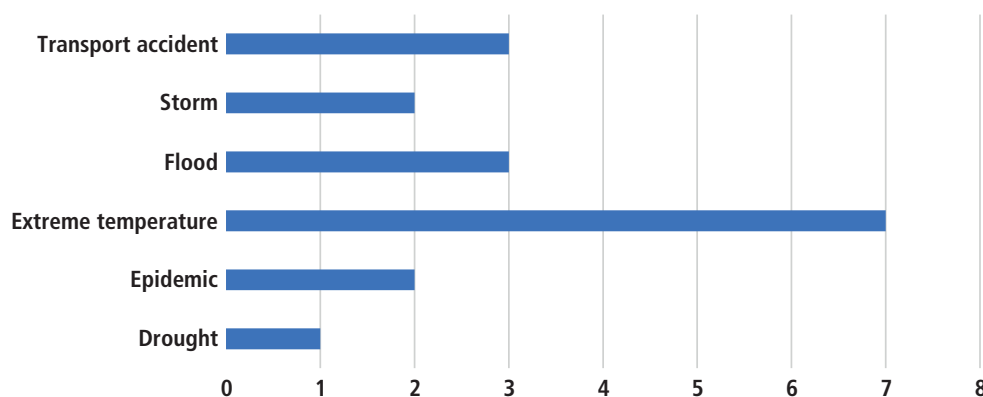


Figure c - Number of disasters in Moldova 1994-2022. Earthquakes do not figure in this graphic because they occurred before 1994. Source: EM-DAT.

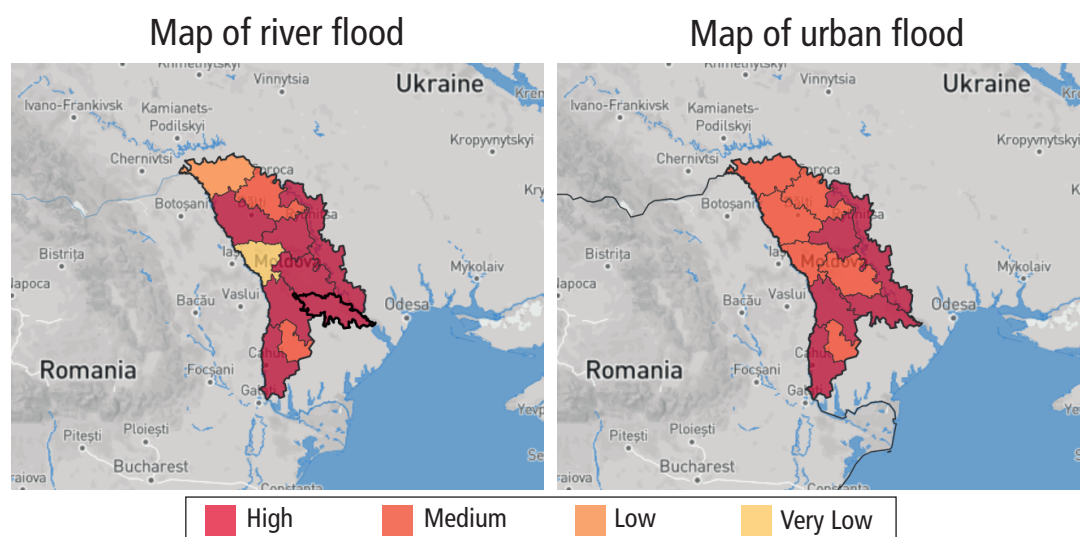
River flood	High
Urban flood	High
Wildfire	High
Earthquake	Medium
Water Scarcity	Medium
Estreme heat	Medium
Landslide	Medium

Table b - Hazard level. Source: ThinkHazard! <https://thinkhazard.org/en/report/165-moldova>

As shown in Table b, the natural hazards that most affect Moldova are floods, wildfires (high-level hazards), earthquakes, droughts, extreme heat (medium-level hazards), and landslides (low-level hazards). The country is also exposed to early frost onset, hailstorms, and to other severe weather patterns.

According to a *ThinkHazard!* report published in 2020 by the Global Facility for Disaster Reduction and Recovery - GFDRR, **river flood** (Figure d) and **urban flood** (Figure e), hazards are classified as high, meaning that potentially damaging floods are expected to occur at least once in the next 10 years²⁵.

According to an analysis conducted by the GFDRR, yearly flooding affects about 70,000 Moldovans and about \$100 million in GDP. As reported in Table c, among the most damaging flood events the one occurring in 1994 stands out for killing 47 people and causing \$500 million in damage; in 1997, most Moldova's provinces experienced floods, which caused nine deaths and about \$80 million in damage. More recently, in 2010, flooding caused by heavy rains provoked severe damage and cost nearly \$42 million in estimated damages and losses²⁶.



Figures d and e - Source: ThinkHazard!

Wildfire is classified as a high-level hazard. According to *ThinkHazard!*, there is over a 50% chance of fire weather occurrence – including a temperature increase and greater variance in rainfall – that can support the spread of significant wildfires in any given year. In areas already affected by wildfire hazards, the fire season is likely to increase in duration from long periods without rainfall. The severity of fires is also expected to increase, according to climate projections.

Located in proximity to Romania's Vrancea seismic zone, **earthquakes** are not frequent but cause extensive damage. Earthquakes are classified as a medium hazard; according to *ThinkHazard!*, there is a 10% chance of a potentially damaging seismic event in the next 50 years.

25 ThinkHazard! (last access 24.07.2023): <https://thinkhazard.org/en/report/165-moldova/UF>.

26 UNDRR, "National DRR Strategy Assessment Republic of Moldova – Desk Review", 2019.

The 1986 earthquake, occurring in Romania with a magnitude of 7.2, caused an estimated \$200 million in damage. Other major earthquakes affecting Moldova occurred in 1940, 1977, and 1990.

Moldova is at high risk of **drought**. Recently, the country has been increasingly affected by periods of drought, so much so that 7 of the 10 warmest years in Moldova's history occurred within the past two decades. Among the most severe weather events, the 2007 drought, which led to losses estimated at \$530 million (Table c) and the more recent drought of 2020 stand out. The latter caused a drop of over 26% in agricultural production, provoked 20% of overall job losses in the agriculture sector, and contributed to an overall recession of the country²⁷.

Disaster	Year	Total deaths	Disaster	Year	Affected people	Disaster	Year	Damage ('000 US\$)
Flood	1994	47	Storm	2000	2,600,000	Flood	1994	548,429
Extreme temperature	2005	13	Drought	2007	210,394	Drought	2007	530,589
Extreme temperature	2012	10	Storm	1994	25,580	Flood	1997	84,405
Flood	1997	9	Flood	1994	25,000	Storm	2000	49,725
Storm	1994	3	Flood	2010	12,000	Flood	2005	10,756

Table c - Disaster risk profile. Source: European Commission- Civil Protection Profile.

The *ThinkHazard!* tool classifies **extreme heat** as a medium hazard. Nonetheless, hot temperature extremes are expected to increase because of continued greenhouse gas emissions. Moreover, according to this tool, in Moldova, the temperature increase will be slightly higher than the global average.



Figure f - INFORM Global Risk Index scores for Moldova, according to each component of risk. Source: INFORM Risk Index website.

27 <https://thedocs.worldbank.org/en/doc/7bf12b95f10a3daf7b570718b2100e15-0080012021/related/MEU-DRM-Special-Topic-May-2021-FINAL-eng-Copy.pdf>

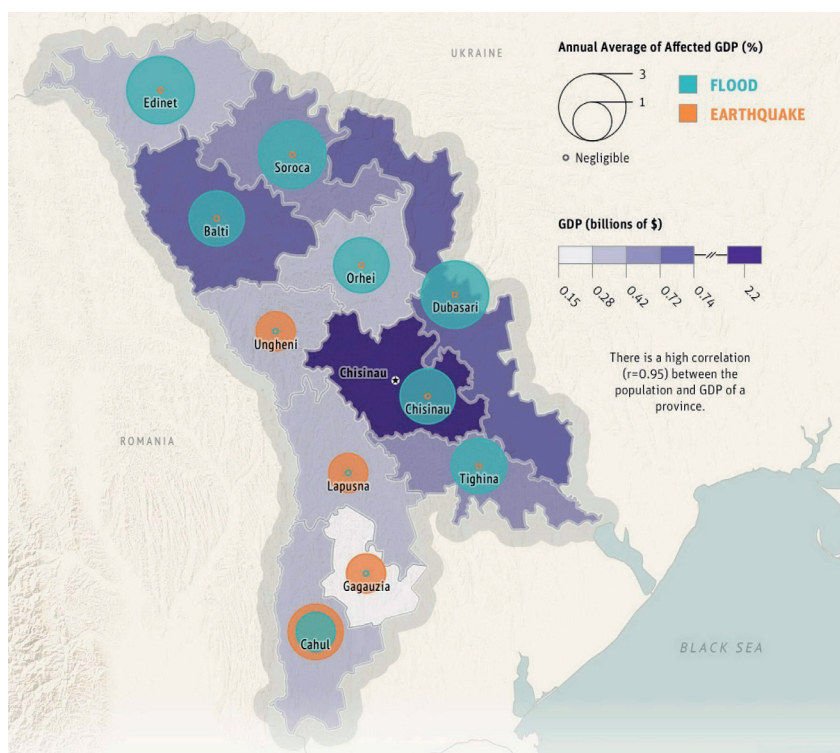


Figure g - Disaster Risk Profile, data estimated for 2015. Source: GFDRR.

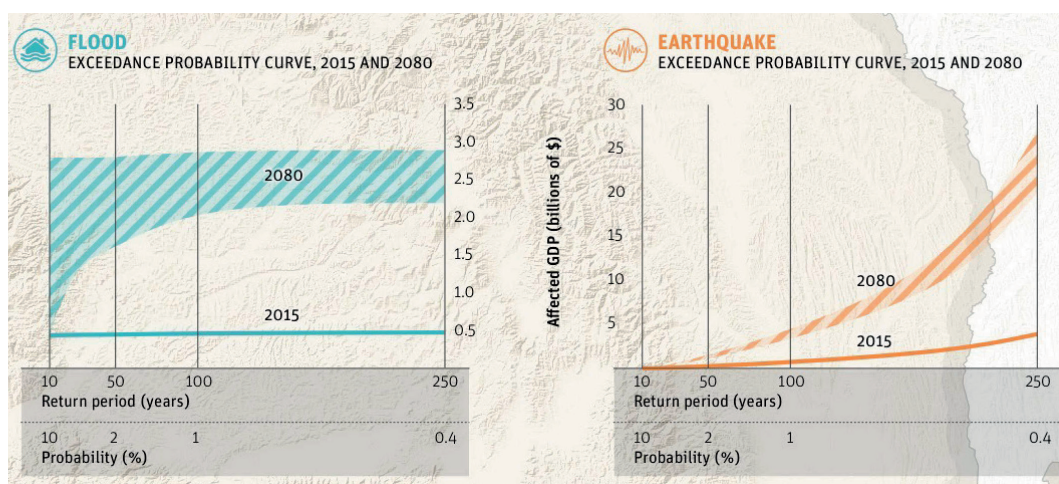


Figure h - Disaster Risk Profile, data estimated for 2015. Source: GFDRR.

According to the INFORM Global Risk Index (Figure f), Moldova's risk class is low (3.4/10), but higher than the average of its income group (upper-middle income) and of the EU regional average (1.9), especially in relation to hazard & exposure (2.3, against 1.86 in the rest of Europe)²⁸.

28 INFORM Index (last access 24/07/2023): <https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Risk-Profile>

Figure g from the Disaster Risk Profile of GDFRR shows that, on average, most losses occur in economically vulnerable districts. The province at greatest risk of floods is Dubăsari, while Cahul is the most exposed to earthquakes. In absolute terms, Chişinău is the province at greatest risk of floods and earthquakes.

The exceedance probability curves of Figure h show the GDP affected by, respectively, floods and earthquakes for varying probabilities of occurrence. A solid line represents the affected GDP for 2015 conditions, while a diagonally striped band displays the range of affected GDP based on a selection of climate and socioeconomic scenarios for 2080. For example, if Moldova had experienced a 100-year return period flood event in 2015, the affected GDP would have been an estimated at \$500 million. In 2080, however, the affected GDP by the same type of event would range from about \$2 billion to about \$3 billion.

Annex 2: Moldova's involvement in Disaster Risk Management projects from the EU and international funding

Introduction

This annex report aims to map the international actors involved in DRM/DRR activities in Moldova as well as the main ongoing projects implemented by such actors in the Country. It is vastly informed by the information shared by GIES in Moldova, the PPRD East programme partners, and the peer review team. In addition, data was gathered by the Fondazione Centro Euro Mediterraneo sui Cambiamenti Climatici (CMCC) from the two different framework programmes and databases, Horizon 2020 and Interreg, filtering for projects and actors working on DRR, DRM, Climate Resilience and Adaptation issues during the 2010-2022 period. Special attention is paid to the projects that are supporting the implementation of the Programme's Action Plan.

International Organisations

The list of International Organisations present in the country includes, among others, the EU; the United Nations Agency on International Development (UNDP) and United Nations Children's Fund (UNICEF); the International Atomic Energy Agency; and the World Bank. Below is a non-comprehensive list of DRM-related projects funded by international organisations and national governments in Moldova.

European Commission/ European Funds

The European Commission has a strong collaboration and presence in Moldova. Some of the key projects in the field of disaster risk management and risk reduction, including activities supporting the implementation of the Programme's Action Plan, are the following:

- *Prevention, Preparedness and Response to natural and man-made disasters in Eastern Partnership countries – phase 3 (PPRD East 3).* The PPRD East programme is in its 3rd phase. It was officially launched on 1 October 2020 and will end on 30 September 2024. The PPRD East 3 partner countries include Armenia, Azerbaijan, Georgia, Moldova, and Ukraine. There are three specific objectives of the PPRD East 3 programme: 1) Building sustainable capabilities of the Partner Countries' respective civil protection institutions for disaster risk prevention, preparedness and response to natural and man-made disasters. 2) Strengthening interlinkages between all relevant governmental actors and civil society stakeholders, as well as the scientific community, and promoting a national inclusive approach to prevention, preparedness and response to natural and man-made disasters. 3) Enhancing regional coordination, institutional and operational cooperation between the UCPM and its Eastern neighbourhood countries, and among the Eastern neighbourhood countries.
- *CBRN4 Centres of Excellence initiative funded by the European Neighbouring Instrument contributing to Stability and Peace.*

- *Horizon 2020*, the EU's research and innovation funding programme from 2014-2020. One project is relevant to the DRM/DRR fields: *SINCERE Strengthening INternational Cooperation on climatE change Research*, aiming at strengthening open international climate change research and innovation cooperation involving European partners in support of implementing the Paris Climate Agreement, including in the broader context of the Sendai Framework for Disaster reduction and the UN's Sustainable Development Goals.
- *Interreg Framework programme*: Moldova has participated in 15 projects on disaster risk reduction/management, 9 of these have been financed by the 2014-2020 Romania – Republic of Moldova ENI CBC programme, which demonstrates a high level of cooperation between the two countries in this field. The other financing programmes are the 2014 - 2020 Black Sea Basin ENI CBC, the 2014 - 2020 INTERREG VB Danube, and the 2007 - 2013 Romania-Ukraine-Moldova ENPI CBC. Some of these projects support the implementation of the Programme, as reported in its official document, in Chapter VII - Source of Funding. These are the *Efficient joint responses to cross-border emergencies* (1); *Increasing the protection of the population in emergencies caused by natural disasters in the cross-border area* (IPESDP) (2); *Improving the response time for emergency situations in the cross-border area by renovating the equipment and infrastructure needed for effectively training and managing the population in providing first aid* (3); *Cooperation on disaster prevention and environmental monitoring in the Black Sea Basin (CO-PREVENT)* (4).
- The *Efficient joint response to cross-border emergencies (Interreg)*, under the Joint Operational Programme Romania-Republic of Moldova 2014-2020 (implementation period: 2022-2023). The project aims to improve the population's safety and protection through ICT-developed infrastructure (building and endowment of the Emergency Dispatch Centres in Bălți - Republic of Moldova and Iași - Romania) and to enhance the communication flow between the structures that act in cross-border emergency situations. The EU's net contribution for this project is EUR 1,998,325.00, out of a total budget of EUR 2,619,405.29; GIES received EUR 1,119,809.09.
- *Improving the protection of the population in emergencies caused by natural disasters in the cross-border area* (IPESDP) (Interreg). The project aims to limit the consequences of natural disasters by improving the level of protection in emergency situations caused by natural disasters in the cross-border area. The value of the project amounts to EUR 333,333.00, with an EU contribution of EUR 299,999.90; the Inspectorate's budget is EUR 200,000.00.
- *Improving the response time for emergency situations in the cross-border area by renovating the equipment and infrastructure needed for effectively training and managing the population in providing first aid (Interreg)*. The project aims to establish a common educational framework to prevent crisis situations in the case of natural and man-made disasters, through a comprehensive action program of actions consisting of refurbishing and equipping the training facilities at GIES's Republican Training Centre; first aid training sessions; afforestation campaign organised in municipalities in the cross-border area; development of a joint action plan for exceptional situations intervention during

the 18 months of the project. The value of the project amounts to EUR 326,525.00, of which EUR 293,872.00 comes from European funding; the Inspectorate's budget is EUR 25,000.00.

- *Cooperation on disaster prevention and environmental monitoring in the Black Sea Basin (CO-PREVENT) (Interreg)*. The project aims at drafting a report on cross-border flood hazards and fires of the Black Sea Basin; developing the concept note on universal surveillance and operation solutions for warning systems; and developing a joint programme to train young persons on what to do in disaster situations, with training for young local volunteers. The project's total value amounts to EUR 839,154.00, with an EU contribution of EUR 772,022.32; the Inspectorate's budget is EUR 130,207.00.
- *The Romania-Moldova cross-border cooperation area will become safer by improving the infrastructure of the Mobile Emergency, Resuscitation and Rescue Service (SMURD), increasing the level of training and maintaining the capacity of the emergency response personnel / Joint Operational Programme Romania - Republic of Moldova 2014 - 2020*. The aims of the project include: organising workshops to review the Common Intervention Plan and associated procedures; identifying new types of risks in the eligible area; developing a common contingency plan and reviewing the related procedures; organising joint training sessions; purchasing a dedicated vehicle for specific missions; building landing platforms; building an emergency reception facility. The project's total value amounts to EUR 10,026,409.00; the Inspectorate's budget is EUR 2,240,980.00.
- *Improving ICT-based communication capabilities in the cross-border area of Northeast Romania - Republic of Moldova*. The objectives of the project are to create within the Republican Training Centre of the Inspectorate an ICT-based communication training module and to provide the Centre with a specialised communication training system based on the Digital Radio Communication Training Platform in the TETRA standard. The project's total value amounts to EUR 2,600,626.27; the Inspectorate's budget is EUR 1,500,832.27.
- *Aligning European Neighbourhood Policy countries with the Civil Protection Mechanism and EU instruments through an exercise series (EURO-MED-REACT) – 2022-2023*. The project aims to organise exercises to give participating countries an opportunity to review national practices and improve emergency and exceptional response and cooperation plans, in order to support the alignment of non-EU countries with the Union Civil Protection Mechanism. The project's total value amounts to EUR 847,879.00; the Inspectorate's budget is EUR 125,802.00. The exercises will cover preparedness for and response to industry (chemical), health (pandemic) and natural (flood) disasters simultaneously affecting Moldova, Ukraine and Jordan.
- *EU Host Nations Support Table-top exercise outside EU (2022-2023)* took place in Moldova in February 2023.

- *Developing Union Civil Protection Knowledge Network partnership among EU, European Neighbourhood Policy countries and international organisations (NET-CBRN-REACT) (2021-2022).*
- *Multi-Country Study Risk Landscape and Capacity to Respond (2023-2026).* The study involves various countries in the Eastern Neighbourhood and Southern Neighbourhood regions, beneficiaries of the Instrument for Pre-Accession Assistance (IPA), including Moldova. The project investigates the disaster risk landscape and capabilities to respond to disasters in the selected countries. The evidence provided on main national, cross-border, regional risks and gaps in addressing these risks will inform priorities and future cooperative actions, and will support the overall external strategy of the Union Civil Protection Mechanism.

Additionally, since the start of Russia's war of aggression against Ukraine, the European Commission has made available to Moldova over EUR 48 million in humanitarian assistance. On the ground, activities are carried out by UN agencies, and international non-governmental organisations, together with local implementing partners. The EU's humanitarian response in the country focuses on multi-purpose cash assistance, to help displaced people cover their basic needs and access to basic services, whether they live in Reception and Accommodation Centres (RACs) or within the host community, as well as supporting local Moldovan families hosting refugees. The EU's humanitarian partners also provide health services, protection assistance (including psychosocial support and sexual and gender-based violence assistance), as well as shelter and non-food items. The EU has also been deploying its rescEU energy reserve to send 36 power generators to 30 hospitals to Moldova to reduce the impact of occasional countrywide blackouts caused by Russia's heavy shelling of Ukraine's energy infrastructure.

United Nations

UNDP

- *Advancing Moldova's National Climate Change Adaptation Planning (phase 2) (2020-2024).*
- *Promotion of climate change and disaster risk reduction solutions in the water and civil protection sectors for enhanced rural resilience (2019-2022).*
- *Disaster and Climate Risk Reduction (2019-2022),* implemented by UNDP with financial support from the Austrian Development Agency and Estonia.

UNICEF

- Resilience of the social protection system, Assessment and recommendations (2016).
- Moldova Emergency Covid-19 Response Project (2020-2023).

UNDRR

- *Urban resilience.* Through the implementation in Moldova of the Making Cities Resilient 2030 initiative, cities can receive technical support for developing and implementing resilience and DRR plans at the local level, while engaging in peer learning and experience sharing with the cities and partner members of the global MCR2030 network.

As part of this engagement, the capital city of Chişinău is completing a local DRR plan based on the recommendations of a baseline resilience assessment (Disaster Resilience Scorecard for Cities) and an extensive consultation process at the local level.

- *Risk knowledge – INFORM index.* UNDRR is developing a sub-national INFORM Risk Index for Moldova to support enhanced risk awareness and understanding of areas at high disaster risk. The INFORM model, developed under the leadership of the European Commission's Joint Research Centre and the Inter-Agency Standing Committee, envisages three dimensions of risk: Hazards & Exposure, Vulnerability and Lack of Coping Capacity, and is split into different dimensions to provide a quick overview of the underlying factors leading to disaster risk. The Index is developed in partnership with GIES and the UN system based in Moldova. It covers 37 subnational administrative units, drawing on over 50 indicators that capture specific risks and issues that are relevant to Moldova.

International Atomic Energy Agency

- *Improved technical capabilities for decommissioning the RADON facility adjacent to the ground and environmental remediation (2020-2022).*

World Bank

- *Strengthening Moldova's Disaster Risk Management and Climate Resilience* (Potential project - not yet started).
- *Moldova Emergency Covid-19 Response Project (2020-2023).*

National Government (bilateral projects)

Besides international organisations, the Government of Moldova collaborates and receives financial and technical support from several partner countries. Some of the relevant current projects are listed below.

Government of Poland

- *Project "Development of Volunteering in Moldova" (Solidarity Fund Instrument).*
- *Project on Urban Search and Rescue Capacity Building* implemented in order to professionalise the Moldovan rescue service in terms of urban search and rescue specialization. (2019-2023).
- Within the framework of the Polish Aid programme entitled *Support for the General Inspectorate for Emergency Situations of the MIA of the Republic of Moldova*, a project was implemented to train Moldovan instructors in rescue operations in the event of an uncontrolled release of flammable substances into the atmosphere (2021). Within *Phase II* (2022-2023) of the programme, a project aimed at supporting the Fire Brigade Training Centre in Răzeni in training its staff is currently taking place in Moldova; it also aims to develop a didactic base.

Government of Romania

- The strong collaboration between the Government of Romania and Moldova in the DRM/

DRR fields is evidenced by the Joint Operational Programme Romania-Moldova, the numerous assistance initiatives from Romania in support of Moldova, and international joint Civil Protection exercises. Some of these are listed below.

- *Improving the Mobile Emergency Service for Resuscitation and Extrication (SMURD) operating infrastructure in Romania-Moldova, by increasing the level of training and maintaining the capacity of professional personnel to intervene in emergency situations – SMURD 2 (2019-2022).*
- *Collaboration in a project to update capabilities in the field of military medicine in Moldova, through the purchase and supply of individual first aid equipment (NATO funding).*
- *PRUT 2021, an international exercise regarding the management and coordination structures for intervening in cross-border emergency situations, aimed at testing the Joint Romania-Moldova Intervention Plan, was held in 2021.*
- *Donation of firefighting ladder units for the Inspectorate for Emergency Situations for the Republic of Moldova (2021), funded by the Government of Romania, through the Ministry of Foreign Affairs, with the support of the MIA.*
- *Collaboration between representatives of the Department of Emergency Situations in Romania in the capacity of experts during the consultation for developing Moldova's national emergency management strategy.*

Government of Japan

- *Fire Prevention Equipment Improvement Project implemented through Japan's International Cooperation Agency (JICA). Along with the above-mentioned projects, the following project supports the implementation of the Programme for the years 2022-2025. Specifically, it aims to improve firefighting equipment through the purchase of 19 special intervention vehicles for GIES as well as training by Japanese experts, aimed at ensuring technique and equipment maintenance.*

Government of the United States

- *PNNL USA (Battelle Memorial Institute) Physical security upgrades and extended warranty, quarterly preventive maintenance at the national radioactive waste repository (2019-2023).*

Additionally, through USAID, the US government engages and supports Moldova's DRR sector by collaborating with organisations such as the Agence française de développement, UN-DRR and IFRC on DRR mapping at the local level (project ACTED), and reinforcing capacity building both at the national level and in the volunteer system.

Annex 3: List of stakeholders consulted in the Peer Review mission

112 Service	Single National Emergency Call Service 112
ASM	Academy of Sciences of Moldova
CALM	Congress of Local Authorities from Moldova
GIBP	General Inspectorate of the Border Police
GIC	General Inspectorate of Carabinieri
GIES	General Inspectorate of Emergency Situations
GIP	General Inspectorate of Police
GIM	General Inspectorate for Migration
IOM	International Organization of Migration
IFRC	International Federation of Red Cross and Red Crescent Societies
MAFI	Ministry of Agriculture and Food Industry
MC	Ministry of Culture
MD	Ministry of Defence
MER	Ministry of Education and Research
MEnv	Ministry of Environment
MF	Ministry of Finance
MFAEI	Ministry of Foreign Affairs and European Integration
MH	Ministry of Health
MIA	Ministry of Internal Affairs
MIRD	Ministry of Infrastructure and Regional Development
MJ	Ministry of Justice
MLSP	Ministry of Labour and Social Protection
SHS	State Hydrometeorological Service
UNHCR	United Nations High Commissioner for Refugees
WHO	World Health Organization

Annex 4: Acronym table

BBB	Build Back Better
CEMC	Crisis Emergency Management Centre
CMCC	Fondazione Centro Euro Mediterraneo sui Cambiamenti Climatici
CSOs	Civil Society Organisations
DAWBEE	Data Access for Western Balkan, Eastern European and Caucasian Countries
DLD	Disaster Loss Data
DRM	Disaster Risk Managementw
DRMC	Disaster Risk Management Cycle
DRR	Disaster Risk Reduction
ECHO	European Civil Protection and Humanitarian Aid Operations
EEAS	European External Action Service
EFDRR	European Forum for Disaster Risk Reduction
EMS	Emergency Management System
ERCC	European Emergency Response Coordination Centre
ERRA	Electronic Regional Risk Atlas
EU	European Union
EUCP	European Climate Prediction
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
EWS	Early Warning System
FRB	Flood Rescue using Boats
FRMPs	Flood Risk Management Plans
GD	Government Decree
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Reduction and Recovery
GFFV	Ground Forest FireFighting using Vehicles
GIES	General Inspectorate for Emergency Situations
GIM	General Inspectorate for Migration
GIS	Geographic Information System
GLoFAS	Global Flood Awareness System
HCP	High-Capacity Pumping
HNS	Host Nation Support
IAEA	International Atomic Energy Agency

IBF	Impact-Based Forecasting
ICON	Icosahedral Non Hydrostatic Weather and Climate Model
IEG	Institute of Ecology and Geography
IGS	Institute of Geology and Seismology
IOM	International Organisation for Migration
IPA	Instrument for Pre-Accession Assistance
ISO	International Organisation for Standardisation
MAFI	Ministry of Agriculture and Food Industry
MEnv	Ministry of Environment
MIA	Ministry of Internal Affairs
MIRD	Ministry of Infrastructure and Regional Development
MoD	Ministry of Defence
NAP	National Adaptation Planning
NAPH	National Agency for Public Health
NARNRA	National Agency for Regulating of Nuclear and Radiological Activities
NATO	North Atlantic Treaty Organization
NCCC	National Commission on Climate Change
NCCAP	National Climate Change Adaptation Program
NDC	Nationally Determined Contribution
NDP	National Drought Plan
NDS	National Development Strategy
NFERP	National Forest Extension and Rehabilitation Program
NGOs	Non-Governmental Organisations
NRA	National Disaster Risk Assessment
PNNL US	US Pacific Northwest National Laboratory
PPRD	Programme for Prevention, Preparedness and Response
PRAF	Peer Review Assessment Framework
RACs	Refugee Accommodation Centers
ROECA	Regional Office for Europe and Central Asia
RRRP	Inter Agency Regional Refugee Response Plans
RW	Radioactive Waste
SAR	Search and Rescue
SDG	Sustainable Development Goals
SHS	State Hydrometeorological Service
SIDA	Swedish International Development Agency

SMURD	Mobile Emergency Service for Resuscitation and Extrication
SOPs	Standard Operating Procedures
TETRA	TErrestrial Trunked RAdio
ToT	Training of Trainers
TTX	Table-top Exercise
UNCCD	United Nations Convention to Combat Desertification
UCPM	Union Civil Protection Mechanism
UNDP	United Nations Development Programme
UNDRR	United Nations for Disaster Risk Reduction
UNHCR	United Nations Office of the High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
UNSDCF	United Nations Sustainable Development Cooperation Framework
USAID	United States Agency for International Development
USAR	Urban Search and Rescue
WHO	World Health Organisation

Annex 5: Key definitions

Build Back Better: The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment. (Source: UNDRR, 2017)

Coping capacity: the ability of people, organizations, and systems, using available skills and resources, to manage adverse conditions, risk or disasters. The capacity to cope requires continuing awareness, resources, and good management, both in normal times as well as during disasters or adverse conditions. Coping capacities contribute to the reduction of disaster risks. (Source: UNDRR, 2017)

Climate change adaptation: the process of adjustment to actual and expected climate change and its impacts. (Source: EC, 2020)

Contingency planning: a management process that analyses disaster risks and establishes arrangements in advance to enable timely, effective and appropriate responses. (Source: UNDRR, 2017)

Critical infrastructure: an asset, a facility, equipment, a network or a system, or a part of an asset, a facility, equipment, a network or a system, which is necessary for the provision of an essential service. (EC, 2022)

Disaster: a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Disaster loss database: a set of systematically collected records about disaster occurrence, damages, losses and impacts, compliant with the Sendai Framework for Disaster Risk Reduction 2015-2030 monitoring minimum requirements. (Source: UNDRR, 2017)

Disaster risk: the potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity. (Source: UNDRR, 2017)

Disaster risk reduction: aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. (Source: UNDRR, 2017)

Early Warning System: an integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events. (Source: UNDRR, 2017)

Exposure: The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas. (Source: UNDRR, 2017)

Essential service: a service which is crucial for the maintenance of vital societal functions, economic activities, public health and safety, or the environment. (EC, 2022)

Hazard: a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. (Source: UNDRR, 2017)

Host nation support: all actions undertaken in the preparedness phase and the disaster response management by a Participating State, receiving or sending assistance, or the Commission, in order to remove as much as possible any foreseeable obstacle to international assistance so as to ensure that disaster response operations proceed smoothly. It also includes the support that Participating States can provide to facilitate international assistance transiting through their territory by land, sea or air. (Source: EC, 2012)

National Platform for Disaster Risk Reduction: a generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multisectoral and interdisciplinary in nature, with public, private and civil society participation involving all concerned entities within a country. (Source: UNDRR, 2017)

Nature Based Solutions: Solutions inspired by, supported by or copied from nature" and "simultaneously provide environmental, social and economic benefits and helps to build resilience" by bringing "more and more diverse, nature and natural features and processes into cities, landscapes and seascapes. (Source: EC, 2015)

Preparedness: a state of readiness and capability of human and material means, structures, communities and organisations enabling them to ensure an effective rapid response to a disaster, obtained as a result of action taken in advance. (Source, Decision 1313/2013/EU)

Prevention: any action aimed at reducing risks or mitigating adverse consequences of a disaster for people, the environment and property, including cultural heritage. (Source: Decision 1313/2013/UE)

Reconstruction: the medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk. (Source: UNDRR, 2017)

Resilience: the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management. (Source: UNDRR, 2017)

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards. (Source: UNDRR, 2017).