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# **COVER NOTE**

From:	Secretary-General of the European Commission, signed by Ms Martine DEPREZ, Director
То:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
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# REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

Advancing risk management and resilience-building in Europe: First report on the implementation of the union disaster resilience goals Second update on preventing and managing disaster risk in Europe

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#### 1. EXECUTIVE SUMMARY

The Union Civil Protection Mechanism (UCPM) plays a pivotal role in shaping the future of disaster risk management across Europe. It promotes a proactive, anticipatory approach to disaster preparedness and resilience, in line with the Union Disaster Resilience Goals (DRGs) adopted in 2023<sup>1</sup>, and the recently adopted EU Preparedness Union Strategy<sup>2</sup>.

This report examines risk management and resilience-building in the EU from a UCPM perspective. It considers developments at both the national and EU levels, focusing on four thematic areas: anticipation; preparedness of the population; early warning; and resilience of civil protection. It represents a first progress report on the implementation of the DRGs pursuant to Article 34(2) and the second progress report on risk prevention and management under Article 5(1)(g) of Decision No 1313/2013/EU.

The findings broadly confirm the need for a more proactive, more comprehensive and better integrated approach to resilience and preparedness as proposed in the EU Preparedness Union Strategy. In the area of anticipation, there is a need to further develop high-quality data, scientific research, and analytical tools and capabilities to support risk-informed decision-making. The comprehensive EU risk and threats assessment planned for 2026 will give a further boost to this effort across sectors.

Enhancing **preparedness of the population** remains crucial. While progress has been made, substantial gaps persist, highlighting the need to further develop communication tools that drive behavioural change, foster a culture of preparedness, and ensure inclusive communication that involves vulnerable groups, including persons with disabilities. At EU level, planned actions include an EU risk awareness day and new guidelines and a pilot training for national experts on risk communication. Synergies with the ProtectEU Internal Security Strategy<sup>3</sup> will further enhance communication and coordination on risks, threats, and resilience across the EU.

The effectiveness of **early warning systems** has been another critical area of focus. While technological advancements like the Copernicus Emergency Management Service and the launch of the Galileo Emergency Warning Satellite Service significantly improve public alerting capacities, organisational and human factors remain central to transforming warnings into timely, life-saving actions. Continued work is needed to strengthen alert dissemination, contingency planning, and integration of interoperable, multi-hazard early warning systems at national and cross-border levels.

To build **civil protection resilience**, the Commission and Member States have undertaken initiatives to stress-test emergency operations centres and improve investment planning. Sustained investments in both physical infrastructure and operational processes are crucial to ensure the continuity of emergency services. Strengthening financial resilience is also important for enhancing the response to and rapid recovery from unexpected crises. Cross-sectoral and cross-border cooperation remain essential to whole-of-government disaster resilience.

The Commission has expanded the **UCPM's capacity-building toolkit** to better support civil protection efforts across the EU. Further reinforcement of this support will be needed to strengthen disaster risk management and the implementation of the DRGs.

<sup>&</sup>lt;sup>1</sup> COM(2023) 61 final of 8.2.2023.

<sup>&</sup>lt;sup>2</sup> JOIN(2025) 130 final of 26.3.2025.

<sup>&</sup>lt;sup>3</sup> COM/2025/148 final of 1.4.2025.

While this report focuses primarily on developments within the EU, and particularly the UCPM, it recognises that the Union's safety and efforts in disaster risk management cannot be pursued in isolation. Strengthening resilience in neighbouring regions and working towards a broader safety belt around the EU will be essential to reinforce the Union's preparedness and ensure shared security.

#### 2. Introduction

In recent years, the EU has been confronted with a wide range of disasters, crises, and threats which have led to loss of life, increasing damage<sup>4</sup>, and exposed vulnerabilities in the systems that provide essential services. The UCPM has played a central role in the EU's collective response by providing coordinated emergency assistance to countries in need. At the same time, the UCPM has risen to the challenge of an increasingly complex risk landscape by bolstering its response capabilities through the expansion of rescEU<sup>5</sup> and the strengthening of the Emergency Response Coordination Centre (ERCC). Efforts have also focused on reinforcing disaster risk management and resilience-building, notably through the adoption of the DRGs in the area of civil protection in 2023<sup>6</sup>, and the EU Preparedness Union Strategy in 2025<sup>7</sup> with a broader cross-sectoral scope.

This report examines risk management and resilience-building in the EU, focusing on four thematic areas:

- 1. Anticipation;
- 2. Preparedness of the population;
- 3. Early warning; and
- 4. Resilience of civil protection.

Two distinct obligations under the UCPM Decision<sup>8</sup> will be covered, namely the **first progress report on the DRGs** pursuant to Article 34(2) and the **second progress report on risk prevention and management** under Article 5(1)(g).

The report considers **developments at both the national and EU levels**, while recognising certain limitations due to the differing timeframe and scope of available data. **National insights** are based on Member States' and Participating States' submissions under Article 6 of the UCPM Decision, highlighting progress made since the publication of the 2024 Commission's report on 'Preventing and managing disaster risk in Europe'9. The staff working document accompanying this report delves deeper into the findings of these national insights. Developments at the **EU level** include more recent Commission initiatives aimed at advancing the DRGs and supporting risk management under the UCPM.

<sup>&</sup>lt;sup>4</sup> https://www.eea.europa.eu/en/analysis/indicators/economic-losses-from-climate-related

<sup>&</sup>lt;sup>5</sup> https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/resceu en

<sup>&</sup>lt;sup>6</sup> COM(2023) 61 final of 8.2.2023.

<sup>&</sup>lt;sup>7</sup> JOIN(2025) 130 final of 26.3.2025.

<sup>&</sup>lt;sup>8</sup> https://eur-lex.europa.eu/eli/dec/2013/1313/2021-01-01/eng

<sup>&</sup>lt;sup>9</sup> COM(2024) 130 final and SWD(2024) 130 final

## 3. ANTICIPATION

**DRG 1 'Anticipate' - To improve risk assessment, anticipation, and disaster risk management planning.** Goal 1, together with its accompanying flagship initiative on scenario development, has given new momentum to anticipatory workstreams. It calls for improvement in the use of foresight and multi-hazard approaches, the assessment of vulnerabilities, crossborder and cross-sectoral impacts, and the integration of risk knowledge into prevention and preparedness planning.

#### 3.1. Commission Initiatives

Two key activities have strengthened anticipatory capability in the period 2023-2024: (i) the development of disaster scenarios informing UCPM planning; and (ii) the improvement of risk data for transboundary risks.

## 3.1.1. Scenario-building: a new tool to strengthen UCPM preparedness for major disasters

Launched as a flagship initiative in 2023, the **scenario-building exercise** produced ten EU-wide disaster scenarios, developed in collaboration with national experts, Commission services, and researchers, drawing on operational, scientific, and thematic policy expertise. The scenarios cover 16 natural and human-induced hazards, selected to reflect the breadth of the EU's evolving risk landscape, and explore plausible worst-case events with cross-border and cross-sectoral impacts.<sup>10</sup>

The analysis yielded a wide range of scenario-specific findings, while also revealing several cross-cutting priority areas for reinforced action (*see below Box 1*). The results are used to inform EU-level prevention and preparedness planning, including setting targets for UCPM response capacities and strengthening coordination between civil protection and other policy areas. Scenario-building is envisaged as a continuous process: additional scenarios may be developed and existing ones revised in response to evolving risks and policy priorities.

## 3.1.2. Building EU-wide risk data for transboundary risk assessment and management

The UCPM has invested in strengthening the knowledge base needed for anticipatory risk management, including through the **Risk Data Hub**, developed within the Joint Research Centre's Disaster Risk Management Knowledge Centre.

The Risk Data Hub was established to address the long-standing challenge of fragmented and inconsistent risk data at EU level, supporting both disaster risk management and climate change adaptation. As a central platform, it provides free access to curated, evidence-based datasets on hazards, exposure, vulnerability, and disaster damages and losses. Ongoing efforts aim to expand the volume and quality of these datasets, integrating hazard scores, exposure of population, buildings, critical infrastructure, and multidimensional vulnerability to provide an integrated overview of disaster risks and increase public awareness.

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<sup>&</sup>lt;sup>10</sup> The scenarios include severe nuclear accident; extreme winter weather with a cyber component; extreme heatwave; energy crisis within the Union; severe pandemic; armed conflict; terrorist attack; earthquake induced tsunami; inland water and coastal pollution; and volcanic eruption. Due to the sensitive nature of their content, the scenarios are not publicly available.

# Box 1: Lessons from the EU disaster scenario-building: five priority areas for reinforced action

- *i.* UCPM response capacity: need to further strengthen operational response capabilities, including continued development and diversification of the rescEU<sup>11</sup> reserve;
- *ii.* Cross-sectoral coordination: stronger emphasis needed on an all-hazards approach, cross-sectoral coordination, and engagement with non-civil protection actors to better prepare for complex emergencies;
- *iii.* Risk knowledge and communication: need to improve anticipation, risk identification, communication, population preparedness, and early warning;
- *iv.* Inclusion of vulnerable groups: prevention, preparedness and response arrangements should more systematically integrate the specific needs of vulnerable groups and of persons with disabilities;
- v. Financing: reinforced and more flexible funding mechanisms could help to respond to cross-sectoral, long-lasting, and transboundary disasters.

#### 3.2. NATIONAL INITIATIVES

Reporting from Member States and Participating States<sup>12</sup> related to anticipation shows continued evolution in risk assessment methodologies, indicating progress in several areas. While traditional single-risk assessments remain the most common approach, **growing attention is being paid to all hazard approaches and the examination of compound risks and cascading effects**, particularly regarding critical infrastructure. Attention to emerging risks is also increasing, with over one-third of countries now using foresight and anticipation methods in risk identification. Among these, Belgium, Ireland, and the Netherlands have integrated horizon scanning<sup>13</sup> into their risk assessment processes.

Floods, extreme weather, nuclear and radiological accidents, drought, and health-related risks (human or animal in origin) continue to be the most frequently reported risks. However, the evolving risk landscape has prompted the **consideration of new threats and scenarios, particularly in the security domain**. There is a growing awareness of human-induced risks, including industrial and nuclear accidents, critical infrastructure disruptions, and cyber-attacks. Environmental and chemical risks have seen a significant increase in reporting since 2015, while transport risks have experienced the sharpest rise since 2020.

Countries are increasingly assessing the vulnerability of areas, sectors, and populations, and quantifying human, economic, and environmental impacts of disasters. Several countries have integrated climate change impacts into their risk assessments, considering also the political and societal implications of climate change, such as climate-induced migration. This reflects a growing understanding of the links between disaster risk management and climate change adaptation, with **climate change recognised as a key driver of risk**.

<sup>&</sup>lt;sup>11</sup> rescEU was established as a strategic reserve of European disaster response capabilities and stockpiles, fully funded by the EU. It comprises a fleet of firefighting planes and helicopters, a medical evacuation plane, and several essential stockpiles.

<sup>&</sup>lt;sup>12</sup> Countries participating in the UCPM are Albania, Bosnia and Herzegovina, Iceland, Moldova, Montenegro, North Macedonia, Norway, Serbia, Türkiye, and Ukraine.

<sup>&</sup>lt;sup>13</sup> Horizon scanning is a foresight method to systematically detect early signs of potentially important developments, see also https://www.eea.europa.eu/en/analysis/publications/horizon-scanning-tips.

National reports indicate **progress in the collection of disaster loss data**, with Spain, Portugal, and Hungary mentioning the development of a single national database. Despite the widespread acknowledgement of the importance of loss and damage data for risk analysis and planning, significant gaps remain, such as the lack of a unified national system for consolidating data and limited coverage data collection.

#### 3.3 WAY FORWARD

The EU Preparedness Union Strategy sets the direction for future work, emphasising the importance of anticipation and an all-hazards approach to preparedness. To achieve this vision, it is essential to develop the capacity to foresee, assess, and prepare for a wide range of disaster scenarios, focusing on cross-cutting vulnerabilities, compound risks, and cascading effects.

In the coming years, continued investment in science, high-quality data, and analytical capabilities will be crucial to generating the knowledge and insights needed to inform decision-making. The development of EU-wide disaster scenarios has been a significant step forward in preparedness planning because it translates risk-based evidence into agreed planning assumptions for the UCPM. The comprehensive EU risk assessment planned for 2026 will be a key tool for strengthening the evidence base for broader cross-sectoral prevention and preparedness. This assessment should offer additional support and evidence to inform national risk management efforts and guide strategic investment in resilience across the EU, helping to address the persistent gaps in disaster risk and loss data that currently hinder anticipation at both national and EU levels.

In the context of climate-related risks, effective anticipation requires stronger integration between disaster risk management and climate adaptation. The EU Mission on Climate Adaptation is already generating knowledge and solutions to support this effort and will continue to facilitate cooperation between climate and disaster risk actors at European, national, and regional levels, helping to align short- and medium-term preparedness with long-term adaptation planning for climate-related hazards.

Strengthening anticipatory capacities should also extend beyond the EU, particularly to neighbouring countries that are often on the front line of emerging risks and can play an important role in buffering negative spillover effects. As many of these partners currently lack the risk data and institutional capacities needed for anticipatory preparedness, addressing these gaps would also reinforce the EU's own resilience.

#### 4. POPULATION PREPAREDNESS

**DRG 2 'Prepare' - To increase risk awareness and preparedness of the population.** Goal 2 promotes public access to risk information, encourages the adoption of preparedness measures, and fosters a culture of prevention and civic engagement. The goal sets an ambitious target: by 2030, 90% of the EU population should be aware of the disaster risks in their region<sup>14</sup>. As of 2024, awareness stood at 67%, highlighting opportunities for progress<sup>15</sup>.

<sup>14</sup> Commission Recommendation on Union disaster resilience goals, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0215%2801%29&qid=1676531610023">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0215%2801%29&qid=1676531610023</a>.

Special Eurobarometer Report 541 EU Civil Protection, Key Findings, p. 7, https://europa.eu/eurobarometer/surveys/detail/2977.

While public communication on risks and preparedness is the responsibility of national authorities, the UCPM can support national efforts through knowledge exchange, capacity-building, and financial assistance for national and cross-border initiatives.

#### 4.1. COMMISSION INITIATIVES

# 4.1.1. preparEU flagship initiative

To advance the DRG 2 'Prepare', the Commission launched the **flagship initiative** *preparEU*. In this context, a mapping of risk communication practices across the EU, coupled with consultations with Member States and Participating States, identified common needs and areas where EU-level action could add value (*see Box 2*). The process revealed a rich but fragmented risk communication landscape, with numerous valuable initiatives that are scattered and difficult to access for peer learning. In response to the identified needs, the **Commission has developed a capacity-building package** which includes:

- a repository of good practices and supporting materials on the Union Civil Protection Knowledge Network platform<sup>16</sup>;
- an EU training for risk communication professionals;
- a community of practice to connect practitioners and facilitate peer learning.

In 2024, the Commission published a good practice handbook on wildfire risk awareness-raising<sup>17</sup>, addressing a critical issue given that 96% of wildfires are caused by human action<sup>18</sup>. The handbook showcases initiatives across the EU and beyond, highlighting key factors that contribute to awareness-raising, such as developing targeted communication strategies, collaboration across sectors and levels of governance, stakeholder engagement, tailoring messages to local contexts, securing sustained funding, and connecting science and practice.

Understanding how people perceive risks and respond to preparedness advice is also key to awareness-raising. In this context, the Commission's Joint Research Centre is conducting behavioural studies to understand how individuals interpret and react to risk communication. Insights from this work can help improve the design of public messages and approaches, fostering not only increased awareness, but also the implementation of preparedness actions.

## Box 2: The *preparEU* pilot project - Joining forces for population preparedness.

Member States and Participating States have been playing an important role in driving the *preparEU* flagship initiative. National civil protection authorities from Sweden, Norway, Spain and Belgium explored how a European dimension could complement and support national risk information activities. In a pilot project funded by the EU, the following areas for action were identified to improve risk awareness and preparedness in the EU:

- i. Basics of self-preparedness guidelines for household preparedness addressing general and universal needs;
- ii. Learning programme for schools integrating disaster preparedness into school curricula to foster a culture of preparedness from an early age;
- iii. Vulnerable groups reaching out and engage vulnerable groups (also: guidelines to support professionals in carrying out inclusive risk communication);

<sup>16</sup> https://civil-protection-knowledge-network.europa.eu

Wildfire risk awareness good practice note.pdf

 $<sup>{\</sup>color{blue} {\tt 18} \, \underline{\tt https://op.europa.eu/en/publication-detail/-/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-a62c-11ef-85f0-01aa75ed71a1/language-en/publication/5afff469-01aa75ed71a1/language-en/publication/5afff469-01aa75ed71a1/langua$ 

- iv. PreparEU Day(-s)— a proposed annual EU-wide event designed to raise public awareness of self-preparedness and risk resilience;
- v. Web hub for risk communication and preparedness a proposed online repository to share information and tools related to public risk awareness communication across the EU.

These recommendations will help shape the implementation of the Commission's actions on preparEU flagship initiative and population preparedness.

## 4.1.2. Eurobarometer on population risk awareness and preparedness

To gain a comprehensive understanding of public risk awareness and preparedness across the EU, the Commission conducted the **first-ever Eurobarometer survey** on this topic, published in September 2024<sup>19</sup>. The survey explored various aspects of risk awareness and preparedness, including perceived risks, information sources, and willingness to engage in preparedness activities.

Key findings from the survey reveal that **many Europeans lack awareness and preparedness for disasters**. Roughly half of respondents do not feel well prepared for local risks and around two thirds of respondents feel that they need more information to be able to prepare for disasters or emergencies. Preparedness levels are limited, with about half of respondents feeling unprepared for disasters, and vary significantly depending on factors such as country, income, education, and urban-rural setting.

The survey highlights areas for improvement, including low community engagement and limited resilience to critical services' disruptions. However, it also reveals a strong trust in emergency services and a desire for information on disaster preparedness, presenting an opportunity to build on these strengths and improve overall risk awareness and preparedness.

#### 4.2. NATIONAL INITIATIVES

Data from Member States and Participating States underscore the importance of public communication on risks and preparedness, with countries advancing in a wide range of activities.

More countries are now making risk information accessible to the public, with 23 countries publishing the results of their risk assessments on official websites and using these findings to support preparedness efforts. For example, Finland and Montenegro use the public results of risk assessments to inform training and preparedness exercises. Denmark and Ireland conduct surveys on citizens' perception of risks and preparedness.

Member States and Participating States have implemented new approaches to risk communication and awareness-raising, such as didactic games and the organisation of a national civil protection day or week. While websites and the internet remain the top reported communication channels, risk awareness campaigns and the use of printed materials have doubled compared to 2020. Nordic countries have launched public awareness initiatives such as campaigns on home preparedness, educational resources, and informative brochures to boost societal preparedness for emergencies and potential conflicts.

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<sup>&</sup>lt;sup>19</sup> https://europa.eu/eurobarometer/surveys/detail/3228

National risk awareness and communication activities are targeted to specific groups, including vulnerable populations, seasonal residents, and older persons. Students and young people are often the primary target for these initiatives. For instance, Czechia has a comprehensive school programme teaching pupils how to call emergency numbers, behave in dangerous situations, and understand protection and siren signals. Activities to promote safe behaviours in daily life and emergencies are also organised for senior citizens and persons with disabilities, like Austria's Children and Senior Safety Olympiads.

## 4.3. Way Forward

Despite progress, significant gaps in public risk awareness and preparedness remain, underlining the need for more effective and inclusive communication strategies. Too many citizens feel under-informed or under-prepared for disasters, as indicated by the findings of the Eurobarometer, while national authorities face challenges in measuring the impact of communication initiatives and translating information into behavioural change. Evidence also points to the need for greater inclusion of vulnerable groups (such as students, pupils and young people, persons with disabilities, older persons and immigrants) in communication and preparedness efforts.

To address these gaps, a more proactive, inclusive, and participatory approach is needed, investing in education, engaging communities and citizens, building trust, and promoting intergenerational, resilience-centred preparedness. The EU Preparedness Union Strategy will support this shift through its whole-of-society approach, aiming to foster a culture of preparedness and resilience across the EU. Synergies with the ProtectEU Internal Security Strategy will help strengthen communication on diverse risks and threats, supporting coherent public messaging and fostering more versatile population preparedness across the EU.

The prepareU initiative will play a key role in advancing the vision of the EU Preparedness Union Strategy, including through actions to promote a minimum of 72-hour self-sufficiency of population in emergencies and crises. To support national authorities on risk communication, the EU will develop guidelines, launch a pilot training in late 2025, and organise an annual EU Preparedness Day. Further actions will include promoting preparedness through education and youth programmes and generating new research to inform policy and practice.

There may also be a need to better prepare citizens to provide basic health support in crisis situations, including war scenarios, through initiatives such as first aid training kits or the establishment of a citizen health reserve.

Enhancing the preparedness of populations in the EU's closest neighbourhood, particularly the Mediterranean, will also be important for the EU's own preparedness, as insufficient resilience abroad can lead to increased displacement pressures and other spillover effects that directly impact the Union.

#### 5. EARLY WARNING

**DRG 3 'Alert' – To enhance early warning.** Building on Goal 3, both the Commission and Member States have made additional efforts within their respective competences to enhance forecasting, detection, and public alerting capabilities – an essential element of anticipatory risk management.

Widely recognised as one of the most effective tools for saving lives and reducing disaster-related losses<sup>20</sup>, early warning systems (EWS) are central to both national and international preparedness efforts. Notably, the United Nations has been promoting action towards inclusive, multi-hazard EWS through its flagship initiative *Early Warnings for All*<sup>21</sup>.

In the EU, responsibility for early warning and public alerts lies primarily with national authorities. The **UCPM plays a complementary role** by developing transnational tools, strengthening the situational awareness capabilities of the ERCC, and providing technical and financial assistance for national early warning capabilities.

#### **5.1.** Commission initiatives

The Commission has developed a **broad range of early warning and information systems** (see Box 3) that can also be leveraged by Member States' public authorities to complement their national tools. Among these, the initiatives outlined below significantly contribute to supporting civil protection and disaster risk management.

# **Box 3: Early Warning and Information Systems**

- *i.* A catalogue of 27 EU-level systems covering various types of hazards accessible to national civil protection authorities, supporting risk monitoring and decision-making;
- ii. The Global Situation System (GSS), a single platform that combines data from various EU-level early warning and information systems, strengthening the ERCC's capability to track evolving threats and anticipate potential critical impacts. The platform is also available to national civil protection authorities;
- *iii.* **The Copernicus Emergency Management Service (CEMS)**, which provides early warning services on floods, wildfires, and droughts, creating maps in support of response, recovery, and preventive interventions, and generating exposure data to help identify areas and assets at risk;
- iv. The European Natural Hazard Scientific Partnership (ENHSP), a scientific collaboration providing the ERCC with real-time, expert monitoring on wildfire conditions across Europe during the wildfire season. To share this benefit with Member States and Participating States, the ERCC has launched a programme allowing national authorities to request early assessments from ENHSP and, from the European Anthropogenic Hazard Scientific Partnership (EAHSP) in relation to radiological and nuclear hazards, for impending emergencies.

The Commission is working on new initiatives, including the development of an AI-engineered tool under the AI For Public Good Initiative. Integrated into the Global Wildfire Information System, the tool will rely on AI algorithms to model fire danger forecasts, detect fire events, and predict fire behaviour.

Another major upcoming advancement is the **Galileo Emergency Warning Satellite Service**, which will provide a satellite-based alerting channel to reach people in remote or less connected areas, even when terrestrial networks are unavailable. This added layer of redundancy will strengthen the resilience of public warning systems, showcasing the added value of the EU

<sup>&</sup>lt;sup>20</sup> For example: <a href="https://wmo.int/topics/early-warning-system">https://www.undrr.org/implementing-sendai-framework/sendai-framework-action/early-warnings-for-all.</a>

<sup>&</sup>lt;sup>21</sup> https://www.un.org/en/climatechange/early-warnings-for-all

Space Programme in supporting civil protection and disaster risk management. With pilot testing ongoing in several Member States, the service is expected to be operational by early 2026.

The UCPM is also **supporting national and international initiatives on early warning**, such as UNESCO's Intergovernmental Oceanographic Commission's CoastWAVE initiative<sup>22</sup>, aiming to prepare coastal communities in the North-Eastern Atlantic and Mediterranean regions for tsunamis and other coastal hazards. Relying on close collaboration between national and local emergency authorities, scientists, and coastal communities, the initiative has already supported communities in Cyprus, Greece, Spain, Turkey, Egypt and Morocco.

The EU has made significant progress in **public alerting** through Article 110 of the European Electronic Communications Code (Directive (EU) 2018/1972), which requires Member States to enable warnings to be sent directly to individuals' mobile phones in emergency situations. Most countries have already implemented this, with some still finalising the process.

#### **5.2.** NATIONAL INITIATIVES

Data from Member States and Participating States point to a more widespread use of EWS. Available information on methodologies and infrastructure for hazard monitoring, detection, and forecasting capabilities, however, remains limited.

Compared to 2020, a greater number of countries report having EWS in place for early hazard detection for all key risks, with extreme weather, nuclear and radiological risks, and floods being the most reported. Countries have also reported on EWS for risks such as pollution and mass migration, which were not previously reported, indicating a gradual expansion in the coverage of EWS.

The connections between EWS at the European and global levels are also becoming more established, with a higher number of countries than in 2020 indicating that their national system is connected to EWS at the European or global level. Only less than ten countries, however, mention cross-border cooperation arrangements on EWS, which suggests there are opportunities for improvement. Some countries indicate using donors' support to expand their public alert systems, strengthening public warning capabilities.

## 5.3. Way Forward

While technology and risk knowledge provide the foundation, effective early warning relies heavily on organisational and human factors. Continued efforts will be needed to ensure that early warning signals are followed by timely and inclusive alerts to the population, contingency plans, and informed individual responses. At EU level, and as outlined in the EU Preparedness Union Strategy, priorities include further enhancing CEMS, promoting its use and integration into national systems, and advancing multi-hazard, interoperable solutions.

The ERCC will continue to develop and refine its situational awareness capabilities. While the new GSS platform represents a major step forward, there is scope for further improvements by incorporating sectoral monitoring to provide near real-time insights into disruptions of critical

<sup>&</sup>lt;sup>22</sup> https://tsunami.ioc.unesco.org/en/articles/coastwave

services, such as energy, transport, or healthcare, to support a more comprehensive and anticipatory situational awareness<sup>23</sup>.

As effective early warning also relies on strong organisational and human factors, raising population awareness and preparedness will be essential to turning early warnings into life-saving action. The launch of the Galileo Emergency Warning Satellite Service in 2026 is expected to significantly enhance public alerting capabilities, expanding the reach and redundancy of the system.

To ensure the effectiveness of EWS, continued efforts will be needed to strengthen underlying processes, promote inclusivity, advance multi-hazard approaches, and strengthen cross-border integration of EWS. The EU Preparedness Union Strategy will guide these efforts, prioritising the development and use of EU-level tools and expanding the ERCC's cross-sectoral monitoring capabilities to support more comprehensive situational awareness.

This know-how, along with the necessary systems and capacities, could also be shared with authorities in the EU's closest neighbourhood to build not only their capabilities but also synergies and interoperability.

#### 6. RESILIENCE OF CIVIL PROTECTION

**DRG 4 'Respond'** focuses on enhancing the UCPM response capacity. To stay ahead of the growing complexity of the risk landscape and advance preparedness, the UCPM is focusing on developing **emergency response capacities**, such as specialised equipment and teams, and related capabilities. These efforts are reflected in the Commission's recently adopted Capacity Progress Report and the corresponding Staff Working Document<sup>24</sup>.

**DRG 5 'Secure'** aims to enhance the resilience of civil protection, aligning with EU and NATO frameworks for building resilience in vital societal functions, such as the EU Directive on Critical Entities Resilience (EU 2022/2557)<sup>25</sup> and NATO's resilience baseline requirements. It promotes improving business continuity, enhancing cross-sectoral and cross-border coordination, risk communication and information management, and partnerships with the private sector, civil society and volunteer organisations. It also promotes post-disaster evaluation and learning to improve preparedness, response, and prevention.

#### **6.1. COMMISSION INITIATIVES**

#### 6.1.1. Flagship initiative on stress-testing emergency operation centres

To improve the **business continuity of emergency operations within the UCPM**, the Commission launched a flagship initiative with two main components: (i) stress-testing the ERCC's business continuity and (ii) supporting national contact points in their own tests through a voluntary methodology and exchange of experiences. The exercise assesses critical business continuity elements, such as identifying essential functions, facilities and equipment,

<sup>&</sup>lt;sup>23</sup> COM(2025)286, <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52025DC0286">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52025DC0286</a>

<sup>&</sup>lt;sup>24</sup> SWD/2025/146 final (pages 23-44), <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025SC0146">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025SC0146</a>

<sup>&</sup>lt;sup>25</sup> https://eur-lex.europa.eu/eli/dir/2022/2557/oj/eng

human resources and coordination, communication workflows, and the execution of drills and exercises.

So far, **ten countries and the ERCC have conducted stress tests**, sharing their approaches and lessons learned. The initiative has helped to raise awareness of business continuity and to identify areas for improvement. It has continued in 2025 with workshops for sharing experiences from national exercises and the development of non-binding guidelines on business continuity within the UCPM. To ensure continuous exchanges on 24/7 operational continuity in disruptive events, the Commission will establish a dedicated expert group. The lessons learned from this initiative can inform the work on ensuring the continuity of vital societal functions under the EU Preparedness Union Strategy.

## 6.1.2. Testing preparedness and coordination in complex crises

In 2024, the ERCC led the large-scale exercise 'EU Integrated Resolve 2024 – Parallel and Coordinated Exercise (EU IR24 – PACE)' to test EU-level preparedness for complex, hybrid crises. The exercise tested UCPM and ERCC functions, evaluating their performance in a complex crisis requiring cross-sectoral, cross-border, and civil-military coordination. It involved over 900 participants among planners and training audience from Commission services, the European External Action Service, EU agencies, the Council, 24 Member States, Norway, the United States, and NATO.

The same year, the UCPM responded to a joint request from Estonia, Latvia, and Lithuania to assess their preparedness for and **response to mass evacuations**. A team of 20 experts from Member States evaluated national mass evacuation procedures, regional cooperation, public preparedness, and the UCPM's role in such scenarios, providing recommendations on areas such as planning, emergency shelter, medical evacuation and chemical, biological, radiological and nuclear risk mitigation (CBRN) strategies. While carrying out this work, the experts engaged with representatives of state and municipal institutions as well as non-governmental organisations.

## 6.1.3. Drawing lessons from UCPM activations for prevention, preparedness, and response

The UCPM's established Lessons Learned Programme (LLP) allows Member States and Participating States to reflect on experiences related to UCPM activations, identifying areas for improvement in response, preparedness, and prevention. In addition to general LLP meetings, dedicated meetings focus on specific topics, such as wildfires, floods, response to large earthquakes, or consular evacuations, covering prevention, preparedness, and response activities. These meetings have led to measures such as advance positioning of firefighters and enhancing Europe's readiness to combat wildfires, including through an increase of rescEU aerial forest fire fighting capacities.

Where Member States and Participating States have repeatedly activated the UCPM for the same type of disasters, the Commission has conducted thorough analyses of the circumstances and actions to **enhance prevention and preparedness, pursuant to Article 6(4) of the UCPM Decision**. The Commission actively engages with national authorities in dialogues to strengthen prevention and preparedness measures, offering EU support for this process.

## **6.2.** NATIONAL INITIATIVES

Civil protection authorities have engaged in wider cross-sectoral cooperation, a trend accelerated by the COVID-19 pandemic. Many countries report having permanent structures to coordinate efforts among different sectors, administrative levels, and stakeholders. National risk assessments, for example, have long been based on cross-sectoral and multi-stakeholder approaches. However, **national reports and peer reviews continue to highlight the need for further improvement in integrated approaches to planning and implementation**. While many countries consult with the private sector, especially critical infrastructure operators, these exchanges are often ad hoc in nature.

Regarding cross-border cooperation, Member States and Participating States report a variety of bilateral and multilateral cooperation agreements with neighbouring countries, as well as regional and international organisations. Notable examples of good practices include the Nordic, Benelux, and Baltic Sea regions, where established cooperation structures facilitate crisis coordination, risk information exchange, mutual assistance and joint exercises.

While the resilience of civil protection relies on **adequate and flexible financing** to enable rapid emergency response and sustained investment, national information on funding sources and allocation is lacking. Whereas most Member States and Participating States report having arrangements for flexible allocation of funds in urgent need, only a few countries operate **dedicated disaster reserve funds**, which – unlike general contingency reserves – are specifically earmarked for disaster response, offering greater predictability and faster access to funding.

Countries report on a variety of financial instruments and funding sources available to finance civil protection investments, mostly from public sources. Very few countries provide information on investment priorities and the allocation of funds to prevention and preparedness activities. **EU funding** plays a complementary role in addressing investment gaps and supporting national efforts to strengthen civil protection systems. However, civil protection authorities continue to experience difficulties in accessing these resources due to administrative capacity constraints and limited familiarity with funding rules.

# 6.3. Way Forward

Stress-testing the business continuity of emergency operations centres has shown promise, and similar exercises should be expanded to identify areas for improvement and facilitate mutual learning. Investing in the resilience of physical assets and operational processes will also be crucial to ensuring the continuity of civil protection services.

Financial resilience is also essential, and adequate, flexible, and sustained funding at all levels will be necessary to support effective preparedness and operations. There has been progress in building resilience through cross-border and cross-sectoral partnerships, but more work is needed to overcome legal and administrative barriers to joint civil protection action. Tools like BridgeforEU<sup>26</sup> can help facilitate cooperation, and strategic disaster risk management frameworks can enable more coordinated, whole-of-government approaches.

The EU Preparedness Union Strategy will play a key role in guiding action on system-wide resilience across relevant policy areas under a whole-of-government approach, including the

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<sup>&</sup>lt;sup>26</sup> COM(2023) 790 final of 12.12.2023.

development of minimum preparedness criteria for essential services. Difficulties in accessing funding sources from other policy areas will need to be addressed more systematically through improved capacity-building and best-practice exchange among services and countries with a view to a more integrated approach to strengthening disaster and crisis resilience and preparedness.

The UCPM has taken steps to address these barriers through awareness-raising, assistance for project development, and tools to support investment planning. These efforts will need to be scaled up to match the growing demand.

7. SCALING SUPPORT FOR NATIONAL EFFORTS: THE EVOLVING CAPACITY BUILDING TOOLKIT

The Union Civil Protection Knowledge Network (UCPKN) has become the go-to hub for the civil protection community since its launch in 2021, enabling stakeholders to connect and share expertise, increasing the level of preparedness of UCPM emergency response operations. Through its web-platform, newsletter, and events, the UCPKN keeps the community informed about the implementation of the DRGs and related topics. The network's online Knowledge Library<sup>27</sup>, launched in 2024, provides a repository of resources on DRGs and disaster risk management, while interactive discussion groups<sup>28</sup>, such as the one on risk communication, enable practitioners to exchange ideas and best practices.

The Commission has expanded the UCPM's capacity-building toolkit to better support civil protection efforts in disaster risk prevention, preparedness, and resilience-building. The toolkit is aligned with UCPM strategic priorities and DRGs, and includes:

- I. **UCPM grants for Disaster Resilience**: 'Technical Assistance for Disaster Risk Management' (Track 1)<sup>29</sup>, focusing on single-country projects, and 'Knowledge for Action in Prevention and Preparedness' (KAPP)<sup>30</sup>, supporting multi-country cooperation initiatives;
- II. **Technical Assistance Financing Facility (TAFF)**<sup>31</sup>, introduced in 2024 to offer expertise in disaster risk management provided by the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR).

65 projects from various countries received support under Track1, KAPP, and TAFF in 2023-2024, with a total EU contribution of EUR 43 million. All DRGs have been addressed through these projects.

III. **UCPM Peer Review Programme** has continued to offer national and regional civil protection authorities the opportunity to receive an independent assessment of their disaster risk management systems from peers in other countries throughout its 2022-2024 iteration. The programme has been updated to include a new methodology tailored to wildfire risk

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<sup>&</sup>lt;sup>27</sup> https://civil-protection-knowledge-network.europa.eu/knowledge-library

<sup>28</sup> https://civil-protection-knowledge-network.europa.eu/groups

 $<sup>^{29} \, \</sup>underline{\text{https://civil-protection-knowledge-network.europa.eu/technical-assistance-disaster-risk-management-call-proposals-track1}$ 

<sup>&</sup>lt;sup>30</sup> https://civil-protection-knowledge-network.europa.eu/knowledge-action-prevention-preparedness-call-proposals-kapp

<sup>&</sup>lt;sup>31</sup> https://civil-protection-knowledge-network.europa.eu/technical-assistance-financing-facility-taff

management, which has been applied in reviews of wildfire risk management in Greece<sup>32</sup>, Italy<sup>33</sup>, and the Germany's Land of Brandenburg<sup>34</sup>, demonstrating the adaptability of the approach to national and regional contexts.

A 2024 workshop<sup>35</sup>, attended by representatives from the reviewed countries and peers-reviewers, underscored the peer review programme's value in facilitating knowledge sharing and driving improvements. The enhancements made during the 2022-2024 cycle, including refinements to the process, analytical framework, and reform promotion, were widely recognised and appreciated.

In 2024, the UCPM also conducted **four prevention and preparedness missions** in Czechia on wildfire risk management, in Chile on forest fires, in Ukraine on CBRN, and in Estonia, Latvia and Lithuania on mass evacuation.

The comprehensive UCPM training programme has contributed to preparing experts and improve capacities to respond to various types of disasters. In 2023, the programme was revised to strengthen the individual competences of experts and personnel, coordination, and interoperability of response capacities involved in international deployments. Thirty exercises (EU MODEX and Full-scale exercises) were conducted based on specific scenarios, including earthquakes, medical emergencies, forest fires, floods, and CBRN. These activities have contributed to increasing the EU's collective level of preparedness to address the consequences of disasters.

## 7.1. Way Forward

The UCPM's support tools have undergone significant developments, offering a wider range of options that are aligned with the DRGS while also allowing for customisation to meet the unique needs of national and regional authorities. The UCPKN has been further developed to facilitate access to good practices, research, and mutual learning.

In the coming years, the general peer review assessment framework (PRAF) will be updated, which will ensure its continued relevance and effectiveness. Further, six peer reviews are scheduled to take place between 2025 and 2027, starting with Kosovo\* and Czechia, which will provide valuable opportunities for mutual learning and exchange of best practices. By continuing to evolve and improve the support tools, the Commission as well as Member States and Participating States will be better equipped to reinforce risk management and resilience-building.

<sup>&</sup>lt;sup>32</sup>https://civil-protection-humanitarian-aid.ec.europa.eu/document/download/a7be6df5-6e70-4397-ae7e-53f5d74374da en?filename=EL%20Peer%20Review final%20report.pdf

 $<sup>\</sup>frac{33}{\text{https://civil-protection-humanitarian-aid.ec.europa.eu/document/download/10fe9a6f-869e-4fa6-923e-d4bdc8400129\_en?filename=peer%20review%20wildfires%20italy\_final%20report%202024.pdf}$ 

 $<sup>^{34} \</sup>underline{\text{https://civil-protection-knowledge-network.europa.eu/system/files/2025-07/wildfire-peer-review-lb\_final-report-june-2025\_en.pdf}$ 

 $<sup>{}^{35}\,\</sup>underline{\text{https://civil-protection-knowledge-network.europa.eu/news/ucpm-peer-review-programme-lessons-learnt-and-next-steps}$ 

<sup>\*</sup> This designation is without prejudice to positions on status and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.

#### 8. CONCLUSIONS

Disaster risk management in the EU has significantly improved in the last years through the strengthening of the EU's civil protection system, demonstrating its ability to adapt to the growing demands of a rapidly changing risk landscape. Similarly, national reporting under the UCPM Decision reflects continued progress in risk management at the national level. The expansion of the UCPM's response capacity and capability, combined with a greater emphasis on proactive risk management and resilience-building, has positioned the EU to better address increasingly complex disasters.

The adoption of the DRGs in 2023 marked a major milestone, providing a shared direction across five key areas of civil protection: improving anticipation, population preparedness, early warning, response capacity, and the resilience of civil protection. The dedicated flagship initiatives that have followed have successfully translated these priorities into concrete action, engaging national civil protection authorities and other partners in a collaborative effort to increase EU resilience.

The UCPM's progress is not only relevant as a sectoral development but also informs the broader strategic effort to strengthen EU preparedness. The EU Preparedness Union Strategy, with its comprehensive vision for EU preparedness, outlines actions to better anticipate, prevent, and respond to a wide range of risks and threats, as well as to raise awareness and communicate to the public and engage with citizens. The close alignment between the UCPM's work and the EU Preparedness Union Strategy's vision presents a unique opportunity for the EU to leverage the UCPM's strengths and expertise to drive progress in preparedness and resilience-building.

The UCPM has demonstrated its value as a key component of the EU's civil protection system. Its continued development, particularly through the further implementation of the DRGs and continued development of its capacity-building tools under the UCPKN, will provide essential contributions to the broader scope and ambition of the EU Preparedness Union Strategy.

Looking ahead, and amid a rapidly evolving risk landscape, further efforts remain essential. Strengthening Europe's resilience will require sustained commitment and collective action from the EU as a whole, its Member States, and civil society. A comprehensive, risk-informed approach is crucial to reduce vulnerabilities and guide strategic investments in the EU capabilities needed to prevent, mitigate, prepare for, and recover from future crises.

Cooperation on preparedness must also extend beyond the Union to the immediate neighbourhood. Enhancing resilience in these regions will contribute to shared security, ultimately reinforcing the EU's own resilience.