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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on progress on implementation of article 6 of the Union Civil Protection Mechanism (Decision No 1313/2013/EU)

Preventing and managing disaster risk in Europe

1. INTRODUCTION

We live in a **new disaster risk management landscape**. Over the last few years, the world has seen record-breaking temperatures and many devastating disaster events. The European continent and its neighbourhood were hit by catastrophic heatwaves, wildfires, droughts and floods. With an unexpectedly fast onset of **climate change**, extreme weather events and threats to lives and livelihoods are highly likely to increase in the future. In addition, the **worsening global security situation and the convergence of other threats and shocks**, including health and hybrid threats, earthquakes, and disruptions to critical infrastructure, present growing risks to the European society.

Article 196 of the Treaty on the Functioning of the European Union (EU) sets out that the EU must encourage co-operation between Member States in order to improve the effectiveness of systems for preventing and protecting against natural or man-made disasters. EU action shall thereby support and complement actions at national level in prevention, preparedness and response. In 2001, the EU established a Community civil protection mechanism, focussing on cooperation between EU Member States on disaster response. Since then, the European Commission has coordinated mutual support between Member States. In 2013, the **Union Civil Protection Mechanism** (UCPM)[1] Decision was adopted to consolidate this work and step up emergency readiness at all levels. When a crisis, of any sort, overwhelms the capacity of a single country, this Mechanism provides the operational backbone for Europe's collective response both within the EU (including the outermost regions), and outside the EU. The 24/7 Emergency Response Coordination Centre (ERCC) has facilitated large and very different emergency response operations (e.g. wildfires, floods, pandemics, population displacement), sometimes simultaneously.

As set out in the Commission Communication 'Managing climate risks – protecting people and prosperity'[2], climate risks will continue to increase in the coming decades, the global average temperatures are already close to 1.5 degrees centigrade above preindustrial levels and Europe is heating twice the global rate. The need to further strengthen the whole disaster risk management cycle has never been more urgent – from risk assessment and anticipatory actions, though prevention and preparedness, to response and recovery.

Demand for assistance under the UCPM has increased dramatically over the past decade.

[1] Decision 1313/2013/EU of the European Parliament and of the Council of 17.12.2013 on a Union Civil Protection Mechanism as amended, OJ L 347, 20.12.2013, p. 924, hereafter referred to as 'the UCPM Decision'. The 27 Member States and 10 Participating States are part of the UCPM (Iceland, Montenegro, North Macedonia, Norway, Serbia and Türkiye; Albania, Bosnia and Herzegovina joined in 2022; the Republic of Moldova and Ukraine joined in 2023).

[2] COM(2024)91 final of 12.3.2024

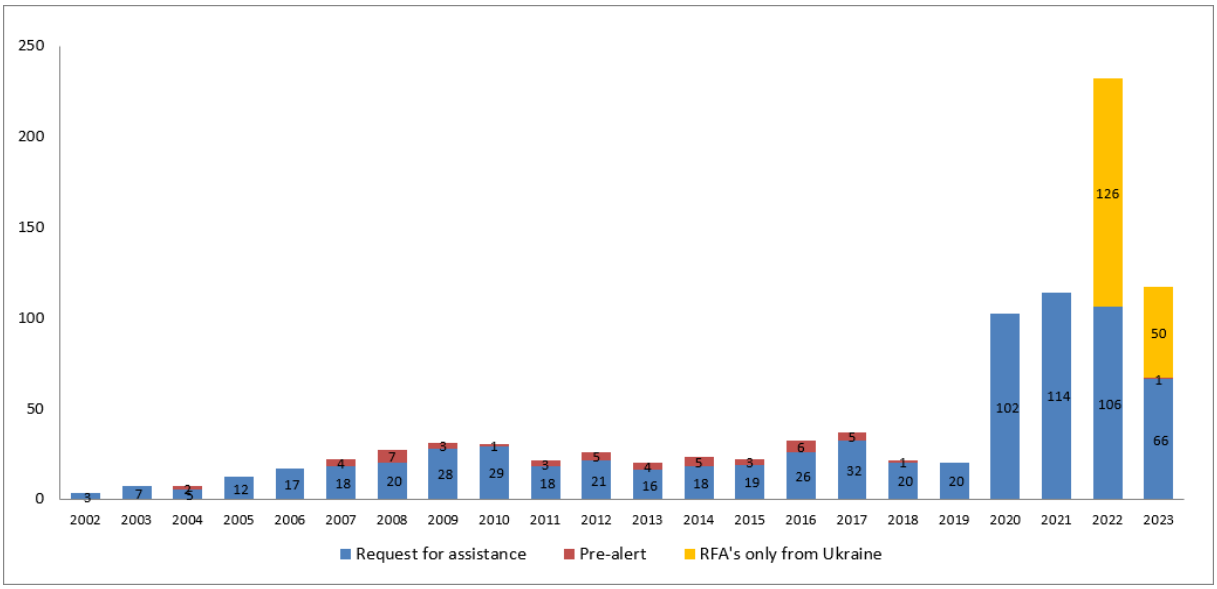


*Figure 1. Number of requests for assistance (RFA) to the UCPM by EU Member States and Participating States when national response capacities have been overwhelmed. *In 2022, Ukraine submitted 126 requests and in 2023 another 50 requests for assistance to the ERCC, after having activated the UCPM shortly before the start of the Russian invasion. Source: ERCC, January 2024.*

For over two decades this Mechanism has also supported and complemented Member States' work on disaster prevention and preparedness. Given the increasing risks and disaster management challenges, it is crucial to put in place effective and coherent **disaster risk management**, with a due emphasis on **prevention,** as set out in Article 6 of the UCPM Decision. This article introduces a general framework on disaster prevention with the aim of achieving a higher level of protection and resilience against disasters and at fostering a culture of prevention that also considers the likely impacts of climate change.

Under Article 5(1)(g) of the UCPM decision, the Commission must report periodically on progress in implementing Article 6. This first report to the European Parliament and the Council presents **progress made in implementing of Article 6**[3] and includes recommendations for a 'future-proofed' disaster risk management. A supporting staff working document[4] provides more detailed information on the implementation of Article 6 and the Commission's analysis of disaster risk management (DRM) summary reports provided by Member States and Participating States between end 2020 and September 2022.

2. ACTIONS TAKEN TO IMPLEMENT ARTICLE 6

Article 6 focuses on risk management, with the overall objective to promote an effective and coherent approach to the prevention of and preparedness for disasters. It has been revised twice since 2013[5]. This section provides an overview of the provisions of the Article and of the actions

[3] Under Article 5(1)(g) of the UCPM Decision, the Commission must '*report periodically, in accordance with the deadlines set out in point (d) of article 6(1), to the European Parliament and to the Council on the progress made in the implementation of Article 6'*.

[4] SWD(2024)130 of 12.3.2024

[5] Amending acts : Decision (EU) 2019/420 (OJ L 77, 20.3.2019, p. 1); Regulation (EU) 2021/836 (OJ L 77, 26.5.2021, p. 1).

taken by the Commission, Member States and Participating States to implement it. It also puts forward recommendations for future action.

Further developing effective and coherent risk management practices at national level *(Article 6(1)(a-d), 6(3))*

Article 6(1)(a-d) states that **Member States and Participating States[6] must develop risk assessments** and **assessments of risk management capability** at national or appropriate sub-national level. Countries are required to make available to the Commission a summary of the relevant elements of these assessments every three years**.** It also requires countries to further develop **national disaster risk management planning.**

Countries shared reports on national risk assessments with the Commission for the 2015 and 2018 reporting periods. They also submitted national reports on risk management capability assessment to the Commission in 2017. Findings from the reports submitted in 2015 and 2018 were presented in the 2nd and 3rd reports entitled 'Overview of natural and man-made disaster risks the EU may face'[7].

Under Article 6(3), the Commission together with Member States and Participating States, were required to develop **guidelines to facilitate the submission of the summary reports** on risk assessment and risk management capability assessment[8]. Article 6(1)(d) also requires countries to report on **cross-border risks and low probability risks with high impacts.**

The Commission together with the countries developed **Reporting Guidelines on Disaster Risk Management.** The Guidelines were published in 2019.[9] 32 of the 33 countries submitted reports for the first reporting deadline under these guidelines (end 2020)[10]. Findings from these reports are set out in section 3.

Peer reviews– strengthening national risk management capability *(Article 6(1)(e))*

The **peer review framework** is a tool for enhancing mutual learning between countries to build prevention and preparedness capacity. Peer reviews are voluntary and involve national experts from across the Member States and Participating States that carefully review national practices of the peer reviewed country.

16 countries have chosen to be peer reviewed, including eight current EU Member States, three Participating States, and several third countries[11]. The Commission brought in a strengthened and more flexible peer review framework in 2020. The Commission also drew up a targeted wildfire prevention peer review framework in 2023 in response to the severe wildfire seasons in the recent years. The reinforced peer review framework complements the increase in

[6] Under article 28(1a) of the UCPM, the Participating States shall participate in the activities of the Union Mechanism, according to the objectives, requirements, criteria, procedures, and deadlines provided for in the Decision. Both EU Member States and Participating States are for the purpose of this report hereafter referred to as 'countries, unless otherwise indicated, i.e. as either EU Member States or as Participating States.

[7] SWD(2017)176 of 23.5.2017; SWD(2020)330 of 30.11.2020.

[8] The reporting must take place by end of December 2020 and every three years thereafter.

[9] COMMISSION NOTICE Reporting Guidelines on Disaster Risk Management, Art. 6(1)d of Decision No 1313/2013/EU (2019/C 428/07). OJ C 428 of 20.12.2019, p. 8. These guidelines, among other things, refer to a Commission Staff Working document (SEC(2010)1626 of 21.12.2010) on "Risk Assessment and Mapping of guidelines for Disaster Management" as a reference document.

[10] Iceland did not submit a report for the 2020 deadline. Albania, Bosnia-Herzegovina, the Republic of Moldova, and Ukraine were not yet Participating States in 2020 and were not subject to the reporting requirement.

[11] BG, CY, EE, FI, MN, MT, PL, PT, RO, RS, TR, as well as Georgia, Tunisia, Algeria and the Republic of Moldova and the UK (as an EU Member State at the time).

response capacities at the EU level through rescEU. In 2024, three targeted wildfire peer reviews will be carried out in Greece, Italy and the Land of Brandenburg (Germany).

Strengthening understanding of disaster by improving knowledge of disaster events *(Article 6(1)(f))*

The UCPM Decision was also amended in 2021, to state in Article 6(1)(f) that Member States and Participating States must improve the **collection of disaster loss data**, with the aim of ensuring evidence-based scenario building.

The Commission developed a Risk Data Hub[12] to collect disaster risk data including disaster loss data from countries and other actors. The analysis of national practices on the collection of disaster loss data reported in the disaster risk management summary reports still shows many shortcomings[13].

Mechanisms to reinforce prevention and preparedness *(Article 6.2 and 6.4)*

Article 6(2) provides for a **specific consultation mechanism to enhance prevention and preparedness** among Member States and Participating States prone to similar types of disasters.

This mechanism to consult some countries on specific risks has so far not been used, in favour of regular and inclusive exchanges with all countries on disaster risks. Examples of such inclusive consultations on specific risks include lessons learnt meetings, preparedness for the wildfire seasons, exchanges on the development of early warning systems and meetings on disaster prevention with countries' experts.

Article 6(4) lays down a specific mechanism to strengthen the level of prevention and preparedness of Member States that **frequently request the same type of assistance from the UCPM for the same type of disaster (Article 6(4))**. In case of three requests for the same type of assistance for the same type of disaster within three consecutive years, the Commission must carry out a careful analysis of the reasons and circumstances of the activations. On the basis of the findings of this analysis, the Commission may propose the deployment of experts on site, provide advice or make recommendations. It may also decide that such measures are not necessary.

This threshold is designed to ensure that countries step up their prevention work in line with the risk intensity.

The Commission is carrying out a careful analysis of the reasons and circumstances of the requests for assistance received between 2019 and 2023 for the same type of disaster to assess whether the conditions to apply the mechanism of Article 6(4) have been met.

Union disaster resilience goals *(Article 6(5))*

The Union disaster resilience goals were included in Article 6(5) in the 2021 revision of the UCPM Decision These goals are non-binding objectives in areas of civil protection that are strategic to increase the resilience of the EU and its Member States and Participating States to provide a common baseline to better manage the risk of disasters with multi-country, transboundary impacts.

[12] DRMKC Risk Data Hub (europa.eu)
[13] See chapter 3.

The first Union disaster resilience goals were developed in cooperation with Member States and Participating States and adopted by the Commission in February 2023[14]. They strengthen the disaster prevention-preparedness-response-recovery cycle, and their implementation by the Commission and by Member States is ongoing.

In the light of the above developments, the following recommendations are put forward for the further **implementation of Article 6**:

The Commission will:

- Continue to promote the uptake of the Peer review framework as a tool to allow countries to assess their risk management capability to ensure their approaches to prevention of and preparedness for disasters are effective and coherent.
- Carefully analyse the reasons and circumstances behind activations for the same type of disaster to assess whether the conditions to apply the mechanism of Article 6 (4) have been met.
- Regularly monitor and analyse the reasons and circumstances of activations for the same type of hazard, with the purpose of supporting Member States and Participating States in their efforts to strengthen their level of prevention and preparedness.

The Commission, together with the Member States and Participating States should:

- Revise the Reporting Guidelines for submitting disaster risk management summary reports to include implementation of the Union disaster resilience goals for the next reporting cycle and seek ways to simplify and streamline the reporting process.
- Take action to ensure the Union disaster resilience goals are reached.
- Take action to improve the systematic collection of disaster loss data.

3. KEY FINDINGS ON DISASTER RISK MANAGEMENT AND PREVENTION

The Commission has identified **key findings on** disaster risk management and prevention **based on** the analysis of Member States and Participating States summary reports made available to the Commission[15]. Where relevant, they reflect the findings from previous national risk assessments submitted by countries under Article 6 (2015, 2018)[16]. The supporting staff working document[17] includes further details on the findings of these reports[18].

[14] Recommendation establishing Union disaster resilience goals OJ C 56, 15.2.2023, p. 1. Communication on "European Union Disaster Resilience Goals: Acting together to deal with future emergencies", COM(2023) 61 final of 8.2.2023.

[15] When national reports and findings are referred to in this report, it refers to reports submitted to the Commission under Article 6(1)(d) by the 27 EU Member States and the 6 countries that were Participating States at the end of December 2020 (Iceland, Montenegro, North Macedonia, Norway, Serbia and Türkiye).

[16] As set out in the previous reports on Overview of risk reports, SWD(2017)176; SWD(2020)330.

[17] See above.

[18] At the time of publication of this report, the reporting for the 2023 deadline was still ongoing and reports submitted have not yet been analysed. The findings do not necessary reflect recent developments at national level.

National reports on disaster risk management, are due to be submitted to the Commission every three years under Article 6(1)(d). The reporting rate since 2013 remains relatively stable and high, albeit incomplete. The Commission received 31(of 34) reports in 2015, 30(of 34) in 2018 and 32(of 33) for the 2020 deadline[19].

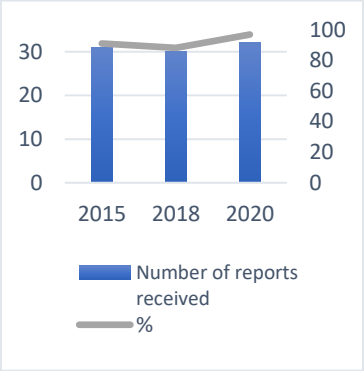


*Figure 2. Thee UCPM **indicator**[20] to monitor, evaluate and assess the application of the UCPM legislation concerns Article 6, tracks the "progress in implementing the disaster prevention framework: measured by the number of Member States that have made available to the Commission the information referred to in point (d) of Article 6(1)".*

The following sections summarise the key findings based on the Commission's analysis of the responses to the 24 questions on risk assessment (Questions 1-8), risk management capability assessment (Questions 9-20) and priority preparedness and prevention measures (Questions 21-24) in the reporting guidelines.

These findings are summarised according to **eight different components of disaster risk management,** which underpin the Union disaster resilience goals. Based on these findings, this report puts forward recommendations to address gaps and shortcomings, improve disaster risk management and foster a culture of prevention.

4.1 Understanding and anticipating risk

A. Identification of key disaster risks[21]

The most commonly reported key risks of concern since 2015 are confirmed. For at least two-thirds of Member States and Participating States, the natural and human health related key risks are floods, extreme weather, human health/pandemics, droughts, and wildfires. The most common human-induced or technological risks are nuclear and radiological risks, industrial risks, critical infrastructure disruptions.

[19] Reports were not submitted by Montenegro, North Macedonia and Türkiye (for the 2015 deadline), Latvia, Malta, Montenegro, Türkiye (for the 2018 deadline), and Iceland (for the 2020 deadline).
[20] Article 3(2)(a) (UCPM).
[21] Staff working document, questions Q3 and Q4.

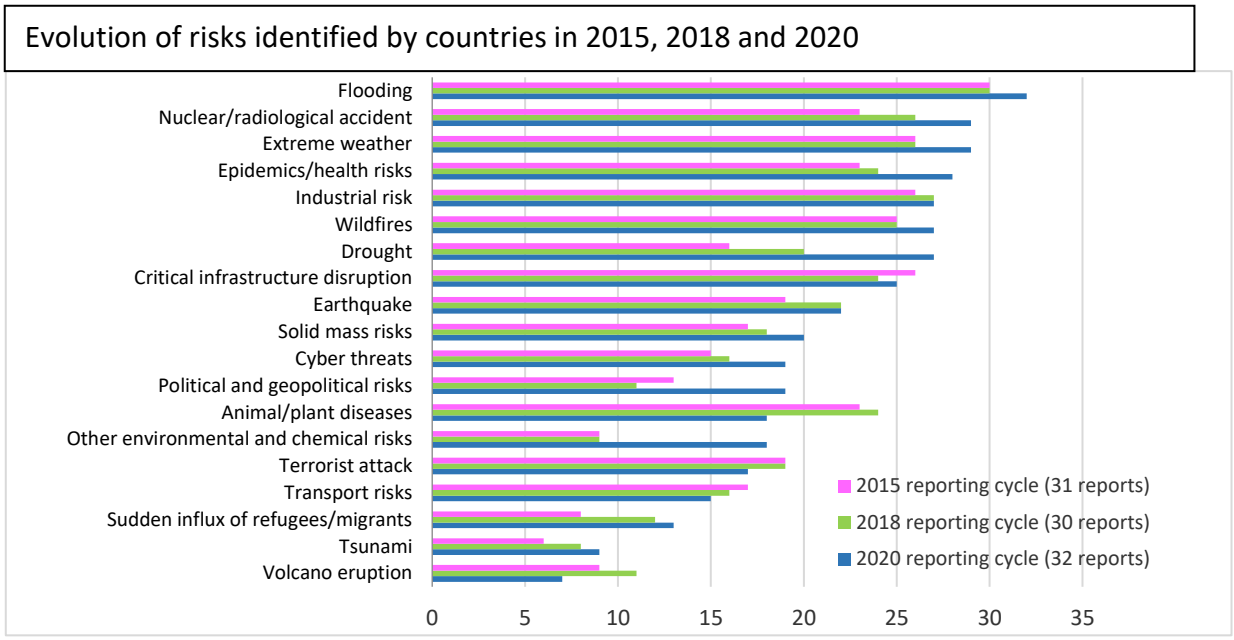


Figure 3. Number of countries that identified a specific disaster risk as relevant in 2015, 2018 and 2020 reports. Sources: 2015 reports (2017 Overview), 2018 reports (2020 Overview), 2020 reports (DRM summary reports, Q3).

Concern is growing across Europe for certain disaster risks. Drought is the risk for which concern has increased the most. Twice as many EU Member States identified droughts as a relevant risk in 2020 than in 2015. Concern has also grown over the risk of **nuclear and radiological accidents, human health-related risks, cyber threat, tsunamis a**nd **population movements, solid mass risks** (landslides, avalanches, rockfall and subsidence), **geopolitical and societal risks**, **transport-related risks** and **environmental and chemical risks**[22].

Most countries now also identify less probable but very severe disaster risks, alongside emerging risks. Since 2019, countries need to identify **high-impact low probability (HILP) risks.** The reported HILP risks vary by country. The most frequently identified HILP risks are nuclear/radiological risks, industrial risks and earthquakes due to their potentially very severe impacts. Two thirds of countries also identify **emerging risks** (newly identified threats or hazards, or known risks that are expected to increase over time). The most often reported emerging risks are extreme weather, floods, wildfires, pandemics, political and geopolitical risks, cyber risks and critical infrastructure disruptions. The emergence of a certain risk can reflect the intensification of certain drivers, for instance related to climate change or increased vulnerabilities. It can also reflect changed risk perceptions and risk assessment approaches. It is also important to be vigilant to **risks identified by only a few countries**. For example, a few countries identify solar storms, which could cause major disruptions to IT systems, as well as certain environmental and chemical risks, such as new invasive species and biodiversity loss.

Only a few countries covered complex interactions between 'natural' and 'man-made' disaster risks by taking complex, compound and cascading effects into account in their risk assessment. Almost all countries covered a range of 'natural and man-made' disasters. Many countries also recognise impacts and cascading effects across society, in that they reported risks that include a wide range of disrupted critical services or supply disruptions, such as energy,

[22] See Annex II to the supporting staff working document, and the report "Overview of natural and man-made disaster risks that the EU may face", SWD(2020)3030, Figure 21.

water supply, and financial systems. Not all countries refer explicitly to an analysis of the interactions of such risks, notably in terms of complex, compound and cascading effects.

Countries mostly focus on short term risks; the extent and magnitude of man-made climate change and environmental degradation however requires a sharper focus on long-term changes in risk assessments. Countries mainly identify acute (short-term) risks such as floods, wildfires, and extreme weather, rather than chronic (long-term) hazards[23]. For instance, only a few coastal states reported increased vulnerability of coastal communities or infrastructure due to sea-level rise or coastal erosion, which in combination with more extreme coastal storm surges will increase coastal flood risk. Water-related acute hazards (floods, droughts, heavy precipitation) are most commonly reported as climate-related risks, but also hazards related to temperature (wildfires, heatwaves), wind (storms) and solid mass (landslides). Of the secondary effects of climate change, about half of the countries reported human health-related risks (e.g. epidemics and pandemics) and a few identified greater threats of vector-borne diseases due to climate change. About a third referred to different forms of supply chain disruptions. A few countries referred to impacts on specific economic sectors such as agriculture, energy, forestry, livestock, water, fisheries, healthcare and transport.

Future proofing of risk assessments requires a more thorough analysis of underlying drivers of the disaster risk and their potential interactions, but only a few countries reported on 'dynamic' risk drivers other than climate change. The key drivers reported that influence hazards, vulnerability and exposure to risks include climate change for which the impacts are well documented. Only a few countries referred to other drivers such as urbanisation, demographical developments and environmental degradation. They also reported globalisation and international and geopolitical developments, alongside developments in information technology and digitalisation.

B. National risk assessment methodologies and practices[24]

National risk identification and assessment methodologies vary in terms of their comprehensiveness. Greater coherence and consistency would make it easier to compare reports across countries, and risk assessments at European level, building on a solid set of national risk assessments.

To understand the future, we need to know the past. However, national practices to collect data on consequences of past disaster events are not systematic and are very incomplete. Data collection on disaster losses is essential to ensure evidence-based scenario building and to improve quantitative risk analysis. However, national reports reveal that **disaster loss data collection is highly fragmented and unstructured** in almost all countries, with only one country reporting of a coherent approach at national level. No country refers to the reporting of risk data to the European Commission's Risk Data Hub[25], which merits further examination.

The methodologies for risk identification and risk analysis vary across countries, and by type of risk. About a third of the countries report of **single hazard scenario** analysis for risk identification, with multi-hazard scenarios less frequently mentioned. Only a few countries provided information on the criteria they used for **identifying high-impact low probability risks**. Countries also use different systems to **classify risks**. Whilst disaster risks from natural hazards are more clearly classified, the labelling of human-induced, technological, and societal

[23] Classification provided in implementing act for reporting Climate law reporting on adaptation. OJ L278, 26.8.2020, p.1

[24] Supporting staff working document, questions 1, 2, 3, 5, 6, 7, 8 and 18.

[25] Disaster Risk Management Knowledge Centre Risk Data Hub: https://drmkc.jrc.ec.europa.eu/risk-data-hub.

risks varies to a larger extent. Only a handful of countries mention to **temporal horizon** for scenarios. This limits the understanding of how and to what degree important drivers such as climate change are being taken into account.

Some reports provide examples of **scenario building**, and some make references to the **climate change scenarios** identified by the Intergovernmental Panel on Climate Change. However, **this is not done consistently** which can lead to an underestimation of risks. Explaining **uncertainties** is important in terms of transparency on the uncertainties associated with the risk analysis, for instance regarding the limitations of data and the models used. Just over a quarter of countries mention that they factor in uncertainties**.** Applying the **precautionary principle** can help justifying the assessment of a potentially serious disaster risk, for which the likelihood cannot not be accurately assessed; but less than a quarter of the countries referred to such considerations.

The methodologies used to determine the level of risk differ. When a risk cannot be assessed with probabilistic and quantitative means, other qualitative approaches are used. About half of countries applied semi-quantitative approaches or qualitative approaches to determine the level of impacts. When impacts are considered, fewer than half of the countries show they cover **human, economic, environmental and political/societal impacts**. However, some countries reported good examples of a wider range of impacts such as societal, financial impacts or impacts on critical infrastructure. More than two thirds of countries presented the significance of each risk using a **risk matrix.**[26]

Not all countries report of regular review mechanisms, even though regular reviews of the risk assessments are needed to capture changes to the risk landscape. Some countries state they review risk assessments regularly, and most commonly every 3 years. In some countries reviews are triggered by specific disaster events or updates of risk specific assessments[27]; others monitoring of developments related to the risk landscape continuously. In some countries, the frequency risk assessment reviews are laid down by law.

The public availability of the findings of risk assessments is patchy. Public transparency helps raise risk awareness and stimulates action to secure disaster resilience. However, only half of the countries make the risk assessments available to the public and a quarter provide links to publicly available risk maps. Most countries provided information on **risk mapping** practices. The most commonly reported risk maps cover floods[28], followed by wildfire, earthquakes and nuclear/radiological. Information on maps on cross-border risks is not provided.

There are some good examples of involvement of key stakeholders in the process to draw up risk assessments. Risk assessment **governance** frameworks are laid down in national legislation in most countries. They are most frequently led by ministries or agencies responsible for civil protection. Stakeholders include a wide range of authorities at national and subnational levels from different specialised sectors (such as critical infrastructure and transport), academia, private sector bodies (such as operators of critical infrastructure) and civil society. The risk assessment process itself plays a key role in increasing the risk awareness of key societal actors,

[26] Reporting guidelines, Q5, C428, 20.12.2019, p8 ff.

[27] Directive 2007/60/EC requires regular reviews of preliminary flood risk assessments and flood risk management plans; likewise river basin management plans need to be updated every 6 years according to Directive 2000/60/EC.

[28] Although flood hazard and risk mapping is required for all EU Member States under Directive 2007/60/EC on the assessment and management of flood risks (OJ L 288, 6.11.2007, p 186), not all reported of the availability of flood mapping in the DRM summary reports.

but also in some cases appears that the civil protection risk assessment process linked to the UCPM obligations operate in isolation.

In the light of the above, the following recommendations on **Understanding and anticipating risk** are put forward.

The Commission, together with the Member States and Participating States should:

- Revise the 2010 Commission staff working document 'Risk Assessment and Mapping Guidelines for Disaster Management'[29] with the aim of further developing anticipatory risk assessment at national level and maximising synergies with the risk assessment processes required by other strands of EU legislation (e.g. critical infrastructure, health, climate and flood risk management).
- Increase knowledge exchanges between countries and experts on how to further improve risk assessment practices, including through the Knowledge Network.

Member States and Participating States are invited to:

- Step up exchanges and cooperation between Member and Participating States on identifying and anticipating risk, including on high-impact low-probability and emerging risks.
- Strengthen disaster risk assessment procedures to better anticipate and mitigate the impact of chronic (long-term) risks, e.g. climate change and geopolitical risks, alongside the impact of acute (short-term) risks.
- Maximise synergies with the risk assessment processes required by EU legislation in other policy areas (e.g. critical infrastructure, health, flood risk, climate policies).
- Improve the systematic collection of data on losses and damages of past disaster events, to improve the understanding of future risk, and make this data available through the Risk Data Hub.

4.2 Improving disaster risk governance

C. Disaster risk management planning[30]

Three quarters of Member States and Participating States report having comprehensive legal frameworks in place for disaster risk management. The frameworks are often complemented by legislation establishing sub-national and sectoral responsibilities. The reports show that specific frameworks for disaster risk management (e.g. civil protection acts) are complemented by other laws, such as sectoral or sub-national legislation. Just under half of the countries also report having soft law measures and policies to complement the legal frameworks. For most countries, the main civil protection acts also cover the assessment of risk management capability including other disaster risk management phases.

Disaster risks are managed at national level in all countries, with the involvement of regional and local authorities to a varying degree. Most countries report having different **vertical cooperation** mechanisms between national and sub-national levels, and **horizontal coordination** mechanisms that effectively involve a wide variety of stakeholder in disaster risk management. Although civil protection-related ministries and authorities have the prime responsibility for carrying out risk assessments, only a third of countries report involving a wide

[29] Commission staff working document (SEC(2010)1626 of 21.12.2010).
[30] Supporting staff working document, questions Q3, Q 13, Q15, Q16, Q21 and Q22.

range of other authorities responsible for other policies or private sector stakeholders. However, broad sectoral involvement in this process can raise risk awareness and improve the process.

In two-thirds of the countries, public authorities with civil protection responsibility coordinate the process of risk assessment, preparedness and response. About a third of the countries report that other sectoral authorities and private sector are actors responsible for different form of prevention (such as ministries of environment, energy, economy, health, agriculture and forestry). Examples of private sector bodies responsible for specific forms of prevention are those responsible for industrial accident risk management and nuclear safety.

Over one third of countries report having some form of risk management planning document in place. About a quarter of countries mention some form of comprehensive national disaster or security strategy[31]. Most also report **prevention and preparedness measures** for the cross-border and high-impact low-probability (HILP) risks they identified but none provided measures to tackle all HILP risks they had identified. The measures primarily address preparedness, for example early warning systems, with fewer prevention measures reported. For instance, prevention measures related to land-use and spatial planning for managing floods, industrial, earthquake and volcanic risks were only reported by a few countries.

Whilst most countries report some prevention and preparedness measures, limited information is provided on how these measures were prioritised and when they will be implemented. National reports play a fundamental role in providing information on risk identification and thereby form the basis for decisions to invest in prevention. Risk management also entails prioritising, planning and funding preparedness and prevention measures and identifying the lead authorities. Although countries report measures for cross-border and high-impact low-probability risks, very few report the timeline for implementation of the measures and the related funding arrangements.

D. Cross-border risk management[32]

All Member States and Participating States systematically identify key risks that have a cross-border nature. This is essential for managing risks across highly interconnected European countries. The most commonly identified cross-border risks are nuclear and radiological accidents, floods, wildfires and pandemic/epidemic. For the first time, countries were asked to identify **procedures and measures at cross-border, inter-regional and international level** as well as **measures to address the cross-border risks**. The reports provide insights to risk management governance, including for cross-border cooperation to manage cross-border risks and risks with transboundary impacts.

Although the country reports reflect prioritisation of procedures and measures to manage the identified risks, there appear to be either implementation or reporting gaps concerning these procedures and measures. Most **cross-border measures** reported concern nuclear and radiological risks, floods, industrial accidents, wildfire and infrastructure disruption. About 70% of countries that identify certain cross-border risks, also provide information on measures to manage those cross-border risks. No country reports measures to manage all cross-border risks they identified. Cross-border cooperation focuses mostly on preparedness, and to a lesser extent on prevention and cross-border risk assessments. Most measures reported for cross-

[31] Countries are not required to make available risk management plans to the Commission, nor to provide summary information on them. A comprehensive assessment of the progress on '*further development and refinement of disaster risk management planning*' has therefore not been possible.
[32] Supporting staff working document, questions 3, 13, 16, 21 and 22.

border are 'non-structural', such as training and education, early warning systems and public awareness raising.

International and European frameworks are widely reported. Some countries refer to important sectoral **EU legislation** that enhances cross-border cooperation to manage some some risks, notably for floods[33], major industrial accidents[34] and critical infrastructure[35]. Countries also report on a wide range of cross-border cooperation in **international processes or organisations** such as the United Nations Sendai Framework for Disaster Risk Reduction, (UNDRR), the World Health Organisation (WHO) and the North Atlantic Treaty Organisation (NATO), referred to by about one third of countries. Only a few refer to the Organisation for Economic Co-operation and Development (OECD) or to macro-regional (e.g. Danube and Baltic Sea) frameworks or organisations. A third of countries note that the UCPM itself enhances cross border work according. A few examples of bilateral cooperation agreements are reported in border regions, for instance on early warnings and notification risks, cooperation on risk assessments and protocols for preparedness, information exchange on early warnings and subsequent response.

E. Risk awareness raising and alert systems[36]

Not all Member States and Participating States report thoroughly on risk awareness, even though adverse consequences of disasters can be reduced through preparedness of the population on how to act in case of an emergency. About three quarters of countries report some activities carried out by civil protection authorities and other key bodies to deliver **disaster risk information and raise risk awareness** of the population, but specific information is scarce. Outreach campaigns use different communication tools (TV and radio advertising, social media, short animated films, leaflets and brochures) and webpages providing information on risks. There are some good examples of education campaigns.

Countries inform the public about the risks to raise general risk awareness, but only half of the countries report that their risk assessments are publicly available. Recurring risk awareness campaigns often address all aspects of resilience and self-protection relating to risks and emergencies, but only a few countries share details of these campaign strategies. Floods and wildfire awareness raising campaigns are the most cited risk specific campaigns. A third of countries report that the education systems are important channels for raising risk awareness.

Alerting and warning the population are key to emergency and crisis communication, but just over half of the countries report using a range of ways to alert the population in the event of an emergency. Examples of tools reported are sirens, mobile phone messages, special smartphone apps and the use of traditional media (radio/TV). The scope to provide early warning and the lead time that can be given to the population and responsible authorities to act depends on the type of disaster risk. Some countries refer to the implementation of EU legislation requiring public warnings by mobile phones by 2022[37].

It is essential to meet the needs of the most vulnerable groups when managing risks, but few countries report such activities. A handful of countries report guidelines on how to take account of the needs of persons with disabilities and other vulnerable groups in the event of an

[33] OJ L 288, 6.11.2007, p 186
[34] Directive 2021/18/EU, OJ L197, 24.7.2012, p.1.
[35] Directive (EU)2022/2557. OJ L 333, 27.12.2022, p. 164.
[36] Supporting staff working document, questions 8, 17, 19 and 20.
[37] Directive (EU) 2018/1972 on a European Electronic Communications Code (EECC). OJ L321, 17.12.2018, p.36.

emergency. A few countries report specific risk awareness initiatives to support vulnerable groups.

F. Early warning systems and response capacities

Early identification of impending disaster events is crucial to reduce adverse consequences. Most Member States and Participating States report having systems in place. However, only about half of the countries that identify certain risks as relevant, report having early warning systems in place for those risks. Early warning systems are in place for a wide range of disasters, primarily related to natural hazards, with extreme weather and floods most often covered, followed by earthquakes and wildfires. For technological risks, early warning systems for nuclear and radiological accidents are the most commonly reported, followed by early warning systems for cyber risks, critical infrastructure disruption and industrial accidents. It is therefore important to set up real-time monitoring of contributing factors (such as dry vegetation conditions raising the wildfire risk, soil saturation for increased flood risk, seismic movement, propagation of viral outbreaks).

Many countries use international or European early warning systems, notably on seismic risk, nuclear and radiological monitoring and health threat monitoring, but only a few refer to Copernicus services. Countries report some examples of targeted cross-border early warning systems with notification of disaster events. Private sector actors are reported to be responsible for monitoring, detection and forecasting of risks related to their economic activities.

It is essential to have well prepared and equipped public and private actors tasked with response to emergencies. However, only a few countries report on critical infrastructure for emergency response being in place. To manage the changing risk landscape with intensified climate related hazards such as floods and wildfires, countries need to improve their national **response capacity**. About half of the countries report of systems to ensure assets are adequately maintained. Some limited information was provided on specific capacities for wildfire response, flood response, CBRN[38] and emergency health response.

In light of the above, the following recommendations on **improving disaster risks governance** are put forward.

The Commission, together with the Member States and Participating States, should :

- Further develop the sharing of good practices among countries and experts, including under the Knowledge Network, with the objective of improving planning tools and decision-making structures to support effective risk governance[39].
- Further improve pan-European early warning tools and services. Where relevant, increase the use of tools such as the 'Copernicus Emergency Management Services' and the 24/7 scientific emergency reporting service provided by the Scientific and Technical Advisory Facility covering natural as well as nuclear and radiological hazards.

Member States and Participating States are invited to:

- Foster a whole-of-society approach in all stages of the DRM process, involving all stakeholders: public institutions, academic and research bodies, the private sector, civil society and communities.[40]

[38] Chemical, biological, radiological, nuclear.

[39] In line with the recommendations and follow-up actions of the Spanish Presidency Civil Protection workshop on 'Strengthening Governance for Disaster Risk Management in Europe' on 5-6 July 2023.

[40] See above..

- Strengthen disaster risk management, including actions to manage key risks with cross-border impacts and risks related to disasters that cause or are capable of causing multi-country transboundary effects.
- Further develop early warning systems for relevant risks, and where possible draw on the transboundary systems developed by the EU, such as the Copernicus' European Flood Awareness System, the European Forest Fire Information System and the European Drought Observatory.
- Promote stronger actions at national level to take the needs of vulnerable people when managing risks.

4.3 Mainstreaming and investing in disaster risk management

G. Cross sectoral disaster risk management[41]

Good examples have been reported on how disaster risk management is carried out under policies other than civil protection and by other relevant government departments and bodies. However, improvements in cross- sectoral risk management are still needed to achieve whole-of-society resilience. National reports provide good examples of horizontal coordination mechanisms where national governance structures involve bodies from different sectors throughout the disaster risk management cycle, notably public authorities, the private sector, local authorities, civil society, academic and research institutions. With some gaps in the reporting on horizontal coordination and cross-sectoral coordination and with very few reported comprehensive risk management strategies, more can be done to raise the profile of disaster risk management tools, for instance ensuring risk assessments are relevant to other sectors.

Other EU policies also contribute to disaster resilience. Disaster risk management needs to regularly integrate new policy tools developed at EU level, including those developed under the European Green Deal[42]. Some countries report on **other EU policies and laws** that enhance disaster resilience and cross-border cooperation, such as critical infrastructure, cyber security, climate change adaptation, drought and flood risk management, industrial accidents and cooperation on nuclear safety. These examples show that disaster risk management must be coherent and find synergies with other policies, notably climate change, critical infrastructure protection and sustainable finance policies.

Though disaster risks go beyond the climate-related hazards and climate adaptation measures cover many areas beyond disaster risk management, the synergies between the two processes are substantial. Two thirds of countries report that adaptation plans are available at national level. Examples of areas common to disaster risk management and climate adaptation measures are the monitoring, collection, and processing of information and data on climate-related disaster risks. To enable synergies and to avoid underestimation of disaster risks, it is also essential that disaster risk assessments include climate change projections and scenarios.

Critical infrastructure disruptions feature strongly among key disaster risks, notably disruption of energy networks, water services, telecommunication, transport networks, financial structures, food supply and healthcare. These have high potential to cascade to further sectors. Some maritime critical infrastructure like ports may risk becoming more vulnerable with climate change impacts, notably sea level rise. Just over half of the countries

[41] Supporting staff working document, questions 2, 3, 4, 12, 13, 14, 15 and 16.
[42] Annex to the Reporting guidelines shows the pre-European Green Deal EU policy landscape.

report having policies in place to protect critical infrastructure. A third of the countries report having specific measures in place, such as planning for civil protection, risk and threat assessments and analysis, authorities-operators cooperation, procedural and technical aspects and risk-specific measures.

Sustainable finance policies provide opportunities for climate adaptation and risk prevention measures. Disaster **insurance** supporting the recovery from a disaster can also play a role in incentivising prevention and 'building back smarter'. A few countries mention in the national reports insurance as a private-sector source of disaster risk financing. A survey on disaster insurance carried out among national disaster prevention experts shows that insurance covers many disasters from natural hazards across the Member States. Nevertheless, there is a considerable climate protection gap due to various obstacles such as the cost of insurance, limiting conditions, caps on compensation a lack of insurance available in high-risk areas[43].

H. National public and private finance mechanisms[44]

Disaster risk management investments require adequate funding. Robust national public finances are need to cater for both response to and recovery from increasing climate-related impacts and for preparedness, prevention and climate adaptation measures. Examples of national disaster risk financing mechanisms are provided in many reports. They include contingency reserves or specific disaster funds (reported to be available in a few countries) and transfer of financial risk of disasters with the help of private actors notably in the form of disaster **insurance.** Just over half the countries report of **flexible budget provisions**, in the form of reserve budgets and contingency funds to cater for emergencies. Few countries reported of dedicated **funding for prevention** to meet growing need for investment in prevention to reduce losses through strengthened resilience. More often, countries reported that budgets are available for preparedness and emergency response[45].

While EU funding is available for disaster risk management, including for prevention, the reported uptake is however limited. Although two thirds of countries mentioned some EU funds, the reporting is neither coherent nor comprehensive. For example, only about a quarter mentioned the use of structural and cohesion policy funds (2014-2020), although about two thirds of EU Member States used these funds for disaster risk management expenditure[46].

For each country, the approval of disaster risk management expenditures under the cohesion policy funds in the 2021-2027 programming period, is conditional on the submission of Article 6 reports (enabling conditions[47]). The DRM summary reports received include the key risks relevant to the country, but only very limited information was provided on funding sources, prioritisation and timeframe to implement such measures. The Commission therefore drew upon additional and complementary sources of information submitted by the Member States, such as adaptation strategies and other national planning tools and strategies, for

[43] Climate protection gap SWD(2021)123 final of 27.5.2021.
[44] Supporting staff working document, questions 8, 17, 19 and 20
[45] SWD(2021)123 final of 27.5.2021 'Closing the climate protection gap- Scoping policy and data gaps'.
[46] 18 current EU Member States made use of Structural and cohesion policy funds for disaster risk management (2014-2020).
[47] To enable Member States to access EU Cohesion policy funds, Regulation (EU) 2021/1060, Annex IV (OJ L231, 30.6.2021, p. 159) sets out the conditions linked to compliance by EU Member States with EU Law. For disaster risk management, these conditions include the submission of article 6 reports and providing information on risk identification, prioritisation of measures, funding mechanisms and planning.

assessing compliance by EU Member States with these conditions for accessing EU cohesion policy funding.

In the light of the above, the following recommendations on **mainstreaming and investing in disaster risk management** are put forward.

The Commission, will:

- Encourage Member States and Participating States to make more systematic use of the EU funds available for investment in prevention, preparedness and climate adaptation.
- Consider options for stronger cross-sectoral approach to incentivise disaster risk prevention in key policies and funds.

Member States and Participating States are invited to:

- Take into account the need for cross-sectoral disaster risk management strategies to further develop national disaster risk financing options, also for the prevention.
- Consider increasing funding for disaster risk management and climate change adaptation in the current programming periods.

4. PROGRESS ON EU LEGAL FRAMEWORK FOR DISASTER RESILIENCE

A wide range of EU sectoral legislation and policies contribute to strengthening disaster resilience. The legal and policy framework for managing disaster risk goes beyond civil protection. This was already mentioned in the Annex to the 2019 Reporting Guidelines for Disaster Risk Management, which refer to the EU policies that cover multiple aspects of disaster risk management. Since December 2019, the EU has further developed its policy and legal framework, linked to the European Green Deal, the measures taken to tackle the COVID-19 pandemic and Russia's war of aggression against Ukraine. Examples of more recent developments that merit further consideration in the efforts to boost prevention and preparedness in the Member States and, where applicable, Participant States include:

- **EU Climate Law**[48] which includes the objectives on climate change adaptation. The EU Climate Risk Assessment (EUCRA)[49], an [upcoming] European Environment Agency report, should inform future climate and disaster risk assessments. Information on key climate related hazards and impacts reported by countries in the DRM summary reports have contributed to the EUCRA.
- The **Directive on the resilience of critical entities**[50] covers preparedness, response and international cooperation on a wider range of sectors that were identified as vulnerable according to the Article 6 risk assessment. It also covers public administrations such as those in charge of civil protection. EU Member States need to carry out risk assessments taking UCPM Risk assessments into account. Operators of critical entities also need to develop risk assessment and implement prevention and protection measures. The Directive[51] on measures for a **high common level of cybersecurity** establishes a **mechanism for cyber crisis management** in full coherence with horizontal and

[48] European Climate Law (europa.eu) OJ L 243, 9.7.2021, p. 1
[49] https://climate-adapt.eea.europa.eu/en/eu-adaptation-policy/key-eu-actions/climate_risk_assessment/index_html/
[50] OJ L 333, 27.12.2022, p. 164.
[51] OJ L 333, 27.12.2022, p. 80

sectoral mechanisms, including the-UCPM. The Directive requires the carrying out of coordinated security risk assessments of critical supply chains.

- Implementation of the **Floods** and **the Water Framework Directives** is important for disaster risk management[52]. Some EU water laws have been amended or introduced to address disaster resilience aspects, notably **risks in the drinking water supply chain and access to safe drinking water**[53] and **wastewater reuse** for the agriculture sector to address increasing water scarcity and droughts[54].
- The **EU Forest Strategy for 2030**[55] calls for more resilient forests and properly managed in the fire risk zones. It calls for landscape management and planning, ecosystem restoration, fuel management through grazing and controlled fires, and that integrated wildfire risk management shall involve the expertise and resources available in all relevant policy fields.
- Preparedness for future pandemics and other health threats requiring attention at Union level has increased with the adoption of the EU Health Union and the establishment of the **Health Emergency Preparedness and Response Authority (HERA).**
- The **European Electronic Communication Code** required that the MS establish public warning systems to alert the population by mobile phones by 2022[56].
- The **taxonomy for sustainable investments**[57] can help attracting private finance for disaster risk awareness raising and adaptation measures for a wide range of economic activities. The **EU Sustainable finance strategy**[58] called for the need to raise climate risk literacy levels of financial actors to enhance the understanding high-risk investments in view of climate related risks. Disaster risk awareness raising activities can contribute to such literacy.
- **EU funding** is available for disaster risk management under several EU instruments, such as Cohesion policy funds, the European Agricultural Fund for Rural Development, the Recovery and Resilience Facility. From 2021 to 2027, the total amount of EU support earmarked for DRM and climate change adaptation under these three instruments reaches nearly EUR 26 billion. The Horizon Europe programme for research and innovation also supports disaster risk management. The EU Solidarity Fund furthermore covers damage from disasters to some extent. With a trend of increased economic damage suffered as a result of disasters in Europe, consideration should be given to further reinforcing the Fund.
- **Tailor-made technical expertise** is available to Member States through the European Commission's Technical Support Instrument (TSI), and it can help Member States design and implement reforms, including in the area of disaster risk management[59]. Under the UCPM, technical assistance and projects at national level and cross-border projects aiming at strengthening disaster risk management are also supported[60].
- In the context of the Economic Governance Reform, the Commission has actively engaged with stakeholders (Ministries of Finance of Member States, independent fiscal institutions, non-governmental organisations, and insurers) on how to **reflect the fiscal cost of climate change in the national budgetary frameworks**. The review of main

[52] Directives 2007/60/EC and 2000/60/EC. Implementation Reports - European Commission (europa.eu)
[53] Directive (EU) 2020/2184, OJ L435, 23.12.2020,p.1.
[54] Regulation (EU) 2020/741. OJ L 177, 5.6.2020, p.32.
[55] COM(2021)572
[56] OJ L 321, 17.12.2018, p.36.
[57] Regulation (EU) 2020/852. O JL 198, 22.6.2020, p.13.
[58] COM(2021)390 final
[59] Technical Support Instrument (TSI) (europa.eu)
[60] Prevention and Preparedness Projects in Civil Protection - European Commission (europa.eu)

concepts of disaster risk financing, evidence from Member States, and the key elements of a disaster risk financing strategy to limit the fiscal cost of climate-related disasters aim to raise awareness and promote exchange of best practices among Member States.[61]

Effective and coherent cross-sectoral risk management must take into account these and future developments in the evolving risk management policy landscape. The mid-term review of the Sendai framework[62] noted that a multitude of policies contribute to disaster risk reduction such as floods and drought risk management in water policy, cyber security policy, forestry and biodiversity polices, health policies, research and tools for disaster risk management such as earth observations.

5. THE WAY FORWARD TO A DISASTER RESILIENT EUROPE

Disaster risk management benefits society as a whole and plays a pivotal role in building resilient societies. The numerous lives claimed by disasters in recent years' extreme weather events remind us that, no matter how fast the response is, prevention will provide the greatest benefits over the long term. Preventing and preparing for the next disaster is essential if we want to protect our society, nature and cultural heritage. Civil protection cannot work in isolation; it is essential to work together across sectors throughout the full disaster risk management cycle.

The UCPM was set up to create an EU framework for assistance to respond to disasters when national capacities were overwhelmed. Over the years, revisions of the UCPM have expanded this framework to go beyond disaster response and encompass a broader spectrum of disaster preparedness and prevention. Article 6 sets up a framework for risk management. This report shows that, while considerable progress has been made, there is still scope to do more on different levels.

The **Union disaster resilience goals** adopted in February 2023, raise the stakes of disaster prevention and risk management action at the EU and national levels and set an ambitious common agenda going forward. In line with the actions set out in the Communication on the Union disaster resilience goals, this Report has identified a **number of complementary actions and recommendations** that are needed to achieve these goals in the UCPM countries. The Union disaster resilience goals are a concrete contribution from the civil protection community to build our overall resilience to disasters in Europe. Member States and Participating States are invited to take action to implement and make progress on achieving these goals, including in the context of the different activities under Article 6.

Damage from catastrophic events is rising enormously, but our overall capacity to absorb and recover from such shocks is limited. More and better prevention investment in a 'whole of EU approach' is therefore needed. As the disaster risk landscape continues to evolve and we face the consequences of climate change, the Commission will continue to work relentlessly to further reinforce the EU's resilience to future risks.

[61] Disaster Risk Financing: Main Concepts and Evidence from EU Member States (europa.eu), 2021 and Disaster Risk Financing: Limiting the Fiscal Cost of Disasters (europa.eu), (2022)
[62] SWD(2023) 151 final