



VEMUN 2026

Guaranteeing Governance in the Global Future: What Role for Europe?

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**Preparing for Extreme Weather
and Climate Change**

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Introduction

Between June and August of 2003, Europe witnessed the hottest summer on record since 1540, with temperatures soaring up to 30 percent above average. The unprecedented heatwave claimed at least 30,000 lives, making it one of the ten deadliest natural disasters in Europe over the last hundred years. Ultimately, this extreme weather event raised concerns about the continent's readiness for climate change.

Over 20 years later, these concerns are still warranted. In August 2025, Sara Aagesen, Spain's Minister for the Ecological Transition, told Cadena Ser radio that, "The fires are one of the parts of the impact of that climate change, which is why we have to do all we can when it comes to prevention." Indeed, in just two weeks, 20 major wildfires destroyed over 300,000 hectares in Spain. This unprecedented wave of wildfires rippled throughout Europe in the summer of 2025, burning over one million hectares within the EU. The Iberian Peninsula has suffered the brunt of the wildfire wave, with Spain and Portugal accounting for 60% of the total burned area in Europe.

Beyond these individual events, studies have shown that human influence contributes to and exacerbates many observed changes in weather and climate extremes. Human-driven greenhouse gas emissions lead to higher global temperatures, which, in turn, intensify prolonged heatwaves, worsen drought conditions, and increase the extreme rainfall and winds associated with severe storms and floods. The scientific field of "extreme event attribution" seeks to determine whether, and by how much, climate change affects the intensity, frequency, or impact of extreme weather events. Such studies are essential in helping impacted communities develop recovery and resilience plans that respond to both current and future climate change impacts.

As a result, prevention and preparedness have emerged as the cornerstones of disaster risk reduction. Investing in adaptation strategies is essential for building a more resilient world. In fact, according to a report by the Global Commission on Adaptation, just 24 hours' warning of a coming storm or heatwave can cut ensuing damage by up to 30%. Yet, nearly one in three people worldwide is still not covered by early warning services. Under the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, adaptation is recognized as a global challenge with both local and international dimensions. Actions and measures vary depending on the needs and conditions of each country or community and can include building flood defenses, creating early warning systems for storms, using drought-resistant crops, and adapting infrastructure, communication systems, and public policies.

Education remains an effective and powerful tool in preparing populations for natural hazards, equipping them with the knowledge necessary to identify and appropriately react to risks, thereby alleviating pressure on emergency services. Successful adaptation efforts require cooperation between governments, local communities, international organizations, the private sector, civil society, and other stakeholders. Moreover, integrating adaptation into economic, social, and environmental policies is crucial for building long-term resilience. This is especially important in bridging inequality gaps and supporting developing countries, whose economic losses resulting from natural hazards are up to 20 times greater, in terms of GDP percentage, than those of the Global North.



However, events like Hurricane Melissa, which struck relatively prepared Caribbean nations yet still caused major damage, underscore the limits of preparedness alone. For this reason, Professor Jean-Pascal Van Ypersele of the Université Catholique de Louvain in Belgium declares that “a combination of preparedness, adaptation, and mitigation” is key to decreasing the scope of extreme weather impacts.

Definition of Key Terms

Extreme Weather Event

An extreme weather event is an event that is rare for a specific location and season and displays unusual features such as unusually high intensity, unexpected timing, abnormal location, or large geographic impact. What qualifies as “extreme” can differ depending on regional climate conditions. Such events may include heatwaves, cold spells, intense rainfall, droughts, tornadoes, and tropical cyclones, among others.

Climate Change

Climate change describes long-term changes in global temperatures and weather patterns. While such changes can occur naturally through factors such as variations in solar activity or major volcanic eruptions, climate change since the nineteenth century has been largely driven by human actions. This form of change, known as anthropogenic or human-induced climate change, results primarily from activities including the combustion of fossil fuels, deforestation, changes in land use, agricultural practices, or industrial production processes.

The Intergovernmental Panel on Climate Change (IPCC), in its Sixth Assessment Report, concludes that human activities—mainly through the release of greenhouse gases—are the clear cause of global warming (the increase in average global temperatures due to rising concentrations of these gases in the atmosphere). As a result, human-induced climate change has intensified weather and climate extremes across all regions of the world, leading to significant negative impacts on ecosystems and human societies.

Preparedness

Preparedness refers to the skills, knowledge, and resources developed by governments, emergency services, organizations, communities, and individuals to anticipate potential disasters and respond to and recover from their effects effectively.

Preparedness measures are implemented as part of disaster risk management (see below) and focus on strengthening the ability to handle emergencies efficiently while ensuring a smooth transition from immediate response to long-term recovery. These efforts rely on accurate risk



assessments and strong connections to early warning systems. To be effective, these actions must be supported by appropriate legal frameworks, institutional structures, and sufficient funding.

A preparedness plan outlines arrangements made in advance to ensure timely, coordinated, and effective responses to anticipated hazards or developing disaster situations that may pose risks to people or the environment. The term “readiness” is often used to describe the capacity to act quickly and appropriately when an emergency occurs.

Adaptation

Adaptation involves anticipating the negative impacts of climate change by taking measures that reduce potential harm or, where possible, make use of new opportunities. Adaptation actions can range from major structural projects, such as constructing barriers to address rising sea levels, to changes in behavior, including limiting exposure to extreme heat and supporting vulnerable individuals during heatwaves. Overall, adaptation refers to the ongoing process of adjusting societies, systems, and practices to the present and expected effects of climate change.

Disaster Risk Management

Disaster risk management refers to the use of disaster risk reduction strategies and policies to avoid the creation of new risks, lessen existing risks, and handle remaining risks. Its goal is to strengthen resilience and minimize human, economic, and environmental losses caused by disasters.

Mitigation

Mitigation refers to actions taken to diminish or reduce the emission of greenhouse gases into the atmosphere, alleviating the impacts of climate change. This can be done by decreasing emissions at their source, through the expansion of renewable energy or the development of cleaner transportation systems, as well as by strengthening natural carbon sinks, for example, by protecting and expanding forested areas. Overall, mitigation involves human efforts to reduce greenhouse gas emissions and enhance their absorption.

Resilience

Resilience refers to the capacity of a system, community, or society exposed to hazards to withstand and manage their impacts, adjusting or transforming when necessary, and to recover efficiently. This includes maintaining and restoring essential structures and functions through effective risk management practices.

General Overview

Climate change is intensifying extreme weather events, increasing risks to communities and nations worldwide. Despite these challenges, effective preparedness and resilience strategies can significantly reduce their consequences. Such efforts, however, must be underpinned by adequate



funding and equity to ensure that protection does not come at the cost of human lives or deepened inequalities, as preparedness in a changing climate cannot be treated as a trade-off.

I. Extreme Weather and Natural Hazards

Since 1980, forest fires in Europe have burned an area more than twice the size of Portugal. According to data gathered by the European Forest Fire Information Service (EFFIS), fire seasons are growing longer and more frequent, while intense heatwaves are creating ideal conditions for larger and more uncontrollable wildfires. However, forest fires are not the only natural hazard that is occurring more often. In fact, over the past 50 years, the number of disasters has increased by a factor of five, to such an extent that World Meteorological Day 2022's theme was Early Warning and Early Action, spotlighting the exponential rise in extreme weather events. These events include heatwaves, heavy precipitation, droughts, and tropical cyclones, and can have severe human, economic, and environmental consequences, placing immense strain on the economy, infrastructure, and social fabric of countries, regions, and institutions. Notably, the Sustainable Development Goals (SDG) Progress Report reveals that extreme weather events have triggered the highest level of climate-related displacement in 16 years.

For instance, between 1980 and the end of 2023, the 27 EU Member States experienced more than €738 billion in losses resulting from extreme weather events. More recently, in January 2025, Storm Éowyn caused extensive damage to Ireland's electricity infrastructure, leaving 768,000 homes, farms, and businesses without power and bringing the nation to a near standstill. Beyond infrastructure damage, extreme weather also poses serious risks to public health. Intensifying heatwaves may increase heat-related mortality and disrupt sectors such as agriculture and tourism, which rely heavily on stable climate conditions. The 2024 European Climate Risk Assessment clearly warns that climate impacts threaten food and water security, energy stability, and may place financial systems and public health at risk. The growing prevalence of extreme weather events is therefore a highly pressing and timely issue, closely linked to climate change.

II. Climate Change as a Risk Multiplier

“Every degree of global warming is projected to cause a 7% increase in extreme daily rainfall.” These numbers, reported by the World Meteorological Organization, illustrate the crucial role climate change plays in intensifying extreme weather events. Specifically, human-induced climate change is driven by greenhouse gas emissions from activities such as fossil fuel production and transportation. Global temperatures have risen faster since 1970 than in any other 50-year period over at least the last 2,000 years. The 2015 Paris Agreement was signed to limit the increase in global average temperature to well below 2°C, yet the UN Intergovernmental Panel on Climate Change (IPCC) warns that exceeding the 1.5°C threshold could trigger more frequent and intense extreme weather events, including severe droughts, heatwaves, and heavy rainfall.

This is supported by the World Weather Attribution 2025 report, which notes that since the Paris Agreement, global warming has risen by 0.3°C. While seemingly small, this increase has added, on average, 11 extra hot days per year, making extreme heat significantly more frequent. The effect is expected to escalate further with continued warming. Warmer air can hold more moisture—about



7% more for each degree Celsius—fueling storms that can produce up to 40% more rainfall than would occur without climate change. Rainfall intensity in Europe has increased by 22% over the last 50 years, raising the risk of flash floods in vulnerable regions.

Climate change is also amplifying other hazards. Prolonged droughts and drier forests make wildfires harder to contain. As noted previously, wildfire seasons are now starting earlier and lasting about two weeks longer than thirty years ago, even affecting northern Europe and the Arctic, regions historically less prone to fire. The threat is projected to grow further, with wildfire risks expected to increase across nearly all of Europe, necessitating robust emergency response and preparedness measures at regional, national, continental, and international levels.

III. Disaster Risk Management and Adaptation Strategies

While reducing greenhouse gas emissions is pivotal to limiting global warming to the necessary 1.5°C—helping to stabilize temperatures and curb the escalation of extreme weather—some climate impacts are now unavoidable. Their consequences can therefore be reduced through enhanced resilience and preparedness, which are also essential to minimizing loss and damage. Preparedness actions are indispensable for protecting communities and ensuring long-term stability. Resilience can take many forms, ranging from drought-resistant crops and diversified energy systems to improved early warning tools and climate-smart urban planning. Many of these adaptation strategies are considered “no-regret” solutions, meaning they are precautionary measures designed to address potential risks before impacts intensify.

As of October 2024, 131 countries reported having national disaster risk strategies, a substantial increase from 57 in 2015, while 113 countries confirmed the existence of multi-hazard early warning systems. Adopted in 2021, the EU Adaptation Strategy coordinates action across all EU policy areas to strengthen climate preparedness, support national adaptation efforts, and expand international initiatives aimed at building climate resilience. In addition, the EU Mission on Adaptation to Climate Change assists cities, regions, and local authorities in increasing their resilience to climate impacts, with financial support from Horizon Europe, the EU’s research and innovation programme. During the second half of 2026, the European Commission is expected to present a policy package for climate resilience and improved climate risk management, further reinforcing existing policies.

Within the energy sector, revisions to the gas and electricity security framework aim to better address risks posed by natural hazards and extreme weather, thereby strengthening resilience to climate impacts. Furthermore, the Regulation on Trans-European Networks for Energy emphasizes the importance of advancing climate adaptation and mitigation, improving system resilience, and enhancing disaster prevention and preparedness. Early warning initiatives such as the European Flood Awareness System (EFAS) also play a key role in raising awareness and supporting preparedness before major flooding events occur.

Nature-based solutions (NBS) represent another viable and efficient approach to climate resilience. The European Commission defines them as “solutions that are inspired and supported by nature, which are cost-effective, provide environmental, social, and economic benefits, and help build resilience.” At COP27, nature-based solutions gained increased attention for their potential to address climate change and were included in the Sharm el-Sheikh Implementation Plan. NBS, such as green



roofs, rain gardens, and constructed wetlands, help manage stormwater by absorbing excess runoff, thereby reducing flood risks and protecting freshwater ecosystems.

The EU supports projects such as City Blues, which implements nature-based solutions in several European cities facing shared challenges, including frequent urban flooding, eroding streambanks, intensifying urban heat island effects, and biodiversity loss. Similarly, Urban GreenUp promotes solutions such as green roofs and shaded green spaces to “renature” urban planning and cool cities during summer months, reducing the risks associated with heatwaves and droughts. However, despite their benefits, nature-based solutions are not universally applicable. For example, planting non-native species to offset greenhouse gas emissions may harm local ecosystems. As a result, communities, countries, and organizations should pursue a diversified range of adaptation strategies, rather than relying on a single approach.

This idea is illustrated by Jeff Opperman, a lead scientist at the World Wildlife Fund (WWF), who compares climate risk management to “investing in stocks,” saying that nature-based solutions “can be key assets in a diversified portfolio. For instance, protecting a low-lying coastal community from flooding should not rely solely on one measure, such as levees, but instead combine multiple complementary strategies. Importantly, a diversified portfolio must also include disaster education, particularly for vulnerable populations.

The Sendai Framework for Disaster Risk Reduction (2015–2030) is a landmark international agreement in which UN Member States commit to substantially reducing disaster risks and losses across human, economic, social, and environmental dimensions. While acknowledging the primary responsibility of States, the Framework emphasizes shared responsibility across all levels of governance, including local authorities and the private sector. It identifies four priority areas for action, notably understanding disaster risk and enhancing disaster preparedness for effective response and to “Build Back Better” during recovery, rehabilitation, and reconstruction. The former highlights the importance of informed decision-making, while the latter emphasizes the importance of strengthening preparedness and utilizing recovery phases to integrate disaster risk reduction into development measures.

Finally, Target E of the Sendai Framework calls for an increase in national and local disaster risk reduction strategies that include education. This is particularly significant given that nearly one billion children worldwide are exposed to extremely high climate-related risks. Empowering young populations through education, participation, and protection is therefore essential to building resilient societies in an era of intensifying extreme weather events.

IV. Human Rights, Inequalities, and Vulnerable Populations

During the launch of the 2025 Sustainable Development Goals (SDG) Report, UN Secretary-General António Guterres stated, “we are facing a global development emergency – a severe one – with over 800 million people still living in extreme poverty. Intensifying climate impacts and relentless debt burdens are draining the resources countries need to invest in their people.” This statement highlights how stark inequalities prevent certain nations from adequately preparing for the increasing frequency and intensity of extreme weather events. Indeed, according to the SDG Report,



Least Developed Countries (LDCs) and Small Island Developing States (SIDS) experience more than twice the global average of climate impacts. Notably, while LDCs account for only 12% of the world's population, they represent 26% of disaster-related deaths worldwide.

These inequalities are further illustrated by a 2025 World Weather Attribution (WWA) study on heatwaves in South Sudan, which focused specifically on their impacts on women and girls. The study found that the February heatwave was made 4°C hotter due to human-induced climate change. Despite public health advice recommending that people stay indoors and remain hydrated during extreme heat, structural conditions severely limit such protective measures. In Juba, the capital of South Sudan, one-third of the population lacks access to water, and only 1% of the city is covered by shade or green spaces. Moreover, many homes are built with iron roofs and lack adequate cooling, electricity, and access to clean water.

The study also highlights gender-based vulnerabilities. Approximately 95% of employed women work in the informal sector, often in agriculture or street vending, which exposes them to prolonged heat and physical exertion. This significantly increases health risks, including heatstroke and kidney damage. Beyond health, the WWA study emphasizes that extreme heat also disrupts education, as prolonged school closures may deepen existing gender inequalities. However, long-term closures could be avoided through relatively low-cost adaptation measures, such as adjusting school hours to avoid peak heat, reorganizing academic calendars, or implementing passive cooling solutions like shade trees and reflective white roof paint. Additionally, first-aid education for both teachers and students can help identify heat-related illnesses and enable timely responses.

More broadly, climate finance plays a crucial role in enabling adaptation to extreme weather events. Developing countries, in particular, still need to establish and expand measures such as multi-hazard early warning systems. Nevertheless, insufficient funding remains a major obstacle. Addressing this challenge, one of the six pillars of the COP30 Action Agenda is “Cross-Cutting Enablers and Accelerators,” which includes discussions on finance for adaptation.

As human-induced climate change exacerbates extreme weather events, effective preparedness and resilience depend on coordinated action across local, national, and international levels, underpinned by adequate financing and inclusive governance frameworks.

Major Parties Involved

National Governments and Public Authorities

National governments play a central role in disaster risk management and in protecting populations from climate-related risks. The Sendai Framework was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR) held in Sendai, Japan. It recognizes that States bear the primary responsibility for reducing disaster risk, while emphasizing that this responsibility should be shared with stakeholders at multiple levels. National governments develop adaptation strategies, invest in early warning systems and resilient infrastructure, and integrate disaster risk reduction into policy design. However, income disparities between countries mean that some governments lack the financial capacity to adequately prepare



their populations, limiting their ability to safeguard basic human rights such as access to health, housing, and security.

Local Authorities, Cities, and Regions

Extreme weather impacts are first experienced at the local level; consequently, local authorities are at the forefront of climate adaptation efforts. They are responsible for implementing nature-based solutions, operating emergency and response services, and communicating risks effectively to local populations. During severe weather events, such as harsh winter conditions, local governments play a crucial role in safeguarding transportation networks and energy systems through regular infrastructure inspections and emergency planning. Local authorities translate national adaptation strategies and policies into concrete, context-specific actions tailored to regional needs.

International Organizations

International organizations play a key role in coordinating action among national governments, providing scientific expertise, and establishing global frameworks that guide national and local responses to climate-related risks. United Nations bodies such as the United Nations Office for Disaster Risk Reduction (UNDRR) and the Intergovernmental Panel on Climate Change (IPCC) assess and disseminate scientific evidence, while also supporting the implementation and monitoring of major international frameworks, including the Sendai Framework for Disaster Risk Reduction. At a continental level, the European Union facilitates coordination among Member States, finances adaptation and resilience initiatives, and works to harmonize disaster risk management standards. In this context, the European Environment Agency (EEA) plays a crucial role by providing data and analytical support to inform policy decisions and advance Europe's climate objectives.

Financial Institutions and Donors

Financial actors play a crucial role in enabling climate resilience, as adaptation and preparedness measures are often highly capital-intensive. In many Least Developed Countries (LDCs) and Small Island Developing States (SIDS), limited access to finance significantly constrains the ability to prepare for and respond to extreme weather events. Predictable, accessible, and sustained funding is therefore essential to bridge preparedness gaps between nations and ensure equitable protection for vulnerable populations. In this context, the first open letter to the international community signed by COP30 President André Corrêa do Lago emphasized that "IPCC warnings about the urgency of climate action center on the fact that finance, technology, and international cooperation are key enablers to accelerate climate action." Complementing this, mechanisms such as the Climate Action Account, supported by the UN Central Emergency Response Fund, mobilize resources for urgent life-saving relief and resilience-building measures. By delivering funding before or immediately after disasters strike, such initiatives play a critical role in helping communities withstand climate-related shocks and recover more effectively.



Civil Society, Non-Governmental Organizations (NGOs), and Communities

Civil society organizations and local communities play a vital role in disaster risk management by contributing local knowledge, promoting inclusivity, and holding institutions accountable. As the first actors to experience and respond to crises, communities are often on the front line of early warning, immediate response, and assistance before official aid arrives. In the context of intensifying climate-related disasters, NGOs such as All Hands and Hearts help protect vulnerable populations by delivering emergency assistance, providing disaster education, and implementing cost-effective adaptation measures, particularly in high-risk areas. These organizations also support recovery efforts by helping communities rebuild in safer, more resilient ways

Climate Skeptics

Climate skeptics play a role in the European Union climate policy, notably through the spread of disinformation that challenges scientific consensus and delays policy action. Nearly half of EU citizens report difficulty distinguishing reliable climate information from misleading content, with skepticism especially prevalent among farmers and in regions less directly impacted by climate risks. The European Commission has responded with initiatives like the ClimateFactsMatter campaign and partnerships with fact-checking organizations to improve media literacy and public trust in climate science. However, the EU’s approach has recently shifted, as regulatory “simplification” has led to the weakening of flagship Green Deal policies (such as the Corporate Sustainability Reporting Directive (CSRD) and the Corporate Sustainability Due Diligence Directive (CSDDD)), under pressure from industrial lobbies. While framed as a means to enhance competitiveness, these rollbacks risk undermining the EU’s climate resilience and long-term adaptation goals.

Timeline of Key Events

- 1972 The UN’s first major environmental conference, held in Stockholm, marks the start of international environmental cooperation and sets the stage for future climate action, including the EU’s later environmental policies.
- 1988 The Intergovernmental Panel on Climate Change (IPCC) is established, providing scientific assessments that underpin EU climate policies and adaptation strategies.
- 1992 The UN Framework Convention on Climate Change (UNFCCC) is adopted, establishing the framework for global climate action. The EU becomes a key party, advocating for ambitious targets and climate finance.
- 1997 The Kyoto Protocol, the first legally binding emissions reduction treaty, is adopted. The EU commits to collective and individual targets, shaping its climate legislation.



2015	The Paris Agreement (COP21) is adopted, aiming to limit global warming to below 2°C. It aims to ensure global greenhouse gas emissions peak as soon as possible, and to balance their emissions and removals. It addresses the adaptation to climate change, financial and other support for developing countries, technology transfer and capacity building, as well as losses and damage.
2015-2030	The Sendai Framework for Disaster Risk Reduction guides the EU and member states in reducing disaster risk, including from extreme weather, through prevention, preparedness, and resilience-building.
November 2019	The European Parliament declares a climate emergency, urging all EU legislative and budgetary proposals to align with the 1.5°C goal and accelerate adaptation measures.
December 2019	The European Commission presents the Green Deal, aiming for climate neutrality by 2050. It includes the European Climate Law and strategies for adaptation, resilience, and sustainable finance.
2021	The EU updates its Adaptation Strategy, focusing on climate-proofing infrastructure, improving early warning systems, and addressing health risks from heatwaves, droughts, and floods.
2023	The COP28, in Dubai, marks the first Global Stocktake under the Paris Agreement, with the EU advocating for stronger adaptation and mitigation measures, including a focus on extreme weather preparedness.
1980-2023	Data shows most climate-related fatalities in Europe are caused by heatwaves, cold waves, droughts, and forest fires, underscoring the need for targeted adaptation and public health measures.
2024	2024 becomes the warmest year on record for Europe, with nearly half the continent experiencing record-high annual temperatures, highlighting the urgency of adaptation and mitigation.
2025	COP30 is expected to further advance global climate commitments, with the EU likely to push for stronger adaptation frameworks and financial support for vulnerable regions facing extreme weather.
1980s-2026	Climate skepticism creates a dual dialogue, occasionally delaying EU climate action and influencing partners. Persistent denial in some member states and internationally affects policy ambition and public consensus.



Previous Attempts to Resolve the Issue

Over the past two decades, European Union countries have actively pursued a range of strategies to mitigate and adapt to the growing threat of extreme weather events driven by climate change. Recognizing the urgency, the EU has implemented ambitious policies such as the European Green Deal, which aims to achieve climate neutrality by 2050 and includes measures to reduce greenhouse gas emissions by at least 55% by 2030. To address the immediate impacts of extreme weather, member states have developed national adaptation strategies, often coordinated through the EU Strategy on Adaptation to Climate Change, which encourages cross-border cooperation and knowledge-sharing. Investments in early warning systems, flood defenses, and heatwave action plans have been prioritized, with countries like the Netherlands and Germany leading in innovative water management and urban cooling initiatives. The EU Solidarity Fund has also provided financial support to regions hit by disasters, such as the devastating floods in Germany and Belgium in 2021. However, challenges remain, including disparities in adaptation capacities among member states and the need for greater integration of climate resilience into infrastructure planning. While progress has been made, the increasing frequency and intensity of extreme weather events underscore the need for more coordinated, proactive, and inclusive approaches at both the national and EU levels.

Possible Solutions

As the frequency and intensity of extreme weather events continue to rise across Europe, EU member states must adopt a multi-faceted approach to build resilience and protect both people and infrastructure. First, investing in robust early warning systems and real-time monitoring technologies can provide communities with the critical time needed to prepare and evacuate, significantly reducing loss of life. Additionally, updating and enforcing stricter building codes and land-use regulations will ensure that new and existing infrastructure can withstand floods, storms, and heatwaves, while also preventing construction in high-risk areas. Moreover, fostering cross-border cooperation and resource-sharing mechanisms within the EU will allow countries to support each other during large-scale disasters, leveraging collective expertise and resources. Furthermore, prioritizing nature-based solutions (such as restoring wetlands, reforestation, and urban green spaces) can mitigate flooding and heat island effects, while also promoting biodiversity. Finally, public awareness campaigns and community-based training programs are essential to empower citizens with the knowledge and skills to respond effectively to emergencies.



Conclusion

The increasing frequency and intensity of extreme weather events demonstrate that climate change poses a significant and long-term challenge to the European Union. As a clear risk multiplier, climate change exacerbates existing vulnerabilities and places growing pressure on public health systems, infrastructure, economic stability, and social cohesion. These developments underline the urgent need for comprehensive and forward-looking preparedness strategies across all EU Member States.

While the European Union has taken important steps through adaptation frameworks, early warning systems, and investments in resilience, current and projected climate impacts reveal that preparedness must be strengthened and more evenly implemented. Effective disaster risk management requires coordinated action at the local, national, and EU levels, supported by adequate financing and inclusive governance. Particular attention must be given to vulnerable populations to ensure that preparedness measures uphold human rights and do not deepen existing inequalities.

In conclusion, addressing extreme weather in a changing climate necessitates an integrated approach that combines preparedness, adaptation, and mitigation. By reinforcing cooperation among Member States, investing in education and risk awareness, and aligning climate resilience with broader development goals, the European Union can reduce loss and damage while enhancing its collective capacity to respond to future climate-related risks.

Questions to Consider

- What are the most pressing extreme weather risks facing your country, and how have these changed over the past decade?
- How do the specific geographic and climatic vulnerabilities of your country shape its priorities in preparing for extreme weather events?
- Which communities or sectors in your country are most vulnerable to extreme weather, and what targeted measures could protect them?
- What existing EU policies or directives are most relevant to your country's extreme weather preparedness, and how can they be strengthened?
- To what extent does climate skepticism influence your country's climate policies and public support for adaptation measures?
- How can the EU contribute to global efforts to address climate-induced extreme weather, especially in supporting developing countries?
- How can public-private partnerships be fostered to invest in climate-resilient infrastructure and technologies?
- How can the EU encourage behavioral change among citizens and businesses to reduce vulnerability to extreme weather events?



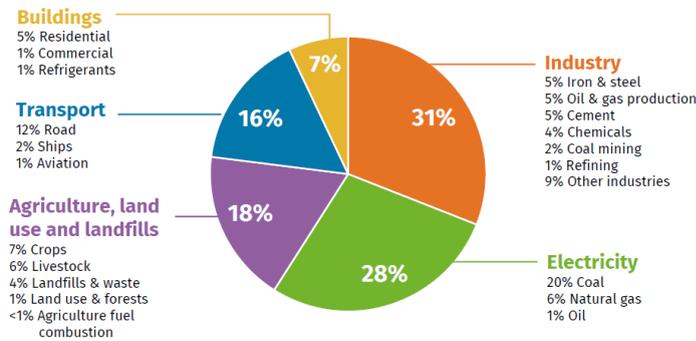
Appendices

Appendix A

FIGURE 6

Global emissions by sector

Percent share of 2020 net GHG emissions

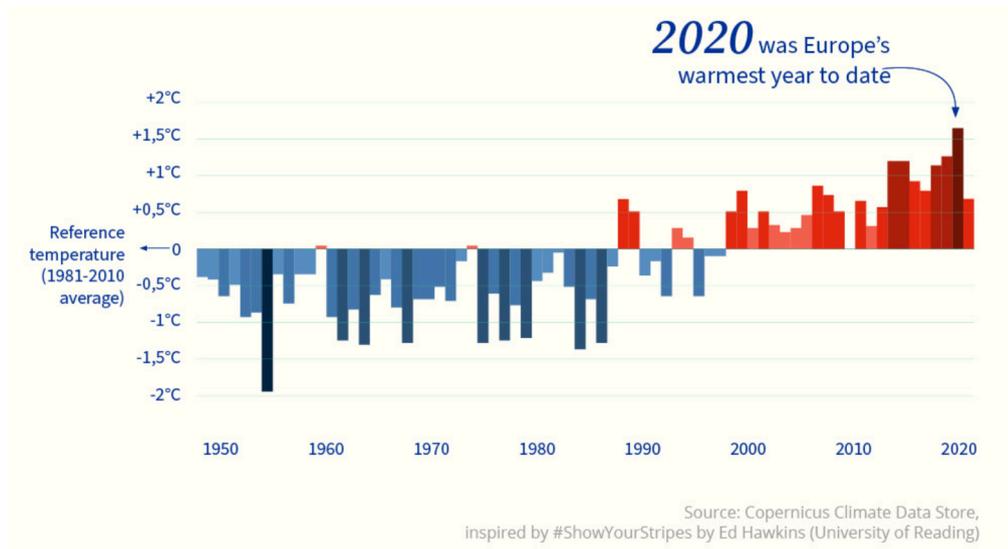


Source: Rhodium Group

Global Greenhouse Gas Emissions by Sector in 2020

<https://rhg.com/wp-content/uploads/2022/12/Figure-6-1.png>

Appendix B

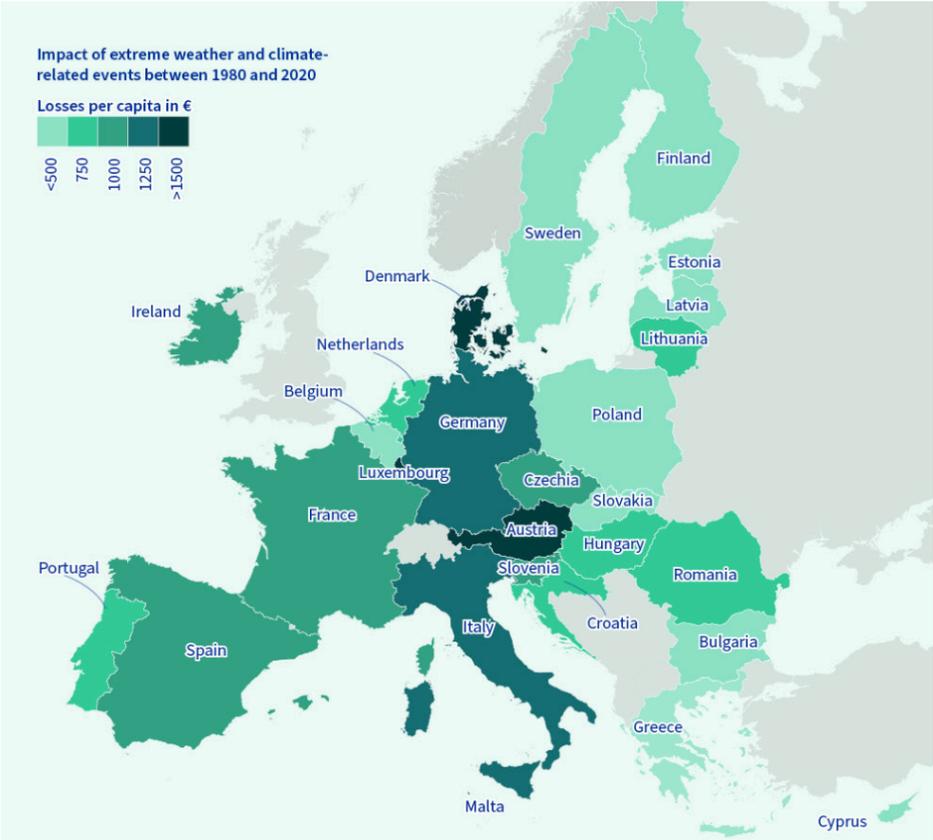


Average Temperature in Europe Between 1950 and 2020 Relative to the 1981-2010 Baseline

<https://www.consilium.europa.eu/en/infographics/climate-costs/#:~:text=The%20financial%20losses%20caused%20by%20extreme%20weather%20and,was%20the%20highest%20for%20Germany%2C%20Italy%20and%20France.>



Appendix C



Impact of Extreme Weather and Climate-Related Events on EU Countries Between 1980 and 2020

<https://www.consilium.europa.eu/en/infographics/climate-costs/#:~:text=The%20financial%20losses%20caused%20by%20extreme%20weather%20and,was%20the%20highest%20for%20Germany%2C%20Italy%20and%20France.>



Appendix D



Forest Fires in the Parish of Bouses, Galicia, Spain in 2025

<https://www.aljazeera.com/gallery/2025/8/19/wildfires-rage-across-spain-and-portugal-as-record-area-of-land-burnt>



Appendix E

Climate Change Fuels Stronger 2025 Storms Change in peak wind speed and storm category due to climate change-driven ocean warming

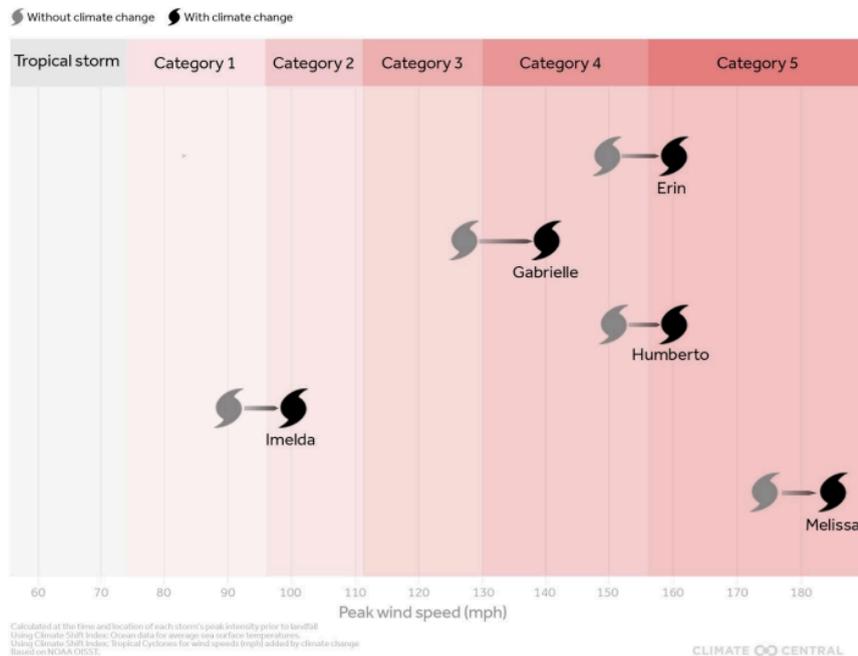


Fig. 8: All Atlantic hurricanes in 2025 strengthened by at least 9 mph during the 2025 hurricane season as analysed by [Climate Central](#).

Comparison of 2025 Atlantic Hurricanes with and without Climate Change

<https://www.worldweatherattribution.org/unequal-evidence-and-impacts-limits-to-adaptation-extreme-weather-in-2025/> (you can download the full report)

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