STUDY

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The Use of Cohesion Policy in Disaster Response and Recovery

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The Use of Cohesion Policy in Disaster Response and Recovery

Abstract

This study provides an overview of the EU policy instruments, including Cohesion Policy Funds, that are used in disaster response and recovery. It assesses their contribution to strengthening resilience to climate change and to meeting disaster-relief and reconstruction needs. The study also examines how the 'Build Back Better' approach can be integrated into future Cohesion Policy to ensure that disaster-affected areas are rebuilt in a more resilient and sustainable manner. Recommendations are provided on how Cohesion Policy can be improved to support EU regions in responding to disasters.

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LIST OF ABBREVIATIONS

BBB	Build Back Better
CARE	Cohesion's Action for Refugees in Europe
CF	Cohesion Fund
COR	Committee of Regions
CPR	Common Provisions Regulation
CRII	Coronavirus Response Investment Initiative
DFAA	Canada's Disaster Financial Assistance Arrangements
DNSH	Do No Significant Harm
EC	European Commission
ECA	European Court of Auditors
EEA	European Environment Agency
EP	European Parliament
ERCC	Emergency Response Coordination Centre
ERDF	European Regional Development Fund
ESF+	European Social Fund+
ESIF	European Structural and Investment Funds
EU	European Union
EUCRA	European Climate Risk Assessment
EUSF	European Union Solidarity Fund
FAST-CARE	Flexible Assistance to Territories
JRC	Joint Research Centre
JTF	Just Transition Fund
IB	Intermediate Body
IF	Intervention Field

IPCC	Intergovernmental Panel on Climate Change
MA	Managing Authority
MFF	Multiannual Financial Framework
NAP	National Adaptation Plan
NAS	National Adaptation Strategy
NBS	Nature-Based Solutions
MS	Member State
OP	Operational Programme (2014-2020)
PO	Policy Objective
PR	Programme (2012-2027)
RRF	Recovery and Resilience Facility
SAFE	Security Action for Europe
SDG	Sustainable Development Goals
SEAR	Solidarity and Emergency Aid Reserve
SO	Specific Objective
TFEU	Treaty on the Functioning of the European Union
UCPM	Union Civil Protection Mechanism
UNDRR	United Nations Office for Disaster Risk Reduction
WMO	World Meteorological Organisation

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EXECUTIVE SUMMARY

Background and aim of the study

In recent years, the European Union has faced an increasing number of natural disasters, including floods, wildfires, droughts, landslides, earthquakes and cyclones (in the EU's outermost regions). Climate change is expected to further intensify both the frequency and severity of these events. While civil protection and disaster risk management remain primarily Member State competences, the EU plays a key supporting role by coordinating, complementing and reinforcing national actions through common frameworks, financial instruments and technical assistance.

To strengthen resilience, the EU has developed a range of policies and tools, including the Floods Directive, the EU Adaptation Strategy, the Copernicus Emergency Management Service, the Union Civil Protection Mechanism (UCPM) and the European Union Solidarity Fund (EUSF). Cohesion Policy also plays a significant role in supporting disaster prevention, preparedness and recovery.

This study examines how Cohesion Policy supports EU regions in managing emergencies, strengthening short- and medium-term resilience, and promoting the reconstruction of infrastructure capable of withstanding future natural hazards. It also assesses how the 'Build Back Better' principle is currently integrated into Cohesion Policy and identifies options to strengthen its incorporation in future programming, in order to support more resilient and sustainable post-disaster reconstruction.

Use and effectiveness of EU policy instruments in disaster response and recovery: The role of Cohesion Policy

The EU has developed a comprehensive set of instruments covering all phases of the disaster risk management (DRM) cycle, from prevention and preparedness to emergency response and post-disaster recovery. While this architecture offers broad coverage, partial overlaps between instruments raise issues of coherence, interoperability and strategic coordination. Available evidence on their overall effectiveness and efficiency remains limited.

Cohesion Policy plays a key role, particularly in prevention and resilience-building. In the 2021–2027 programming period, approximately EUR 17.9 billion (around 4.5% of the total budget of the European Regional Development Fund, Cohesion Fund and Just Transition Fund) has been programmed for climate change adaptation and risk management. This share varies significantly across Member States. Supported interventions focus mainly on climate adaptation and the prevention of floods and landslides, but overall spending on disaster risk management remains relatively low compared to total Cohesion Policy allocations. Several adjustments were introduced in the 2021–2027 period, including the Regional Emergency Support to Reconstruction (RESTORE), which increases flexibility for post-disaster reconstruction financing. As of September 2025, around EUR 1.6 billion has been allocated under RESTORE across five Member States and 14 programmes. Despite these developments and the positive contribution of Cohesion Policy to preparedness and resilience—through investments in protective infrastructure, risk mapping, the literature on governance capacity and nature-based solutions (NBS) and stakeholder evidence point to persistent gaps. These include insufficient coordination between key actors (Managing Authorities, civil protection bodies and environmental authorities), a lack of consistently risk-based project selection criteria, outdated territorial risk assessment tools, and monitoring systems that do not adequately capture long-term resilience and adaptation outcomes.

A survey of national and regional Managing Authorities conducted for this study confirms these findings. Respondents highlight major strengths of Cohesion Policy, such as predictable long-term funding, support for infrastructure and climate adaptation, and scope for innovation and flexibility.

However, they also underline significant weaknesses, including administrative complexity, slow implementation, limited suitability for emergency response, competing investment priorities and overlaps with other EU funding instruments. Overall, the survey confirms that there is considerable scope to strengthen the role of Cohesion Policy in addressing disaster risks more effectively.

The "Build Back Better" approach

The Build Back Better (BBB) approach represents a shift from restoring pre-disaster conditions to strengthening resilience and reducing future vulnerabilities through a combination of structural and non-structural measures.

In the context of Cohesion Policy, BBB refers to using post-disaster recovery and reconstruction not merely to restore assets, but to rebuild safer, more resilient and future-proof communities, infrastructure and economies. It reframes recovery as an opportunity to reduce structural vulnerabilities, adapt to future climate and hazard conditions and strengthen institutional and social resilience. In operational terms, BBB within Cohesion Policy combines: risk-informed planning (e.g. reconstruction based on multi-hazard risk assessments and updated spatial data); resilient and green design (e.g. application of enhanced construction, environmental and digital standards anticipating future shocks); inclusive recovery (e.g. addressing the needs of vulnerable groups and restoring livelihoods and essential services); learning and continuous improvement (e.g. integrating lessons from past disasters into design, regulatory and governance frameworks).

Empirical evidence indicates that BBB generates long-term economic and social benefits. However, its implementation is often constrained by governance challenges, including limited community participation, post-disaster time pressure, and the lack of standardised metrics to assess BBB performance. EU instruments such as the EUSF and RESTORE are increasingly aligned with BBB principles by promoting resilience, sustainability and inclusiveness in post-disaster reconstruction.

Strengthening the integration of BBB into Cohesion Policy requires targeted legal, financial and governance adjustments to support risk-based solidarity and to incentivise resilience-oriented reconstruction rather than simple asset replacement.

Case studies of successful initiatives

Four EU case studies and one non-EU case study were carried out. The EU case studies are focused on providing an in-depth understanding of how Cohesion Policy funding has been used to respond to disasters and to strengthen resilience across different regional contexts. The non-EU case study is focused on conditions for applying the BBB principles.

The EU case studies show that where clear legal frameworks for disaster reconstruction are in place, countries are able to mobilise resources more rapidly while embedding resilience requirements. Strong pre-disaster planning and risk zoning emerge as essential conditions for BBB, as they facilitate more resilient reconstruction processes. Key bottlenecks within the EU include weaknesses in governance coordination and limited technical capacity at the local level.

Outside the EU, the experience of Canada's Disaster Financial Assistance Arrangements (DFAA) demonstrates that financial incentives can drive the adoption of higher resilience standards. Overall, the analysis confirms that effective BBB implementation requires measurable indicators and transparent monitoring mechanisms.

Conclusions and recommendations

Cohesion Policy has proven to be an essential source of financing for prevention, preparedness and, to a lesser extent, recovery measures. Its role in immediate emergency response remains limited. The main

challenges in its use include administrative complexity, lengthy procedures, insufficient disaster-specific guidance and overlaps with other instruments.

On the basis of the analysis carried out, several recommendations can be formulated to strengthen the contribution of Cohesion Policy. At the EU level, it is recommended to recognise that recovery and reconstruction often extend beyond a single programming cycle, streamline procedures, promote innovation and knowledge exchange, and strengthen RESTORE as well as the integration of the BBB approach. Recommendations for national and regional policymakers include: enhancing the local capacity, improving coordination and planning, prioritising preventive infrastructure, reducing administrative burdens and strengthening monitoring systems.

Many of the study's recommendations are consistent with the 2028–2034 Multiannual Financial Framework (MFF) proposal, which promotes simplification, integration, flexibility and a streamlined monitoring framework. However, certain features of the post-2027 MFF proposal risk weakening Cohesion Policy's role in reducing regional disparities, in particular due to a more centralised approach that could limit regional and local involvement, despite their key role in addressing climate-related vulnerabilities. To mitigate this risk, regional participation in disaster risk management should be ensured, funding for disaster risk management and climate adaptation increased, and dialogue between public authorities and businesses strengthened.

Future Cohesion Policy regulations should explicitly incorporate BBB principles into National and Regional Partnership Plans (NRPPs), require risk-based reconstruction strategies, and integrate BBB criteria into project eligibility and selection processes to prioritise long-term resilience over simple restoration.

Operationalising BBB will require appropriate incentive and capacity-building mechanisms, including differentiated co-financing rates for verified resilience upgrades, simplified procedures for BBB-compliant projects and advance payments for early design phases. In addition, regional advisory mechanisms, peer-learning networks and EU-wide BBB indicators (such as the share of rebuilt assets exceeding pre-disaster standards, avoided losses and service continuity metrics) would support institutional learning, transparency and performance-based reconstruction.

1. THE USE AND EFFECTIVENESS OF EU POLICY INSTRUMENTS IN DISASTER RESPONSE AND RECOVERY

KEY FINDINGS

- Civil protection and disaster risk management remain primarily the competence of Member States; however, the EU has a crucial supporting role in coordinating, complementing, and reinforcing national actions through shared frameworks, financial support, and technical assistance.
- The EU has developed a comprehensive set of instruments covering various phases of the disaster risk management cycle – from prevention and preparedness to emergency response and post-disaster recovery. These instruments partially overlap, raising questions about their overall coherence, interoperability, and strategic integration.
- Cohesion Policy also plays a role, primarily in prevention and resilience. Approximately EUR 17,943 million or 4.5% of the total budget for the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the Just Transition Fund (JTF) has been allocated for climate change adaptation and risk management in 2021–2027. This percentage varies across countries, and different types of interventions are supported, with a particular focus on the prevention of floods and landslides. Overall, however, it still represents a relatively small proportion of the total.
- In the 2021–2027 programming period, several changes were introduced in Cohesion Policy, including RESTORE (the Regional Emergency Support to Reconstruction), which allows greater flexibility in financing post-disaster reconstruction. As of September 2025, approximately EUR 1.6 billion has been allocated to RESTORE across five countries and 14 programmes. Despite the policy evolution and the positive contribution to preparedness and resilience (e.g. through protective infrastructures, risk-mapping tools, governance improvements, nature-based solutions) the existing literature also highlights several areas for improvement such: enhancing stakeholders coordination, clearer selection criteria based on risk and vulnerability, updated territorial risk assessments and planning tools, better monitoring systems capable of capturing long-term resilience and adaptation outcomes.
- A survey of Managing Authorities confirms the strengths of Cohesion Policy (e.g. long-term and predictable funding, infrastructure and climate adaptation support, flexibility, innovation) as well as weaknesses (e.g. not fit for emergencies, slow and complex, competing priorities, overlaps with other funds). This indicates that there is room for improving how it addresses disasters.

1.1. Brief introduction to the study and overview of the methodological approach

This study aims to explore in depth how Cohesion Policy supports EU regions in managing emergency aid, strengthening short- and medium-term resilience, and rebuilding infrastructure capable of withstanding future disasters such as floods, wildfires, droughts, landslides, cyclones, earthquakes and other extreme events. It also explores how the "Build Back Better" principle is integrated and how it can be further reinforced in future Cohesion Policy to ensure that reconstruction is more resilient and sustainable.

The European Union has experienced a growing number of disasters, and climate change is expected to increase their frequency and severity. To strengthen resilience, the EU has developed a range of policies and instruments to support disaster risk management – from prevention/preparedness, through emergency response, to recovery and reconstruction[1]. The EU Cohesion Policy also plays an important role, even though only a small share of resources is allocated to disaster risk management, which includes climate change adaptation.

In this study, a combination of methods is used to collect data and generate evidence on the EU policy framework, and in particular on the use of Cohesion Policy in disaster response and recovery. The methods applied include a review of academic literature, official documents and policy evaluations; an analysis of financial data from the Cohesion Open Data Platform; a survey of Managing Authorities (MAs) of 2021–2027 ERDF, CF and JTF programmes; and case studies of successful initiatives based on desk research, survey responses, as well as interviews with key stakeholders. It is worth noting the main limitations of the methodological approach. The quantitative analysis of Cohesion Policy support focused on the funding allocated to the intervention fields defined in the relevant fund legislation. However, these fields of intervention serve only as indications of the intended objectives. A mere allocation of funds does not necessarily mean that the money has been—or will be—spent, nor that the goals related to disaster risk management, including adaptation to climate change, have been achieved. Furthermore, the financial data provide comparable indications across countries and over time, but they do not provide information on the strategic choices or reasoning behind the spending. Finally, in relation to the survey of MAs, it is worth noting that the data collected through the questionnaire largely reflect the perspectives of those stakeholders who choose to share their views with the study research team. Additional methodological details are provided in Chapters 1 and 3, as well as in Annex 2.

The study is structured in four chapters, a bibliography and two annexes. Chapter 1 provides an overview of existing EU instruments that address disaster response and recovery. This includes an in-depth analysis of the role of Cohesion Policy (paragraph 2.1). Chapter 2 explores how the Build Back Better principles can be integrated into the EU Cohesion Policy. Chapter 3 presents five case studies of how funds have been used effectively to build resilience inside and outside the EU. Chapter 4 concludes and provides recommendations, with particular attention to the 2028–2034 Cohesion Policy framework. Following a list of references, Annex 1 includes additional figures and tables that were omitted from the main text to maintain the conciseness of the report. Annex 2 provides further information on the survey and the interviews.

1.2. Existing instruments at the EU level

1.2.1. Overview of EU Instruments

Several policies and instruments have been introduced over the years in the EU to strengthen resilience to disasters. The EU Floods Directive, the most important piece of legislation in this area, was adopted in 2007. This is complemented by other initiatives such as the EU Adaptation Strategy, the Union Civil Protection Mechanism, the European Union Solidarity Fund, the Copernicus Emergency Management Service, and the Climate-ADAPT platform. Each instrument has its own focus, strengths, and limitations. The available evidence on their performance – drawn from academic literature and technical

[1] There are several definitions of Disaster Risk Management. The United Nations Office for Disaster Risk Reduction (UNDRR) defines it as "the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses" (UNDRR, n.d.). The Directorate-General for European Civil Protection and Humanitarian Aid Operations of the European Commission (DG ECHO) emphasise that "disaster risk management policies aim to tackle these risks [natural hazards and human-induced disasters threaten people, property, environment and cultural heritage] through preventive, preparedness, response and recovery actions" (European Commission - DG ECHO, 2025).

reports – is systematised in this study to provide the European Parliament with a comprehensive overview, with particular attention to Cohesion Policy support and potential reform options.

Although civil protection and disaster risk management remain primarily within the competence of EU Member States – as established by Article 196 of the Treaty on the Functioning of the European Union (TFEU) – the European Union plays a crucial **supporting role**. This supporting function refers to the EU's capacity to **coordinate, complement, and reinforce national actions** through shared frameworks, financial instruments, and technical assistance. It does not replace national responsibilities but enables Member States to benefit from **cross-border cooperation**, **strategic planning**, and **access to EU-level resources**, particularly in cases where disasters exceed national response capacities or require long-term resilience investments. The instruments and legal frameworks developed at the EU level – such as the Union Civil Protection Mechanism, the European Union Solidarity Fund, and Cohesion Policy tools – are designed to fulfil this complementary role, enhancing the overall effectiveness and coherence of disaster management across Europe.

European Union Civil Protection Mechanism (UCPM) – 2001. The UCPM is the EU's central framework for enhancing cooperation and coordination in civil protection. Although designed primarily for the EU and its Member States, the mechanism also assists non-EU countries, giving it a significant external-aid dimension. Its main objective is to improve the effectiveness of systems for preventing, preparing for, and responding to natural and man-made disasters.

By fostering stronger collaboration among Member States and the additional participating States, the UCPM aims to ensure better protection of people, as well as of the natural and cultural environment and property. The mechanism was formally established through Decision No. 1313/2013/EU (European Parliament & Council, 2013), and has since been reinforced through subsequent amendments, including Decision 2019/420 (European Parliament & Council, 2019) which introduced the rescEU reserve, and Regulation 2021/836, which further amended Decision 1313/2013/EU on a Union Civil Protection Mechanism (European Parliament & Council, 2021). Together, these legislative acts empower the UCPM to support, complement, and coordinate Member States' actions across prevention, preparedness, response, and public awareness.

Responsibility for the management and organisation of the UCPM lies with the European Commission, specifically the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO). Operational coordination is provided through the Emergency Response Coordination Centre (ERCC), a 24/7 hub that continuously monitors risks and coordinates assistance both within the EU and internationally.

When disasters exceed national response capacities, any affected country—whether an EU Member State or a participating non-EU state[2]—may request assistance via the UCPM. In such cases, the ERCC mobilises a range of pre-committed resources, including medical teams, firefighting aircraft, field hospitals, and technical experts, to ensure rapid and effective intervention. This reserve is co-financed by the EU budget and includes essential equipment such as firefighting planes and helicopters, emergency medical teams, medical stockpiles, and high-capacity energy support systems. These assets are hosted across several Member States but remain under EU operational control to allow swift deployment when national resources are insufficient.

[2] More than 10 non-EU states participate in the EU Civil Protection Mechanism: Albania, Bosnia and Herzegovina, Iceland, Moldova, Montenegro, North Macedonia, Norway, Serbia, Türkiye, and Ukraine.

In addition, Member States contribute teams and modules to the European Civil Protection Pool (ECPP), which guarantees that deployed units meet strict certification standards and can operate seamlessly together, thereby strengthening interoperability during joint missions.

Since its creation in 2001, the UCPM has become an indispensable tool in European and international disaster management. Between 2017 and 2022, it was activated more than 500 times for a wide range of emergencies (Van der Velden et al., 2024). In 2024 alone, the mechanism was activated 58 times, responding to events such as floods in Central Europe, wildfires in Greece and Albania, and emergency evacuations from conflict zones.

European Union Solidarity Fund (EUSF) – 2002. The EUSF, established by Council Regulation 2012/2002 and extended in 2020 to include major public health emergencies, is a special financial instrument outside the regular EU budget designed to provide rapid and targeted assistance to EU Member States and accession countries affected by major natural disasters (Council of the EU, 2002). In the context of the 2021–2027 Multiannual Financial Framework (MFF), the EUSF is financed through the Solidarity and Emergency Aid Reserve (SEAR), which – following the adoption of Council Regulation 2024/765 (Council of the EU, 2024) – was revised to include two components: the European Solidarity Reserve (supporting disasters under the EUSF) and the Emergency Aid Reserve (for other crises). The European Solidarity Reserve has a maximum annual allocation of EUR 1.016 billion (in 2018 prices or EUR 1.144 billion in current prices[3]) for 2024–2027, of which EUR 50 million is earmarked for advance payments. Additionally, 25% of the annual allocation – equivalent to EUR 286 million in 2024 – can only be accessed after 1 October each year, ensuring that EUSF funding remains flexible and responsive to unforeseen events while preserving a financial buffer for late-year emergencies. The Fund's mobilisation requires formal approval by both the European Parliament and the Council, reinforcing its structured yet agile approach to supporting solidarity across the EU in times of crisis[4].

Significant reforms introduced in 2014 addressed key limitations of the original EUSF regulation. Before the reform, the Fund applied a broad and ambiguous definition of "major disasters" and "extraordinary regional disasters," which led to confusion, false expectations among Member States, and a high rate of rejected applications – 45 out of 61 applications submitted under the "extraordinary regional disasters" category between 2002 and 2012. The regulation originally allowed aid when damages exceeded EUR 3 billion (in 2002 prices) or 0.6% of a country's GNI, and in exceptional cases, when a region suffered severe and lasting impacts despite not meeting those thresholds. However, the vague criteria for extraordinary regional disasters caused political pressure and dissatisfaction due to inconsistent application. The 2014 reform clarified eligibility by introducing a more precise threshold: damage must exceed 1.5% of regional GDP at the NUTS 2 level, or 1% for EU outermost regions. The reform also streamlined the application and disbursement process – allowing countries 12 weeks to apply (previously they had 10 weeks) and setting a 6-week deadline for the Commission to assess requests. Furthermore, the reform permits advance payments of up to 10% of the expected aid to accelerate financial assistance. These changes were introduced to improve predictability, transparency, and the overall effectiveness of the EUSF in responding to disasters across the EU (Bachtler et al., 2019).

[3] Here, current prices refer to 2024 prices.

[4] The fund operates through a five-phase process: 1) Application, when an affected country submits a request for aid within 12 weeks of the disaster; 2) Application assessment, the European Commission examines eligibility, verifies that damage thresholds are met, and assesses whether the disaster qualifies for support – to be completed within six weeks; 3) Budgetary procedure and awarding, this involves a proposal by the Commission to mobilise the necessary funds, which must be approved by the European Parliament and the Council; advance payments of up to 10% of the anticipated aid can be made to accelerate initial response; 4) Implementation, the beneficiary State uses the funds for eligible operations, including immediate relief, infrastructure repairs, and protective works, within 18 months from the date of the total aid disbursement (the funds may be used retroactively from the day the disaster occurred); 5) Closure, the beneficiary country submits a final implementation report, within six months of completing operations.

EU Floods Directive – 2007. This Directive (European Parliament & Council, 2007) was established to assess and manage flood risks across Member States to reduce the adverse impacts of flooding on human health, the environment, cultural heritage, and economic activities. Recognising that floods are events that cannot always be prevented, the directive promotes a proactive and sustainable approach to flood risk management. It outlines a three-step process: conducting preliminary flood risk assessments to identify high-risk areas, producing flood hazard and risk maps to visualise potential impacts, and developing flood risk management plans to guide mitigation efforts. These plans are reviewed every six years and are designed to incorporate environmentally sound and climate-resilient strategies. A key feature of the directive is its emphasis on public participation and stakeholder engagement, ensuring transparency and fostering shared responsibility. Additionally, the directive promotes coordination among Member States, particularly for river basins that cross national borders, and aligns with broader EU policies such as the Water Framework Directive and the European Green Deal. Overall, the Floods Directive provides a structured framework for reducing flood risks while enhancing resilience in the face of climate change.

Copernicus Emergency Management Service (CEMS) – 2012. The European Commission provides information and support to actors involved in relief aid, disaster and risk management, and emergency response activities. Through the CEMS, users have free and open access to extensive immediate and historical datasets from the Copernicus Programme, as well as information provided by partner agencies. Emergency management professionals integrate these data into preparedness, response, and recovery activities.

The service comprises three main components: an **early warning and monitoring system**, which includes thematic tools for assessing risk, monitoring hazards in real time, and providing flood, wildfire, and drought forecasts;[5] an **on-demand mapping component**, which delivers rapid mapping services during emergencies caused by natural or human-made disasters;[6] an **exposure mapping component**, which uses satellite and census data via the **Global Human Settlement Layer (GHSL)** to provide information on the presence of settlements and population exposure.[7]

The European Climate Adaptation Platform (Climate-ADAPT) – 2012. This is a comprehensive online knowledge platform developed to support the European Union's efforts to adapt to the impacts of climate change. Its primary function is to serve as a central, authoritative source of information – a 'first-stop shop' – for data on climate-change risks, vulnerability assessments, and adaptation actions.

Climate-ADAPT is designed to assist a wide range of stakeholders, including policymakers, researchers, public authorities, and practitioners at EU, national, regional, and local levels. By providing access to up-to-date, science-based knowledge and decision-support tools, the platform aims to enable the development of informed, effective, and sustainable adaptation strategies across Europe. It plays a critical role in supporting the implementation of the EU Adaptation Strategy, the Commission Communication on managing climate risks, and broader initiatives under the European Green Deal.

The platform is managed by the European Environment Agency (EEA) in close collaboration with the European Commission, and benefits from contributions from various European bodies and agencies. Climate-ADAPT offers a wide array of resources, including databases of case studies, adaptation

[5] These tools include the European and Global Drought Observatories (EDO and GDO), the European Forest Fire Information System (EFFIS), and the European and Global Flood Awareness Systems (EFAS and GloFAS), as well as the Global Flood Monitoring (GFM) product (https://emergency.copernicus.eu/mapping/about-copernicus-ems)

[6] This mapping products support preparedness, emergency response, and recovery operations by providing detailed and timely situational information (https://emergency.copernicus.eu/mapping/about-copernicus-ems).

[7] This information is critical for estimating the potential impact of hazards and is also integrated into the other CEMS components (https://human-settlement.emergency.copernicus.eu/).

options, and guidance documents, along with interactive tools such as maps, graphs, and indicators that help users visualise climate-change trends, impacts, and policy responses.

Within Climate-ADAPT, there are two key sub-sites: the European Climate and Health Observatory and the Mission on Adaptation to Climate Change Portal. The first focuses on the relationship between climate change and public health, providing health professionals and decision-makers with access to relevant data, tools, and good practices to support climate-resilient health systems. The second supports EU regions, cities, and communities in building resilience, to help at least 150 European regions and communities adapt to climate-related risks by 2030. It offers practical knowledge and tools to support regional and local adaptation planning and action.

EU Adaptation Strategy – 2013 (updated in 2021). The EU Strategy on Adaptation to Climate Change, adopted on 24 February 2021 (European Commission, 2021), sets out the vision of transforming the European Union into a climate-resilient society by 2050. Building on the 2013 strategy and aligned with the European Green Deal and the European Climate Law, it establishes four core objectives: making adaptation smarter—by enhancing data, risk knowledge, and the Climate-ADAPT platform; faster—by accelerating measures across sectors; more systemic—by embedding resilience into fiscal, sectoral, and local policy; and stepping up international action—by increasing global support for adaptation efforts.

Recovery and Resilience Facility (RRF) – 2021. The RRF, established under the Next Generation EU (NGEU) framework, primarily addresses the socio-economic impacts of the COVID-19 pandemic. Still, its scope also includes investments and reforms aimed at increasing resilience to natural disasters. A total of EUR 723.8 billion (in grants and loans) was allocated to Member States' National Recovery and Resilience Plans (NRRPs), which finance, inter alia, infrastructure, early warning systems, and resilient energy and water networks that can mitigate the impacts of floods, storms, wildfires, and other natural hazards. The disbursement of these funds is linked to the achievement of milestones and targets.

1.2.2. Evidence on effectiveness

Some evidence exists on the effectiveness of the EU instruments described above. This can be summarised by distinguishing among the key phases of the disaster management cycle: prevention, emergency response, recovery, and rebuilding. While some EU instruments are specific to one phase, others may intervene across several stages of the disaster management cycle.

Prevention/preparedness

Evaluations confirm that the **EU Floods Directive** has **significantly improved flood-risk governance**, particularly in transboundary river basins, and has contributed to **integrating climate resilience into water management strategies**. The 2019 evaluation by the European Commission (EC, 2019) concluded that the Directive was effective, efficient, coherent, and delivered clear EU added value. It has enhanced awareness and preparedness across Member States, promoted public participation, and fostered cross-border cooperation. However, at the time of the evaluation, there was still limited evidence on whether the Directive had led to a measurable reduction in flood damage through concrete measures.

The evaluation also reported that public consultations involving citizens, experts, and officials confirmed that the Directive has improved flood-risk management. Nonetheless, there remains scope to strengthen public awareness and foster synergies between the Floods Directive, other EU water legislation, and related instruments. In addition, further progress is needed in understanding and modelling the impacts of climate change on all types of flooding.

A recent assessment by the European Court of Auditors (ECA, 2024) of the **EU Adaptation Strategy** – which has **promoted the integration of resilience into fiscal and sectoral policies** and encouraged

the use of NBS – recommended that the Commission improve the reporting system used to measure progress and weaknesses, promote EU tools for climate adaptation to increase their uptake, and ensure that EU-funded projects are adapted to current and future climate conditions.

The implementation of the Strategy is supported by tools such as the **Climate-ADAPT platform**. According to its latest evaluation (Ramboll Management Consulting, 2024), Climate-ADAPT is widely trusted and used, particularly by regional and health authorities. However, the platform continues to face challenges in engaging local actors, updating its content regularly, and ensuring balanced sectoral coverage.

On the operational side, the **CEMS** tools are widely used by civil protection authorities to support risk assessment and preparedness, providing timely geospatial information and up-to-date environmental data.

Although primarily designed for emergency response, the **UCPM** has increasingly supported prevention and preparedness activities. Since 2021, it has funded training programmes, knowledge-sharing initiatives, and prevention projects. A 2024 interim evaluation (van der Velden et al., 2024), covering the period 2017–2022, notes that these investments are relatively recent and that the mechanism still lacks robust performance indicators to assess long-term preventive impact.

In summary, EU prevention instruments are generally well established and perform effectively within their respective domains. Their main limitations include:

- monitoring systems are not always adequate to measure progress and performance.
- the need to strengthen public awareness and engage local stakeholders more effectively.
- the need to enhance synergies between different EU tools.

Emergency response

The EU's emergency response architecture is among the most developed and operationally mature components of the Union's disaster management system. At its core is the **UCPM**, which enables coordinated and rapid deployment of assistance across Member States and beyond. Its effectiveness has been confirmed by a 2024 interim evaluation (van der Velden et al., 2024), which highlights its strong performance in delivering immediate relief during major crises such as wildfires, floods, the COVID-19 pandemic, and the war in Ukraine. At the same time, the harmonisation of procedures and coordination with non-EU partners remains a challenge, due to differences in legal frameworks, operational protocols, and resource allocation (Eriksen et al., 2021).

A significant enhancement to the UCPM came with the creation of **rescEU** in 2019. The most recent evaluation (van der Velden et al., 2024) shows that rescEU has significantly improved the EU's capacity to respond to large-scale emergencies. Stakeholders interviewed during the assessment highlighted its impact on fostering preparedness for health emergencies, particularly through measures adopted during the COVID-19 pandemic, as well as its contributions to addressing forest fires and energy security challenges, especially in light of Russia's aggression against Ukraine.

Complementing these operational tools, the **CEMS** provides on-demand mapping services that are activated during emergencies. As noted by the Joint Research Centre of the European Commission (European Commission, 2022), the CEMS supports civil protection services and other dedicated actors, including forestry, wildfire management, and water authorities, globally.

From a financial perspective, the **EUSF** plays a key role in supporting immediate relief. An ex-post evaluation of the EUSF for the period 2002–2016 (EC, 2019) confirms its effectiveness in enabling rapid

interventions, although it also highlights the need for more explicit eligibility criteria and faster disbursement – issues addressed by the 2014 reform.

The **SEAR** allows for a more agile response to both natural disasters and public health emergencies, but it has also raised concerns. According to Hochrainer-Stigler et al. (2023), the dual mandate of SEAR risks diluting the principle of solidarity and complicating the financial planning needed to ensure adequate support for different types of crises.

Overall, the EU's emergency response system is highly functional and has demonstrated strong performance in recent years. The main challenges relate to fast disbursement, coordination with non-EU countries, and maintaining an appropriate balance between flexibility and strategic focus.

Recovery and medium/long-term reconstruction

A combination of financial, operational, and data-driven instruments supports the recovery phase. Although not explicitly designed for recovery, the **EUSF** has financed recovery measures such as slope stabilisation and improved drainage systems, which contribute to resilience. These outcomes are well documented in the ex post evaluation of the Fund (EC, 2019).

The **UCPM** also plays an important role in recovery efforts, particularly through logistical support, medical evacuations, and the deployment of energy infrastructure. A 2024 evaluation (van der Velden et al., 2024) notes that while the mechanism has expanded its role in recovery, it still faces limitations in systematically monitoring the assistance provided and assessing its long-term impact, owing to incomplete monitoring frameworks.

The **CEMS** provides data on population and infrastructure exposure. This information is essential for post-disaster needs assessments and for guiding reconstruction efforts.

A recent addition to the EU's recovery toolbox is the **RESTORE instrument**, introduced in 2024 in the context of EU Cohesion Policy. RESTORE allows Member States to reprogramme ERDF and ESF+ funds for post-disaster reconstruction. It introduces a new specific objective (SO 2.10) and prioritises the BBB principle, in line with the Sendai Framework for Disaster Risk Reduction. RESTORE offers high co-financing rates and pre-financing options, which are expected to accelerate recovery and enhance resilience. Its effectiveness will depend on how quickly and widely it is adopted by Member States. A comprehensive analysis of Cohesion Policy funds and RESTORE is presented in the next section.

In conclusion, the EU's recovery instruments are generally effective in supporting infrastructure rehabilitation and service continuity. However, there is still limited evidence regarding their contribution to long-term reconstruction and territorial resilience. Coordination between the various financial and operational tools — particularly between the EUSF and RESTORE — is likely to be essential for ensuring effectiveness.

1.2.3. Concluding remarks on synergies, overlaps and gaps of existing instruments

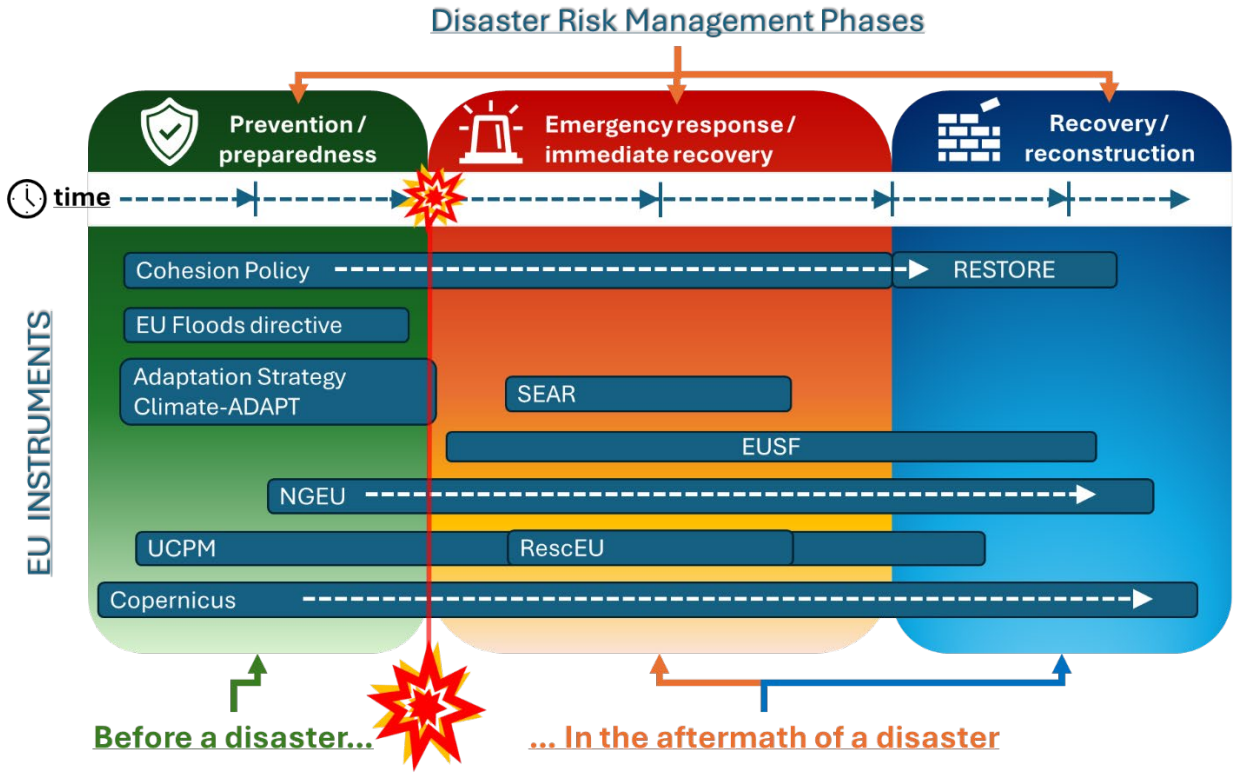
The European Union has developed a comprehensive set of instruments for disaster risk management (DRM), including the UCPM, the EUSF, the SEAR, and the RESTORE instrument. These tools cover the various phases of the DRM cycle – from prevention and preparedness to emergency response and post-disaster recovery. However, the coexistence of multiple instruments with partially overlapping scopes raises questions regarding their overall coherence, interoperability, and strategic integration.

Multi-risk instruments such as SEAR, despite the flexibility that allows them to address diverse threats — ranging from geophysical disasters to pandemics — within a single fund, make risk quantification and resource allocation more complex. Their broad coverage may reduce the availability of resources for natural disaster response. Consequently, some scholars advocate either separate funding instruments

or clearly delineated compartments within multi-risk funds to ensure transparency, adequate capitalisation, and efficient crisis response. In other words, 'it is crucial to deal with multi-risks within a coherent integrated framework, although not using the same instrument and approaches' (Hochrainer-Stigler et al., 2023).

Overall, scholars and policy analysts increasingly suggest a more functionally integrated, strategically aligned DRM framework. The post-2027 reform window represents a crucial opportunity to streamline coordination, clarify mandates, and shift from reactive aid to systemic resilience — without undermining the flexibility that has historically enabled EU instruments to adapt to diverse emergencies. In this light, complexity is not necessarily a flaw but a structural feature that can be harnessed more effectively through improved governance design.

Figure 1: Overview of current EU instruments according to different disaster management phases



Source: Authors' elaboration

1.3. The role of Cohesion Policy: how it has addressed disaster response and recovery

1.3.1. Cohesion Policy funds allocated to climate change adaptation and risk management in 2021-2027

EU Cohesion Policy is one of several tools used to respond to disasters caused by natural hazards (Hochrainer-Stigler et al., 2022). **It plays a vital role in directing investments towards creating a more resilient environment**, preventing the most severe impacts of disasters, and enhancing regions' preparedness for such events. A concrete example of disaster risk reduction in European Cohesion Policy is the funding allocated for flood-management projects in vulnerable regions. The EU has

supported the construction of flood defences, improved drainage systems, and the restoration of natural floodplains in areas prone to flooding. These interventions not only help to protect local communities and infrastructure but also promote environmental sustainability by strengthening ecosystem resilience.

Cohesion Policy also fosters cooperation among regions facing similar risks, particularly in cross-border contexts, thereby enabling more effective responses. It supports initiatives aimed at climate-proofing, building resilience, and enhancing prevention and preparedness efforts. Funding opportunities available in the 2021–2027 period help Member States and regions to develop risk assessments, thereby contributing to the EU's broader objectives for climate-change adaptation (European Commission – DG REGIO).

Cohesion Policy safeguards citizens by investing in areas such as forest-fire prevention, flood-risk management, and resilience to various disaster risks, including weather-related events that often transcend national borders and are exacerbated by climate change. Specific challenges vary according to geographic location: southern and central Europe experience more heatwaves, forest fires, and droughts, while northern and north-eastern Europe face increased rainfall and flooding, alongside sectoral vulnerabilities in tourism and agriculture. As local and regional authorities are the first responders to disaster impacts, EU Cohesion Policy plays a vital role in supporting disaster-risk management capacities.

Recent data[8] on the 2021-2027 programming period shows that, as of September 2025, approximately EUR 17,943 million (of which EUR 13,397 million of EU contribution) have been allocated by Cohesion Policy programmes funded by the ERDF, CF and JTF to climate adaptation and risk management.

This represents 4.5%[9] of the total budget for ERDF, CF and JTF (EUR 396,084 million)[10]. Just over 50% of the resources assigned to climate change adaptation are allocated to adaptation and prevention of floods and landslides – see figure 2 below.[11]

The countries with the highest percentage of resources allocated to climate-change adaptation and risk management, relative to their total planned ERDF, CF and JTF funds, are Bulgaria (11.4% of total ERDF, CF and JTF), Cyprus (8.3%), Greece (7.6%), Slovenia (6.7%), Poland (5.4%), Germany (5.1%), and Croatia (5%). Interreg programmes also show a high share of resources devoted to climate adaptation and risk management, at 8.0% of their total resources (see figure 3 below).

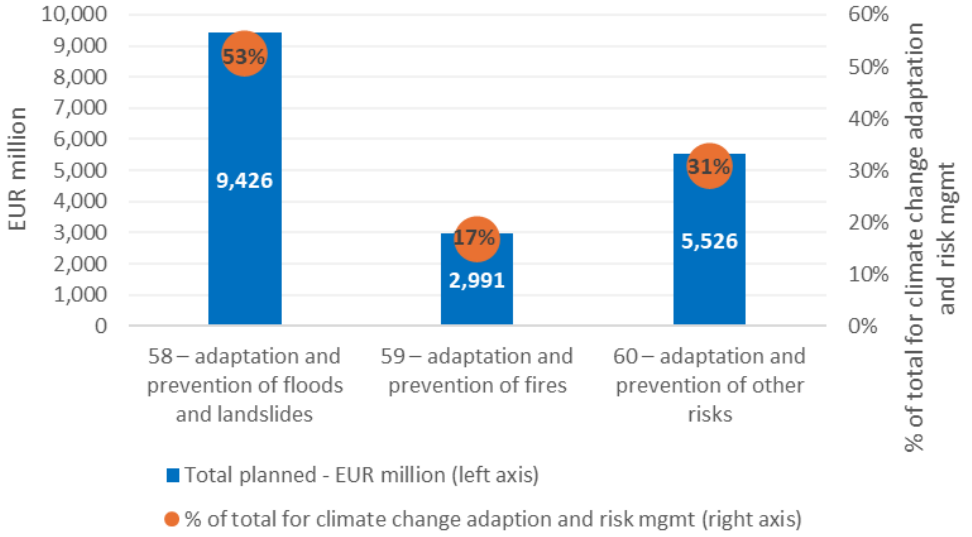
[8] See Cohesion Open Data Platform: https://cohesiondata.ec.europa.eu/2021-2027-Categorisation/2021-2027-Planned-finances-detailed-categorisation/hgyj-gyin/about_data. The dataset was downloaded at the beginning of October 2025.

[9] This is higher than the 3% reported in a previous EP study on "Climate adaptation using Cohesion Policy", which used data retrieved in June 2024 and calculated the ratio differently (see Gancheva et al., 2024). Indeed, the 3% ratio calculated in the 2024 study considered at the denominator all funds including ESF, while the numerator captures only ERDF/CF/JTF allocations. On the contrary, the 4.5% ratio in the present report considers a numerator and a denominator which are coherent, and include ERDF, CF and JTF.

[10] The contribution of JTF is very limited, with approximately just EUR 40 million allocated to the intervention field 60 – adaptation and prevention of other risks.

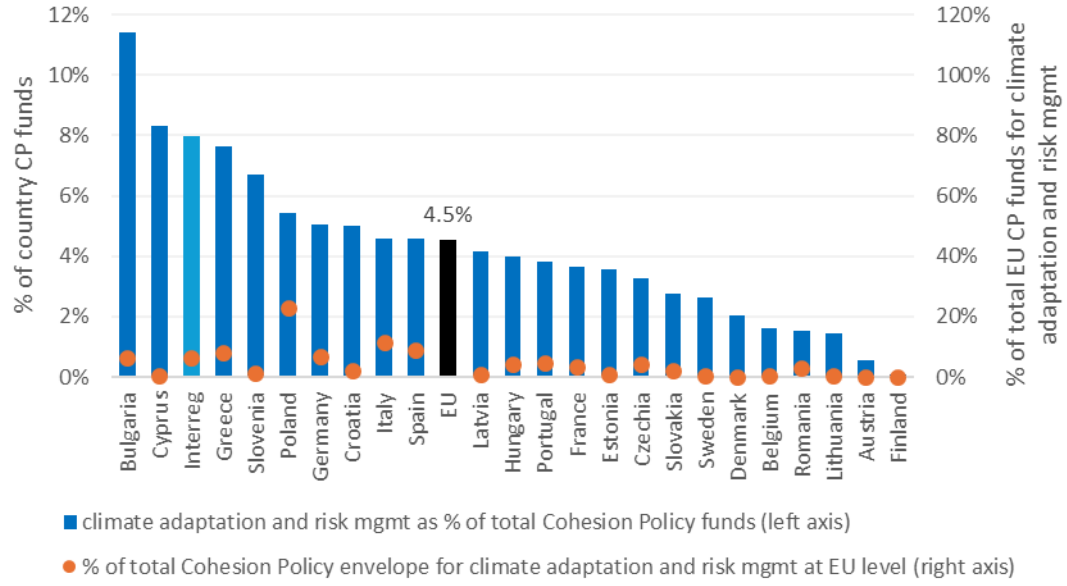
[11] It is worth mentioning also REACT-EU (Recovery Assistance for Cohesion and the Territories of Europe) which was launched in 2020 as part of the EU's immediate response to the social and economic impacts of the COVID-19 pandemic. It provides additional resources to existing Cohesion Policy funds, mobilizing EUR 50.6 billion from the ERDF and ESF+ for 2021–2022. Even though it focuses on supporting job retention, healthcare systems, SMEs, and investments in green and digital transitions, with a 100% EU co-financing and a high pre-financing rate, REACT-EU ensures swift deployment of funds and has been helpful in enhancing crisis-response capacities and preparing for a sustainable recovery across EU regions.

Figure 2: Cohesion Policy funds (ERDF, CF and JTF) allocated to climate change adaptation and risk management by intervention field in 2021-2027



Source: own elaboration on Cohesion Open Data Platform – DG REGIO

Figure 3: Share of Cohesion Policy funds (ERDF, CF and JTF) allocated to climate-change adaptation and risk management in 2021–2027



Note: The blue bars represent the proportion of ERDF/CF/JTF resources allocated to adaptation and risk management in each Member State (MS), relative to the total Cohesion Policy funds they receive. The orange dots indicate each MS's share of the total EU resources (ERDF/CF/JTF) allocated to climate-change adaptation and risk management. Intervention fields considered in the calculation: 58, 59, 60.

Source: Own elaboration based on the Cohesion Open Data Platform – DG REGIO

The countries absorbing the highest share of the total EU budget for climate-change adaptation and risk management are Poland, Italy, Spain, and Greece. Poland absorbs 23.3% of total EU funds and has the largest planned budget, amounting to EUR 2.4 billion under the programme European Funds for Infrastructure, Climate, Environment 2021–2027. Italy absorbs 11.6% of total EU funds, with almost all regional programmes allocating resources to climate adaptation and risk management. Spain and Greece account for approximately 9% and 8% of total EU funds, respectively. In Spain, the most relevant programme in financial terms is the Pluri-regional Programme Spain ERDF 2021–2027, while in Greece the most relevant programmes are Civil Protection and Environment and Climate Change. Together with Germany, Bulgaria, and the Interreg programmes, these countries absorb approximately 71% of the total European funds allocated to climate-change adaptation and risk management.

1.3.2. Key features of the 2021-2027 programming: enabling conditions and RESTORE

In the 2021–2027 policy framework, **enabling conditions** were introduced to "provide the funds with a solid conditionality mechanism ensuring that Member States put in place systems and arrangements needed for an effective and efficient implementation of Cohesion Policy" (European Commission, 2023c). Among these, the enabling condition 2.4 Effective disaster risk management framework requires a national or regional disaster-risk management plan that includes at least: a description of key risks; information on disaster-prevention, preparedness, and response measures to address the identified risks; and information on financing resources. The 2021–2027 framework mandates that Member States must comply with enabling conditions throughout the entire programming period, and payments from the Commission to Member States for the relevant specific objective may only occur once the necessary enabling conditions have been met.

In December 2024, in response to floods and wildfires in Central, Eastern, and Southern Europe, the European Parliament adopted the RESTORE Regulation 2024/3236 (European Parliament & Council, 2024). **RESTORE** allows EU countries to more easily channel the ERDF and the CF resources to post-disaster reconstruction for disasters occurring between 1 January 2024 and 31 December 2025. RESTORE enables Member States affected by climate-related disasters to benefit from a 95% co-financing rate for recovery initiatives under the ERDF. To ensure rapid support for territories impacted by natural disasters, an additional pre-financing of up to 25% of the total amount is available.[12]

Investments under RESTORE include the repair of damaged infrastructure (such as the reconstruction of public infrastructure or investment in fixed capital for businesses and equipment) and the restoration of natural areas, biodiversity, and green infrastructure, including Natura 2000 sites. RESTORE can complement other instruments, such as the EUSF. It introduces a new Cohesion Policy specific objective (SO 2.10): "supporting investments aimed at reconstruction in response to a natural disaster." As stated in recital (6) of the RESTORE Regulation, "in the context of reconstruction in response to natural disasters, operations based on the '**Build Back Better**' principle should be prioritised in the selection process" of projects financed under RESTORE.[13]

The most up-to-date financial data on the use of Cohesion Policy indicate that resources under the RESTORE mechanism have been introduced in five countries – Poland, Italy, Romania, Spain, and France – for a total of EUR 1,639 million across 14 national or regional programmes (see table below). The programmes with the highest amount of resources allocated under RESTORE are: the ERDF Reunion 2021–2027 and ERDF Mayotte 2021–2027 programmes in France; the ERDF Valencia 2021–

[12] It is worth mentioning that RESTORE also permits a flexible use of the European Social Fund Plus funds, in order "to finance short-term work schemes without the need to combine with active measures, support access to healthcare and provide basic necessities".
[13] The aim is to "increase the resilience of communities through integrating disaster risk reduction measures, as indicated in the United Nations Sendai Framework for Disaster Risk Reduction 2015-2030".

2027 programme in Spain; and the European Funds for Infrastructure, Climate, Environment 2021–2027 programme in Poland. It is worth noting that most of the resources allocated to the new RESTORE-related specific objective—almost 80% – are not funded under the intervention fields (codes 58, 59, 60) that identify climate-change adaptation and risk-management measures, and which were used in the above analysis. Instead, they fall under other intervention fields, such as "Provision of water for human consumption (extraction, treatment, storage and distribution infrastructure, efficiency measures, drinking water supply)" (code 62); "Waste water collection and treatment" (code 65); and "Other reconstructed or modernised roads (motorway, national, regional or local)" (code 93).[14] If these additional intervention fields are considered (amounting to an extra EUR 1.3 billion), the share of Cohesion Policy funds allocated to disaster-risk management would increase to 4.8% of the total ERDF/CF/JTF budget.

Table 1: ERDF and CF allocated to RESTORE (EUR million)

Member States and Programmes	RESTORE		
	Intervention fields 58-59-60	Other intervention fields	Total
Spain	**186.9**	**186.7**	**373.6**
Programme Region of Valencia ERDF 2021-2027	183.6	186.6	370.2
Programme Region of Murcia ERDF 2021-2027	3.3	0.1	3.4
France	**22.5**	**518.2**	**540.8**
Programme Auvergne-Rhône-Alpes et des territoires Rhône Saône et Massif Central		19.5	19.5
Programme Mayotte ERDF 2021-2027	0.0	413.0	413.0
Programme Reunion ERDF-ESF+ 2021-2027	22.5	85.7	108.2
Italy	**46.7**	**4.1**	**50.8**
RP Sicilia ERDF 2021-2027	43.6	1.4	45.0
RP Valle d'Aosta ERDF 2021-2027	3.1	2.8	5.8
Poland	**101.5**	**535.0**	**636.5**
European Funds for Infrastructure, Climate, Environment 2021-2027		326.3	326.3
European Funds for Silesia 2021-2027	60.0	61.1	121.1
European Funds for Dolny Slask 2021-2027	10.5	76.2	86.7
European Funds for Opolskie 2021-2027	10.5	71.4	81.9
European Funds for Lubuskie 2021-2027	20.5		20.5
Romania	**22.6**	**15.0**	**37.6**
North East		15.0	15.0
South East	22.6		22.6
Total	**380.3**	**1,259.0**	**1,639.3**

Source: own elaboration on Cohesion Open Data Platform – DG REGIO

[14] Respectively, 16%, 14% and 29% of total RESTORE.

Box 1: Examples of how national and regional authorities mobilised Cohesion Policy funds following the RESTORE regulation

In **Valle d'Aosta** (Italy), the Managing Authority requested an amendment to the 2021–2027 ERDF Programme in March 2025 to support investments aimed at reconstruction in response to the major floods that occurred on 29 and 30 June 2024[15] (the Commission approved the changes in July 2025). The funds will be used for hydraulic works and landslide-mitigation measures.

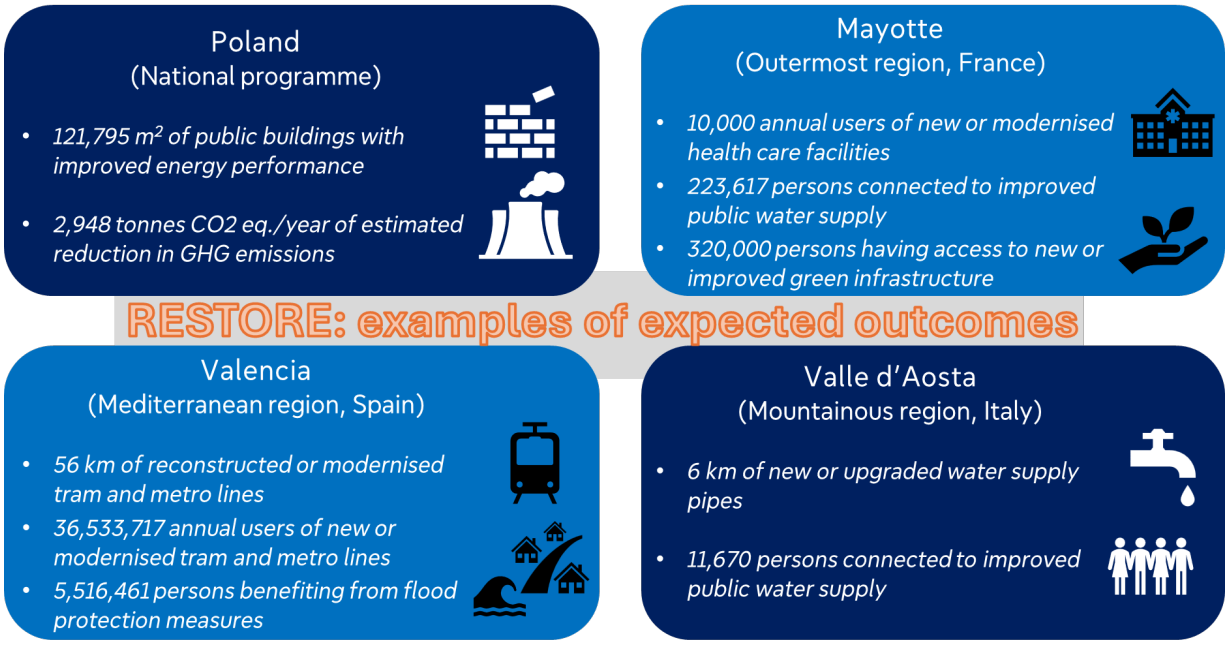
In **Valencia**, RESTORE, complemented by the EUSF (EUR 945 million), will be used to boost reconstruction (e.g. rebuilding of infrastructures, restoring ecosystems, etc.)[16] after the devastating DANA[17] floods of October 2024, which caused over 230 deaths and severe damage to homes, schools, hospitals, transport networks, and businesses.

In the French outermost region of **Mayotte**, RESTORE was used, also in this case together with the EUSF, to address the devastating aftermath of cyclone Chido (December 2024)[18]. In April 2025, a call for tender[19] was launched with the primary objective to "support the reconstruction and strengthening of Mayotte's resilience to natural disasters, [...] and accelerating the reconstruction of damaged infrastructure, while improving preparedness and response to future disasters".

In **Poland**, RESTORE funds were mobilised in response to the flood which devastated the south-west of the country between the 14th and 16th of September 2024[20]. At the beginning of 2025, the 2021-2027 National Programme "EU Funds for Infrastructure, Climate, and Environment" was amended and RESTORE planned for the post-flood reconstruction, and for investments strengthening resilience to future disasters (e.g. reconstruction and expansion of water and sewage systems and other infrastructures).

[15] Photo from https://www.lastampa.it/aosta/2024/07/22/news/conto_danni_alluvione_cervinia_cogne-14496249/
[16] Photo from https://www.vanityfair.it/article/che-cosa-significa-dana-perche-immagini-valencia-dovrebbero-far-riflettere-tutti
[17] DANA stand for Depresión Aislada en Niveles Altos" (Isolated Depression at High Altitudes).
[18] Photo from https://www.vaticannews.va/en/pope/news/2024-12/mayotte-devastated-by-cyclone-chido.html
[19] See: https://aides-territoires.beta.gouv.fr/aides/reconstruire-mayotte-apres-les-catastrophes-naturelles-cyclones-chido-et-dikeledi/, and: https://europe-a-mayotte.yt/2025/09/19/appels-a-projets-feder-fse-restore-la-contribution-de-leurope-pour-la-reconstruction-et-le-developpement-de-mayotte/
[20] See: https://getrealonclimatechange.org/2024/09/24/southern-poland-under-water-an-appeal-for-help/

Figure 4: Examples of RESTORE results expected by 2029



Source: own elaboration on Cohesion Open Data Platform – DG REGIO

1.3.3. Evidence on Cohesion Policy effectiveness from literature

Over the last two programming cycles, EU Cohesion Policy has played an increasingly strategic role in supporting disaster response and recovery across Member States. While its primary mission remains reducing regional disparities and promoting sustainable development, Cohesion Policy has progressively integrated climate resilience and risk management into its investment logic, particularly in regions exposed to hydrogeological, seismic, and climate-related hazards. Based on a search of the European Commission evaluation library,[21] eleven national and regional evaluations of Cohesion Policy specifically focused on the thematic objective of promoting climate-change adaptation, risk prevention, and management were identified and reviewed.[22] A list of the evaluations is provided in Annex 1. These evaluations, conducted between 2019 and 2023, concentrate mainly on ERDF projects. They cover interventions across eight Member States, including Germany, Italy, France, Slovakia, and Croatia in the 2014–2020 programming period. The majority of interventions addressed flood risk, but several also targeted landslides, wildfires, coastal erosion, earthquakes, and pandemic impacts. Most funding was directed towards **preparedness and prevention**, though some evaluations also addressed recovery.

The evaluations show that Cohesion Policy has supported a wide array of interventions, with a strong focus on structural flood-protection measures, including dikes, retention basins, and barriers (e.g. Stengl, 2023b; Gallenz et al., 2021). Other projects supported the modernisation of civil protection infrastructure, including early-warning and communication systems (PRJ Consulting, 2022). In France's Loire River Basin, approximately 45 projects supported local risk-management strategies and contingency planning (Edater, 2022).

[21] See: https://ec.europa.eu/regional_policy/policy/evaluations/member-states_en

[22] In the library there are also other evaluations focusing on interventions funded by the Thematic Objective 5, but together with other Thematic Objectives. These evaluations are not specifically aimed at assessing interventions which promote climate change adaptation, risk prevention and management. These evaluations analyse the general advancement of the funded projects and some of them are more focused on energy field or on measures for cultural heritage and transport.

The construction of several infrastructure assets was financed (e.g. 14 flood-protection structures in Slovakia), together with the modernisation of communication networks and the development of risk maps and planning tools. In Corsica, nearly 14,350 residents were expected to benefit directly from improved flood-protection infrastructure (Teritéo, 2023).

The evaluations identified a number of **recurring challenges hindering the use of Cohesion Policy funds**. For example, in **Sardinia**, projects experienced significant delays, and the absorption of funds remained low — only 1.3% of available resources for hydrogeological risk prevention were spent due to the lack of a comprehensive and updated project pipeline (Mandarino, 2021). Bottlenecks such as **administrative complexity**, **unclear selection criteria**, and **delays in environmental authorisations** were frequently cited (Stengl, 2023a; t33 & IZI, 2021). The **monitoring of outcomes and long-term impacts** was often limited, with most evaluations focusing on outputs — such as the number of structures built — rather than on reductions in vulnerability or improvements in adaptive capacity.

Despite these challenges, more recent evaluations highlight a **growing integration of disaster risk management** with climate adaptation and territorial planning. Interventions increasingly include **non-structural measures** such as risk mapping, governance improvements, and NBS. In Slovakia, for instance, evaluations recommended stronger prioritisation of projects based on vulnerability and strategic criteria (Stengl, 2023b). In France, synergies between flood-risk prevention and biodiversity goals were highlighted (Edater, 2022). In Croatia, the integration of digital tools and early-warning systems was seen as a step towards more agile and comprehensive risk management (PRJ Consulting, 2022).

In conclusion, the reviewed evaluations clearly show that Cohesion Policy has made **meaningful contributions to disaster preparedness and resilience** across Europe. While many interventions still revolve around infrastructure, there is a growing emphasis on **systemic and climate-resilient approaches** aligned with broader policy goals such as the European Green Deal and the EU Climate Adaptation Strategy. By combining physical protection with planning, digitalisation, and governance improvements, Cohesion Policy is increasingly supporting regions not only in responding to risks but also in **anticipating and managing them more effectively**.

The evaluations provide clear recommendations to enhance the contribution of Cohesion Policy to disaster-risk management. These include:

- Establishing clearer selection criteria based on risk and vulnerability (Gallenz et al., 2021; t33 & IZI, 2021;
- Updating and aligning territorial risk assessments and planning tools (Mandarino, 2021; Teritéo, 2023);
- Improving coordination between MAs, civil protection agencies, and environmental bodies (Edater, 2022);
- Strengthening result-based monitoring systems to better capture long-term resilience and adaptation outcomes (Stengl, 2023b).

The evaluation findings are consistent with the broader analysis provided by a European Parliament study (Gancheva et al., 2024), which offers a comprehensive overview of how Cohesion Policy contributes to climate resilience across Europe. The study highlights a clear upward trend in funding for adaptation, with resources increasing from approximately EUR 8 billion in the 2014–2020 period to an estimated EUR 17 billion planned for 2021–2027. It also notes that despite this growth, **climate adaptation remains a relatively small share of the overall Cohesion Policy envelope**, suggesting that its role — while increasing — is still limited in financial terms. Furthermore, the study underscores the need for improved dialogue and cooperation across sectors and stakeholders, particularly between

policymakers (e.g. MAs) and businesses, whose expectations often extend beyond civil-protection measures, awareness raising, and capacity building.

The study also highlights that businesses — particularly **small and medium-sized enterprises (SMEs) — face difficulties in accessing climate-adaptation funding** under Cohesion Policy. The barriers are both practical and institutional: limited awareness of available funding opportunities, insufficient technical support for project preparation, and administrative burdens that discourage participation. These obstacles may limit the involvement of the private sector in building resilience, despite its critical role in sectors such as construction, energy, agriculture, and tourism. The limited involvement of SMEs in mainstreaming climate-change adaptation is also exacerbated by a lack of synergies between climate-adaptation and innovation policy, as highlighted, for example, by a recent analysis of Cohesion Policy in Poland (Murzyn, 2025).

1.3.4. Evidence on Cohesion Policy use and effectiveness from a survey of MAs

Information on the use of Cohesion Policy in disaster management was gathered through a survey conducted between August and September 2025, targeting the MAs of the 2021–2027 programming period. An online semi-structured questionnaire was designed and sent to 243 MAs. It combined closed and open-ended questions to capture both quantitative evidence and qualitative perspectives on the strengths and weaknesses of Cohesion Policy funds across different phases of disaster management, the use of specific EU initiatives such as RESTORE, and awareness of other EU instruments.

A total of 40 valid responses were collected (approximately a 16% response rate). Respondents included MAs responsible for different types of programmes (ERDF, Interreg, etc.), thereby ensuring diverse representation.[23]

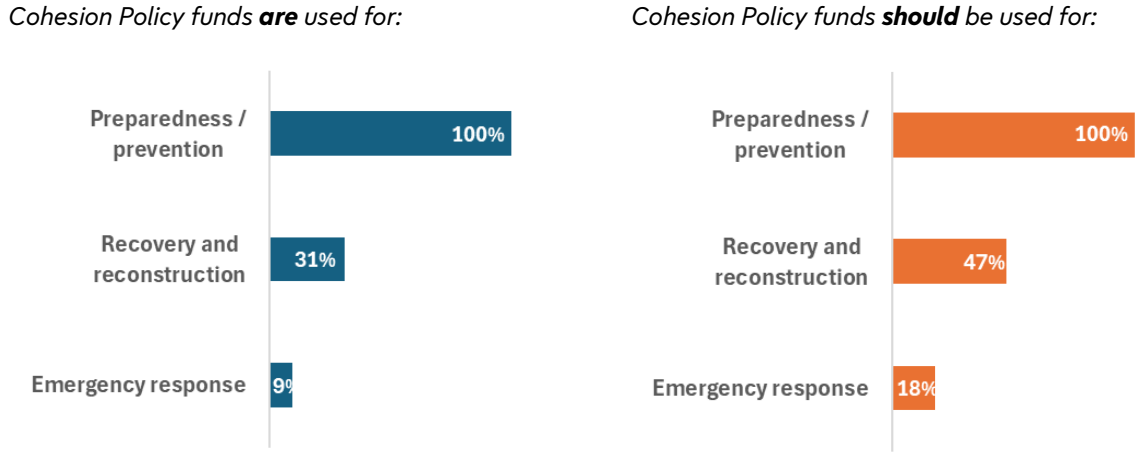
In Cohesion Policy, there is a **strong emphasis on prevention and preparedness**. According to the survey, all respondents indicated that funds are used for this phase of disaster management, with climate-change adaptation emerging as a recurrent theme, often backed by significant financial allocations. Typical measures include investments in climate-adaptation infrastructure, flood protection (e.g. river embankments, stormwater management, water-retention systems), soil protection and anti-landslide interventions, and drought mitigation (e.g. water-resource management, ecosystem resilience).[24] These measures primarily address climate-related disasters such as floods (particularly linked to increased rainfall), landslides, storms, and droughts.

By contrast, Cohesion Policy is less suitable for **immediate emergency response or relief**, as only **9% of respondents** reported financing interventions in the immediate aftermath of disasters. Very few cases of immediate relief were mentioned, apart from isolated examples of support to victims of floods, fires, or droughts. This limited role likely reflects the fact that **emergency response is often covered by other EU instruments**, such as the EUSF or the UCPM. Attention to the **recovery and rebuilding** phase is more limited than for prevention, but is more frequently mentioned than emergency response (31% of respondents). In this respect, the focus is mainly on seismic-risk reduction and earthquake resilience.

[23] Responses were received from: Austria, Belgium, Bulgaria, Czechia, Finland, France (La Réunion), Germany, Greece, Croatia, Italy, Luxembourg, Poland, Portugal (Azores), Romania, Slovenia and Sweden. Responses cover nine interregional cooperation programmes: Italy-Slovenia, Romania-Bulgaria, Italy-Austria, IPA Romania-Serbia, Germany (Brandenburg)-Poland, Danube Region, Sweden-Denmark-Norway (Öresund-Kattegat-Skagerrak), Atlantic Area, Northern Periphery and Arctic.

[24] The most commonly used intervention fields are 058-060. Nonetheless some other complementary intervention fields are also used: 046, 064, 079.

Figure 5: In which disaster management phase are Cohesion Policy funds used?



Note: multiple responses were allowed.

Source: survey of MAs

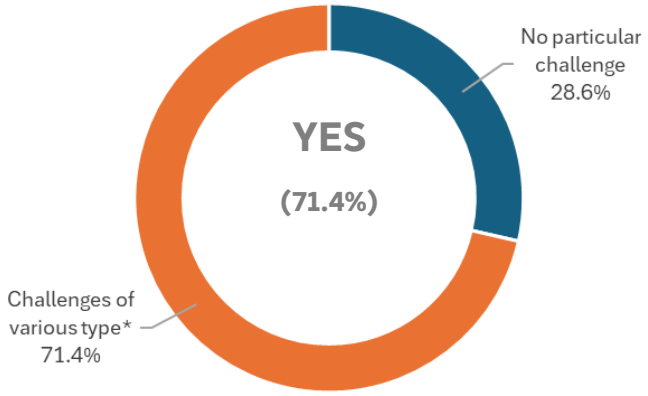
Cohesion Policy is used predominantly for prevention and preparedness, and it is also perceived by MAs as best suited to these purposes (100% of respondents). A considerable number of MAs also consider it suitable for long-term recovery and reconstruction (47%), while only a limited number see it as appropriate for immediate relief (18%). The reasons for favouring prevention include: alignment with the long-term nature of Cohesion Policy (programmes are designed for structural investments, infrastructure, and preventive measures rather than immediate emergency response); the complexity of Cohesion Policy procedures (the funds are too complex and slow for urgent disaster relief but work well for preparedness and recovery); and added value in knowledge-sharing (some Interreg programmes emphasised their role in cross-regional learning and capacity-building).

Cohesion Policy is also used to finance innovative practices such as projects integrating climate resilience and urban planning,[25] innovative water management for stormwater and snowmelt, participatory models for housing reconstruction, and dissemination and knowledge-sharing through open-source materials.[26]

Approximately 70% of respondents stated that they had encountered challenges in programming or implementing disaster-related operations. According to respondents, these challenges are consistent with those typical of Cohesion Policy programmes and include: delays (e.g. due to late closure of 2014–2020, changes in programme priorities, or administrative and technical hurdles in reconstruction projects); bureaucracy and complex procedures; eligibility issues (difficulty in defining measures that fit the programme scope); long programme cycles; and lack of co-financing.

[25] "The RIMU CLIMA Project – Integrated Umbrian Metropolitan Resilience to Climate Change." (ERDF Programme Umbria – Italy)
[26] "Open-source e-book that showcases the practical experience of different projects." (Interreg Atlantic Area Programme 2021-2027)

Figure 6: Were challenges encountered in programming or implementing these disaster-related operations?



* delays of programming and during implementation, bureaucracy and complex procedures, eligibility issues and interpretation doubts, long-term Cohesion Policy cycles, lack of cofinancing

Source: survey of MAs

Approximately 14% of survey respondents used RESTORE or intend to use it during programme implementation for reconstruction and resilience-building. Respondents who intend to use RESTORE view it as an add-on instrument that provides flexibility and access to additional resources, which is particularly valuable for Member States strongly affected by disasters.

Interventions planned under RESTORE include the reconstruction of housing and the strengthening of infrastructure resilience (see above for examples of how RESTORE is used). Respondents who neither use nor plan to use RESTORE noted that national funding was available, making RESTORE unnecessary, and highlighted uncertainty regarding how to implement RESTORE within specific programmes (e.g. Interreg). Critical perspectives also pointed out that most financial resources had already been allocated elsewhere and that RESTORE has a perceived weak connection with the core logic of Cohesion Policy, which is not designed for rapid responsiveness.

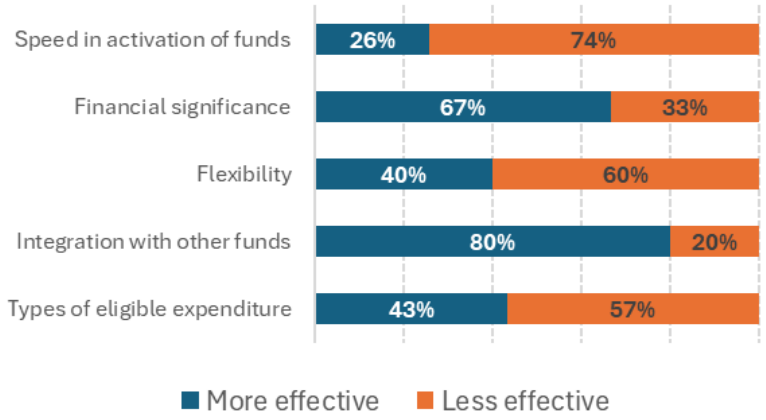
RESTORE is not the only change in Cohesion Policy approach introduced in the 2021–2027 programming period compared to 2014–2020. Survey respondents noted that a specific objective related to disaster prevention had been introduced, with more concrete measures incorporated.

Beyond the changes introduced — including RESTORE — respondents identified several strengths of Cohesion Policy in relation to disaster management, including: long-term and predictable funding that provides security for strategic investments; support for infrastructure and climate adaptation, enabling large-scale prevention and recovery projects; flexibility to include disaster-related actions; cross-border and transnational cooperation (e.g. Interreg was praised as the only tool allowing coordinated regional action); and innovation and integration (Cohesion Policy encourages the incorporation of resilience into broader development projects).

Several weaknesses were also identified, such as: the long-term orientation of Cohesion Policy being poorly suited to emergencies; Cohesion Policy being perceived as too slow and complex for immediate disaster relief; budgetary limitations due to competing priorities; a focus on specific risks (e.g. floods and fires); overlaps with other funds; and administrative complexity (e.g. implementation delays and heavy procedures that reduce effectiveness in urgent contexts).

Compared with other EU instruments,[27] the speed of activation of Cohesion Policy funds is considered slower. Their financial significance is also perceived as less important than that of instruments such as the RRF, which provide large allocations more rapidly.

Figure 7: How does Cohesion Policy compare with other EU instruments?



Source: survey of MAs

With respect to flexibility of purposes, views are mixed. Some MAs emphasise that Cohesion Policy allows a broad range of investments, while others argue that it is constrained by rigid programming cycles and procedures. Similarly, views differ regarding eligible expenditure: some MAs consider Cohesion Policy more effective because it offers broader eligibility, whereas others argue that other instruments have clearer, disaster-specific eligible costs (e.g. the EUSF). Regarding integration with other funds, most respondents expressed positive views, noting that Cohesion Policy is effective in combining resources and aligning with other funding sources. Considering the weaknesses identified, there is clear room for improvement in the use of Cohesion Policy funds across the phases of disaster risk management.

For preparedness and prevention — the main focus of Cohesion Policy — recommendations include: simplifying procedures and reducing bureaucracy (less regulatory burden and easier application processes); increasing flexibility in actions and eligibility to allow a broader scope of preventive measures; strengthening the capacity of local authorities to design and implement preventive actions; increasing investments in infrastructure, particularly for climate adaptation and flood/fire prevention; and promoting knowledge-sharing on efficient solutions and cross-regional learning.

For disaster relief — even though this is not considered an appropriate primary focus for Cohesion Policy — if the funds are used to support immediate response, it is important to streamline procedures, particularly for local governments and NGOs (e.g. for selection and contracting), to enable rapid response capacity and complement other instruments rather than duplicate them.

For medium- and long-term rebuilding, it is important to adapt Cohesion Policy to long-term recovery horizons, as many reconstruction projects exceed the seven-year programme cycle; expand support beyond physical reconstruction to include social and economic recovery; link prevention and rebuilding efforts more closely; and improve monitoring systems with better data on hazards and risks to guide rebuilding.

[27] It is worth noting that the extent to which other EU instruments are known by MA participating in the survey is limited. Only RRF and EUSF are quite well known (87% of respondents are familiar with the Next Generation EU and 74% with EUSF). Awareness of UCPM is low (36%), despite its central EU role in disaster management while other instruments, described in chapter 1.1 are barely recognized (15%).

2. BUILD BACK BETTER: HOW THIS APPROACH CAN BE INTEGRATED IN COHESION POLICY

KEY FINDINGS

- The Build Back Better (BBB) approach represents a shift from restoring pre-disaster conditions to enhancing resilience and reducing future vulnerabilities, integrating both structural and non-structural measures. The aim of resilient recovery is shared by the international and national BBB frameworks, though each framework emphasises different aspects, such as risk reduction and governance (G20), sustainability and circularity (OECD), and local leadership and capacity-building (Asian Development Bank).
- Empirical evidence shows that BBB yields long-term economic and social benefits, but implementation faces governance challenges, including limited community participation, time pressure after disasters, and the absence of standardised metrics for assessing BBB success.
- EU instruments such as the European Union Solidarity Fund (EUSF) and RESTORE increasingly align with BBB principles, emphasising resilience, sustainability, and inclusiveness in post-disaster reconstruction.
- Embedding the BBB approach into Cohesion Policy requires legal, financial, and governance adjustments to promote preventive, risk-based solidarity and to incentivise resilience-building over simple reconstruction.

2.1. In-depth analysis of the BBB approach and its characteristics

2.1.1. Introduction

The concept of BBB has emerged as a fundamental principle in contemporary disaster-risk reduction and recovery practices. This approach represents **a shift from traditional disaster response focused solely on restoring pre-disaster conditions to one that actively seeks to enhance resilience and reduce future vulnerabilities**. It was first introduced in 2006 by the United Nations Secretary-General's Special Envoy for Tsunami Recovery. In 2015, BBB was incorporated as the second half of Priority 4 in the Sendai Framework for Disaster Risk Reduction 2015–2030,[28] acknowledging its extensive application and acceptance among disaster-risk management practitioners, policymakers, and researchers (Fernandez and Ahmed, 2019). Additionally, BBB gained recognition in the health domain and in the broader strengthening of societal resilience in post-COVID-19 activities.[29]

Generally speaking, **BBB should incorporate both structural and non-structural measures** within reconstruction programmes (Fernandez and Ahmed, 2019). However, Mannakkara and Wilkinson (2015) noted that the emphasis on rebuilding the built environment and the economy often overshadows social and psychological recovery. As a result, they proposed a set of revised BBB

[28] It is an agreement which is aimed at reducing disaster risks and losses in lives, livelihoods, and assets. Its guiding principles promote prevention and resilience through four main priorities: understanding risk, strengthening governance, investing in risk reduction, and enhancing preparedness. See: https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030

[29] The EU created for example its Next Generation EU recovery plan which it framed as a "once in a lifetime chance to emerge stronger from the pandemic, transform [...] economies, create opportunities and jobs for the Europe where we want to live" (Recovery plan for Europe - European Commission, 12.11.2025).

principles focused on social recovery, categorised into community support and community involvement (see also the figure below).

The scientific literature on BBB has expanded considerably since its introduction. Research trends have evolved from conceptual discussions to more empirical studies examining implementation experiences and outcomes (Fernandez and Ahmed, 2019). Current research focuses on: Developing frameworks to evaluate the effectiveness of BBB interventions (e.g. Zhou et al., 2022); Community-centred approaches, based on participatory methods which recognise the value of local knowledge and needs (e.g. Ngulube, 2024; Fan and Albuerne, 2022); Linking BBB with climate-change adaptation strategies (e.g. Mannakkara, 2021).

2.1.2. Key characteristics and objectives of BBB

The BBB approach emphasises the need to rebuild in ways that reduce disaster risks and foster sustainable development. As previously noted, rather than simply restoring pre-disaster conditions, BBB seeks to enhance resilience and reduce future vulnerability throughout the reconstruction process. International guidelines issued by various organisations articulate the different dimensions of BBB, while national frameworks — such as the "Betterment" approach in Australia — help identify the key features that an operational definition of BBB should ideally incorporate. These are described in the following paragraphs.

International guidelines

International guidelines on BBB adopt different approaches and emphasise slightly different aspects of the concept. The figure below presents some illustrative examples.

Figure 8: Different dimensions of BBB as covered by different approaches

Source: G20 Disaster Risk Reduction Working Group 2023; Mannakkara and Wilkinson 2016; OECD (2020). Building back better: A sustainable, resilient recovery after COVID-19; ADB (2025). Building Back Better Sector Guides. Volume1: Overview.

BBB, as outlined by the G20 and drawing on the work of Mannakkara and Wilkinson (2016), places emphasis on three core elements: reducing disaster risk; supporting community recovery — including

psycho-social assistance; and establishing the institutional and legal frameworks needed to ensure effective implementation. The approach developed by the Asian Development Bank (ADB) complements this by including additional dimensions, such as local leadership and capacity-building. The OECD's post-COVID-19 BBB guidelines, by contrast, emphasise various aspects of sustainability related to BBB, including reducing greenhouse-gas emissions, limiting biodiversity loss, and improving supply-chain resilience and circularity. Overall, these approaches are complementary and can be considered jointly.

Betterment in Australia

In Australia, aspects of BBB have been framed under the concept of "Betterment", which integrates several of the elements outlined above (Australian Government, 2023). This approach provides a strategic framework that focuses on improving resilience and reducing future risk during post-disaster recovery. Rather than merely restoring affected areas to their pre-disaster conditions, it emphasises strengthening infrastructure, community services, and environmental practices so they are better able to withstand future events.

A central component of the Betterment approach is investment in **resilient infrastructure**. This involves rebuilding structures to be more robust and capable of resisting future hazards, including through the use of hazard-resistant design techniques. The approach also recognises the importance of **community engagement**, ensuring that local populations are actively involved in the recovery process. By incorporating their insights and needs, reconstruction efforts can align more closely with community priorities and contribute to greater overall resilience.

Sustainability is another key dimension of Betterment. The approach promotes environmentally sustainable practices, such as restoring natural barriers (e.g. wetlands) that help mitigate disaster impacts while preserving local biodiversity. It also includes comprehensive risk assessments to identify vulnerabilities and guide planning and investment decisions, ensuring that recovery measures address underlying risk drivers rather than focusing solely on immediate restoration.

Long-term planning is equally important. Betterment encourages strategies that take account of future risks, climate-change impacts, and demographic trends, fostering a proactive rather than reactive approach to recovery. Overall, the Betterment approach aims to create safer and more resilient communities that are better prepared for future disasters, while also enhancing the quality of life for residents. This represents a shift from traditional recovery practices towards a more holistic and forward-looking strategy.

2.1.3. Summary of benefits and limitations

Overall benefits

A World Bank study suggests that when countries rebuild stronger, faster, and more inclusively after disasters, they can reduce the impact on people's livelihoods and well-being, potentially cutting global average losses (The World Bank, 2018). This evidence indicates that while BBB may require higher initial investments, the long-term benefits significantly outweigh the costs through reduced future disaster losses and improved overall resilience. Leveraging the reconstruction process to enhance assets and increase their productivity — for example, by integrating modern technologies or upgrading outdated infrastructure to meet present and future demands — would generate additional economic benefits, making investment in an improved recovery and reconstruction process even more compelling (The World Bank, 2018, p. 3).

> "*Building back better and stronger after a natural disaster is one of the most effective ways of ending the cycle of poverty and vulnerability that can trap people and communities*"
>
> (John Roome, Senior Director, World Bank Group, 2018)

Key practical limitations of BBB

In theory, the concept of "build back better" is widely understood. However, many experiences have shown that it is easier to propose than to realise (Fernandez and Ahmed, 2019).

Lack of knowledge or too narrow conceptualisation of BBB

Wisner (2017) illustrates how complex and difficult it is to implement a 'build back better' approach to disaster recovery. He argues that disaster risk is the result of an accumulation of underlying factors, and that focusing primarily on the triggering event — such as a flood or earthquake — is too narrow an understanding of BBB. Instead, he emphasises **the need to examine the processes of risk accumulation** and **the root causes of social vulnerability** to loss, injury, and death. These include limited access to resources and power, weaknesses in (local) governance structures, land-use planning issues, and the vulnerabilities of specific social groups (see also Blaikie et al., 2014).

In line with this perspective, Birkmann et al. (2023) analysed the reconstruction process in Germany's Ahr Valley after the devastating 2021 floods. Their findings show that researchers and decision-makers tended to focus on re-establishing or improving pre-disaster conditions through financial compensation, while insufficiently recognising the pre-existing destabilisation that contributed to the disaster.

Governance challenges related to time pressure

One of the major challenges in applying BBB principles is the inherent tension between the urgent need for immediate assistance and the long-term planning required for resilient reconstruction. In the aftermath of disasters, governments face pressure to minimise risk quickly, rebuild communities, and restore socio-economic stability. **This urgency creates a paradox: the rapid action needed for effective response can undermine the comprehensive planning required for BBB** (Finucane et al., 2020), potentially increasing long-term vulnerability.

This challenge is compounded by the central role of community engagement in BBB. Developing a holistic understanding of underlying vulnerabilities and creating sustainable risk-reduction solutions **requires meaningful consultation with affected communities** (Ingram et al., 2006). Yet such processes are time-consuming and difficult to implement in the immediate aftermath of an event, when communities are primarily focused on clean-up and urgent reconstruction activities.

Measuring BBB

Implementing and tracking BBB requires a practical set of indicators. However, no widely accepted set of metrics for assessing the success of BBB currently exists. Mannakkara and Wilkinson (2013) have suggested several aspects, including:

- the speed of reconstruction.
- the quality of outcomes — for example, with respect to rebuilt houses and roads, as well as wider disaster-risk outcomes such as exposure patterns.
- long-term beneficiary satisfaction.
- multidimensional, socially inclusive metrics based on community experiences throughout the recovery process.

Other researchers have proposed additional metrics, such as the availability of social infrastructure (e.g. sports facilities and community buildings) or the restoration of livelihoods such as farming or fishing (e.g. Platt and So, 2017; Rahmayati, 2016; Hettige and Haigh, 2016). However, evaluating change in relation to BBB is a complex task. Scorecards and indices that encompass a broad array of indicators

have considerable limitations (Fernandez and Ahmed, 2019). While quantifying tangible metrics — such as the number of houses rebuilt or jobs restored, and the associated economic benefits — may be relatively straightforward, assessing social and psychological recovery poses much greater challenges (Kim and Olshansky, 2014).

In line with the need to understand the root causes of disaster risk, qualitative aspects of the recovery process must be integrated into comprehensive BBB approaches. Platt et al. (2016) examined the use of different types of data — including satellite imagery analysis, volunteered geographic information (VGI), ground surveys and observations, social audits, household surveys, official publications and statistics, and insurance data — that may support quantitative analyses.

Specificities related to the EU regional development context

The BBB concept has not been very prominent at the EU level so far, despite the importance of post-disaster reconstruction. A key reason is that the primary responsibility for civil protection, including response and recovery, lies with the Member States. Indeed, according to Article 6(f) TFEU, the EU shall "carry out actions to support, coordinate or supplement the actions of the Member States". Nonetheless, an orientation consistent with BBB emerged in the context of COVID-19 recovery, with the aim to "emerge stronger from the pandemic" (European Commission, 2020). Moreover, several existing EU instruments reviewed in Chapter 1 of this study — such as the EUSF and RESTORE — have clear BBB potential, even if they are not explicitly labelled as such. The following paragraphs complement the Chapter 1 review by examining more specifically how these instruments relate to BBB principles.

BBB in Post-Pandemic activities

Although not explicitly referred to as BBB, the European post-COVID-19 recovery strategy was centred on achieving a more resilient, sustainable, and inclusive recovery from the crisis (European Commission, 2020). The Recovery Plan for Europe incorporates several key components, including establishing sustainability as a core principle and emphasising the need for a green recovery.

Economic resilience is a central aspect of the EU's post-COVID-19 approach to "Build Back Better". The EU aims to strengthen the resilience of its economies by investing in infrastructure, supporting businesses, and fostering innovation, thereby enabling Member States to better withstand future shocks and disruptions. To support these efforts, the EU established the **RFF**, which provides substantial funding to align recovery measures with long-term strategic objectives. This funding is intended to facilitate investments that promote **sustainability**, digitalisation, and social cohesion.

On sustainability, Member States are required to allocate funding to measures supporting the green transition, including energy-efficiency improvements that reduce energy consumption and dependence on fossil-fuel imports. The pandemic also highlighted the importance of **digitalisation** across sectors, and the EU is therefore committed to enhancing productivity, improving public services, and ensuring that economies can adapt to future challenges through deeper digital integration.

Social cohesion remains a priority of the EU's recovery strategy. As the pandemic exacerbated existing inequalities, the EU has sought to support vulnerable communities and ensure continued access to essential services. This focus on social equity is indispensable for fostering a more inclusive and resilient recovery.

In summary, the EU's approach to "Build Back Better" represents a transformative strategy aimed at turning the challenges of the pandemic into opportunities for a more sustainable and equitable future. To receive support under the Facility, Member States submitted National Recovery and Resilience Plans (NRRPs) detailing the reforms and investments planned until the end of 2026, including specific

milestones and targets. These plans were required to allocate at least 37% of their budget to green initiatives and 20% to digital initiatives.

The **Recovery and Resilience Scoreboard** provides an overview of progress in implementing both the Recovery and Resilience Facility and the National Recovery and Resilience Plans (European Commission, 2025a).

EUSF and BBB

The EUSF, described in Chapter 1 of this study as the main EU instrument supporting recovery from disasters, has a clear recovery focus and thus a potential BBB dimension. Initially, the EUSF was created in response to the massive flooding across central and eastern Europe. It enabled the EU to deliver rapid financial assistance to disaster-affected countries as an expression of solidarity with Member States. The fund originally focused on major disasters causing damage exceeding EUR 3 billion or affecting at least 1,500 people. In 2007, the regulation was revised to broaden eligibility criteria, allowing support for regional disasters and increasing the fund's budgetary ceiling. This reflected the need for a more flexible response to a wider range of events.

In 2014, the EUSF was further refined to include disasters linked to climate change and other environmental events, emphasising the EU's commitment to disaster resilience and recovery. In its resolution of 1 December 2016 on the EUSF, the European Parliament stressed the importance of revising the regulation to integrate the 'Build Back Better' principle (European Parliament, 2025).

During the COVID-19 pandemic in 2020, an additional significant amendment was introduced, allowing the EUSF to cover losses resulting from major public-health emergencies such as COVID-19 (Hochrainer-Stigler et al., 2023).

Overall, the EUSF has played a critical role in providing immediate financial assistance to Member States, enabling effective disaster response. The fund has supported various recovery efforts, including rebuilding infrastructure, restoring public services, and addressing the needs of affected communities. However, existing research has suggested that the EU "should consider pursuing its objective of 'practical solidarity' by reorienting the EUSF from a post-disaster response and aid instrument to a pre-disaster, risk-based solidarity instrument" to "reduce the disincentives for risk reduction inherent in post-disaster aid" (Hochrainer et al., 2010).

RESTORE and BBB

The Regional Emergency Support to Reconstruction (RESTORE) was introduced in response to the disasters that affected Central and Eastern Europe, notably the floods and wildfires of September 2024. RESTORE allows for more flexible use of funds to repair infrastructure, provide basic assistance, and support short-term work schemes. Recital (6) of the RESTORE Regulation (European Parliament & Council, 2024) underlines that the '**Build Back Better**' principle should be prioritised in the selection of projects financed under RESTORE (see section 1.3.2 above for further details on the use of RESTORE as of early October 2025).

2.2. Analysis of the conditions for an effective integration of BBB in Cohesion Policy

2.2.1. Key aspects to consider for effective integration of BBB

For an effective integration of the BBB concept into Cohesion Policy Framework, several aspects should be considered.

- **Clearly defining BBB objectives** that prioritise enhanced post-disaster resilience rather than the mere reconstruction of infrastructure. This should include consideration of the systemic root causes of disaster risk and draw on disciplines such as land management and spatial planning. BBB measures must also be **tailored to the distinct phases of recovery**: while initial efforts focus on emergency relief (e.g. shelter), strategic BBB plans need to guide the actual reconstruction phase (see also Table 2 below).
- **Legal and governance adjustments** could include **advisory mechanisms** to support municipalities in applying BBB principles. In addition, **reviewing timelines** and **simplifying methodologies** for implementing BBB should be considered. Restricting the use of funds to restoring pre-disaster conditions undermines the application of BBB principles.
- **Financial adjustments** should target the creation of **incentive mechanisms**, such as higher co-financing rates for projects aligned with BBB principles.

A clear definition of BBB objectives and opportunities

Existing research (e.g. Birkmann et al., 2023; Wisner, 2017) suggests that reconstruction processes following disasters can offer significant opportunities to enhance resilience in the context of ongoing societal and climatic changes, including future extreme events. However, in contrast to approaches that conceptualise resilience as an individual trait or place primary responsibility on individuals, it is **essential to address the contextual factors that shape vulnerability to build resilience effectively** after crises. The mere reconstruction of infrastructure is insufficient, as pre-disaster structures have already proven to be exposed and vulnerable. Relevant aspects that need to be considered include **land management**, **spatial planning**, **infrastructure reconstruction**, and **funding schemes for loss and damage**.

Funding mechanisms aimed at ensuring BBB must include requirements falling within the domains of "knowledge", "planning and governance", and "technology and infrastructure". In the knowledge domain, this should include support for analytical mechanisms, especially when decisions need to be taken rapidly. Such support may relate both to understanding the underlying root causes that generated disaster risk and require action, and to strengthening analytical capacity for developing and integrating more sustainable technologies and infrastructures.

Overall, it is essential that during both the transitional phase and the longer-term redevelopment phase, a primary objective such as vulnerability reduction is clearly defined and adequately monitored. Conventional quantitative indicators of progress — such as the number of houses constructed — which are frequently celebrated as evidence of recovery and development, may not sufficiently capture the extent to which vulnerability has actually been reduced (Ingram et al., 2006).

Timeline: differentiation of BBB measures according to recovery phases

To operationalise BBB, it is important to differentiate between the key phases of recovery and reconstruction (see Table 2 below). In the first weeks following an event, the focus is on clearing houses and roads and providing initial support, for example, through temporary infrastructure such as tents, temporary bridges, or emergency water supply (phases 1–2). The strategic application of BBB principles mainly concerns the reconstruction process. In these later phases (phases 3–5), different types of sustainability-enhancing measures — for example, land-use planning, restoration of livelihoods, and other actions addressing the root causes of disaster risk — should be implemented.

Birkmann et al. (2023) observed, in the case of the 2021 floods in Germany, that the initial phases of recovery and reconstruction (phases 1–2) unfolded within hours, days, and weeks after the event, and that the capacity to enhance disaster resilience was therefore limited at that stage. They note that the reconstruction phase (phase 4), involving private housing and essential services, and phase 5

(community development), offer multiple opportunities to increase resilience. These may include, for example, the development of new hazard maps and protection zones that incorporate climate-change effects and support adapted land use, or the stronger consideration of the needs of vulnerable groups (p. 12). The cleaning and restoration of landscapes and open spaces (phase 3) also provide opportunities to enhance resilience. In the case of floods, this may include land-use policies that encourage water retention and water capture during the landscape reconstruction process (e.g. in agriculture and forestry).

Table 2: Key phases of the recovery and reconstruction process and potential application of BBB

Phases	Application potential for BBB	
1st Phase: Disaster assistance during the first weeks after the event, including the clearing of damaged buildings and blocked roads, carried out by volunteers and emergency response institutions		**Low application potential** *in the first hours, days and weeks following a disaster, the focus is on emergency support*
2nd Phase: Recovery and relief support, including the provision of tents and other temporary infrastructure, as well as the drying of water-damaged buildings		
3rd Phase: cleaning and recovery of landscapes and open spaces		**High application potential** *BBB principles can be applied*
4th Phase: Reconstruction of houses and public infrastructure, carried out mainly on-site but, in some cases, through off-site relocation		
5th Phase: Community development and the full restoration of livelihoods		

Legal and governance adjustments

In line with the above aspects, several adjustments were proposed by participants in the survey of MAs (consistent with the views expressed by case study interviewees — see also Chapter 3 of this report). To address the BBB **knowledge gap**, for example, the Polish interviewee suggested establishing an advisory mechanism:

> *"A key issue concerns capacity asymmetry between municipalities: smaller local governments often lack the knowledge, technical expertise, and human resources to prepare adaptation plans, implement complex nature-based projects, or track performance indicators effectively. […] It would be important to "Establish dedicated advisory mechanisms to assist beneficiaries during project preparation and implementation, helping them integrate BBB principles effectively into funding applications."*
>
> (Polish case study)

Additionally, the **review of timelines** and **requirements** was proposed:

> *"Restoring heavily damaged structures necessitates more time than standard emergency repairs."*
>
> *"A prioritisation mechanism for BBB investments, particularly for critical infrastructures like hospitals, would be necessary to ensure effective resource allocation."*
>
> (Croatian case study)

"To better embed BBB principles, Cohesion Policy funds should introduce targeted requirements into existing regulations and implementation guidelines, particularly for lengthy rehabilitation and reconstruction activities."

(Slovenian case study)

It was also stressed that a more **simplified methodology** for accessing and using the funds is needed.

"A simplified methodology for demonstrating compliance with BBB should be specified, otherwise it would add to an already excessive administrative burden."

(Case study La Réunion)

A significant constraint that currently limits the application of BBB is the requirement to **reconstruct only up to pre-disaster conditions**. In practice, substantially enhancing structures and going beyond the pre-disaster status — for example, by improving the energy efficiency of buildings — is very difficult to administer.

"The majority of Solidarity Funds went hence to the renovation of public infrastructure, such as roads, for which coming back to the original state was ok."

(Croatian case study)

Financial adjustments

The main suggestions for financial adjustments relate to the creation of **incentive mechanisms** or **preferential treatment**:

"For enhancing the consideration of BBB principles, the introduction of an incentive such as a higher co-financing rate if compliance with the BBB principle is demonstrated could be useful."

(Case study La Réunion)

"Increased funding rates or preferential treatment for projects demonstrating strong BBB alignment to offset higher initial costs could be useful to enhance the integration of BBB into Cohesion Policy Funds."

(Polish case study)

For an example of incentive mechanisms which support BBB, see also the case study of the Canadian Disaster Financial Assistance Arrangements programme in Chapter 3.

2.2.2. How to enhance the integration of BBB

In light of the key aspects of BBB outlined above (section 2.2.1) and the main features of EU Cohesion Policy, the following table highlights how Cohesion Policy should — or could — address them. For more details, see section 4.2 of this study.

Table 3: Aspects to consider in enhancing the integration of BBB in Cohesion Policy

Aspects to consider	How Cohesion Policy should address them
Upfront definition of BBB objectives	• Integrate the BBB approach from the outset of programming. • Establish BBB as a key principle for reconstruction efforts; emphasise the need for systemic analysis, including the root causes of disaster risk; and encourage the case-by-case definition of BBB objectives, for example, through expert advice. • Highlight the role of horizontal disciplines such as land management and spatial planning. • Review eligibility criteria and fields of intervention; include a field of intervention covering both structural and non-structural measures in line with the BBB approach.

Differentiation of BBB measures according to recovery and reconstruction phases	• Strengthen the programming of funds (e.g. in the NRPP — National and Regional Partnership Plans 2028–34) by tailoring resilience-enhancing measures to the different recovery phases: cleaning and restoration of landscapes and open spaces; reconstruction involving private homes and essential services; and community development. • Develop a handbook with a menu of off-the-shelf measures to guide policymakers or design a dedicated set of guidelines that can be applied to develop case-by-case recovery strategies.
Legal and governance adjustments	• Strengthen the selection of operations by including the BBB principle among the project-selection criteria for interventions financed in response to a disaster (e.g. within the NRPP — National and Regional Partnership Plans 2028–2034). • Enhance the implementation of interventions and programmes by pursuing further simplification and strengthening monitoring, including through dedicated guidelines. • Allow reconstruction measures to go beyond pre-disaster conditions. • Establish a dedicated advisory mechanism.
Financial adjustments	• Develop incentive mechanisms for the application of BBB and adapt co-financing and payment schemes accordingly.

3. CASE STUDIES OF SUCCESSFUL INITIATIVES

KEY FINDINGS

- Clear legal and institutional mandates enable faster and safer recovery, while pre-disaster spatial planning and risk zoning facilitate resilient reconstruction.
- Governance coordination remains a persistent challenge. The response to the 2023 floods in Slovenia revealed gaps in coordination between the EU Solidarity Fund, national recovery instruments, and Cohesion Policy. Despite strong local capacity for damage assessment, delays occurred because responsibilities across ministries and EU fund channels were not clearly aligned.
- Technical capacity at local level is a bottleneck. In both Poland and Croatia, smaller municipalities struggled to design and procure projects that met the new resilience or green-infrastructure standards required for EU co-financing. Several case studies propose regional technical helpdesks or shared design-support units — a practical solution to make BBB achievable beyond capital cities or national agencies.
- Financial incentives drive the adoption of higher resilience standards. Experience from Canada's Disaster Financial Assistance Arrangements (DFAA) shows that funding conditions can enforce BBB principles. Under the DFAA, federal co-financing of reconstruction costs is available only if provincial or municipal projects rebuild to higher resilience standards. This creates a tangible incentive for governments to adopt updated design codes and risk-informed planning practices before disasters occur.
- BBB requires measurable indicators and transparent monitoring. Across all cases, monitoring frameworks remain focused on outputs (e.g. buildings reconstructed, kilometres of road repaired) rather than outcomes such as reduced risk or improved resilience. Canada's DFAA and the EU's emerging performance-based frameworks suggest introducing simple, outcome-oriented indicators (e.g. the proportion of rebuilt assets exceeding previous safety standards, or the percentage of people living in safer zones after reconstruction).

3.1. Purpose of the analysis and selection of cases

The primary purpose of the case study analysis is to provide practical and policy-relevant illustrations of how Cohesion Policy funding has been used effectively to respond to disasters and to build resilience in different regional contexts. The analysis includes the use of specific instruments such as RESTORE and examines the extent to which initiatives reflect — or could better reflect — the principles of "Build Back Better". The following paragraph explains the selection of case studies; the subsequent section presents the results based on desk research and interviews. Case studies were selected using a combination of criteria, including the financial amounts received through Cohesion Policy, geographical characteristics, and the occurrence and impact of disasters.

Concerning Cohesion Policy funds, the Cohesion Open Data Platform[30] was used to rank regions according to the amounts programmed for the prevention of, and adaptation to, climate-related and

[30] https://data.europa.eu/en/news-events/news/cohesion-open-data-platform

other risks associated with natural hazards (intervention fields 58–59–60). However, these data do not indicate the relationship between funding and specific disasters, nor do they specify the disaster-management phase for which the funds are used (e.g. whether they are allocated prospectively for prevention and preparedness or spent on recovery and reconstruction). For this reason, an international disaster database (EM-DAT)[31] was also consulted. EM-DAT contains data on the occurrence and impacts of over 26,000 disasters worldwide from 1900 to the present and is compiled from various sources, including UN agencies, non-governmental organisations, reinsurance companies, research institutes, and press agencies. Recent events for Europe and the outermost regions (2020–2025) were filtered to identify disasters with the highest impacts in terms of people affected. This information on occurrence and impact was then cross-checked with Cohesion Policy data referenced above. A non-European case study was also included to provide an external, informed perspective on how BBB has been successfully applied elsewhere. For this purpose, international reports on good practices were screened (e.g. International Recovery Platform, 2024; Tagliacozzo et al., 2022).

A considered application of these criteria led to the selection of the following cases of interest:

1. **Cyclones in La Réunion**: this French insular outermost region has been hit by tropical cyclones each year since 2022, affecting more than 26,000 people with the worst year in 2023 (25,000 affected), although no fatalities have been registered. With almost EUR 600 million of total ERDF allocations to selected projects under the ERDF-ESF+ programme, as of the end of March 2025, it also received a high amount of Cohesion Policy support (with around EUR 45 million of the total allocations in the intervention fields related to climate change adaptation (58-59-60)[32]. More than EUR 100 million has also been programmed under RESTORE instrument.
2. **Earthquake in Croatia** (Zagreb region): Croatia, which combines Mediterranean and continental climate regions, was hit by a major earthquake in 2020, affecting about 150,000 people. It received almost EUR 3.4 billion from Cohesion Policy Funds under the "Competitiveness and Cohesion" and the "Integrated territorial programme" programmes, out of which 125 million was allocated to climate adaptation intervention fields (mainly from the "Competitiveness and Cohesion" programme, EUR 116 million). Additionally, it received more than 1 billion from the EUSF.
3. **Floods and landslides in Slovenia**: This Member State, which includes sub-Mediterranean, continental and mountainous areas, was severely hit by floods and subsequent landslides in 2023 (more than 1.5 million affected). The affected regions encompassed: Gorenjska, Goriska, Jugovzodna Slovenija, Koroska, Osrednjeslovenska, Podravska, Pomurska, Savinjska, Spodnjeposavska, Zasavska. Slovenia received more than EUR 750 million Cohesion Policy support through the "EU Cohesion Policy" programme (EUR 141 million was allocated to projects funded under the intervention fields 58-59-60). Additionally, more than EUR 400 million was received via the EUSF.
4. **Floods in Poland:** Poland, a temperate continental climate region, has faced severe flood events, most notably in 1997 and 2024. In July 1997, the Oder River overflowed, and Southern Poland was among the worst-hit areas, with 54 deaths and over one billion USD in damage. In September 2024, Storm Boris triggered record rainfall, leading to severe flooding across Central Europe, including Poland, where it affected about 56,900 people. Poland has negotiated the largest cohesion policy budget in the EU for 2021–2027, amounting to EUR 76 billion, out of which almost 4 billion in the intervention fields related to climate adaptation. As of March 2025, EUR 753 million had been decided in these intervention fields. Poland is also one of the countries which programmed

[31] The international disaster database: https://www.emdat.be/
[32] Source: https://cohesiondata.ec.europa.eu/2021-2027/2021-2027-Finances-Detailed-Planned-vs-Implemented/3git-md5z/about_data (downloaded at the end of July 2025)

resources under RESTORE, for a total amount planned of EUR 636 million; more than half of these resources have been programmed under the Programme "European Funds for Infrastructure, Climate, Environment 2021-2027".

5. **Canada's Disaster Financial Assistance Arrangements** Canada's Disaster Financial Assistance Arrangements (DFAA): this is a multi-hazard programme that was recently evaluated (Public Safety Canada, 2022) and links with the National Adaptation Strategy. DFAA is considered a good practice also by the International Recovery Platform Report on BBB Financing (International Recovery Platform, 2024). Work carried out to reform DFAA can provide relevant lessons also for the EU and Cohesion Policy

3.2. Examples of how funds are used effectively to respond to disasters and to build resilience in and outside the EU

The case studies were developed through a combination of desk research (including a review of documents and literature and the survey of MAs) and interviews. The four EU case studies follow a common template comprising: (1) a synthesis of the case study; (2) an overview of the context and the role of Cohesion Policy and other EU instruments in disaster response, recovery, and resilience-building; (3) the challenges and opportunities for further integrating the "Build Back Better" approach; and (4) the lessons learned and recommendations for strengthening future Cohesion Policy support. The non-EU case study on Canada's DFAA follows a slightly different structure: (1) a synthesis of the case study; (2) an overview of the programme; (3) recommendations stemming from the 2022 evaluation of the DFAA; (4) the changes implemented from April 2025, including those related to the "Build Back Better" approach; and (5) the key lessons and recommendations for reinforcing EU Cohesion Policy support.

Interviews were conducted with the relevant authorities in La Réunion, Croatia, Slovenia, and Canada. In the case of Poland, it was not possible to interview the relevant authorities; however, several responses to the online survey were collected, and these were used to develop the case study. The results of the desk research and interviews are presented in the following paragraphs for each case study. For more information on the survey and the interviews, see paragraph 1.1 and Annex 2.

3.2.1. Cyclones in La Réunion

Overview of the context and role of Cohesion policy and other EU instruments in disaster response, recovery and in building up resilience

Cyclones are a recurrent hazard for the French outermost regions of the EU in the Indian Ocean. La Réunion has been affected by tropical cyclones every year since 2022, with more than 26,000 people impacted and 2023 marking the most severe year, although no fatalities were recorded (CRED/UCLouvain, 2025). In March 2025, tropical cyclone Garance brought severe winds and intense rainfall, causing extensive damage to infrastructure, public buildings, private homes, businesses, and agricultural areas. More than 265,000 people were affected, five lives were lost, and the island sustained widespread and severe destruction (European Commission, 2025b).

Cohesion Policy investments in La Réunion are designed to address the **specific challenges faced by outermost regions**, including geographic remoteness and insularity, limited market size, dependence on external trade, exposure to climate-related risks, and the need for specialised transport connections.

EU Cohesion Policy Programme covered in the analysis: Programme Réunion ERDF-ESF+ 2021-2027

Synthesis of the case study: Cyclones frequently impact the French outermost regions in the Indian Ocean, with La Réunion suffering significant damage from Cyclone Garance in March 2025. Following this cyclone, the RESTORE mechanism allocated funds for the sustainable reconstruction of public infrastructure. The "build back better" (BBB) principles are being integrated into these efforts, focusing on resilience against climatic hazards. The case of La Réunion can be considered a successful example of Cohesion Policy progressive alignment to BBB. Nonetheless, the use of EU funds can be enhanced and, to do so, interviewees recommend simplifying administrative processes, and higher cofinancing rates applied to interventions that comply with BBB principles.

Table 4: ERDF under the Programme Réunion ERDF-ESF+ 2021-2027

Breakdown of Finances	EUR Million
Total ERDF programmed	1,567.0
ERDF programmed* (excluding RESTORE)	112.8
ERDF using RESTORE mechanism	108.2

*funds allocated to intervention fields: (58) adaptation and prevention of floods and landslides; (59) adaptation and prevention of fires; (60) adaptation and prevention of other risks.

Source: Cohesion Open Data Platform

As confirmed in an interview with representatives of the MA of La Réunion (Direction Générale Adjointe Europe), the **RESTORE** mechanism was mobilised following cyclone Garance, and a new priority was created within the programme by the MA. In parallel, both the Region and the State requested the mobilisation of the EUSF. A total of 10% of ERDF funds has been allocated to the new RESTORE axis, amounting to approximately EUR 100 million. The ERDF-financed operations focus on the sustainable reconstruction of affected public buildings—such as town halls, schools, colleges, high schools—and road infrastructure, including associated elements such as public lighting. One of the measures implemented under RESTORE is the "reconstruction, renovation and restoration of public buildings affected by cyclone Garance", which covers educational buildings, sports facilities, buildings hosting public services, and cultural or socio-cultural facilities.[33] The mobilisation of the EUSF supports the reimbursement of infrastructure restoration, debris clearance, and clean-up operations.

Build Back Better: challenges and opportunities for further integrating this approach

The principles of BBB were considered in the reconstruction process, **particularly in relation to improving resilience to climatic hazards**. As an outermost region located in the tropics, La Réunion is especially exposed to cyclone risks—conditions that differ significantly from those faced in central Europe. Consequently, specific regional and even sub-regional characteristics need to be taken into account in the allocation of funds to ensure that BBB measures reflect local needs.

According to interviewees, **opportunities** for applying BBB principles are mainly linked to: (a) the increased co-financing rate introduced under the RESTORE regulation, which reduces the reliance on national funding in a territory recovering from a major crisis; and (b) the sufficiently broad eligibility criteria for reconstruction. In practice, Cohesion Policy funds were mobilised rapidly in La Réunion. RESTORE was deployed within three months, whereas the EUSF decision was still pending as of October 2025. In the view of interviewees, regionalised instruments are more effective than centralised instruments in enabling timely responses of this kind.

[33] See Fiche Action 2.10.1 of 2021-2027 ERDF Programme of La Réunion, Reconstruction, Renovation, and Restoration of Public Buildings Affected by Cyclone Garance: https://regionreunion.com/IMG/pdf/fa_2.10.1_restore-_remis_en_etat_des_batiments_publics.pdf

Figure 9: Outermost region of La Réunion, Indian Ocean

Source: Wikimedia Commons

Figure 10: Effects of Cyclone Garance

Source: Le Monde
https://www.lemonde.fr/en/environment/article/2025/03/01/cyclone-garance-wreaks-havoc-on-la-reunion-island_6738711_114.html

Challenges identified by interviewees relate mainly to practical implementation issues. First, while the requirement to demonstrate that the damage is directly linked to the natural disaster is well understood, providing the necessary supporting documentation is not always straightforward in practice. Second, the obligation to account for insurance reimbursements can be difficult to meet, as insurance procedures—and the actual receipt of reimbursement—may take several years after a claim is filed. As a potential solution, interviewees suggested applying a **flat rate** to insurance reimbursements to simplify the processing and settlement of claims.

Lessons learned and recommendations for strengthening future Cohesion Policy support

Interviewees emphasised the need to minimise the **administrative burden** as far as possible, for example by introducing flat rates linked to insurance reimbursements or by adopting non-cost-related financing methodologies.

To strengthen the integration of BBB principles, they recommended **the introduction of incentives**, such as a higher co-financing rate for operations that demonstrate compliance with BBB requirements. However, they also stressed that a **simplified methodology for establishing such compliance** must be developed to avoid placing excessive administrative demands on beneficiaries and MA.

3.2.2. Earthquakes in Croatia (Zagreb Region)

Overview of the context and role of Cohesion policy and other EU instruments in disaster response, recovery and in building up resilience

In the early hours of 22 March 2020, an earthquake struck 5.56 km north of Zagreb, causing one death and 26 injuries; two additional fatalities occurred during subsequent clean-up operations. Numerous buildings and critical infrastructure—including hospitals, schools, and the Croatian Parliament—were damaged (So et al., 2020). On 29 December 2020, a second and stronger earthquake (magnitude 6.4) struck 50 km southeast of Zagreb and 6 km southeast of Petrinja, resulting in seven deaths, numerous injuries, and the temporary displacement of approximately 15,000 people (Atalić et al., 2023). In total, the two earthquakes caused damage to around 26,000 buildings (European Commission, 2023a).

In response, Croatia received around EUR 1 billion from the EU Solidarity Fund, disbursed in two tranches: EUR 684 million in 2020 and EUR 319 million in 2021 (European Commission, 2023a). The funding enabled rapid investments in the reconstruction of essential infrastructure, including schools, universities, hospitals, and cultural heritage sites. Notable projects supported by the EU Solidarity Fund include the restoration of Zagreb Cathedral, the Merkur Clinical Hospital and Sisters of Charity Hospital, several faculties of the University of Zagreb, the Dr Ivan Merz primary school, and the establishment of container settlements in Sisak-Moslavina County to provide temporary accommodation (European Commission, 2023a).

According to interviews with representatives of the Ministry of Physical Planning, Construction and State Assets, and the Ministry of Regional Development and EU Funds, the EU Solidarity Fund and the Resilience and Recovery Facility are being used to support resilience and recovery measures. In addition, ERDF resources have been allocated to the repair of public-sector buildings damaged by the earthquakes and to the renovation of family homes and apartment buildings. However, **lengthy procedural requirements delayed the release of funding**, which is particularly problematic for urgent disaster responses—especially when such events occur near the end of a multiannual financial framework.

EU Cohesion Policy programme covered in the analysis: Competitiveness and Cohesion 2021-2027 Croatia

Synthesis of the case study: In 2020, Croatia was struck by two major earthquakes that resulted in multiple fatalities and extensive damage. The European Union Solidarity Fund provided approximately EUR 1 billion to support reconstruction efforts, focusing on critical infrastructure and promoting the "Build Back Better" principle to enhance long-term resilience. Croatia represents a notable example of the rapid deployment of funds for the reconstruction of essential infrastructure such as schools, hospitals, and cultural heritage assets. However, coordination challenges and complex management processes hindered timely implementation in some cases, underscoring the need for streamlined procedures in future disaster responses.

Table 5: Programme Competitiveness and Cohesion 2021-2027 Croatia

Breakdown of Finances	EUR million
Total ERDF/CF programmed	6,113.1
ERDF/CF programmed* (excluding RESTORE)	370.5
ERDF/CF using RESTORE mechanism	0

*funds allocated to intervention fields: (58) adaptation and prevention of floods and landslides; (59) adaptation and prevention of fires; (60) adaptation and prevention of other risks.

Source: Cohesion Open Data Platform

ERDF and CF investments following the 2020 earthquakes **focused on** building renovations and seismic upgrades, including the reinforcement of existing structures to improve **earthquake resilience**. Beyond earthquake-related interventions, the funds also supported:

1) Flood protection measures, such as the construction of dykes and the implementation of restoration works, reflecting the fact that floods constitute Croatia's main natural risk.
2) Firefighting capacity, particularly in coastal regions that are affected by wildfires during the summer months.
3) Civil protection investments, recognising that numerous civil protection institutions operate across Croatia and require adequate equipment and training.

Build Back Better: challenges and opportunities for further integrating this approach

According to interviewees, post-earthquake renovations in Croatia were not limited to restoring buildings to their previous condition but also sought to apply the BBB principle, with particular emphasis on enhancing energy efficiency and resilience to future disasters. While Solidarity Fund grants focused primarily on restoring public infrastructure, they placed limitations on upgrading older homes that do not meet current energy standards, creating challenges for improving the overall housing stock in the affected areas.

More than 200 renovation projects for public buildings—including hospitals, universities and schools—were initiated through a blended funding scheme that allocated 45% from the European Solidarity Fund for construction works and **55% from the RRF** for enhancement. This approach encouraged higher-standard reconstruction and enabled beneficiaries to select more cost-effective solutions. However, interviewees noted that **a public prioritisation mechanism for investments**, especially in critical sectors such as healthcare, **remains necessary** to ensure the efficient allocation of resources.

Despite these advances, the **financing process was complicated** by staggered construction schedules and the limited 18-month period available for spending Solidarity Fund support, which frequently necessitated extensions and additional national funding for the concluding months. Given that the restoration of heavily damaged structures requires significantly more time than standard emergency repairs, **a more extended timeframe is essential** for comprehensive renovation. In this respect, Cohesion Policy plays an important role due to its longer-term perspective, although challenges in implementation remain.

Cohesion Policy is not considered suitable for direct emergency response, and its comparatively slow implementation processes can hinder reconstruction efforts. This highlights the need for greater streamlining and for reducing overlaps between instruments (see below).

For public-sector buildings that cannot access EUSF resources, ERDF funding is used, with a focus on energy efficiency and BBB principles. This approach aims not only to support energy renovations for undamaged buildings but also to enhance overall resilience to earthquakes and fires, improving both safety and energy performance in the long term.

Figure 11: Croatia, physical map and location

Source: Wikimedia Commons.

Figure 12: Effects of 2020 earthquake in Zagreb

Source: Wikimedia commons.

Lessons learned and recommendations for strengthening future Cohesion policy support

Coordinating the reconstruction and recovery efforts supported by the EU Solidarity Fund proved extremely challenging, involving 1,330 contracts with 609 beneficiaries and 304 construction companies, and engaging 10,500 construction workers (European Commission, 2023a).

According to interviewees, **the management of EU funds is overly complex due to the involvement of numerous institutions** and the need to coordinate across several ministries—an especially significant constraint in emergencies where speed is essential. The **coexistence of multiple funding instruments** (such as the Solidarity Fund, Cohesion Policy funds, the Civil Protection Mechanism, and the Rural Development Programme) further complicates management. At the same time, interviewees noted that the availability of several funds can also be an advantage, as they can be deployed according to their specific purposes or target groups. For example, the Rural Development Programme can support farmers affected by natural disasters, while Cohesion Policy funding may be used for longer-term investments in flood protection.

3.2.3. Floods in Slovenia

Overview of the context and role of Cohesion policy and other EU instruments in disaster response, recovery and in building up resilience

The 2023 floods were described as the "worst natural disaster in the history of independent Slovenia", affecting almost two-thirds of the country's territory (Republic of Slovenia, 2025b). On 3 and 4 August 2023, heavy rainfall struck the western, northern, eastern, and central regions, causing severe flooding and landslides. Several areas became inaccessible, requiring the evacuation of residents, and one fatality linked to the event was confirmed (International Federation of Red Cross and Red Crescent Societies, 2025).

Supporting climate change adaptation and risk prevention is a key priority of the 2021–2027 Cohesion Policy programme, as it was during the 2014–2020 period, when more than EUR 92 million was committed to flood protection. Following a programme amendment, funds were also used to purchase equipment for rapid flood response. Under the 2021–2027 programmes, Slovenian authorities have committed EUR 109 million to investments in flood-risk reduction (European Commission, 2023b).

EU Cohesion Policy Programme covered in the analysis: EU Cohesion Policy Programme 2021-2027

Synthesis of the case study: Following the 2023 floods in Slovenia, the EU Solidarity Fund and the 2021–2027 Cohesion Policy funds played essential roles in financing rehabilitation efforts. However, progress was hindered by challenges such as shortages of qualified personnel and lengthy approval procedures. To strengthen future disaster recovery and resilience, interviewees recommended introducing pre-financing mechanisms for emergencies, establishing clearer eligibility criteria, and embedding "Build Back Better" principles more explicitly into funding regulations and implementation guidelines.

Table 6: EU Cohesion Policy Programme 2021-2027

Breakdown of Finances	EUR million
Total ERDF/CF programmed	3,495.9
ERDF/CF programmed* (excluding RESTORE)	233.8
ERDF/CF using RESTORE mechanism	0

*funds allocated to intervention fields: (58) adaptation and prevention of floods and landslides; (59) adaptation and prevention of fires; (60) adaptation and prevention of other risks.

Source: Cohesion Open Data Platform

The EUSF financed water and wastewater interventions, transport measures, emergency operations to meet the immediate needs of the affected population, the collection of debris and waste from landslides and mudslides, the removal of contaminated soil, and the reimbursement of salaries for clean-up activities.

According to the State Secretary at the Ministry of Infrastructure, following the floods, "...we worked hard to repair and reopen traffic infrastructure and restore community connectivity. [...] We also managed to repair and upgrade the heavily damaged Poljana–Šentvid road, which is **now much more resilient** and will be able to withstand extreme weather" (Republic of Slovenia, 2025a).

As confirmed in an interview with a representative of the Ministry of Cohesion and Regional Development, reconstruction works following the catastrophic flooding events of August 2023 were funded primarily through the EU Solidarity Fund and partly through the 2021–2027 Cohesion Policy programmes.

Build Back Better: challenges and opportunities for further integrating this approach

Challenges faced during the implementation of rehabilitation works after the floods, according to the interview, include:

- A shortage of qualified personnel, workforce, and machinery for reconstruction, as the same companies were simultaneously engaged in both regular construction and post-flood rehabilitation work.
- Limited availability of water and construction engineers required to redesign or modify existing projects.
- The inherent complexity of managing water systems and working in landslide-prone areas, and
- Lengthy procedures for obtaining permits or acquiring land, where applicable.

The interviewee confirmed that the **principles of BBB were partially considered in the reconstruction process,** but highlighted several limitations. These include a predominant focus on returning infrastructure to its pre-disaster state rather than exceeding previous standards, limited financial resources for complementary works, delays in obtaining administrative and spatial approvals, and the need to prepare extensive project documentation.

Figure 13: Slovenia, physical map and location

Source: Wikimedia Commons.

Figure 14: Effects of the 2023 floods in Slovenia

Source: Wikimedia Commons.

Infrastructure investments under Slovenia's 2021–2027 Cohesion Policy programme are aligned with BBB principles, in part due to requirements related to the climate proofing of infrastructure projects, the application of the "Do No Significant Harm" (DNSH) principle, and the consideration of New European Bauhaus principles.[34] These elements are already integrated into the programme's selection criteria.

Lessons learned and recommendations for strengthening future Cohesion policy support

According to the interviewee, access to and administration of Cohesion Policy funds could be improved through:

- **the introduction of pre-financing** and advance payments in emergencies;
- the establishment of **a dedicated emergency window** with clear eligibility criteria;
- the inclusion of specific objectives to **strengthen technical assistance** and local capacities (e.g. training, a one-stop shop for applications); and
- more **flexible co-financing** conditions.

To better embed BBB principles, Cohesion Policy funds should introduce targeted requirements into existing regulations and implementation guidelines, particularly for rehabilitation and reconstruction activities with longer timelines and broader scopes.

3.2.4. Floods in Poland

Overview of the context and role of Cohesion policy and other EU instruments in disaster response, recovery and in building up resilience

In July 1997, the Oder River overflowed, causing catastrophic flooding in Poland, the Czech Republic and Germany. Southern Poland was among the worst-affected areas, recording 54 deaths and approximately EUR 1 billion in damage (AECOM, n.d.). In September 2024, Storm Boris triggered record rainfall, leading to severe flooding across Central Europe, including south-west Poland (European Commission, 2024). The 2024 flood affected around 56,900 people in Poland, inundated 1,873 km², and resulted in approximately EUR 76 million in financial assistance (Murawski et al., 2025).

Poland has negotiated the **largest Cohesion Policy allocation in the EU for 2021–2027**, amounting to EUR 76 billion (Ministry of Development Funds and Regional Policy, 2022). Of this amount, approximately EUR 4 billion has been programmed under intervention fields related to climate-change adaptation, risk prevention and other natural hazards. RESTORE has also been mobilised, with a planned allocation of EUR 636 million. In 2025, following the devastating floods of September 2024, the EU Solidarity Fund allocated EUR 76 million to Poland as part of a EUR 280 million EU aid package supporting flood recovery across Central Europe (European Commission, 2025c).

Build Back Better: challenges and opportunities for further integrating this approach

Respondents to the survey of MAs (see section 1.3.4) identified several **practical challenges** in aligning Cohesion Policy interventions with BBB principles. A key issue concerns **capacity asymmetry between municipalities**: smaller local governments often lack the knowledge, technical expertise and human resources needed to prepare adaptation plans, implement complex nature-based projects or monitor performance indicators effectively.

[34] The New European Bauhaus is an EU funding tool that aims to revitalise neighbourhoods through design for sustainability and inclusion. For more information on the initiative and investment guidelines see: https://new-european-bauhaus.europa.eu/tools-and-resources/neb-investment-guidelines_en

EU Cohesion Programme(s) covered in the analysis: All Polish Programmes

Synthesis of the case study: Poland has experienced several severe flood events, most notably in 1997 and 2024, which have prompted major investments in disaster prevention and resilience. Supported by EU Cohesion Policy, projects such as the Racibórz Dolny Flood Protection Reservoir have significantly enhanced safety for more than 1.3 million residents and demonstrated their effectiveness during the 2024 floods. In the 2021–2027 programming period, Poland is benefiting from EUR 76 billion in Cohesion Policy funds—the largest allocation among EU MSs—with substantial resources dedicated to green, resilient and regionally balanced development. Despite strong performance in prevention, Cohesion Policy implementation in Poland continues to face challenges related to administrative complexity, bureaucracy and limited flexibility, underscoring the need for more adaptive, nature-based and innovative approaches in future programming.

Figure 15: Effects of 2024 floods in Kłodzko, Lower Silesia

Source: *Wikimedia Commons*.

Additionally, the **higher upfront costs** associated with BBB-compliant investments—such as the use of eco-friendly construction materials or renewable energy technologies—can discourage applicants despite their long-term benefits. These benefits, including enhanced resilience and reduced maintenance costs, typically materialise over a longer timeframe, which is difficult to capture and justify within the standard project cycles of EU funding programmes. Respondents also noted that while BBB principles are partially reflected in the climate-proofing criterion, **additional criteria** will be required to operationalise the BBB approach fully.

To address these barriers, participants proposed several supportive measures. These include establishing dedicated **advisory mechanisms** to assist beneficiaries during project preparation and implementation, helping them to integrate BBB principles effectively into funding applications. Respondents also recommended higher funding rates or **preferential treatment for projects that demonstrate strong alignment with BBB principles**, in order to offset higher initial costs. They further emphasised the need for clear national or regional guidelines and legal frameworks to standardise the interpretation and application of BBB principles across programmes.

Figure 16: Poland, physical map and location

Source: Wikimedia Commons.

Figure 17: Effects of the 2024 floods in Lower Silesia

Source: Wikimedia Commons.

Lessons learned and recommendations for strengthening future Cohesion policy support

Poland has implemented a range of innovative, disaster-related investments supported by Cohesion Policy. However, several implementation challenges persist. These include **complex administrative procedures, delays linked to the agreement of EU budgets**, and the **cumulative effects of consecutive crises**—such as the COVID-19 pandemic, refugee inflows resulting from the war in Ukraine, and the energy crisis—which collectively slowed programming despite the use of temporary flexibility instruments such as CRII(+), CARE, FAST-CARE and SAFE. Moreover, the long programming and implementation cycles typical of Cohesion Policy, together with time-consuming project selection and evaluation processes, reduce the flexibility of these funds for immediate post-disaster assistance.

Respondents agreed that Cohesion Policy is most effective in the prevention, preparedness and long-term recovery phases, supporting strategic investments in flood defences, equipment and infrastructure. However, it is **less suited to immediate relief efforts** due to lengthy approval and contracting procedures.

Under the new RESTORE instrument, planned interventions include the restoration of road and flood-protection infrastructure and the reinforcement of rescue services. **RESTORE is viewed as a flexible and modern tool**, offering a maximum co-financing rate of 95% and an additional pre-financing rate of 25%, thereby combining reconstruction with resilience objectives. Nevertheless, respondents noted that the instrument **does not fully address the needs of flood victims**, such as the reconstruction of private homes or smaller local infrastructure.

In conclusion, the strengths of Cohesion Policy lie in its support for infrastructure, its promotion of innovation and new technologies, and its encouragement of environmental initiatives. Its weaknesses include bureaucracy, implementation delays and limited flexibility, as well as restricted scope for post-disaster reconstruction. Future improvements should focus on enhancing adaptability, incentivising nature-based and innovative solutions and maintaining dedicated prevention measures. Greater flexibility in reallocating funds between policy objectives and reduced thematic concentration could further strengthen the effectiveness of disaster-related investments.

3.2.5. Canada's Disaster Financial Assistance Arrangements (DFAA)

Overview of the programme

The DFAA enable the federal government of Canada to **assist provinces and territories when disaster response and recovery costs exceed their capacities**. Since 1970, more than C$1.6 billion (approximately EUR 1.1 billion) has been provided to help restore infrastructure and personal property to pre-disaster conditions. Assistance is channelled through provincial or territorial governments, which determine the specific types and amounts of support made available to affected individuals and communities.

The reimbursement percentage for eligible costs is determined through **a cost-sharing formula that takes into account the scale of the damage and the population of the affected area**. Public Safety and Emergency Preparedness Canada works with local governments to assess damages and review claims, ensuring flexibility in the assistance provided (International Recovery Platform, 2024).

Recommendations following an evaluation of the DFAA in 2022

In 2022, an evaluation report by the Expert Advisory Panel on the DFAA was published (Public Safety Canada, 2022). The assessment was commissioned in response to the increasing frequency and severity of disasters in Canada, which are placing growing strains on the capacity of governments and communities to respond effectively. Despite more than 50 years of operation, the DFAA remains primarily focused on post-disaster recovery and does not adequately address pre-disaster risk reduction or resilience. **An Expert Advisory Panel was therefore convened to recommend necessary reforms**, with the aim of strengthening disaster recovery while promoting proactive resilience investments and a more comprehensive approach to disaster preparedness.

The Panel recommended to:

- Establish an integrated disaster-resilience standard with clear institutional roles, science-based guidance, a public resilience rating system and a multi-sector consortium to support solutions and financing.
- Target funding towards climate adaptation, disaster risk reduction and vulnerable populations; link funding allocations to resilience ratings; create stable pre-disaster funding mechanisms; and incentivise community-level plans and NBS.
- Integrate risk data into the DFAA to enable risk-informed decisions and restrict reconstruction in high-risk areas; invest in regional and cross-jurisdictional risk-assessment capacities.
- Ensure that Indigenous peoples (First Nations, Métis and Inuit), who frequently live in areas particularly exposed to hazards, are consulted and receive equitable support; improve alignment between the DFAA and the Emergency Management Assistance Program.
- Increase DFAA flexibility to support innovative recovery partnerships and expand assistance for vulnerable and disadvantaged populations.
- Provide technical assistance and funding to strengthen local capacity, particularly in remote, rural, northern and Indigenous communities; facilitate the sharing of lessons learned and technical guidance.
- Streamline and digitise DFAA processes, simplify applications through clear guidance and tools, improve responsiveness and monitor performance and long-term risk-reduction outcomes.

Programme covered in the analysis: Canada's Disaster Financial Assistance Arrangements

Synthesis of the case study: Canada's DFAA is a federal cost-sharing programme supporting provincial and territorial disaster response and recovery. A 2022 expert panel found the scheme overly focused on post-disaster assistance and recommended integrating pre-disaster risk reduction, clearer resilience standards, equity considerations, improved risk data and digitalised administrative processes. Reforms that entered into force in April 2025 introduced five funding streams, a 70% base federal cost share with an additional 15% "Build Back Better" top-up for infrastructure, a flexible disaster risk reduction component, streamlined digital administration and strengthened monitoring. Complementary federal incentives now promote improved pre-disaster risk assessment and investment.

Figure 18: Effects of floods in Toronto

Source: Flooded Don Valley Parkway in Toronto, https://globalnews.ca/news/1046844/worst-natural-disasters-in-canadian-history/

Changes implemented from April 2025, considering "Build Back Better"

According to an interview with a representative of the Centre of Recovery Policy at Public Safety Canada, the DFAA has primarily supported provincial and territorial governments in the post-disaster recovery phase, particularly for infrastructure and uninsurable losses (such as those resulting from floods). Activation is based on a per-capita threshold and a cost-sharing formula. Rising costs and practical shortcomings prompted a **two-year review, which led to a major overhaul that entered into force on 1 April 2025**. Historically, the programme focused on restoring pre-disaster conditions and offered only limited health-related (including mental health) support, typically for up to six months. The recent reforms aim to align the DFAA more closely with "Build Back Better" principles.

Key changes introduced in 2025:

- Five funding streams with differentiated cost-sharing arrangements to provide greater flexibility for provinces and territories.
- Infrastructure is financed through a 70% federal cost share, with an automatic additional 15% for disaster-resilience enhancements ("Build Back Better"). A defined list of standards and guidelines specifies which measures are eligible for this additional 15%.
- A less prescriptive disaster-risk-reduction (DRR) stream—decoupled from direct damage (base rate 25%, with possible top-ups)—supports measures such as relocation and NBS. It requires a cost–benefit analysis and offers 50% or 90% cost-sharing depending on the degree of risk reduction (high- versus low-risk areas).
- Simplified administration, increased federal support and greater automation

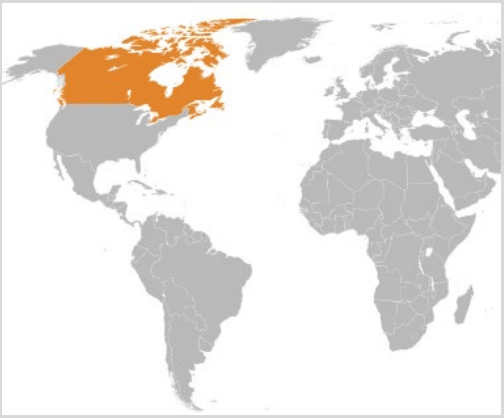
Monitoring and analytics have been strengthened:

- Proof of expenditure is required, together with evidence that the risk-reduction measures undertaken align with the National Research Council guidance under the National Adaptation Strategy or with approved provincial guidelines.

- Enhanced tracking now differentiates between spending categories (e.g. infrastructure, firefighting equipment) and provides analytical insights into key cost drivers, including inflation.

While the **DFAA remains a post-disaster mechanism and continues to finance response operations, it is now complemented by a federal pre-disaster incentive programme** that supports risk assessment and proactive investment. This reflects the recognition that prevention is often more cost-effective and that the effective use of the DFAA depends on a clear understanding of local risk.

Figure 19: Canada's extension



Source: *Wikimedia Commons*.

Figure 20: Effects of floods in Canada

Source: Public Safety Canada
https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/rcvr-dsstrs/dsstr-fnncl-ssstnc-rrngmnts/index-en.aspx

Key Lessons and recommendations for strengthening EU Cohesion policy support

In conclusion, the DFAA experience demonstrates that post-disaster financing alone is insufficient; recovery must be complemented by pre-disaster risk reduction and climate adaptation, supported by clear standards, defined institutional roles and transparent monitoring. The case also underscores the importance of linking funding to risk data and resilience performance, limiting reconstruction in high-risk areas unless mitigation measures are incorporated, and streamlining and digitalising processes while ensuring strong equity considerations and adequate support for local capacities. Several lessons can be drawn for EU Cohesion Policy. These include adopting an integrated resilience standard and rating system for disaster-risk-reduction and climate-adaptation actions; creating stable pre-disaster funding streams for DRR and adaptation—including NBS and community-level planning; linking co-financing rates to demonstrated resilience progress; and improving coordination across instruments to support an end-to-end resilience approach.

4. CONCLUSIONS AND RECOMMENDATIONS

KEY FINDINGS

- Cohesion Policy has demonstrated strong value in financing prevention and preparedness measures, and—though to a lesser extent—recovery activities, despite persistent challenges such as administrative complexity and lengthy procedures.
- Based on the analysis carried out, recommendations at EU level include: recognising that recovery and reconstruction often extend beyond a single programming cycle; streamlining procedures; promoting innovation and knowledge exchange; strengthening RESTORE; and more systematically integrating BBB principles.
- Recommendations for national and regional policymakers include: building local capacity; improving coordination and planning; prioritising preventive infrastructure; reducing administrative burdens; and strengthening monitoring systems.
- Many recommendations of this study are consistent with the 2028–2034 Multiannual Financial Framework (MFF) proposal, which emphasises simplification, integration, flexibility and a streamlined monitoring system. However, some features of the post-2027 MFF proposal risk weakening Cohesion Policy's role in reducing regional disparities, particularly due to a more centralised approach that may limit regional and local engagement—actors that are essential in addressing climate vulnerabilities. To mitigate this risk, regional participation in DRM should be ensured, funding increased and dialogue between public authorities and businesses strengthened.
- Future Cohesion Policy regulations should explicitly incorporate BBB principles into National and Regional Partnership Plans, require risk-based reconstruction strategies and integrate BBB criteria into project eligibility and selection in order to prioritise long-term resilience over simple restoration.
- Operationalising BBB requires incentives and capacity-building mechanisms, including differentiated co-financing rates for verified resilience upgrades, simplified procedures for BBB-compliant projects and advance payments for early design phases. Regional advisory mechanisms, peer-learning networks and EU-wide BBB indicators (e.g. share of rebuilt assets exceeding pre-disaster standards, avoided losses, service-continuity metrics) would further institutionalise learning, transparency and performance-based reconstruction.

4.1. Introduction to the conclusions and recommendations

This concluding chapter sets out recommendations on how Cohesion Policy can be strengthened to support EU Member States and regions in disaster risk management. The focus is on the phases for which Cohesion Policy has proven most suitable: prevention and preparedness, as well as the long-term challenges of reconstruction, with particular attention to building more robust and future-proof infrastructure for citizens and communities.

4.2. Policy recommendations on how Cohesion Policy can be enhanced

As discussed in Chapter 1 of this study, the EU has established a broad set of disaster risk management instruments—including the UCPM, EUSF, SEAR, and Cohesion Policy (including RESTORE)—covering prevention, preparedness, response, and recovery. While this diversity ensures coverage across all

phases of the disaster risk management cycle, it also creates challenges related to coherence, interoperability, and strategic integration.

Some weaknesses in the EU DRM framework are addressed in the 2028–2034 MFF proposal. The forthcoming reform window offers an opportunity to streamline coordination, clarify mandates, and move from reactive aid to systemic resilience. Stronger flexibility tools (the Single Margin Instrument and the Flexibility Instrument) are introduced, together with an "exceptional crisis mechanism" designed to provide additional loans in the event of a major crisis.[35]

As highlighted throughout this study, EU Cohesion Policy is one of the instruments used for disaster management. Its most substantial contribution to date has been in the phases of prevention and preparedness. These phases are essential both for strengthening short- and medium-term resilience and for addressing the longer-term challenges associated with reconstruction. Immediate emergency response or disaster relief is not a focus of Cohesion Policy, which is consistent with the nature of the policy; indeed, the MAs consulted for this study emphasise that Cohesion Policy is not particularly suited to providing support in this phase. Cohesion Policy does intervene in recovery and long-term reconstruction, but there remains room for improvement.

Drawing on the analysis of existing instruments, the available literature, and the survey findings, several recommendations can be made to enhance Cohesion Policy's contribution to DRM. These recommendations are presented in the following paragraphs, distinguishing between those directed at the EU level and those addressed to national authorities. A brief reflection is also provided on how these recommendations relate to the still-preliminary proposals for the 2028–2034 MFF.

4.2.1. EU level recommendations

Based on the analysis carried out, a number of recommendations can be put forward at the EU level.

- **Clarify Cohesion Policy's role as complementary to dedicated instruments**. It is important to communicate clearly that Cohesion Policy does not replace instruments such as the EUSF or the UCPM, but can bridge gaps (e.g. covering recovery operations not eligible under emergency funds, or financing complementary prevention).
- **Acknowledge that recovery and reconstruction often extend beyond a single seven-year programming cycle**. To strengthen Cohesion Policy's capacity to address the long-term challenges of reconstruction—particularly the need to build more robust and future-proof infrastructure for citizens and communities—it is recommended **to ensure multi-cycle financing or rolling commitments** that guarantee continuity **for large-scale projects** (e.g. rebuilding housing stock, rehabilitating transport infrastructure).
- **Streamline administrative procedures**. It is recommended to simplify contracting and procurement rules for local authorities and NGOs so that essential services and emergency works can be mobilised rapidly. This may include standardised emergency templates, shorter approval chains, and derogations from normal timelines in declared disaster contexts.
- Explore **a 'fast-track emergency window' within Cohesion Policy**. This may involve piloting a simplified funding strand that can be **activated in exceptional circumstances**, when existing instruments are not sufficient, offering a limited but flexible pool of resources for immediate response while keeping the bulk of Cohesion Policy focused on long-term resilience.

[35] Already in the 2021-2027 period, some instruments such as the SEAR—covering emergencies both within and beyond the EU— are being restructured. The mid-term review acknowledged that the SEAR had proved inefficient and insufficiently resourced (see SWD(2025) 570 final/2, accompanying the document COM(2025) 570 final, A dynamic EU budget for the priorities of the future: the Multiannual Financial Framework 2028-2034). Therefore, following the mid-term review, the two envelopes of the "European Solidarity Reserve", which supports affected countries and regions under the EUSF, and the Emergency Aid Reserve (EAR), which reinforces relevant Union programmes in response to crises and emergencies inside and outside the Union, were separated.

- **Promote innovation and knowledge exchange**. Innovation is an important outcome of Cohesion Policy investments. It is recommended to strengthen the dissemination of innovative practices across regions (e.g. integrated stormwater management, participatory housing reconstruction models) and to encourage Interreg and cross-border projects as laboratories for innovation. Dedicated EU initiatives could provide targeted technical assistance and training, with national authorities doing likewise for local authorities and municipalities.
- **Support socio-economic recovery**, not only physical reconstruction. It is recommended to better integrate measures and funds (ERDF and ESF+) for economic revitalisation, business continuity, and community well-being within disaster recovery projects. Ensure that vulnerable groups (e.g. older adults, low-income households, displaced residents) benefit from reconstruction programmes by assessing their needs, involving them in recovery strategies, and supporting the most disadvantaged communities.
- **Strengthen RESTORE and coordination with other instruments**. Within the current Cohesion Policy framework, the analysis confirms the importance of RESTORE, which offers greater flexibility for post-disaster reconstruction. At the same time, it highlights the need to clarify RESTORE's mandate, encourage complementarity with the EUSF and the UCPM, and avoid overlaps.
- **Embed Build Back Better standards**. This implies making resilience criteria mandatory for reconstruction projects (e.g. seismic standards, climate-resilient building codes, flood-proofing requirements). Encourage combining reconstruction with risk reduction to avoid re-creating vulnerabilities. See paragraph 4.2 for specific recommendations on BBB.

4.2.2. National and regional level recommendations

Following the analysis of this study, several recommendations can be suggested to national and regional policymakers.

- **Build local capacity for prevention**. It is important to provide technical assistance and training to municipalities and local authorities to design and manage risk-reduction projects. Consider twinning, peer learning, or technical support platforms.
- **Improve coordination and planning**. Align Cohesion Policy interventions with civil protection strategies and spatial planning. Ensure that risk assessments, vulnerability maps, climate scenarios and socio-economic vulnerability data guide decisions on where and how to rebuild. Promote data sharing between MAs, civil protection agencies and research institutions.
- **Prioritise preventive infrastructure**. Increase investments in green and grey infrastructure (e.g. flood retention basins, coastal protection, wildfire breaks, resilient water systems) and ensure these are aligned with relevant strategic documents such as those concerning climate change adaptation. Prioritise operations that reduce exposure, build resilience and explicitly adopt the BBB approach (see paragraph 4.2), rather than those that only restore the status quo. Streamline implementation and reduce administrative bottlenecks.
- **Reduce bureaucracy and increase flexibility**. It is recommended to simplify calls for proposals, eligibility criteria and reporting requirements to encourage participation by local actors. Flexibility should allow EU regions to adapt quickly to needs and to address diverse hazards (floods, fires, droughts, storms, earthquakes). Consider pre-approved "framework projects" that can be activated rapidly. MAs could simplify eligibility criteria and reporting requirements, and promote green infrastructure and preventive measures in selection criteria.
- Monitoring and evaluation. Strengthen results-oriented indicators further with indicators on avoided damages, reduced economic losses, etc., in addition to those measuring the population benefiting from protection measures. Develop EU-wide methodologies to assess resilience impact**.**

4.2.3. Concluding remarks on recommendations in the light of the ongoing negotiation on 2028–2034 MFF

In July 2025, the Commission presented its proposal for the 2028–2034 MFF (European Commission, 2025d). In September 2025, it adopted a second package of sectoral proposals, completing the framework for the next long-term EU budget[36]. The decision on the future long-term EU budget and revenue system will be taken by the Member States in the Council, acting by unanimity, with the consent of the European Parliament for the MFF.

Given the ongoing negotiations between the European Parliament, the Council, and the Commission on the new MFF, it is important to situate the recommendations made in this study in the context of the significant changes that the proposed 2028–2034 MFF will bring for Cohesion Policy.

In brief, the Commission's proposals for the post-2027 framework introduce National and Regional Partnership Plans (NRPPs), stronger climate and resilience priorities, and substantial simplification. The recommendations made in this study are broadly aligned with the new MFF proposal. Before the MFF proposal, the Commission's Communication on the mid-term review of Cohesion Policy (European Commission, 2025e) had already emphasised the need for modernisation and reform of the Policy, including greater simplification, a stronger reform-driven orientation, and an improved focus on results. It also highlighted the need for Cohesion Policy to make a more strategic contribution to the EU's competitiveness and security agenda.

On monitoring, the recommendations also align with the proposed post-2027 changes: a comprehensive overhaul, with a single framework for monitoring and performance (European Commission, 2025f).

The recommendations on RESTORE likewise remain valid. RESTORE is integrated into the broader logic of MFF flexibilities and NRPPs. However, it is important to ensure that this instrument retains a clear, disaster-specific role rather than becoming diluted. It is also essential to guide MAs on how to combine different funding sources effectively to support comprehensive recovery packages.

In conclusion, the Commission's proposals address simplification, integration, and the mainstreaming of resilience. For example, NRPPs—intended to promote both simplification and integration—offer an opportunity to embed disaster prevention alongside climate and resilience targets.

However, despite these positive aspects, the significant changes anticipated in the 2028–2034 MFF proposals also pose challenges for disaster risk management within Cohesion Policy.

The 2028–2034 MFF proposal reflects a new architecture for Cohesion Policy already signalled in the Commission's Communication on the post-2027 long-term budget (European Commission, 2025g). Some features of this architecture may threaten the goal of reducing disparities between EU regions and Member States and of promoting balanced, harmonious development by strengthening economic, social, and territorial cohesion. These developments—most notably a potentially weaker engagement of EU regions and territories and a re-oriented funding direction—may challenge the ambition of establishing natural disaster response and recovery as a cross-cutting issue of Cohesion Policy.

The proposed new architecture of single national plans has been the subject of criticism, including by the European Parliament's Committee on Budgets[37] and by the Committee of the Regions (COR, 2025), which expressed concerns about the constraints such a model could impose on Cohesion Policy's place-based and regionally driven approach. There is a persistent concern across the Cohesion Policy

[36] Press release of 3 September 2025: https://ec.europa.eu/commission/presscorner/detail/en/ip_25_2011
[37] Press releases of 23 April 2025: https://www.europarl.europa.eu/news/en/press-room/20250414IPR27985/budgets-committee-sets-out-priorities-for-next-long-term-eu-budget

community—comprising regional stakeholders, EU networks, and institutional actors responsible for the Policy's management and delivery—that the EU's changing direction, in a context of geo-strategic and geo-economic shifts, is leading to greater centralisation, with limited scope for engaging EU regions and territories in the strategic transformations ahead.

In particular, the new architecture may imply reduced participation in policy decisions by communities most exposed to climate vulnerabilities and disasters, fewer available funds, and a distribution of resources that may not adequately reflect territorial vulnerabilities. Several general recommendations can therefore be made in this regard.

- **Ensure regional and local participation in DRM policy and strengthen institutional awareness** of EU tools. As disaster risk management and climate change adaptation are cross-cutting policies, they must be addressed coherently across all levels—global, EU, national, regional, and local. In this context, the role of regional and local authorities is indispensable. As those most exposed to risks and with the deepest knowledge of their territories, EU regions are best placed to lead effective efforts on DRM and climate change adaptation. The risk of losing proximity to territories was also highlighted by the European Court of Auditors (2024), which emphasised that local communities often lack awareness of EU tools, strategies, and plans.
- **Ensure sufficient funding for DRM**, from preparedness to recovery and reconstruction. The literature has highlighted the inadequacy of EU Cohesion Policy in supporting adaptation to climate-related risks and other risks across EU regions. Despite an increase in allocated funds in the 2021–2027 period, the share remains low (e.g. 4.5% of the Cohesion Policy budget) compared with the EU's broader spending targets, where at least 30% of the EU budget and of Next Generation EU is to be climate-related expenditure. This funding level is insufficient given the scale and diversity of risks facing different regions. It is important to ensure that disaster risk management is not marginalised in the new Cohesion Policy framework and that the Policy continues to build Europe's resilience by investing in prevention and long-term recovery, while working in complementarity with emergency instruments.
- **Take regional vulnerabilities into account in the allocation of funds** across territories. Cohesion Policy allocations should explicitly reflect territorial variations in hazard exposure, climate risks, and socio-economic vulnerability. Funding envelopes ought to draw on multi-hazard risk assessments, updated spatial data, and forward-looking climate scenarios. Regions confronting elevated risks—whether from floods, wildfires, drought, seismic events, storms, or coastal erosion—should receive proportionately greater support. This would ensure that investments address genuine needs and contribute to reducing long-term losses. To put this into practice, National Recovery and Resilience Plans (NRRPs) should incorporate allocation methods weighted by risk and vulnerability, establish minimum shares for high-risk areas, and provide MAs with guidance on prioritising operations which reduce exposure to disaster risks .
- Finally, it is worth noting that while the proposal moves closer to BBB principles by embedding resilience and climate considerations in all investments, an **explicit reference to multi-cycle disaster recovery continuity** is still missing.

4.3. Specific recommendations for integrating BBB in post-2027 Regulations

In order to strengthen Cohesion Policy's capacity to ensure the reconstruction of resilient and future-proof infrastructure in disaster-affected regions, the following recommendations are proposed.

Anchor BBB in the legal and programming architecture and clearly define BBB objectives. This may require explicitly incorporating the *Build Back Better* approach into the strategies for responding to disasters under the NRPP framework; it may also imply introducing a dedicated 'BBB field of intervention' covering both structural and non-structural measures.

In the 2028–2034 MFF proposal, the use of European funds for disaster management is explicitly considered. The EU Facility supports Member States in addressing crisis situations, such as national or regional disasters, with the objective of 'increasing resilience following a crisis'.

A flexibility amount (unallocated at the beginning of the programming period) is foreseen, enabling Member States to use financial resources to respond to disasters. This can be mobilised through formal amendments to the National Plans. In such cases, the financial resources must be programmed under the objective 'Supporting measures for addressing crisis via reconstruction, repair and enhancing resilience'.

Furthermore, the Regulation proposal establishing a new 2028-2034 "mega-fund" for economic, social and territorial cohesion, agriculture and rural, fisheries and maritime, prosperity and security (European Commission, 2025h) could explicitly require the adoption of a BBB approach when Member States implement interventions in response to a disaster, and the NRPP could include a dedicated section on the BBB approach to be followed (Annex V of the mentioned Regulation proposal). This section could describe elements such as recovery governance, strategies for relocating from high-risk areas, involvement of local communities, and the NBS to be adopted. One possibility to consider is the inclusion of a field of intervention relating to structural and non-structural measures under the BBB approach (e.g. land-use planning, social recovery, NBS).

Differentiation of BBB measures according to recovery phases. In addition to explicitly considering the use of funds for disaster risk management and, in particular, the adoption of BBB principles, it is recommended to strengthen programming and reinforce the knowledge base available to policymakers.

- Strengthen the programming of funds (e.g. in the NRPP – National and Regional Partnership Plans 2028–34) by tailoring resilience-enhancing measures to the different recovery phases: cleaning and restoring landscapes and open spaces; interventions involving private homes and essential services; and community development.
- Enable long-term, multi-phase reconstruction. Allow multi-cycle investment programming across phases 3–5 (landscape restoration, infrastructure reconstruction, community recovery). Extend implementation windows for reconstruction projects to reflect the complexity of resilient retrofitting.
- Develop a handbook with a menu of off-the-shelf measures to guide policymakers, or design a dedicated set of guidelines that can be applied to develop case-by-case recovery strategies.

Build technical and institutional capacity. This can be done by establishing regional BBB advisory mechanisms to help small municipalities design, procure, and monitor resilient reconstructions; financing capacity development for risk-informed planning, hazard mapping, and performance-based infrastructure design; and encouraging peer exchange and communities of practice among MAs applying BBB.

Institutional capacity can also be strengthened through dedicated guidelines, as mentioned earlier. Learning and transparency can be institutionalised by encouraging post-event learning reports and open databases of BBB reconstructions. The findings can then be used to update technical standards and NRPP guidance regularly.

Legal and governance adjustments. To strengthen the selection of operations in the NRPPs 2028–34, it is recommended to include the BBB principle among the selection criteria for projects financed in response to a disaster under the objective "Supporting measures for addressing crisis via reconstruction, repair and enhancing resilience".

The BBB principle could be applied either as an eligibility condition or as an award criterion. Examples include: the integration into projects of structural and non-structural measures to reduce future disaster risk; the contribution of the projects to climate change adaptation and mitigation; the capacity of projects to address the needs of vulnerable groups (women, older people, persons with disabilities, low-income households) in both design and benefits; and the inclusion of actions aimed at strengthening local institutions and long-term disaster risk management capacity.

Develop and track BBB indicators. Introduce EU-wide BBB monitoring indicators (e.g. percentage of rebuilt assets exceeding pre-disaster standards; estimated financial losses avoided; downtime reduction or service continuity metrics; percentage of projects integrating NBS or digital resilience tools)

Financial adjustments. To facilitate the uptake of BBB, it is also recommended to develop incentive mechanisms for its application and to adapt co-financing and payment schemes. This may include:

- Applying differentiated co-financing rates for reconstruction, with a specific incentive for projects demonstrating measurable resilience upgrades and BBB application.
- Linking the application of BBB to simplified procedures and designated guidelines that can be used to verify BBB compliance.
- Allowing advance payments or pre-financing for early design and permitting phases that integrate resilience analysis.
- Supporting standard cost models for verifying BBB compliance. Standard cost models use pre-defined amounts to calculate eligible expenditure based on outputs, activities, or predefined units. Compared with the reimbursement of real costs, these approaches could streamline checks and reduce the administrative burden on both MAs and beneficiaries.

Incentivise innovation and hybrid (green/grey) infrastructure, through promoting nature-based and hybrid solutions as BBB-eligible investments (wetlands, retention basins, slope stabilisation); creating a catalogue of standard BBB-compliant measures aligned with DRR and climate adaptation best practice; and integrating digital tools—hazard mapping, digital twins, and resilience dashboards—to monitor performance after reconstruction.

Embed social and economic resilience through requiring reconstruction projects to include social recovery components, addressing vulnerable groups, mental health, and community spaces (cf. Mannakkara & Wilkinson); linking infrastructure rebuilds with local economic recovery and skills development clauses in procurement; and supporting relocation or adaptation in high-risk zones rather than reinstating exposed assets.

In essence, integrating BBB into Cohesion Policy means ensuring that every euro spent on reconstruction reduces future risk, strengthens territorial resilience, and supports a just and sustainable recovery rather than reinstating pre-disaster fragilities.

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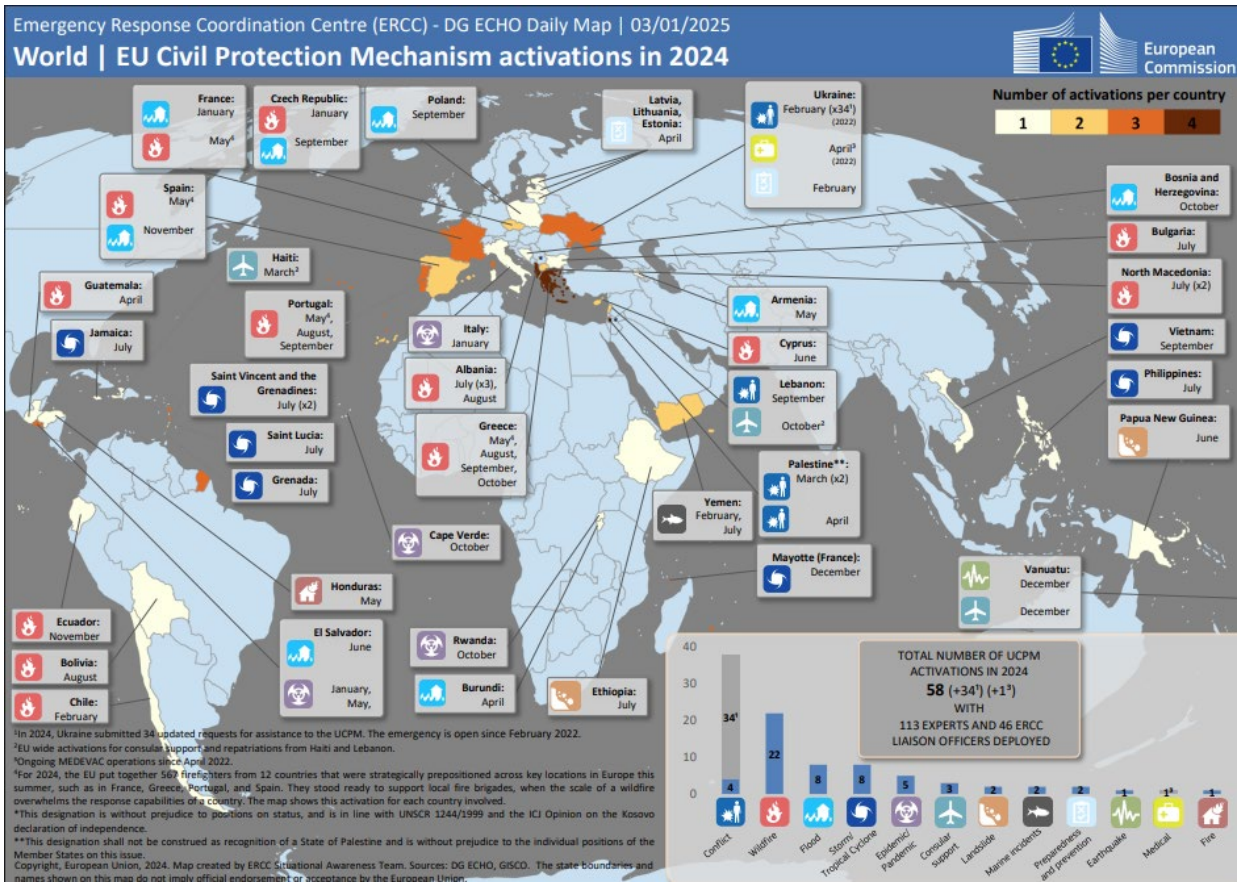
ANNEX 1: ADDITIONAL FIGURES AND TABLES

Figure 21: UCPM activations (2024)



Source: Emergency Response Coordination Centre (ERCC) – DG ECHO Daily Map (https://erccportal.jrc.ec.europa.eu/ECHO-Products/Maps#/maps/5124)

Table 7: Overview of selected evaluations of 2014-2020 Cohesion Policy (analysed in paragraph 1.3.3) and their territorial coverage

Evaluation (see references for details)	**Covered territories**
Edater, 2022	Loire River Basin, France Targeted Significantly Risky Territories (TRI) • Tributaries addressed: Allier, Vienne, Cher, Sèvre Nantaise, Maine • Basin-wide and interregional planning approaches • Specific mention of cities like Poitiers, Angers, Orléans, Nante
Entera & Ramboll, 2019	Free State of Bavaria, Germany
EY & Naviga, 2022	Czech Republic (national and regional/local level), with specific focus on 50 towns/cities for green surface development
Gallenz et al., 2021	The Land of Saxony-Anhalt and other bodies governed by public law, in particular: • State Office for Flood Protection and Water Management Saxony-Anhalt (LHW) • Reservoir operation Saxony-Anhalt (TSB)
GEFRA, 2019	Free State of Saxony, especially: • Dresden • Chemnitz • Freiberg • Erzgebirge region
Mandarino, 2021	Sardegna, Italy Focus on municipalities at high hydrogeological risk (e.g., Bitti, Capoterra, Monserrato, Nuraminis, Sassari, etc.), involving 338 municipalities (out of 377)
Stengl, 2023a	Slovakia, with interventions spanning multiple river basins, including: • Bodrog, Hornád, and Poprad rivers (Eastern Slovakia) • Nitra and Váh rivers (Western Slovakia) • Rural and mountainous areas particularly vulnerable to flash floods
Stengl, 2023b	Slovakia, with focus on: • Upper Bodrog catchment area (including the Ondava and Latorica rivers) • Areas affected by recurring local and regional floods • Small towns and rural communities in Eastern Slovakia
PRJ Consulting, 2022	Nationwide coverage across Croatia • High-priority cities: Ogulin, Karlovac, Zagreb, Petrinja • Engagement with national ministries, regional governments, and civil society
t33 & IZI, 2021	Autonomous Province of Trento, in particular the municipalities of: Trento, Riva del Garda, Caldonazzo, Levico Terme, Borgo Valsugana, Cavalese
Teritéo, 2023	City of Ajaccio, Corsica, France. Specific focus on: • Salines district • Cannes district • White Mills stream • Arbitrole river area • Saint-François beach and citadel

Source: Authors' elaboration

ANNEX 2: ADDITIONAL INFORMATION ON THE SURVEY AND ON INTERVIEWS

Survey of MAs

An online questionnaire was sent to 251 Managing Authorities. The response rate was 16%, and 40 valid answers were collected from MAs of 2021-2027 programmes implemented in sixteen EU Member States: Austria, Belgium, Bulgaria, Czechia, Finland, France (La Réunion), Germany, Greece, Croatia, Italy, Luxembourg, Poland, Portugal (Azores), Romania, Slovenia and Sweden. Responses cover nine interregional cooperation programmes: Italy-Slovenia, Romania-Bulgaria, Italy-Austria, IPA Romania-Serbia, Germany (Brandenburg)-Poland, Danube Region, Sweden-Denmark-Norway (Öresund-Kattegat-Skagerrak), Atlantic Area, Northern Periphery and Arctic.

The online questionnaire included 25 items, combining closed- and open-ended questions. The questionnaire was structured in two modules:

1. Use of Cohesion Policy in Disaster Response and Recovery
2. Conditions for integrating the BBB approach and other innovative principle in Cohesion policy

The responses were collected between July and September 2025.

Interviews

As part of the case studies, interviews were conducted with:

- La Réunion: representatives of the Managing Authority at Region Réunion/ Direction Générale Adjointe Europe.
- Croatia: representatives of the Ministry of Physical Planning, Construction and State Assets, and a representative of the Ministry of Regional Development and EU Funds.
- Slovenia: a representative of the Ministry of Cohesion and Regional Development.
- Canada: a representative of the Centre of Recovery Policy at Public Safety Canada.

This study provides an overview of the EU policy instruments, including Cohesion Policy Funds, that are used in disaster response and recovery. It assesses their contribution to strengthening resilience to climate change and to meeting disaster-relief and reconstruction needs. The study also examines how the 'Build Back Better' approach can be integrated into future Cohesion Policy to ensure that disaster-affected areas are rebuilt in a more resilient and sustainable manner. Recommendations are provided on how Cohesion Policy can be improved to support EU regions in responding to disasters. The study was commissioned by the Policy Department of the Directorate-General for Cohesion, Agriculture and Social Policies, mandated by the European Parliament's (EP) Committee on Regional Development (REGI).

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