Regional Synthesis Report – Europe & Central Asia
Sendai Framework Midterm Review Process
Author: Stanley Allan
November 2022
**Introduction**

The Sendai Framework (SF) for Disaster Risk Reduction (DRR) 2015-2030 was adopted during the Third United Nations World Conference on DRR. The Sendai Framework was subsequently endorsed by Member States in the United Nations General Assembly and provided for an all-of-society and all-of-State institutions engagement in preventing and reducing disaster risks posed by both natural and man-made hazards and related environmental, technological and biological hazards and risks. The Midterm Review (MTR) of the Sendai Framework, initiated in 2022 and to be completed in 2023, offers an opportunity to reflect on both the successes and the challenges of the period from 2015 - 2022. It is also a chance to renew a shared commitment to the Sendai Framework, and to accelerate and amplify its implementation in the years to 2030.

The Europe and Central Asia region is affected by natural hazards including floods, earthquakes, droughts, landslides, and wildfires\(^1\), as well as a range of natech and biological hazards. It has also been faced with the generational challenge of the COVID-19 pandemic: approximately 25 billion life years were lost in Europe from the COVID-19 pandemic in 2020 alone\(^2\). Simultaneously, countries in North and Central Asia are losing 4% of their GDP in average annual losses to disaster, with agricultural drought one of the key driving force\(^3\). Looking to the future, INFORM Climate Change analysis projects that all areas in Europe and Central Asia, and in particular Central Asia, Eastern Europe and Southern Europe, will experience an increase in crisis and disaster risks by 2050\(^4\). The necessity of implementing the provisions of the Sendai Framework is therefore experienced urgently in Europe and Central Asia.

This MTR Regional Synthesis Report takes advantage of the evaluative moment provided by the MTR to offer an overview of trends and activities in risk management at the national level in the Europe and Central Asia region. It draws extensive primary material from national voluntary reports (NVRs) undertaken by member states as part of the MTR process in the region, as well as supplementary information from interviews with regional stakeholders and contributions to other regional reports. The report offers a qualitative analysis of achievements and obstacles in risk management to 2022, as well as an assessment of future priorities, based closely in the evidence base of the NVRs produced in the region. The eight NVRs that form the core empirical material of this report were developed by:

- Austria
- Belgium
- Bosnia and Herzegovina
- Georgia
- Montenegro
- Norway
- Sweden

---


\(^3\) United Nations, Economic and Social Commission for Asia and the Pacific (ESCAP) (2020). The Disaster Riskscape Across North and Central Asia: Key Takeaways for Stakeholders. ST/ESCAP/2881.

Poland

The report proceeds in two sections. First, a retrospective assessment of key achievements and challenges in the years since 2015, including an overview of the changing context for risk management in the region. This section is structured around the four Priorities of the Sendai Framework and grounded in extensive primary material from NVRs in the region. Second, a schematic prospective assessment of priority areas of action to accelerate and amplify the implementation of the Sendai Framework in the years to 2030. Though the report makes no claims to offer an exhaustive analysis, it aims to give an impression of the state of play national level with regards to the actually existing practice of risk management in the region.
Retrospective Assessment: Progress and Challenges

Understanding

Risk understanding is an area of strength in the region. A key success in risk understanding in the period has been raising the profile of disaster risk reduction at the level of national decision-making, facilitating a broader awareness of the possibilities and challenges of disaster management. Risk assessment is an established and widespread practice in Europe and Central Asia (mandatory for the Member States of the European Union), whilst improvements to risk communication and education are among the most common activities that contribute to DRR in the region. From 2015 - 2022 there has been progress in establishing risk databases at national and sub-national level, including through making use of the Sendai Framework Monitor and the INFORM initiative. The move to understand risk as systemic, and to account conceptually for the ambiguous and cascading properties of risk, is still nascent in Europe and Central Asia, though some advances are underway.

Risk Awareness in Government

- A core success of the implementation of the Sendai Framework in the years from 2015 has been an improved awareness of the necessity of proactive and preventative risk management throughout national governments. However, influence at the very highest levels of government, and in economic planning ministries, remains a challenge and response oriented approaches remain a norm in several countries.

Belgium has developed structures to support iterative learning on risks by decision-makers. Following the occurrence of an emergency situation, a post-crisis review is conducted. The competent authority reviews whether procedures have been properly conducted, whether these proved sufficient to manage the situation and which improvements can be implemented to address future crises. The points for improvement from this evaluation are incorporated into the emergency and intervention plans. The decision can be made to take special measures or to provide additional equipment or personnel as well.

Montenegro notes that an important hindering factor related to development and implementation of the National DRR Strategy was the lack of awareness and understanding of risk governance issues among decision-makers at national and local level. This was compounded by the challenges emanating from obstacles to coherent working between risk reduction, development and climate change related goals and activities and the need to overcome them to ensure coordinated implementation.

Sezin Sinanoglu, Resident Coordinator, Tajikistan assesses that increased awareness of the Sendai Framework amongst national level officials has been a key success in the period from 2015 - 2022. She notes that the Midterm Review process in Tajikistan has been useful in catalysing further engagement. However, she also notes that, at the very highest levels of government, decision-makers “don’t get the spirit of Sendai”.

Risk Assessment

- Risk assessment is an area of strength in the region, with national, sub-national and sectoral risk assessments implemented in many countries. There remains a need to ensure that risk
assessment methodologies and capabilities can encompass the cascading and non-linear nature of risk.

**Norway** has a National Risk Analysis (NRA) coordinated by the Directorate for Civil Protection (DSB). The NRA is used to support risk management decisions in a rapidly changing global risk landscape characterized by increasingly complex, interconnected societies and highly mobile people, information, and goods. The first NRA was carried out in 2010, and the latest NRA summary report (2019) includes analyses of 25 scenarios in three different categories: natural hazards, technical hazards, and man-made disasters.

**Poland** notes that a key obstacle to appropriate management of risks in the country is a continuing lack of knowledge and competence at multiple levels of government in controlling and enforcing risk reduction activities. Only 19% of government institutions surveyed for the MTR make use of satellite imagery in assessing and managing risk. As a result, it was agreed by 100% of surveyed institutions and Voivodeships that there is a pressing need for a national level GIS to provide support in this area. The development of a GIS National Security tool was undertaken in direct response to this need.

In **Austria**, the National Risk Analysis compiles various disaster scenarios of national importance that are within the scope of the responsibility of the federal government. The National Risk Analysis of 2018 compiled a total of 18 disaster risk scenarios of which eleven were related to natural hazards and seven to man-made hazards. The man-made hazards include traffic accidents, power outage, nuclear accidents, terror-and cyber attacks and industrial accidents. The National Risk Analysis is carried out every three years.

**National Databases**

- 33 countries in the region have reported progress on national DRR strategies using the Sendai Framework Monitoring system, while 11 countries are using the DesInventar disaster loss database system. A key focus in the region moving forward should be to increase the interoperability of existing sources of data on hazards and vulnerability.

**Montenegro**: The Desinventar Sendai database is in use in Montenegro. Supported by UNDRR, in April 2019, Montenegro initiated the implementation of its national disaster loss data collection project. However, the Montenegrin NVR also notes a lack of comprehensive recorded data on local and national level on natural disasters which affected people, cultural assets and environment prior to 2008, as well as the non-existence of a methodology or guidelines for collecting and further disseminating data.

In **Austria**, a national hazard event and loss/damage database (CESARE) which integrates harmonised data for selected hazards from different institutions is in the process of being established. In the future, this database will support quantitative analysis within the national risk analysis as well as the Sendai Monitoring Programme. It is recognised that integrating insurance data as well as loss and damage data on federal assets into the CESARE database would help to improve the reliability for assessments.

**Vincente Anzellini, Monitoring and Reporting Hub, IDMC**, notes that a key challenge for Europe is ensuring data interoperability amongst national and regional reporting processes, especially with regards to damage and loss. To achieve this goal, rather than creating new systems and workflows, it
is important to work with governments to harmonise existing systems. There is also a need to assess more precisely which entities collect and analyse disaster data on the regional and national level, and to identify opportunities to align existing collections with Sendai through a systematic gap analysis.

**Systemic Risk**

- The move to adequately account for the systemic nature of risk is still in its infancy in the region, with challenges including understanding of the concept amongst decision-makers and the practical operationalisation of its tenets. There is, however, a growing momentum to build capacity in this area.

**Bosnia and Herzegovina**, in assessing systemic risk, notes positive momentum towards a more complex understanding of the nature of the risk. Harmonisation of different risk and hazard assessment methodologies and the design and application of geospatial tools have enabled the adoption of risk-informed policies and decisions across different levels of government. The application of risk and hazard mapping has significantly contributed to increased risk understanding and evidence-based disaster risk governance. However, challenges persist linked to a limited level of knowledge concerning the systemic nature of risk, and issues with the integration of the disaster’s root causes into the risk and hazard assessment process, alongside fragmented and insufficiently enforced data collection and exchange.

**Sweden** has incorporated considerations of systemic nature of risk into its critical infrastructure risk management. The Covid-19 pandemic and the war in Ukraine underscore the importance of critical infrastructure and security of supply at the national level. Currently, the country is going through a process in which civilian government agencies, regions and municipalities, in cooperation with the business community and the Swedish Armed Forces, are working to establish procedures for maintenance, protection and prioritisation of critical infrastructure and security of supply. In addition, Sweden is joining NATO and will as a member be included in enhanced work with resilience, including the security of infrastructure and supply.

**Franziska Hirsch**, UNECE, calls for an embrace of further areas of disaster risk management, in particular new and emerging hazards associated with technological and biological processes, as part of the holistic management of systemic risk. A key process towards this goal is the active engagement and coordination of multiple forms of expertise, developing a “common language that is even better adapted going ahead”.

**Nicholas Bishop and Soumyadeep Banerjee**, IOM note that there does not currently exist a broad-based understanding of the interconnected nature of risk amongst decision-makers. The community of practitioners working on risk therefore need to do more to think about how risk works, and how hazards and human actions can cause vulnerability in a specific territory.
Governance

The EFDRR Roadmap 2021 - 2030 and the Strategy for the Development of Cooperation of Countries of Central Asia in Disaster Risk Reduction for 2022 - 2030 establish a common commitment to sophisticated and integrated risk governance in Europe and Central Asia in the years to 2030. These strategic documents offer specific and detailed priority areas for risk management, providing the foundation for international coordination in risk governance in support of the recommendations of the Sendai Framework. At the national level, DRR platforms are a key instrument of risk governance: 37 national platforms for DRR are in place across the region. Though these platforms vary in their structure, all aim to ensure multi-stakeholder engagement in building resilience at national level by implementing DRR measures and mainstreaming risk reduction dimensions across relevant sectoral policies, programmes and instruments. Sub-national structures of risk governance also play an important role in the region, supported by the MCR 2030 initiative.

DRR Strategies and Platforms

- National strategies and platforms form the backbone of risk governance in the region. They are supported by regional level strategies and roadmaps for the implementation of the Sendai Framework to 2030. These instruments function best when they are well-resourced and endowed with sufficient authority to support their comprehensive implementation.

Montenegro has prepared the Strategy for Disaster Risk Reduction with Dynamic Plan of Activities 2018-2023. To create the document, a multi-sectoral working group was established which consisted of representatives from relevant national authorities such as ministries, agencies, services as well as academy and research communities and NGOs. A Local Strategy for Disaster Risk Reduction was developed with an Action Plan for the period 2021-2026, in which 34 different activities were identified with approximately 40 million euros of planned financial resources.

In 2017, Georgia adopted the National Disaster Risk Reduction Strategy of Georgia 2017-2020, along with its Action Plan and the Annex of the Action Plan. The Strategy defines activities for reduction of natural and man-made disaster risks and challenges faced by the country and defines the main DRR policy directions. It also outlines specific and detailed practical activities to be undertaken by the Government of Georgia in the area of risk management. The Action Plan defined 183 activities, of which 100 activities had been implemented by 2022, and a further 12 are ongoing with an extended timeline.

Norway’s national platform was initially established as a cooperation forum for the prevention of natural hazards, including consequences of climate change. In 2016, it was developed in coordination with two other initiatives: the strengthening of cooperation and coordination according to a White Paper on floods and landslides, and a project on natural hazards and infrastructure (NIFS). The national platform is coordinated jointly by the Directorate for Civil Protection (DSB), the Water Resources and Energy Directorate (NVE) and the Norwegian Public Road Administration (NPRA). The national focal point for the Sendai framework is DSB. Looking forward, Norway has noted the necessity of coherence between Sendai and other international frameworks, regulations and conventions.

Dzhergalbek Ukashev, Director, Center for Emergency Situations and Disaster Risk Reduction (CESDRR), notes the leading work conducted by CESDRR in Central Asia since its establishment in
CESDRR has played a pivotal role in the generation of risk data, the development of scientific and technical capacity, and the mobilisation of resources for risk reduction in the region. CESDRR has also acted as a hub for international partnerships for risk reduction in Central Asia, working with, inter alia, the United Nations, the European Union, the World Bank and the Asian Development Bank.

Local Governance

- Decentralised risk governance is an area of strength in the region, with regions and municipalities widely recognised as important actors in disaster management. The MCR2030 campaign brings together a network of 141 municipalities to support capacity building and knowledge exchange for risk management. A key challenge has been to ensure that sub-national governance entities are adequately resourced to meet their commitments in risk management.

In Norway, the 356 municipalities are the main agents in national disaster risk reduction. Risk and vulnerability assessments, physical planning, emergency plans and exercises are the cornerstones of disaster risk reduction at the local level. All municipalities are required to have an operational fire and rescue service and, according to the Civil Protection Act, they are required to establish systems for emergency prevention, preparedness, and response. According to the Planning and Building Act, they are required to carry out risk & vulnerability assessments in connection to land use planning and development. According to the Civil Protection Act, they are required to carry out overall risk & vulnerability assessments, covering both existing and future risks (including climate change impacts), and covering both existing and planned buildings, installations, and infrastructure.

Poland notes that local risk management governance structures are an area of strength. Sub-national governance in Poland is structured around the unit of the Voivodeship. In total, there are 16 Voivodeships in Poland, of which 9 responded systemically to the Midterm Review survey. Of this sample, 100% of Voivodeships report that key risks are monitored at the sub-national level and that threats to critical infrastructure are included in their risk assessment process. 89% note that these risk assessment processes include cascade effects. 75% of surveyed Voivodeships have cooperated with local governance structures to provide and support risk assessment services in the past three years, whilst 55% of surveyed Voivodeships maintain databases recording losses from disasters.

In 2019, Georgia’s capital Tbilisi adopted the Resilient City Strategy 2030. The strategy aims at building a vibrant city that is ready to respond to any challenges and sets a comprehensive roadmap for 2030 with missions, goals, and actions. The Strategy promotes successful execution of objectives and goals defined within the global post – 2015 agendas. In addition, the Tbilisi Land Use Master Plan was also adopted by the City Hall in 2019, which demonstrates a vision of a green, connected, compact and resistant city. Another important strategic document that supports integrated risk management at the local scale is the Green City Action Plan (GCAP), which was developed and adopted in 2017. The GCAP includes establishment of a Green City Baseline, the development of a vision and strategic objectives, the creation of a set of key programmes and measures to improve the environmental situation.

UNDRR has overseen the launch and implementation of the Making Cities Resilient 2030 initiative. As of 2022, over 55 million people live in one of the 141 MCR2030 cities in the region. The regional office also supported the establishment of global Resilience Hubs in Barcelona, Greater Manchester, Helsingborg, Malmoe, Matosinhos, Milan and Potenza, and Wroclaw. These hubs are networks of
innovators from business, investment, civil society, academia and urban development communities who are committed to mobilising financing and action to raise the resilience of all urbanites in meaningful and inclusive ways. Through dedicated project-based engagement, UNDRR has guided MCR2030 implementation through the roll-out of Disaster Resilience Scorecard assessments, Public Health Resilience Scorecard assessments or peer exchanges among municipalities.

**Inclusive Governance**

- The move to more inclusive forms of risk governance presents an opportunity for progress in the region. Whilst disaster governance structures often integrate multiple agencies and authorities, the systematic inclusion of marginalised perspectives, including those of youth and people living with disabilities, remains a challenge in Europe and Central Asia.

**Austria** notes an increase in collaborative structures that take marginalised groups into account. Local communities are empowered to join the risk management process: tools that support local communities to participate in and guide their own risk assessments include the ‘natural hazard and climate change check’ and the local KLAR! model regions for climate change adaptation. However, local communities are facing challenges, especially to raise awareness and acceptance of prevention measures. Obstacles remain in terms of facilitating communication and dealing with short timescales of warnings. More generally, there is a recognition that the inclusion of vulnerable groups in all stages and on all levels of the disaster risk management process remains a challenge.

**Vineta Polatside, Senior Adviser for Safe and Secure Region Priority, Council for Baltic Sea States (CBSS)** outlines how CBSS, recognising the limited inclusion of youth and children’s perspectives in disaster risk management, commissioned the ChYResilience initiative, which looked to assess the barriers to the involvement of young people in DRR. Fourteen focus group discussions with youth of different ages (7-25 years) and 25 interviews with experts from diverse fields and with different perspectives, mandates, and approaches were conducted. Two of the key findings of the initiative are as follows:

- Children and youth interviewed for the study demonstrated an ample understanding of the concepts of risks and disaster, across all age groups involved. Their knowledge and ability to conceptualise risks, disaster and safety becomes deeper and more nuanced as they grow up.
- The single most important factor identified by both adult and child respondents as hampering children and youth’s active role in building resilient societies was the lack of knowledge, awareness and capacity of adults around them. Even when adults in relevant positions open up to listen to youth’s voices, youth doubt that their opinions will be taken into serious consideration.

**Gordon Rattray, European Disability Forum** notes that within national governments there remains very little understanding of what it looks like to have disability-inclusive DRM. Designated Sendai Focal Points don’t understand what inclusion in risk governance is, and they consequently don’t practise it. Further, there are very often challenges to the accessibility of both spaces and information.

**Sezin Sinanoglu, Resident Coordinator, Tajikistan** notes that, in contexts where governments operate in a highly centralised manner, inclusivity in risk governance can be profoundly limited. In these situations, a lack of inclusion of marginalised voices into risk management is a function of a broader concentration of decision-making power across government.
Coherent Governance

The implementation of coherent governance approaches in the region has been mixed. There are examples of best practice that insist on the mainstreaming of risk reduction and distributed responsibilities for implementation. However, obstacles to coherence persist, including a sectoral approach to risk management and a lack of authority for DRR institutions.

**Bosnia and Herzegovina** notes that an integrated development planning process, especially on the local level, gained momentum in the period to 2022. Progress was achieved with understanding and further strengthening the incorporation of risk reduction into different developmental and planning frameworks, contributing to enhanced resilience-building. Considerable effort has been committed to develop a multi-sectoral and multi-disciplinary approach to disaster risk reduction, frequently coordinated by the National DRR platforms in collaboration with localized DRR platforms at the cantonal level. However, this multidisciplinary approach to DRR still suffers from insufficiently developed, regulated and enforced policy and normative frameworks, a lack of effective and efficient coordination and cooperation among sectors, and insufficient capacities for risk reduction at all government levels.

**In Austria**, RESPECT (Responsibility and Risk: Operationalizing comprehensive climate risk layering in Austria among multiple actors) is the product of a collaboration between the Environment Agency Austria, the International Institute for Applied Systems Analysis (IIASA), the department Z_GIS of the University of Salzburg, the Wegener Center of the University of Graz, the University of Innsbruck, and the Spatial Services GmbH. The aim of the project is to integrate natural hazard management that focuses on events caused by natural climate variability with climate adaptation measures that deal mostly with increasing risks resulting from climate change. Together, these measures form a holistic approach, also known as a climate risk management approach, which the project aims to operationalise.

**Montenegro** notes ongoing obstacles in engagement of and cooperation with state institutions, society, and local authorities, as well as challenging ensuring the coherence of DRR practices among different sectors (such as health, education and sport). As such, a key challenge is the adoption of relevant DRR-related policies in different sectors, especially the financial field, and a lack of expert and well-trained staff in DRR-related sectors.
Finance

Finance for risk-informed investment is an area in which challenges have been experienced from 2015 - 2022. Though the region remains a significant funding partner for UNDRR, and while some national budgets for investment in resilience have increased, there remains a shortfall in resource allocation for risk management. In this context, there have been attempts to more systematically engage the private sector and mechanisms of risk transfer to ensure resource mobilisation for risk reduction and preparedness.

Public Sector Investment

- There is a shortfall in domestic resource mobilisation for proactive risk management in the region. Dedicated budgets for risk management are rarely sufficient, and the mainstreaming of disaster risk into national planning is unusual. There is an opportunity to capitalise on increasing awareness of the centrality of systemic risk to advocate for more systematic investment in risk management.

Georgia demonstrates strong practice in the area of financing for risk management. The National DRR Strategy’s Action Plan defines the necessary budget for its implementation, whilst the appendix to the Action Plan outlined specific activities to be conducted. Within the period of 2017-2020 financial resources have been accumulated for the majority of activities outlined in the Action Plan: the overall budget was USD 293 850 309.9 (962 829 925.6 Gel), with 55.57% of the financial resources coming from the state budget and 44.43% of budget from grants and programmes of the donor international and/or non-governmental organizations. The seven-year UNDP Programme “Reducing the Risk of Climate-driven Disasters in Georgia”, funded by the government of Georgia along with several international partners, mobilises 74 million USD for early warning systems in the country.

Austria invests around €400M per year in natural hazard prevention, according to records of the Torrent and Avalanche Control (WLV). Federal investments regarding structural measures have increased from € 89.5 million to € 103.4 million since 2015. In terms of climate change adaptation, increasing investments are expected for adaptive measures through a shift in priorities within the federal budget, as damage costs are predicted to increase in the upcoming years.

Bosnia and Herzegovina notes that investments in disaster risk reduction increased following the catastrophic floods of 2014 and that the cycle continued throughout the reviewed period, though mainly for ex-post actions. These investments are still largely provided by external sources and predominantly are used for the implementation of structural measures, rather than non-structural. Financing of the risk reduction activities from domestic sources is still limited and mainly directed to the operation and functioning of the protection and rescue/civil protection forces. However, positively, investments by the public and private sectors are significantly more risk-informed than previously. In general, the private sector is lagging behind the public and is not actively included in governance structures for risk financing investments.

Poland recognises that sufficient financing has been a key obstacle in the period from 2015 - 2022. At both the national and sub-national level, there have been consistent resource and capacity constraints in the implementation of disaster risk reduction activities. Further, there is a lack of a dedicated national strategy for risk management, which has hindered both the mobilisation of resources for and
the coherent implementation of risk reduction activities in Poland. In addition, the reorganisation of governance bodies responsible for risk reduction has presented an obstacle to informed and systematic risk reduction.

Private Sector

- Partnership with the private sector is widely recognised as crucial to effective risk management, but there has been only limited practical success. In particular, there is limited cooperation with the private sector on insurance and other risk transfer mechanisms. In the long run, engaging the private sector could be key to sustainable resource mobilisation for risk management.

In Poland, a survey conducted by the Government Centre for Security revealed a systematic lack of engagement with non-governmental institutions and volunteers on the local level. In total, over 30% of institutions surveyed for the MTR recognised improving collaboration with non-government organisations as a key priority in improving disaster resilience in the country. Analysis also revealed a need for building even better cooperation between entities on different levels that could solve the problem of partially limited coordination of information exchange. An important venue for this cooperation is the annual National Forum for Critical Infrastructure Protection and the National Forum for DRR, which work to realise the principle of private-public partnership in order to educate people at different levels, and to inspire them to develop bottom-up initiatives to improve resilience.

Gordon Rattray, European Disability Forum notes that the private sector fails to appreciate the cost effectiveness of engaging in risk management - including preparedness, climate change adaptation and disaster risk reduction - in an inclusive way. He underlines that “it is economically beneficial in the long run to do things in a way which is accessible to all”.

Nicholas Bishop and Soumyadeep Banerjee, IOM, note that partnership with the private sector is critical to mobilising the resources to meet the ethical objectives inherent to development practice in general and risk management in particular. It is important to work collaboratively with private institutions to develop a shared language and a vision for the role of private sector capacities and finance in international development. Simultaneously, development actors must ensure that they are innovative and specific in their attempts to mobilise private sector networks and finance. An area of particular urgency is working with both states and the private sector to ensure that insurance can be extended to the most hazardous spaces.

Preparedness

The picture in the area of preparedness and response is mixed. Sophisticated preparedness, emergency response and contingency planning processes are well-resourced across the region, including for Natech events. So too are initiatives in improving risk communication and education (i.e. national plan for risk awareness in France). There has been progress in the area of early warning systems, including growing commitments to cross-boundary systems. The implementation of the Build Back Better principle is limited across the region.
Early Warning

- Early warning systems are an area of growth in the region, though opportunities for improvement remain. Countries are increasingly making use of technological improvements to design accessible and impactful early warning systems. However, failures in recent years underscore the importance of maintaining urgency for early warning system implementation. Looking forward, an important priority is the development of cross-boundary systems.

**Bosnia and Herzegovina** notes a mixed record for the implementation of early warning systems in the period. Disaster preparedness and response gained more momentum following the 2014 floods and the overall reactive profile of the DRM system began to change through the improvement of early warning systems, building the professional capacities and resources of the emergency responders, raising awareness of the broader population, and better preparedness for response. However, challenges remain in the domains of provision of necessary resources and equipment, and advancement of the multi-hazard early-warning systems that are able to reach everyone in a community.

**In Belgium**, BE-Alert has been fully operational since 2017. Currently, 1,093,897 addresses are already registered and more than 87% of the municipalities are registered on BE-Alert. At present, all authorities in Belgium have a warning system to ensure the safety of their residents. A mayor, governor or minister has the authority to activate BE-Alert in order to send a message through SMS, e-mail or voice call to everyone impacted by an emergency situation. In this way, residents can quickly receive the necessary recommendations, like closing windows and doors in the event of a fire. BE-Alert is an ongoing project, as the NCCN continues to search for new technologies and channels to alert people wherever they are. The program has sufficient capacity to inform a large number of residents at the same time via different channels. This capacity remains under continuous testing on a regular basis.

**Poland** reports a key success in this area as Alert RCB, an SMS-based early warning system. Alert RCB is an example of cooperation between decision makers and scientists, due to its joint development with research entities in the field of threats monitoring and citizens warning. The SMS system is used to warn citizens of dangerous events but also to increase public awareness of threats arising from climate change. In 2021, 507,749,369 messages were sent in Polish and 36,839,568 in English. An important supplementary tool that allows the sensitization of the population about local threats is the Regional Warning System. As part of this system, messages about potential threats created by voivodeship crisis management centres, appear on TV screens, on the website and in the mobile application. The early warning system in Poland is an example of a risk management technique that both responds to acute instances of disaster and works more generally to build a more resilient society. It also demonstrates the necessity of working closely with research entities for risk reduction, as it is the product of close collaboration between government and academic entities.

**Sweden** has a well-established multi-hazard system for detection, monitoring, analysis and forecasting of the hazards and possible consequences. The responsibility for different kinds of hazards are distributed across several actors according to their expertise. The system for weather warnings, which is managed by the Swedish Meteorological and Hydrological Institute, has recently been updated and new consequence based warnings were launched in 2021. Warnings are issued through several channels and a very high percentage of the country and populations are covered by these warnings. The latest major development when it comes to dissemination of warnings are alerts via
sms (since 2017) and the use of digital applications. Municipalities, rescue services, county administrative boards and national agencies with a responsibility for crisis management should all have a crisis management plan and staff ready to react to warnings at all times.

Technology for Response and Information Sharing

- The Europe and Central Asia region has seen innovation in the use of technology in risk management, both to support authorities in coordinating complex response activities and to allow citizens to develop a deeper understanding of their specific risk profile. The EU’s Copernicus Programme, which provides earth observation information freely and openly to end users, is exemplary in this regard.

In Portugal, the size and geographic dispersal of wildfires, and the amount of entities involved in resource mobilisation, has made it imperative to develop a capacity for rapid and informed analysis in Portugal. In response to this need, the Government of Portugal has developed the FEB Monitorização (FM) tool to support wildlife monitoring and operational decision-making to support response to the outbreak of wildfires. The FM tool represents a geospatial intelligence solution, based on ArcGIS licensing that integrates a WebGIS portal, dashboards and mobile apps, combining real time data with existing information from different sources, remote sensing, satellite data and location of operational assets. It supports the ongoing mapping and situational analysis of an operation, the creation of information products to support decision-making throughout the chain of command, and the provision of up to date information to all stakeholders. Currently, the access to the platform is guaranteed to approximately 500 users who collaborate in wildlife response actions, including firefighters, security forces, armed forces, forestry agents, medical personnel and academic institutions.

In Belgium, communication between authorities in case of an emergency is facilitated by ICMS (Incident & Crisis Management System). This is a platform used by all crisis management competent authorities to communicate between themselves quickly and efficiently, not only during an emergency, but also during the monitoring of an important event, or to engage in an exercise. It contains contact information (entered, updated and managed by the local communities to have the most current data), discussion tools, a very wide emergency plans database, and maps with all relevant layers, among other things. The NCCN organises training on a regular basis for the staff of all local authorities that may be involved in crisis management, whether there are beginner users or willing to develop their knowledge of the tool.

In Austria, HORA (Natural Hazard Overview and Risk Assessment) is an open source internet platform that visualises data of various natural hazards and their occurrence in Austria within a map. In 2002, HORA started out as a platform providing information about flood risk, thus answering a call after a flood event in 2002 for raising awareness for risk, the limits of protective measures and the interaction between the public sector, the insurance sector and private actors. That way, the platform enables people to assess the hazard of flooding in a specific area as well as allowing for an optimisation and prioritisation of protective measures for municipalities, federal states and the state. Today, citizens can additionally inform themselves about various other hazards such as storms, earthquakes, landslides, hail, snow load and current weather warnings concerning their home by entering their address in the search bar. The input parameters for the underlying models are maintained and updated regularly.
Cedric Bourillet, Director General of the Directorate General for Risk Prevention, France outlines the development of digital tools for early preparedness and early warning in France. FR Alert has been developed as a means to send information and warning messages to phones in the context of disaster, and has been fully operational since September 2022. VIGICrue is a tool to allow people to tailor the level of information on flooding risks that they receive to their specific locality and the water level of nearby rivers. Each represents an innovative use of digital technology to support disaster preparedness and response.

Risk Education and Communication

- Campaigns to improve risk education and knowledge are a common feature in the region. Education measures can improve the general level of understanding in risk management, whilst targeted campaigns can support changes in perceptions of specific issues. It can be useful to coordinate such initiatives with existing educational institutions.

Norway has developed an online 'Bank of Knowledge' (Kunnskapsbanken). This is a technical solution to make information about risk and vulnerability more easily accessible. The system collects, compiles, and visualises data from various sources, and includes private sector contributions from insurance companies. It aims at improving overview and knowledge about disasters, to strengthen civil protection, to enhance disaster prevention, and reduce losses and damages. An important part of the system is the translation of data into a common language, which makes it easier to find data even if the sources use different terms.

Georgia has placed a particular emphasis on broad-based education in risk reduction. To enhance a proactive attitude to risk reduction education and to build a bridge between knowledge and behaviour, the government of Georgia, in close collaboration with partner organisations, has implemented a broad range of educational initiatives, projects. First, the DRR training and training of trainers (ToT) module with inclusive approach, has been developed for the National Centre for Teacher Professional Development (Teachers House) under the Ministry of Education and Science of Georgia in Tbilisi and Batumi, where teachers are trained on a regular basis. In addition, special subjects related to DRR, such as Civil Education, Society & Me, and Environment & Sustainable Development, have been developed and integrated into the National Curriculum of General Education for the III – XII grade school students. Finally, a DRR learning module was developed and integrated within the curriculums of six universities: Batumi Shota Rustaveli State University, Gori State Educational University, Kutaisi Akaki Tsereteli State University, Jacob Gogebashvili Telavi State University, Samtskhe-Javakheti State University and Shota Meskhia State Educational University.

In Belgium, the National Crisis Centre has been actively campaigning to raise risk awareness, in collaboration with different national, regional, provincial, and local partners. These risk communication campaigns are designed to increase resilience and knowledge about risks in Belgium, and to bring about real change in behaviour before, during and after an emergency. Examples of previous risk awareness campaigns include: ‘BE-Ready’, an educational package for primary schools; ‘mijnloodplan.be’, a website to create a personal emergency plan; and ‘Inform yourself’, a campaign to boost the subscriptions to BE-Alert, the Belgian early warning system.

Build Back Better
The Build Back Better (BBB) principle is conceptually accepted in the region, but is limited in its application. Challenges to BBB implementation include resource limitations and the complexity of managing diverse stakeholders. However, capacities for sustainable and inclusive recovery in the region are gradually developing.

Georgia notes that recovery is the most complex phase of DRM, involving the greatest number and variety of stakeholders and affecting the greatest long-term impact on a community’s social and economic success. Georgia puts its efforts to execute an inclusive and comprehensive disaster recovery, rehabilitation and reconstruction considering the wide-ranging needs of communities, organisations, and individuals.

Belgium: to ensure a fluent reconstruction phase, the Walloon Region, which was most affected by the floods of July 2021, created a special reconstruction commission, namely the “Federal Support Cell” (CAF). The aim of the CAF was to coordinate federal support during the transition between crisis management and reconstruction. The task of this unit was to organise the operational mobilisation of the federal departments still active on the ground. Support was provided through the maintenance of the National Logistics Hub, and of the regular contacts between the National Crisis Centre (NCCN) and the governors. In response to the floods, at the level of spatial planning, urban planning and housing, multiple actions were undertaken:

- The Vesdre Master Plan, a multidisciplinary strategic plan that will establish an operational methodology for a sustainable reconstruction of the territory.
- The "Sustainable Neighbourhoods" programme, which aims to develop a more precise approach to the operations to be carried out in 11 neighbourhoods, located in 9 municipalities that have been severely affected.
- The Walloon Government is also working on environmental reconstruction (including through hydraulic/hydrological modelling of the Vesdre basin) to reduce the risks in the event of new floods, but also in terms of climate risks.

Cedric Bourillet, Director General of the Directorate General for Risk Prevention, France notes that reconstruction after disaster is an area where progress is necessary in France. However, recent successes include established tools to deal with waste after flooding, improvements at funding new homes and the development of a strong capacity in the rapid reconstruction of roads and bridges. Changes in the legislative framework in 2022 have supported this capacity development.

Partnerships

The period from 2015 - 2022 has been one of growing partnership in risk management. On the region-wide level, an intergovernmental agreement on risk management was concluded for the first time in Central Asia, whilst the EFDRR brought together delegations from 49 European and Central Asian Member States. Partnership has also been a feature of risk management on the national and sub-national scale, with research organisations, private sector actors and non-governmental organisations frequently involved in risk management planning. The remaining challenge in the region is to integrate such partners more systematically, and to ensure the implementation of commitments to partnership in the years to 2030.

International
International collaboration for risk management has been an area of rapid progress since 2015. Along with the EFDRR Roadmap and the Strategy in Central Asia, national governments have pioneered networks of capacity and expertise amongst each other and with intergovernmental institutions.

Regional collaboration is an area of strength in Poland. Initiatives such as the Lublin Triangle, V4 and the Network of Director General of the European Crisis Management Centre serve to support the identification, comprehension and analysis of risks and the development of coherent measures to build resilient infrastructures. The stress testing programme prepared by UNDRR-ROECA, which seeks to assess resilience capability taking into consideration key indicators from various sectors, is a further example of this emphasis on international partnership.

Georgia has engaged strongly with the Making Cities Resilient (MCR) campaign. Both Tbilisi and Gori have joined the MCR campaign promoted, with the aim to facilitate the implementation of post-2015 agendas and support local governments to reduce local disaster risks. Within the initiative, the city administrations aimed to establish a permanent local capacity for periodic multidisciplinary disaster risks assessment, raise the awareness of citizens and mobilise resources for funding with the final outcome to develop emergency management plans. Georgia’s MTR notes that the “Making Cities Resilient” campaign ensured clear vision of the local governments regarding the steps to build the culture of prevention, promote sustainable urban development and resilience of the cities.

Belgium plays a key role in the Network of Directors-General of European Crisis Centres. Launched in 2018, the network was created on the initiative of the Director-General of the Belgian National Crisis Centre, with the support of the Secretariat of the Benelux Union and the Benelux countries. The aim of this network is to identify and connect the different crisis centres to better understand each other, exchange skills and experiences and address common challenges in a coordinated way. The objectives of the Network are cemented in the Protocol of Cooperation, a document with great symbolic value, showing the states’ willingness to strengthen their cooperation, which has already been signed by 26 states. As a result of this initiative, Belgium obtained a network of colleagues in different crisis management functions to cooperate actively and coherently prior to and in case of crises with major international and cross-sectoral implications. By bringing these different actors around the table during formal meetings, we can be mutually aware of the challenges faced by our counterparts, support each other in implementing national solutions and develop a structure capable of relaying the needs of crisis management actors to the decision-making.

Sezin Sinanoglu, Resident Coordinator, Tajikistan outlines an important international partnership for resilience in Central Asia. In 2020 and 2021, the United Nations, the World Bank and the UK Foreign Commonwealth and Development Office collaborated to produce an assessment of risk and resilience in the Ferghana Valley and the Central Asia - Afghanistan Border Area. The objective of this assessment process was to establish the foundation for better coordinated and more impactful national, regional, and cross-border engagements, and to strengthen dialogue with national governments on actions that can tackle FCV and other risks. As a result of the project, a “very successful partnership has been set up which promises a strong focus and advocacy on risk and resilience”.

Vlatko Jovanovski, Disaster Preparedness and Prevention Initiative South Eastern Europe Head of Secretariat, notes that from 2015 - 2022 there were over 40 activations of the Union Civil Protection Mechanism (UCPM) by the DPPI SEE member states. Requesting international assistance
usually means that the particular state has exhausted its national capacities for consequence management and needs additional assistance. The most frequent triggers for such requests remain forest fires, floods, earthquakes and severe weather events. With the refugee and migrant crisis in 2015/2016 the UCPM was activated as well and also during the COVID-19 pandemic. According to the European Forest Fire Information System (EFFIS), the annual average of forest fires within the DPPI SEE region, for the reporting period, ranges between 1.29 (Slovenia) – 264.43 (Turkiye). Every fire season with no exception, DPPI SEE member states are either engaged in national forest fire suppression activities, or they are sending assistance to other countries in need of such assistance.

**National**

- National level partnerships in risk management are diverse across the region. Some countries demonstrate the systematic engagement of partners, both within and beyond national governments, with a particular emphasis on scientific and academic connections. In general, there is limited engagement with civil society actors.

**Georgia** notes success in private sector partnerships. In the period from 2015 - 2022, the resilience of industrial facilities and business in general in terms of disaster risks has enhanced considerably. The majority of participants of the MTR have outlined that they currently possess emergency management plans structured in accordance to business continuity guidelines, strictly aimed at rapid restoration of their services and provision of those services to the masses. Despite the major impact that COVID – 19 Pandemic had on the private sector, within the support of the government, businesses rapidly adapted to the situation at hand by maintaining vital segments for their proper functioning and creating a safe environment for their employees.

National level risk management networks are an area of strength in **Austria**. The role of water boards for collaboration across protective infrastructures is crucial, as they set up funds to which each member contributes. On a national level, various stakeholders mention the work of the Austria Strategy for Disaster Risk Reduction platform as a positive example, as well as workshops and training provided by the SKKM. Other successful initiatives and networks include the Disaster Competence Network Austria (DCNA), as a scientific disaster-focused network, and the KIRAS Security Research Programme as a dedicated research and implementation funding scheme.

The city of Helsingborg in **Sweden** is representative of partnerships for risk management that exist on the sub-national scale. The city of Helsingborg is a relatively large municipal organisation with nine departments and municipal companies active in the energy, water, sanitation and port sectors. All actors actively participate in the city's DRR and resilience work. The city receives an annual government grant to carry out crisis preparedness work in the face of extraordinary events, financing both DRR staff at the city management department, and appointed DRR coordinators in the city's other departments. DRR staff in each department jointly coordinates and propel the city's work forward, guided by RSA and prioritised areas of actions. In its structured distribution of risk management activities, Helsingborg demonstrates principles of polycentric risk management at the municipal level.
Contextual Shifts

2015 - 2022

- There has been a burgeoning recognition of the increasingly interconnected nature of risks from 2015 - 2022. This has crystallised into an account of risks as internal to the normal functioning of society, with global climate change and the COVID-19 pandemic playing an important role in this understanding. Practically, this recognition is associated with the sense that traditional methodologies of assessment and structures of governance are inadequate to the realities of contemporary risk.

**Bosnia and Herzegovina** notes that new risks and emerging issues impacted resilience-building in the country from 2015 - 2022, but that the existing policy and normative framework do not elaborate on them well in the multi-hazard, multi-risk context. There is insufficient information and data, and the existing risk assessment methodology is linear: not anticipating future uncertainties, but only analysing past events. Insufficient human and institutional capacities of local stakeholders during the COVID-19 pandemic and similar complex disasters can result in shifting priorities and delayed engagement by relevant partners, especially in activities that require strong multi-sectoral coordination and consultations.

**Poland** assesses that from 2015 - 2022 it has become clear that, in the modern world, countries are less and less often faced with homogenous and isolated threats. Most often the threats occur in various combinations, with the emergence of one threat frequently initiating another one or more. Attempts to introduce (or stick to old) strict divisions are doomed to failure or, at best, to a situation in which the same threat can be classified in more than one category. The boundary between civilisation threats and those caused by intentional human activity is particularly blurred. In addition, the situation is complicated by the fact that many identical threats may have not homogenous sources of their origin even in the same territory/area. In order not to artificially separate the civilisation threats from those resulting from intentional human activity, risks such as disruption in the fuel system (liquid fuel supplies), disruption in the gas system (gas supplies), mass migration and radioactive contamination must be understood as linked with each other and with natural hazards.

**Austria** notes that the threat of multi-hazards, their cascading effects and systemic character, as well as issues with the effective communication of related information, are perceived as issues that have emerged since 2015. With the COVID-19 crises, the consequences of globalisation and interdependencies of our socio-economic system have become visible and the challenges and fear of shortages in supply chains are considered as a new emerging issue. Furthermore, the COVID-19 pandemic has challenged the role of politics in decision-making within the DRM Cycle. Accordingly, increasing societal complexity has been identified as one of the emerging issues that causes a lot of concern amongst the stakeholders. Moreover, it is proposed to take the systemic nature of risks and cascading effects more into consideration in the future.

In **Central Asia** there has been a qualitative shift in the framework for risk reduction activities in the region. The first ever regional Strategy for risk reduction in Central Asia represents a commitment to concrete steps towards adequate risk governance in the years to 2030. The strategy integrates multiple stakeholders into the risk management process and insists on common standards of data production to facilitate collaboration across national and institutional boundaries. The implementation of the strategy will catalyse and require ongoing engagement and support from development partners.
operating in Central Asia, orientated at both the national and local level. In the context of this progress, Mr. Dzhergalbek Ukahev, Director of the Center for Emergency Situations and DRR (CESDRR) in Almaty, notes that Central Asia has been a region where “unique results have been achieved” since 2015.

2022 - 2030

- Analysis of the changing context of risk management in the years to 2030 is often based on the lessons learned from the incremental manifestation of the risks associated with global climate change and from the clarifying event of the COVID-19 pandemic. There is also an increasing concern with the risk accumulating through the widespread application of a series of sophisticated technological advances, as well as through ongoing processes of geopolitical and social instability in the region.

Bosnia and Herzegovina recognizes a need to “re-frame” disaster risk management to 2030 and beyond. This is needed to ensure a successful transition to the proactive system through stepped-up resilience-building efforts by all actors at all levels. This relies on a whole-of-government and all-of-society approach, converging disaster risk governance with all sectors while addressing existing, emerging and systemic risk. This can be achieved through:

- Embedding a holistic and proactive approach to risk reduction with a better understanding of the systemic nature of the risk and streamlined anticipation and mitigation of existing and emerging risks
- Enhanced and enforced normative and regulatory framework for better risk governance with identified strategic objectives and integrated sector policies,
- Strengthened capacities of institutions with sufficient resources, gender-sensitive and inclusive risk reduction policies and actions,
- Provision of sustainable and innovative investments for resilience by entities from the public

In Belgium, the National Risk Assessment pays particular attention to emerging risks and the influence they may have on each risk scenario analysed. More specifically, during the Belgian National Risk Assessment 2023-2026, the following societal or technological developments, which may influence the occurrence of certain risks, will be assessed by the experts: 5G; artificial intelligence; energy transition; systemic interdependence; blockchain technology and cryptocurrency; Internet of Things related hazards; quantum computing; biohacking; polarisation of society and erosion of privacy.

Sweden identifies social cohesion as an emerging risk. Public attitude and public engagement during a crisis is fundamental for resilience. While interpersonal trust and trust in crisis management authorities in Sweden is comparatively high, there are rising challenges. Sweden is facing increasing levels of violence related to conflicts between criminal groups. This in turn forms part of broader challenges with increasing segregation, marginalisation and an eroding overall trust and solidarity within Swedish society, along with undue influence on democracy and human rights. In light of this The Swedish Civil Contingencies Agency is emphasising the need to work actively to keep the public’s trust. Increasing income disparity and differences in trust, which correlate with gender and education level, may be factors complicating this challenge. It is important to ensure a just society to ensure high social cohesion.
Prospective Assessment: Priorities for Action

1) Frameworks and Networks for Sendai Implementation

UNDRR has been looking to engage regional dynamics to drive resilience building across Europe and Central Asia. First, at a macro-regional level, through the implementation of the European Forum for DRR Roadmap 2021-2030, by providing a strategic vision and framework for priorities in accelerating the Sendai Framework in Europe and Central Asia. The EFDRR Roadmap is the key instrument for accelerating and amplifying the implementation of the Sendai Framework in the region, reaffirming a commitment to governance structures that include the widest possible variety of stakeholders, including scientific actors and those most at risk, and that work across sectoral and international boundaries. The Strategy for the Development of Cooperation of Countries of Central Asia in Disaster Risk Reduction for 2022 - 2030 harmonises with the EFDRR Roadmap by providing a sub-regional commitment to well-resourced risk governance across borders and at multiple scales, including through the creation of mechanisms to share disaster risk data across national boundaries, the implementation of joint measures to harmonise regulatory frameworks, the creation of joint disaster risk assessments, and the regional standardisation of tools, methodologies, storage and dissemination of disaster risk data and forecasting.

The connective ethos of the EFDRR Roadmap and the Central Asia Strategy emerges from a strengthened network of regional dynamics, initiatives and instruments in the region, building upon existing cooperation frameworks and bringing together countries sharing common disaster risk. In doing so, emphasis is placed on the institutional capacity of regional bodies across the broader macro-region, including inter-governmental organisations such as the European Union, the Council of Baltic Sea States (CBSS), the Disaster Prevention and Preparedness Initiative for South Eastern Europe (DPPi-SEE) and the Almaty Centre for Emergency Situations and DRR (CESDRR) for Central Asia. By developing a network of networks, structured around regional hubs for DRR, UNDRR aims to catalyse the transferral of expertise and capacity from regional dynamics to the country and sub-national level, and to strengthen coordination of resilience building at both the regional and country level. Through a network of networks approach, the implementation of the DRR agenda in the Europe and Central Asia region supports the development of multi-sector and multi-scale risk management in the region. The approach also offers a mechanism for UNDRR to generate results at scale, maximising resources by developing sustainable networks of expertise and action for resilience in the region.

2) Specifying systemic risk

In the context of the move to understand risk as systemic, efforts to ensure the availability and quality of risk data are more important than ever. The systemic risk paradigm is at its most powerful when it is supported by data that works to quantify and specify cascading and non-linear disaster events. High quality risk data is crucial to the task of realising the practical potential of systemic risk through effective communication with national decision-makers. As well as developing technical capacity in the creation and maintenance of new data sets, it is important that existing sources of data are integrated and harmonised, both at the national and international scale. The move to systemic risk must go hand in hand with a renewed commitment to providing quality risk data to decision-makers.

The expansion of the horizon of risk management catalysed by the Sendai Framework and continued by the move to systemic risk implies a wide horizon of action for disaster risk management professionals. Biological, industrial, technological and natech hazards, as well as a range of risk drivers that condition vulnerability and resilience, are deeply relevant to the practical work of implementing the Sendai Framework. In the years to 2030, it is important to maximise the opportunities presented by this conceptual horizon by developing mechanisms to engage partners in diverse fields, and specifying the added value of DRR interventions into parallel fields of development practice.
3) **Mainstreamed and inclusive risk governance**

The mainstreaming of risk governance into development planning is a key catalyst for implementation in the years to 2030. Risk-informed development planning occurs at the point at which considerations of risk and resilience are built into the DNA of economic planning at all levels, and in both the public and private sector. Risk and resilience outcomes here are understood as the consequence of development decisions, with the individuals and institutions responsible for making such decisions expert in operationalising principles of risk management. As such, risk management functions as a practice rather than a sector, insisting on a diverse set of decision-making actors and rigorous analysis processes to ensure the resilience of societies as a whole.

Inclusive risk governance is also a priority area for progress. It is important to support development of new and diverse risk governance networks that can help to address the complex and ambiguous realisation of systemic risk. Inclusion must encompass the participation of the voices of the most vulnerable in established sites of risk governance, but also push for the development of alternative networks of knowledge, power and accountability. These networks would also include emerging players in risk management, including actors from the private sector, municipal authorities, sub regional entities and complementary practices of sustainable development. These networks work independently, with each other and with established risk governance institutions to ensure that risk management functions to build the resilience of marginalised communities.

4) **Increased and innovative resource mobilisation**

There is an urgent need to increase resource mobilisation for risk management in the region. This means continued work at the national and international level to advocate for the increased allocation of resources from national government budgets for proactive risk management. Two other strategies to increase investment from public funding sources will be important in the years to 2030. First, the positioning of DRR projects and activities in such a way that they become eligible for funding from budgets dedicated to support climate change adaptation and other development agendas. Second, the integration of systemic risk management principles into government investment in all sectors and all levels, dramatically expanding the amount of spending that is risk-informed.

These conventional sources of development funding must also be supplemented by creative approaches to resource mobilisation in the years to 2030. In particular, collaboration with various private sector actors, from private financial institutions to logistics and manufacturing companies, offers opportunities to raise finance, deploy technology and develop capacity at scale. DRR professionals must commit to learning the languages and priorities of private sector entities to develop an attractive offer to potential partners. In the context of waning multilateralism and stagnating international development funding from public finances, the innovative engagement of the private sector will become more important than ever.