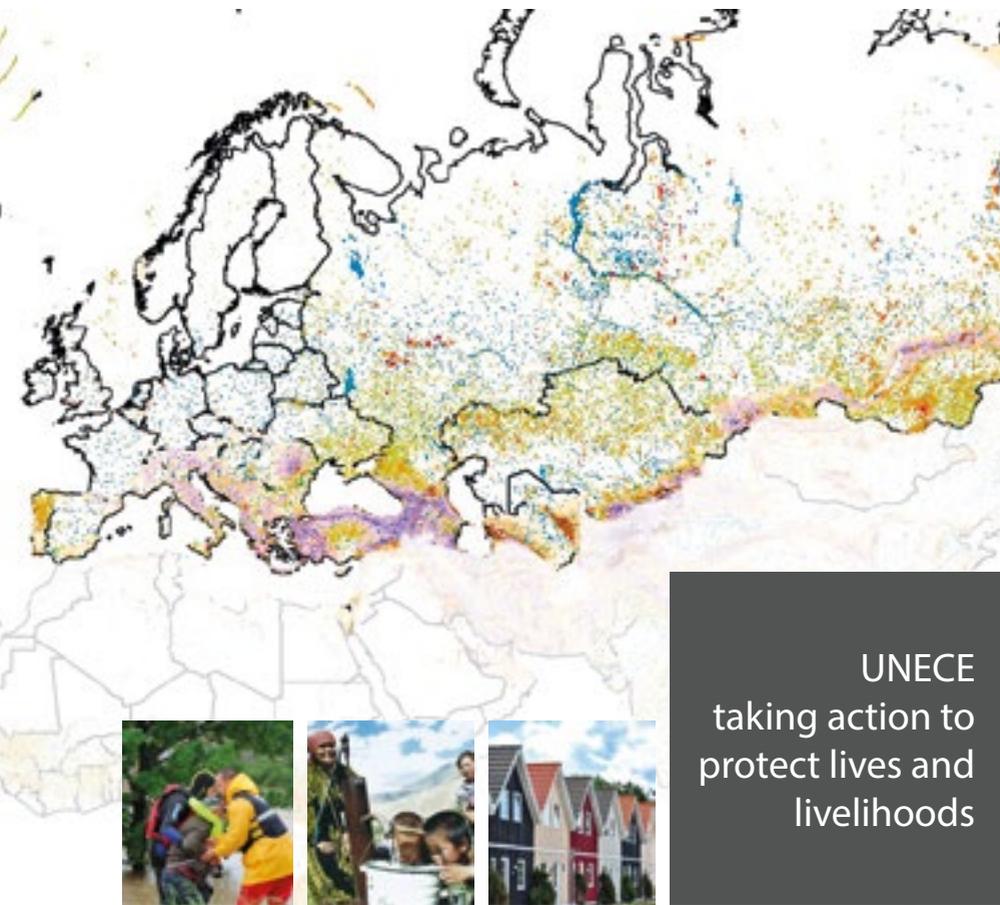


Resilience to disasters for sustainable development



UNECE
taking action to
protect lives and
livelihoods

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

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RESILIENCE TO DISASTER FOR SUSTAINABLE DEVELOPMENT: UNECE ACTIVITIES

All the countries of the United Nations Economic Commission for Europe (UNECE) region, including the most developed, are vulnerable to disasters. In Italy alone, the earthquake that hit the Central regions in August 2016 caused economic losses for over 23 billion euros, while in the European Union, almost 150 billion euros were lost to disasters over the past decade.

Because disasters such as floods know no borders, effective response requires transboundary or regional coordination and cooperation. The UNECE supports the implementation the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), adopted at the Third UN World Conference in Sendai, Japan, on March 18, 2015 (<http://www.wcdrr.org/conference>) and endorsed by the UN General Assembly in June 2015. In particular, the UNECE contributes to the United Nations Plan of Action on Disaster Risk Reduction for Resilience. The Plan calls on the United Nations system, both as individual organizations and collectively, to “make disaster risk reduction a priority.”

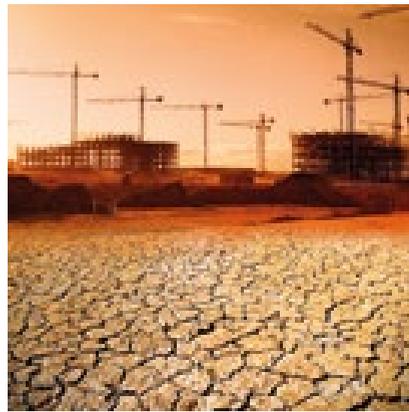
Within this framework, UNECE plays a crucial role in disaster preparedness in its region and – through its recommendations, treaties and best practice – well beyond its boundaries, particularly in the following areas:

1. Standards and regulatory frameworks
2. Housing and land management
3. Environmental management
4. Measurement and statistics
5. Protective functions of forests

1. Standards and Regulatory Frameworks for DRR

Through its Group of Experts on Risk Management in Regulatory Frameworks, UNECE works with the United Nations Office for Disaster Risk Reduction (UNISDR) as well as with standards-setting organizations to make standardized guidelines supporting disaster risk reduction more readily available and accessible to authorities, policymakers, small and medium-sized enterprises, non-governmental organizations, universities and local communities. Deliverables under this programme include:

- A booklet on Standards for DRR, whose aim is to “help bring voluntary standards into the toolbox of disaster risk reduction, both by encouraging their use of business and by enhancing their role in regulatory practice and policy-making more generally.”
- A task force under the ISO Technical Committee 292, coordinated by UNECE, that identified voluntary standards that could be used for advancing and measuring progress on the SFDRR indicators.
- A background paper on Standards and Normative Mechanisms for Disaster Risk Reduction for the 2015 edition of the Global Assessment on Disaster Risk Reduction (GAR 2015).







2. Housing and Land Management

Cities, infrastructures and buildings are constantly and increasingly exposed to hardships posed by natural phenomena and human-induced disasters, including weather-related events, such as floods, landslides, sea level rise and erosion. Unpredictable events such as earthquakes will also continue to hit cities hard. Sound urban planning and safe building prevent disastrous effects and save lives.

Through its Committee on Housing and Land Management, UNECE is addressing disaster risk prevention and mitigation in cities by promoting the integration and mainstreaming of DRR considerations into relevant policies and building standards. Activities include regional forums and urban planning guidelines for DRR, in particular for coastal cities.

Recent UNECE work in this area also includes:

- Capacity-building activities carried out in cooperation with the United Nations Office for Disaster Risk Reduction (UNISDR) in Serbia and Albania. Resources permitting, this will be repeated in other countries of the SEE region.
- UNECE country profiles on housing and land management feature DRR-related considerations and UNISDR has given expertise and analysis to the profiles. This cooperation is extremely valuable, and UNECE is currently working on the profile for the Republic of Kazakhstan and Belarus for 2017, following the guidelines drafted by UNECE Committee on Housing and Land Management in 2015.
- National workshops organized over the two-year period 2014–2016 in Armenia, Republic of Moldova, Serbia and Tajikistan, in cooperation with the United Nations Human Settlements Programme (UN-Habitat), the United Nations Development Programme (UNDP) and UNISDR.
- United for Smart Sustainable Cities (U4SSC), launched by the International Telecommunications Unit (ITU) and UNECE in support of the SDG 11 – Make cities and human settlements inclusive, safe, resilient and sustainable. This initiative includes the ongoing work to establish smart sustainable cities standards, and to develop the SSC index in 2017.
- Working towards the implementation of both the New Urban Agenda and the 2030 Agenda for Sustainable Development, helping member States develop efficient monitoring and review mechanisms.

Collaboration with the University of Geneva to integrate the natural sciences into urban planning in order to build resilient communities.

3. The Water Convention

Water related disasters affect a large number of people every year. Between 1990 and 2015, more than 4 billion people were affected by floods and droughts, and this number is expected to increase due to climate change. The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) entered into force in 1996, and since March 2016 all United Nations Member States can accede to it. It obliges Parties to prevent, control and reduce the transboundary impacts by facilitating cooperation.

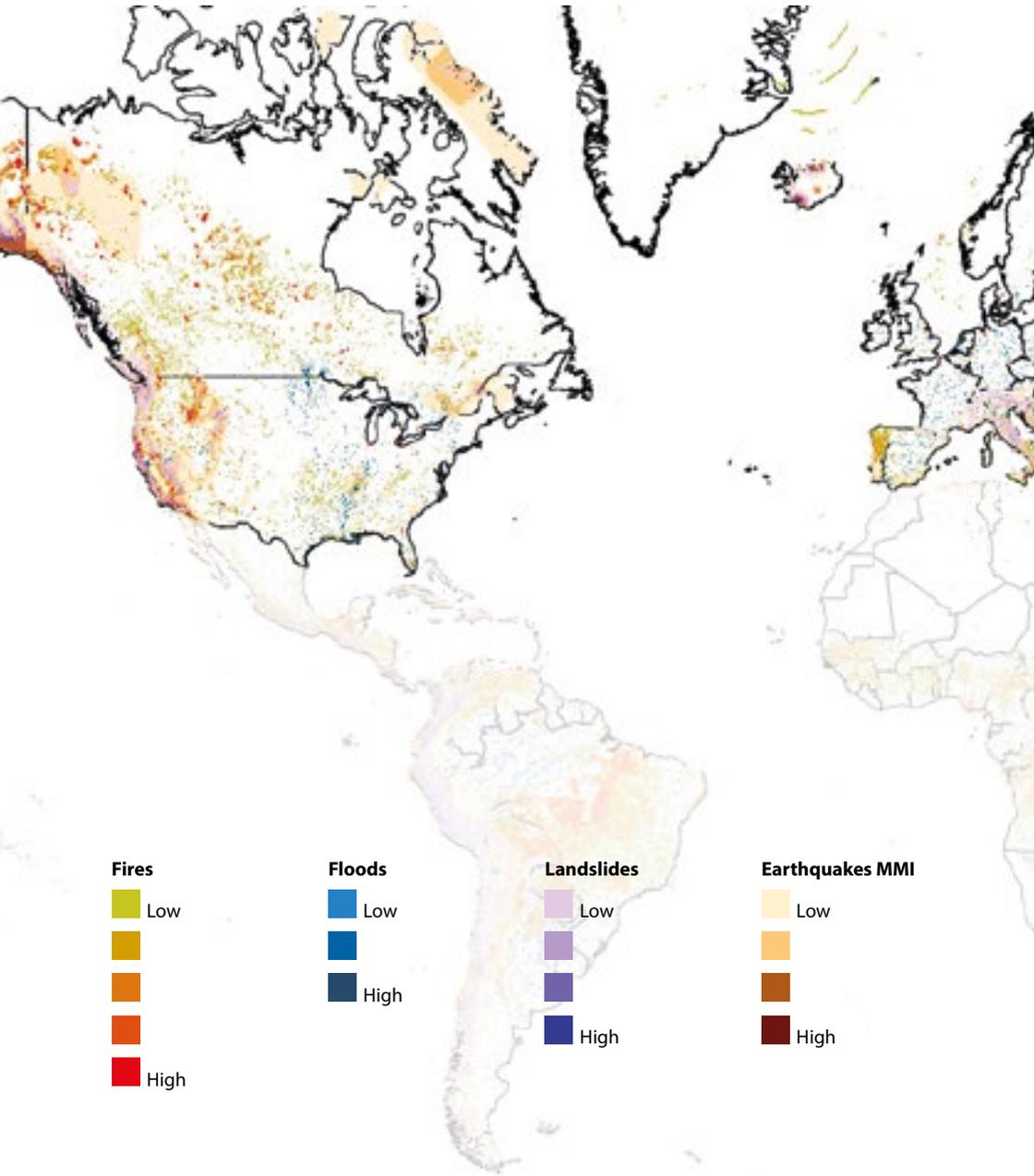
UNECE recent activities in this domain feature:

- The development of a “Words into Action” Implementation Guide for Addressing Water-Related Disasters and Transboundary Cooperation in support of the implementation of the Sendai Framework For Disaster Risk Reduction 2015-2030, to be prepared through the Task Force on Water and Climate in cooperation with UNISDR as well as in light of the 2030 Agenda for Sustainable Development and the Paris Agreement.
- The coordination of a series of pilot projects and a global platform for testing new methodologies and sharing experience on climate change adaptation and DRR in transboundary basins. In this regard, several DRR measures have been and will be implemented. Strategic Frameworks for Adaptation to Climate Change in the Dniester (Republic of Moldova and Ukraine, 2016) and Neman (Belarus, Lithuania, Russian Federation, 2015) River Basins were developed as one of the first transboundary adaptation strategies of this kind.
- A collection of lessons learned and good practices, shared through the annual workshops of the Global Network of Basins Working on Climate Change Adaptation, and published in April 2015.
- The Water Convention’s Protocol on Water and Health aims to protect human health and well being by better water management, including the protection of water ecosystems, and by preventing, controlling and reducing water-related diseases. Parties are required to establish national and local targets for the quality of drinking water and the quality of discharges, as well as for the performance of water supply and waste-water treatment. They are also required to reduce outbreaks and the incidence of water-related diseases. These measures are essential for securing water related life support systems during or after an incident.





Disaster prone areas in the UNECE region



Source: UNISDR: Preventionweb, compiled by UNECE (multiple hazards: earthquakes, fires, landslides and floods)

4. Industrial Accidents Convention

The 41 Parties to the Convention on the Transboundary Effects of Industrial Accidents — from Western, Eastern and South-Eastern Europe, the Caucasus and Central Asia — work together to prevent, prepare for and respond to industrial accidents, especially those with transboundary consequences. These accidents may be the consequence of human activity, or triggered by natural disasters. The Industrial Accident Convention is the only legal instrument for reducing the risk of technological disasters, and enhancing disaster risk governance. As such, it supports countries in meeting their related commitments under the Sendai Framework for the Disaster Risk Reduction.

Under the Industrial Accidents Convention, Parties have to work on two levels:

At the national level, by setting up early warning systems, mandating the operators of large industrial installations to take precautionary measures, or by preparing contingency plans for immediate response. This includes public participation in the decision-making process and in emergency planning and exercises.

At the international level, on joint emergency plans, mutual assistance, and public awareness, as well as on ensuring that the public can take part in decision-making. Parties to the Convention also exchange information and technology, and identify actions that may save lives in the event of an accident, such as how to facilitate the transport of equipment and personnel across borders during emergencies.

The Convention has been publicized via a “summary in cartoons,” a short film, and the video “From Sandoz to Sendai,” launched at the occasion of the International Day for Disaster Risk Reduction in 2017. Online training materials have been developed to further raise awareness, including postcards on the linkages of the Convention with the Sendai Framework on Disaster Risk Reduction 2015-2030 and the 2030 Agenda for Sustainable Development and the Sustainable Development Goals. Since 2004, the Convention has been complemented by an Assistance Programme, to support countries with economies in transition in implementing the Convention’s provisions.





UNECE DRR-related activities under the Industrial Accidents Convention include:

- The development of a Words into Action guidelines on man-made/ technological hazards, in cooperation with UNISDR, the Joint UNEP/ OCHA Environment Unit and OECD,
- A joint UNECE/OECD Seminar, held in November 2016 in Ljubljana, Slovenia, in the framework of the Ninth Meeting of the Conference of the Parties to the Convention. The seminar aimed at fostering the implementation of the sustainable development agenda for industrial accidents prevention, preparedness and response, in particular in view of the Sendai Framework for Disaster Risk Reduction;
- The facilitation and implementation of transboundary preparedness exercises, e.g. a trilateral field exercise in the Danube Delta region between the Republic of Moldova, Romania and Ukraine in September 2015 and a bilateral exercise between Poland and Germany on the Oder River in September 2017;
- Capacity-building activities to support the identification and notification of hazardous activities in Central Asia, South-Eastern Europe and the Caucasus and Eastern Europe;
- Support to countries in the application of guidance materials developed under the Convention, e.g. of a checklist on contingency planning for accidents affecting transboundary waters, guidance on land-use planning and safety guidelines for tailings management facilities, pipelines and oil terminals;
- Initiation of and participation in the Inter-Agency Coordination Meetings on Industrial Accidents, held annually in April or May since 2013.

5. Human Rights

Effective DRR is only possible as long as the public has timely access to adequate information on the potential risks of and actions for mitigating disasters; if they can effectively participate in decision-making on proposed DRR projects, plans and laws; and if those responsible can be held accountable for all matters related to potential and past disasters.

Parties to the UNECE Aarhus Convention and its Protocol on Pollutant Release and Transfer Registers (PRTRs) are obliged to disseminate all relevant information that would help the public take measures to prevent or lessen harm in the event of an imminent threat to human health or the environment:

In this context:

- Some 60 Aarhus Centers operational in 14 UNECE countries are currently developing activities to raise awareness and strengthen national capacity for disaster preparedness and risk reduction in cooperation with the Organization for Security and Cooperation in Europe (OSCE).
- The Aarhus Convention has also inspired civil society actors beyond the UNECE region to apply its principles in various areas, including violations of human rights in the event of disasters. In particular, the Santa Fe Declaration on Disaster Risk Reduction of 12 November 2014, which calls upon States to set up a culture of resilience based on human rights at all stages of disaster, acknowledges the usefulness of the Aarhus Convention in disaster situations.







6. Measurements

When an extreme event or disaster occurs, National Statistical Offices have to quickly provide data on the population, areas and businesses affected as well as information on the impacts of disasters for risk management. The coordinated delivery of good quality data helps to define the type of actions to be taken for an effective recovery of the affected areas.

UNECE coordinates the statistics in the UNECE region through the Conference of European Statisticians (CES) and its Bureau and the Database of International Statistical Activities. More specifically, the CES Bureau:

In October 2014, undertook an in-depth review of international work on measuring extreme events and disasters, based on a paper by Mexico, emphasizing several priority action areas, including:

1. Institutional cooperation with mapping agencies to integrate statistical data with geographical information;
2. Need for common classifications and definitions for extreme events and disasters for statistical purposes.

Based on the recommendations of the in-depth review a "Task Force on measuring extreme events and disasters" has been established in 2015 by the CES Bureau, with the main objective to clarify the role of National Statistical Offices in measuring extreme events and disasters. In 2016 the Task Force has carried out a survey in the UNECE region with the objective to identify the current and possible future roles of National Statistical Offices (NSOs) in measuring extreme events and disasters. According to its renewed mandate (February 2017) the Task Force is now also focusing on the operationalization of the recommendations of the Open-ended Intergovernmental Expert Working Group on Indicators and Terminology Relating to Disaster Risk Reduction (as far as relevant for NSOs), and contributing to the work of the UNESCAP Expert Group on disaster-related statistics. Members of the Task Force represent NSOs of Armenia, Italy (chair), Mexico, Republic of Moldova, New Zealand, South Africa and Turkey.

Furthermore, the following international organizations are members of the Task Force: the Food and Agriculture Organization of the United Nations (FAO), the Joint Research Centre of the European Commission (JRC), Eurostat, UN-ECLAC, UN-ESCAP and its Expert Group on Disaster-related Statistics in Asia and the Pacific, the United Nations Office for Disaster Risk Reduction (UNISDR), the World Health Organization (WHO) and the World Meteorological Organization (WMO).

The main outcome of the work of the Task Force will be "Recommendations on measuring extreme events and disasters", defining the role of National Statistical Offices, and providing a glossary of most relevant terms, definitions and classifications (to be presented to the CES Plenary in June 2019).



7. Forests

Forests face growing challenges and risks from natural disasters. Climate change is expected to increase the frequency and intensity of natural disaster events in the future. In addition, demands driven by population expansion and economic development have often impact on forests and forestland. Trees, forests, and the ecosystem services they provide, have a fundamental role to play in addressing the underlying causes of natural disasters. Therefore, Sustainable Management of Forests (SFM) has a crucial role in mitigating natural disasters and their impacts as well as enhancing the post-disaster reconstruction and recovery.

Integrated approaches to disaster risk reduction are the most effective. Forestry can be one of effective contributors to disaster risk management, especially when combined with appropriate land-use planning, mitigation measures and early warning systems. Forest ecosystems exercise key protective functions to prevent disasters, including protection from erosion, landslides and avalanches, conserving local climate conditions, filtering air and water and protecting from floods.

When appropriately managed, forests can withstand and protect people and ecosystems against natural disasters of varying degrees and types. SFM is not only a widely used tool to maintain healthy and growing forests in the ECE region, it also allows forests to provide all forest functions in the long term.

To promote the role of Sustainable Forest Management in mitigating natural disasters and their impacts, UNECE implements, in partnership with the United Nations Food and Agriculture Organization (FAO) a joint programme of work which includes monitoring of the state of forests and provision of statistical information for evidence-based policies in support to Sustainable Forest Management at the national level. Recent outputs include:

- Development of Forest Sector Outlook Studies for the ECE region including a scenario on the forest sector role in climate change mitigation and the carbon storing potential of wood products (2017 - 2018);
- A pilot project on evaluation of forest functions, including protective functions: System for the Evaluation of the Management of Forests (SEMAFOR) (2016);
- A study on the status of forest functions, including mitigating disasters and their impacts: Forests in the ECE region. Trends and Challenges in achieving the Global Objectives on Forests (2015);
- A study on forest-fire management in the region, and a White Paper on the State of Wildfires and Fire Management in Forests and Other Vegetation Resources in the UNECE Region, developed in close cooperation with the Global Fire Monitoring Center (2014);
- Rovaniemi Action Plan for the Forest Sector in a Green Economy: providing suggestions of possible concrete on the ground actions and implementing actors in Pillar B Low carbon Forest Sector and Pillar D Long Term Provision of Forest Ecosystem Services (2013).

A UNECE toolkit for the implementation of the Sendai framework

Prosperity can only be built on a solid foundation of security and stability, but can be wiped away in minutes as a consequence of both natural and man-made disasters, not counting the immeasurable human suffering and environmental degradation that may result.

Sustainable development in its economic, environmental and social dimensions also relies on the solid management of disaster risks. This is because disasters exacerbate poverty, affecting disproportionately the most vulnerable, who often live in exposed areas such as informal settlements erected with no regard to building codes. Disasters also have a devastating impact upon fragile eco-systems, destroy schools and hospitals affecting health and educational outcomes, and result in increased social tensions and weakened institutional support systems for social policy.

UNECE works to ensure that social and economic progress go hand in hand with a better disaster risk management. Weak and under-resourced systems and infrastructure in sectors ranging from housing to energy networks, from trade and transport hubs to information technology, compromise the capacity to manage any risk, including disaster risks. UNECE activities not only strengthen these systems' capacity to deliver services in normal times, they also reduce disaster risks, build resilience and enable countries to cope with and recover from disasters when they occur.



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