European Union

ISSUE 8 | APRIL 2023
ISSN 2811-6852

Union Civil Protection Knowledge Network

Dear Reader,

In times of polycrisis, protracted crises and cascading crises, it is no wonder that all of us, from ordinary citizens to the most influential policy makers (especially the latter), need support with sense-making and identifying new strategies to apply in times of shifting trends. It is, therefore, also no wonder that the European Commission (EC) has turned to the European Science Advice Mechanism (SAM) for advice on science-based crisis management.

For almost a year and a half, some of the best scientists in Europe and around the world have analysed what science can tell us about crisis preparedness, crisis management and crisis recovery. A scientific evidence report, led by Professor Tina Comes from the University of Delft, provides an over-300-page-long overview of the research done so far. Chief Scientific Advisors for the EC have developed this further to provide recommendations for policy makers to help them make science-based political decisions at times of crisis.

The recurring sense that crises are more common and more entangled seems to have a scientific explanation within the theory of complex systems. Indeed, the world is becoming more interconnected, mostly due to rapidly developing technologies. This means that the effects of occasional collapses and disturbances can be felt further away, and faster. A cyber-attack, for example, can take down services on the other side of the planet in minutes. If people travel overseas on jet planes, diseases can spread in a matter of weeks. In a complex system, it is typical that effects are hard to model and predict. This increasing uncertainty is something that crisis managers are going to have to contend with.

In a complex system, networks (formal and informal arrangements of people and organisations that coordinate, collaborate, and share knowledge and best practices) are going to play a more important role in preparedness and fast response to crises than previously, when the crisis management has been mostly sectoral and hierarchical. It is also important that we think beyond the public sector. In the networked world, volunteers equipped with communication technology and tools to organise themselves fast and on an ad-hoc basis are becoming increasingly influential players. Not only might citizens living on the seashore be the first ones to detect an oil spill, but they might also quickly self-organise a first response by engaging on social media. They have local knowledge, fresh ideas, and their own connections to expand their networks further. Authorities have to leverage the enthusiasm, motivation and skills of volunteers while also coordinating with public sector efforts.

Even less recognised, and therefore underexploited, is coordination and networking with the private sector. Most of the wealth in the world is privately owned. This can become an important resource in times of crisis, where public sector response might not be sufficient or fast enough. Take for example, the private sector donations at the onset of the Ukrainian war, when aid was delivered to the front in days and weeks.

To summarise, the scientific evidence predicts networking to have an increasingly decisive role in crisis management. Networking is working. Networking means working. It has to be done wisely, extensively, systematically, and well in advance of when the next crisis strikes.

Maarja Kruusmaa
Chief Scientific Advisor of the European Commission

IN THIS ISSUE

- Disaster Resilience Goals
- Testimonial from the Türkiye earthquake response
- Belgium's rescEU hub for Ukraine
- UCPM Peer Review Romania
- Spotlight on the 'RESISTANT' project
- The science behind the EU response to the earthquakes in Türkiye and Syria

New Director-General at ECHO

ECHO Director-General, Maciej Popowski
© L. Hastert, EU

ECHO has a new Director-General: Maciej Popowski.

Besides a long career as a Polish diplomat, closely involved in the accession negotiations of Poland to the EU, Maciej's professional career involves several EU institutions. He was Deputy Secretary General of the European External Action Service (EEAS), Head of Cabinet for European Parliament President Jerzy Buzek, Director of the Directorate-General for International Cooperation and Development (DG DEVCO), and Ambassador-Representative of Poland to the EU's Political and Security Committee (PSC).

Prior to joining ECHO, from September 2020 until January 2023, he served as acting Director-General at the Commission's Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR).

Maciej is very much looking forward to working with civil protection colleagues: "Even before joining ECHO, I was aware of the key role played by the UCPM both inside and outside the EU. Whenever disasters hit, the UCPM is there. I admired this work already when I was working in Neighbourhood policy and I've seen the impact of disasters at a personal level too, in the terrible floods that engulfed my home city of Wrocław in 1997. I am very happy and also proud to become part of the European civil protection family and I'm looking forward to working with Member States to make Europe stronger and more resilient."

EU ERCC awarded Gold Medal for Civil Protection

The European Emergency Response Coordination Centre (ERCC) received the Spanish Gold Medal of Merit for Civil Protection for their response efforts to the war in Ukraine, alongside the State Emergency Service of Ukraine.

In the presence of Commissioner Lenarčič, ECHO Director Hans Das received the medal from the Spanish Minister for Home Affairs, Fernando Grande-Marlaska on 10 February. The highest honour in the Spanish civil protection system was awarded in recognition of 'the impressive effort deployed by the ERCC in its coordination of the UCPM response to the Russian war of aggression on Ukraine', and for the growing role of ERCC response coordination.

Director Das dedicated the medal to all colleagues working at the ERCC, and commended ECHO's relentless work to make EU solidarity a reality for the victims of the war in Ukraine and disasters worldwide.

Commissioner Lenarčič applauded the work of the civil protection community: "I would like to pay tribute to the entire civil protection community in Spain, but also across the entire European Union. You go in when others are evacuating; you put your own lives at risk to save others. Thank you."

The Spanish Gold Medal of Merit for Civil Protection awarded to the ERCC. © EU

ECHO Director A Hans Das received the medal on behalf of the ERCC in the company of Commissioner Lenarčič. © EU

The Disaster Resilience Goals

On 8 February 2023, the Commission adopted the Disaster Resilience Goals (DRGs) – a set of objectives to build a resilient Europe, focusing on five key areas for disaster prevention and preparedness.

In recent years, Europe has been facing increasingly complex and interconnected crises including the COVID-19 pandemic, numerous disasters exacerbated by climate change, and Russia's war of aggression against Ukraine. A coordinated **EU wide disaster prevention and preparedness strategy** will be essential to rise to this challenge.

The Commission and the member states have identified and agreed on five DRGs to strengthen the EU's collective capacity to withstand future disasters, as well as protect its citizens, livelihoods, and the environment.

Commissioner Lenarčič highlighted the importance of efficient cooperation: "To tackle these obstacles, it is time that we boost together, in a structured manner, our resilience to disasters. Embarking on this new agenda, the EU and its member states will be better placed to prevent and prepare for the consequences of disasters of all kinds. This will save more lives and protect citizens, livelihoods, and the environment in the EU and the world."

The Disaster Resilience Goals are:

GOAL 1	 **Anticipate**	To improve risk assessment, anticipation, and disaster risk management planning in the face of increasingly cross-sectoral and interdependent risks.	**Flagship initiative:** To develop 10 Europe-wide disaster scenarios covering 16 key hazards faced by the EU that have cross-border impacts.
GOAL 2	 **Prepare**	To increase risk awareness and disaster preparedness of the population to reduce the impact of future disasters.	**Flagship initiative:** To develop #preparEU, a pan-European risk awareness initiative for disaster risk.
GOAL 3	 **Alert**	To enhance early warning to ensure warning messages at national, regional, and local levels reach the right people at the right time.	**Flagship initiative:** To link global early warning to local action in Europe. The ERCC has developed a range of automated European and global early warning and detection systems, and is developing a multi-hazard 'dashboard' that provides European situational awareness to emergency managers.
GOAL 4	 **Respond**	To enhance the UCPM response capacity to fill critical gaps and avoid further deterioration of a situation when the national capacity is overwhelmed.	**Flagship initiative:** To scale up the rescEU strategic reserve. This includes a doubling of rescEU's aerial firefighting fleet by 2023, with an additional 2 helicopters and 14 light aircraft.
GOAL 5	 **Secure**	To ensure a robust civil protection system which remains operational 24/7, both during and after disasters, when it is most needed.	**Flagship initiative:** Stress-testing the emergency operation centres across Europe. This flagship will pilot a pan-European disaster preparedness 'stress test', which will check the business continuity of emergency operation centres.

Gaetano Vivo, leading the ECHO team spearheading work on the DRGs, commented on the intended outcome of the goals: "The Disaster Resilience Goals will act as a strategic compass to steer our work in disaster prevention and preparedness. Each of the goals comes with specific objectives and flagships, which will facilitate their implementation." These ambitious goals now provide a structured outlook on work that is already ongoing, as well as future activities in ECHO, the Commission, and member states.

Bella Nestorova and Anna Blake, also from the ECHO DRGs team, elaborated on the goals and their implementation. Bella stated: "The concrete flagship initiatives illustrate the goals to our citizens. We are currently working closely with member states and other services of the Commission to establish an implementation plan for these flagships across the EU to bring more member states and participating states on board."

Anna noted: "The first milestone of this process was a meeting with the Disaster Prevention and Risk Management Commission Expert Group (DPEG) on 29 March, where we kicked off this implementation plan. Member states and participating states can 'internalise' the goals in their own resilience strategies and plans, and we would encourage member states to do that at all governance levels."

The ERCC will be stress-tested as part of the Secure flagship initiative. © EU

A testimonial from Türkiye: after the earthquake

Kinga Perge is an Urban Search and Rescue (USAR) first responder from Hungary, also working for Budapest Firefighter Association. When news broke of the devastating earthquake in Türkiye and Syria, she was ready for deployment. As liaison and USAR operations coordinator with the Budapest Volunteer Rescue Union - Hungarian Caritas team, she shares her experience of being involved in a disaster relief effort of this magnitude.

On the morning of 6 February, we woke up to a red alert from the Global Disaster Alert and Coordination System (GDACS). As both my partner and I are members of USAR teams, we immediately started to get ready: checked our personal bags, made some calls, gathered information and started to prepare for the mission. After the alert, our ways parted. As a firefighter, he is coordinator of the HUNOR USAR team, so he was deployed with the governmental team of Hungary to the Hatay sector in Türkiye.

Meanwhile, our volunteer team from the capital, the Budapest Volunteer Rescue Union, deployed a medium capacity USAR team to the city of Kahramanmaras through Caritas Hungary. We started our journey on Tuesday with 19 members and 2 search dogs in 5 cars and trailers, with nearly 2 500 km ahead of us. An additional 12 members and 4 search dogs flew to Türkiye and joined us there.

"When I looked around at the first team leaders meeting with representatives of international teams from around the world, I also recognised some familiar faces, and saw the same determination in their eyes. From that point on, I was confident we will have no issues in asking for support from each other."

The rescue operation continued day and night.
© László Németh

"From a professional viewpoint, the main takeaway from the mission was that there's no right or wrong decision, only a decision."

As my position is in liaison and USAR operations coordination, I started to collect available information during mobilisation, trying to get ready for the arrival to the affected area. I also got in touch with all my friends and colleagues from different international USAR teams to share what we know and to see who will deploy at which sector. On arrival, I directly went to the command post of AFAD and the Turkish government and requested the first assignment, while half of the team started to set up our base of operations. Despite the 38-hour trip behind us and the freezing cold, the team spirit was so high, and the adrenaline fuelled us so much that the rescuers showed no tiredness and started the assessment and rescue immediately. My initial feelings were right, any time I asked for a heavy capacity or special assessment equipment from any other team, the solution and support were there immediately, just as we helped if requested without hesitation. I believe that only with this mindset was it possible for us to work effectively during the rescue. The devastation in the city was unspeakable.

I still hardly find the right words, it feels like there's no right terms to describe the damage caused by the earthquake. Even with these circumstances, the Turkish people never ceased to express their gratitude towards us, which raised our spirits and helped us to keep going. We worked side-by-side with the Turkish responders at almost every worksite. Our joint operations resulted in the highest reward possible when we managed to save a 17-year-old girl.

Our team worked tirelessly in the rubble. However, the number and volume of worksites was so high that I felt we could do so little compared to the scale of the disaster. When I could, I created even three or four responding units from our team to execute different tasks, so it was also inevitable to take the lead of a unit on field to support the operations. The work was demanding and the weather conditions were very harsh, but I still did not hear any complaints. Our team worked in Kahramanmaras until 12 February, when we demobilised and got home on 13 February.

Personally, the most difficult part was the lack of communication with my partner. During the first days we could only speak for seconds, then the line broke. We only realised how hard it was when I also landed at Budapest airport and we could finally hug each other. We talk a lot about our missions to each other, which helps to deal with the intense feelings and experiences.

Belgian rescEU hub channelling aid donations to Ukrainians

From the very start of Russia's war of aggression in Ukraine, people have been asking 'How can I help?'. Some want to donate time or money to support refugees arriving from Ukraine in other countries, while others want to know what essentials they can send to help support people still in Ukraine and contribute to alleviating their suffering.

Companies wanting to help got in touch with the ECHO to offer goods and ask how to get them to Ukraine. When the private sector and other large organisations get involved in responding to a crisis, the impact is bigger, but so are the logistical challenges.

Cristian Giménez Payo is from the rescEU donations team at ECHO. He said: "After the outbreak of war in Ukraine, we started to receive offers from companies hoping to help by donating goods for Ukrainian people. We decided to organise this at EU level. ECHO offered to coordinate the process and channel the offers, and Belgium offered its support."

The hub for Ukraine in Aalst, Belgium is run by Belgium's Federal Public Service Health (FPS) and civil protection authorities, and supported by rescEU. Set up to help private companies send their donations to Ukraine, it will be operating until the beginning of 2024, at least.

When a company offers goods for Ukraine or its neighbouring states, Belgium hosts the donation temporarily, both physically and as a temporary 'owner' of the goods until they reach Ukraine. The Belgian authorities do the administrative and logistical work, host the capacity goods in their warehouse, and arrange transport of the goods from their warehouse to Ukraine.

The hub manages goods ranging from medical equipment, personal protective equipment (PPE), medicines, and chemical, biological, radiological and nuclear (CBRN)-related items. More than 7.5 million items, with a value of around EUR 5 million, have been delivered to Ukraine so far through the Aalst hub.

Viviane Henry, Strategic Advisor in Crisis Management Belgium, FPS, said: "This pilot project has opened doors allowing private companies to donate through the UCPM framework. Like with any new project, challenges were met during this past year, but nothing that couldn't be resolved by the different partners involved. We have gained a lot of experience and, as of now, there have been 17 successful donations, including seven in the category of medicines, four medical devices donations, and six 'others', such as PPE and biocides."

The Belgian rescEU hub contains, for example, medical goods.
© SPF Santé Publique – FOD Volksgezondheid

The pilot has yielded good results and possibilities for future activities. Viviane added: "In total we've received 629 pallets of products and delivered them to EU hubs near the Ukrainian border. However, we hope this is just the beginning and that in the future we can help channel many more donations to support Ukraine. This is a very good example of public-private cooperation. Belgium supports future initiatives, allowing the public authorities to enhance relations and build trust with the private sector."

Companies interested in donating can check an up-to-date list of what is needed and contact ECHO-Donations@ec.europa.eu about the next steps.

EU Medevac hub provides medical care for Ukrainian victims

Russia's war on Ukraine has severely affected emergency healthcare in the country, while in neighbouring countries, refugee inflow has put hospitals under strain.

The EU Medevac Hub near Rzeszów, Poland has one of the closest airports to Ukraine, and provides care for patients from Ukraine before their transfer to other countries for further treatment.

EU energy hub helps keep the lights on in Ukraine

The EU energy hub in Poland is delivering power generators and other energy items to Ukraine, helping the country sustain its electricity supply in the midst of Russia's deliberate attacks on its energy infrastructure.

The generators range from small models capable of powering single households, to much larger models suitable for keeping public buildings and vital community services, like hospitals and central heating points, running.

Companies wishing to support the in-kind donations programme for Ukraine can go to:
https://civil-protection-humanitarian-aid.ec.europa.eu/funding-evaluations/financing-civil-protection/channelling-aid-donations-ukrainians_en

FROM THE COMMUNITY

UCPM Peer Review Romania

Peer review team and representatives of the Romanian Department for Emergency situation and General Inspectorate for Emergency Situations. © EU

Romania has completed a UCPM peer review with expert peers from UCPM member states and the European Commission. The exercise highlighted good practices in the country and made recommendations.

The Department for Emergency Situations (DES) in Romania, together with its General Inspectorate for Emergency Situations (GIES), requested a UCPM peer review focused on disaster risk reduction governance, risk management planning, risk prevention and risk preparedness measures.

The review mission took place in October 2022. The peer review team, accompanied by ECHO staff and supported by the Euro-Mediterranean Centre for Climate Change, met with a wide range of stakeholders and went on field visits in and around Bucharest.

The review report, presented by European Commissioner for Crisis Management Janez Lenarčič to Romanian Prime-Minister Nicolae Ciucă, identified strengths and good practices in the Romanian disaster risk management system.

Romania has a strong legislative and governance basis in disaster risk management. Its recent strategic planning stresses the importance of policy coherence between disaster risk reduction, climate change adaptation and the Sustainable Development Goals (SDGs). Romania is currently developing its national disaster risk reduction strategy, and the recommendations provided in the peer review report are especially timely as part of this.

Nation-wide risk awareness campaigns have taken place in Romania in recent years, and these may be brought even closer to citizens through public-private partnerships.

Among the peer review's main recommendations were:

- a need for an improved operationalisation of disaster prevention roles;
- clearer identification of funding sources;
- regular risk assessments;
- implementation of essential prevention measures, like seismic retrofitting of buildings and flood prevention, through nature-based solutions;
- clearer identification of which authority is responsible for which hazard.

Francisc Senzaconi is Head of Disaster Risk Reduction Department at GIES. He said: "The peer review exercise was an opportunity for Romania to present its good practices and disaster management approach – anchored in the specificities of Romania and its geographic position – and to identify the areas that require sustained effort to improve."

The peer review team was made up of expert civil protection practitioners from national authorities: Sofía Gonzales Lopez (Spain), Laurent Alfonso (France), Nataša Holcinger (Croatia) and Carlos Mendes (Portugal).

Sofía Gonzales Lopez, who works for the Spanish civil protection authorities as a Disaster Risk Management Expert, said: "Being one of the peers of the UCPM Peer Review Romania has been an enriching experience. It's an opportunity to share experiences with one another and with a country that is determined to move from disaster management to disaster risk management. We've returned home with a suitcase full of thoughts and ideas – from small details to big actions – that we can apply in our own systems. Everything counts."

Read more on the review's recommendations and good practices in the Romania Peer Review report.

Transboundary storm risk and impact assessment in Alpine regions

Snow stratigraphy measures via the SnowMicroPen: measurement of the key variables that may have changed due to forest damage. © bfw.ac.at

Massimiliano Pittore Ph.D. is a senior researcher at the Center for Climate Change and Transformation at Eurac Research, Italy, where he leads an interdisciplinary research group on Climate and Disaster Risk.

He is the project coordinator of 'Transboundary storm risk and impact assessment in Alpine regions' (TRANS-ALP), an Italian-Austrian collaboration co-financed by the UCPM for the period of 2021–2022. He talked to us about the project and its contribution to the UCPM.

How did the idea of the TRANS-ALP project come about?

Storm Vaia in 2018 was a wake-up call for both the scientific community and the practitioners and local authorities in the Alpine region. The storm impacted the previously less affected southern side of the Alps, downing more than 8 million cubic metres of forests and causing extensive damage due to heavy rain, flooding and landslides, with an economic loss exceeding EUR 3 billion. A similar extreme event occurred during a 1966 cyclonic storm. These two cases were considered exceptional, but could foreshadow a change in the frequency and intensity of large-scale disasters, partly as a result of climate change. In such conditions, currently available risk assessment and prevention tools can prove inadequate, particularly on a cross-border level and in vulnerable mountainous regions.

Could you tell us what the TRANS-ALP project is about?

The overall goal of TRANS-ALP was to provide innovative multi-hazard storm risk assessment and impact-forecasting methodology, tailored for civil protection authorities in cross-border mountain regions. This involved critically scrutinising existing multi-hazard risk assessment approaches and mapping techniques of socio-economic assets and their vulnerability, better informing decision-making processes for disaster risk prevention in mountain areas of the European Union, and encouraging the adoption of common standards by comparing best practices across borders.

TRANS-ALP built a database of selected extreme events with damaging effects that occurred between 1980 and 2020 in the border area between Austria and Italy, to better understand such events and use them to inform more efficient impact forecasting methodologies.

We implemented a cross-border framework to model possible exposure to natural hazards. It covers the areas of South Tyrol (Italy), East Tyrol (Austria) and a part of Veneto (Italy), and accounts for issues like the changing number of people in given areas during daytime, at night, and during peak commuter times.

We also created a cross-border risk re-assessment framework to estimate the potential increase in avalanche hazard in the months following a wind-storm event. This framework, tested in two Alpine areas in Veneto (Italy) and East Tyrol (Austria), might be suitable for application in the whole Alpine area and in other mountainous regions in Europe. The project also developed cross-border risk-assessment reports for storm-related hazards, supported by common standardised methodologies and data-sharing tools.

What's next for TRANS-ALP?

The TRANS-ALP activities have helped research that will be continued in other projects. For example, the management of multi-hazard risks due to extreme meteorological events will be further explored by Eurac Research and Austria's national weather and geophysical service (Geosphere Austria) in the project 'X-Risk CC', which is financed under the INTERREG Alpine Space.

The Austrian Research Centre for Forests and other Austrian stakeholders will quantify cascading effects of storm-related forest damage on the snow avalanche hazard in a study site in East Tyrol (Austria). Finally, the regional Veneto Agency for Environmental Protection, in collaboration with the University of Padova, will further analyse the impact of wind on forests and their evolution.

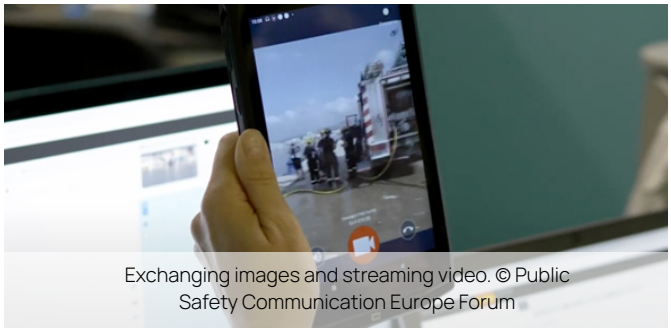
BroadWay and BroadEU.net: helping responders communicate anytime, anywhere

Police, Fire, Medical Responders from across Europe at the Ferry Fire pilot in Malaga. © Public Safety Communication Europe Forum

If our mobile phones can work anywhere, then why can't the radio devices that we use for emergency response? Responders need mobile broadband communication to carry out their disaster response and security operations wherever they are, whenever they need to, and with whoever they need to cooperate with.

BroadWay addresses this and, supported by the EU's Horizon 2020 programme, is laying the groundwork for a pan-European system of national mobile broadband systems for mission critical operational mobility. It develops solutions for responders to take mission critical mobile devices with them wherever they need to respond, with the same apps they use at home, and use them to communicate with others from different countries.

The BroadEU.net system aims to do this through national mission critical mobile systems that will be deployed in European countries in the coming years. France and Finland are already in the process of starting to use mission critical mobile systems, and other countries are set to follow.



Exchanging images and streaming video. © Public Safety Communication Europe Forum

BroadEU.net will interconnect national networks to allow responders to roam with their own mobile devices, access their home command structure and information systems, and communicate in talk groups that can be joined together when needed.

What this means is that national systems can share the same look and functions, improving interoperable communication – in other words, using our smart phones just as we do in our personal lives, but in a way that is more secure and reliable.

BroadWay carried out three pilot systems that were then evaluated by the response community:

- Forest fire: Ljubljana, Slovenia, with fire responders from across Europe;
- Drug smuggling: Kerkrade, The Netherlands – Cross-border police cooperation across the Netherlands, Germany and Belgium;
- Ferry fire: Malaga, Spain – Cooperation between Spanish agencies, police, Guardia Civil, and medical and fire response, with international support from across Europe.

Uwe Kippnich, Security Research Coordinator from the Bavarian Red Cross, took part in the BroadWay trial in Malaga. He said: "We can match groups from inside and outside the affected area, we have a direct connection. It is very important that we can react really fast. This is what is needed for major disasters like flooding and wildfire."

BroadWay finished in 2022, and the work continues through BroadEU.net, supported by the Commission's Department for Migration and Home Affairs. The 11 countries involved in BroadWay has now become 15 countries working together at Ministry/Agency level, and more countries are considering joining.

Solidarity for Skopje: Remembering 60 years on

Museum of the City of Skopje in a former train station. The clock stopped at the time that the earthquake happened. © Darko Chekerovski

"26 July is engraved in people's memories as one of the most tragic days in the country's history. The initiative to mark the 60th anniversary of the Skopje earthquake calls again for togetherness and solidarity, which in today's world seems more necessary than ever."

Armen Grigoryan,
UNDP North Macedonia Resident Representative

New post office of Skopje that was constructed after the eartquake. © Darko Chekerovski

This year marks 60 years since the catastrophic Skopje earthquake in which 1 070 citizens lost their lives. 470 men, 430 women and 170 children died, 3 300 were injured, and more than 200 000 citizens were left homeless. Almost 85% of the city's infrastructure and housing was destroyed – more than 15 800 buildings and 28 000 apartments.

The United Nations Development Programme (UNDP) in North Macedonia is coordinating activities to mark the 60th anniversary. The UNDP played a significant role in the reconstruction of the city after the earthquake, and in shaping the future Skopje during its most difficult moments. In the days after the earthquake, 35 nations asked the UN General Assembly to put relief for Skopje on its agenda, and a campaign directed at national governments and international agencies began to identify resources to help with recovery efforts.

The international solidarity demonstrated in the aftermath of the earthquake transformed the reconstruction effort into a symbol of friendship and brotherhood among countries and communities. Skopje became a city of solidarity and the whole world was united in helping the victims and rebuilding the city.

The UNDP is putting together commemorative events in collaboration with a broad number of national partners, including the Ministry of Local Self-Government on behalf of the Government of the Republic of North Macedonia, the Protection and Rescue Directorate, the Crisis Management Centre, and a number of diplomatic missions and international organisations.

The events will include a series of discussions and actions on enhancing the urban resilience of the City of Skopje following up-to-date global and regional best practices and lessons learned, and in line with identified gaps, challenges, and opportunities.

The City of Skopje needs to be ready to face today's complex risks and threats, and to prevent, mitigate, prepare for, respond to, and recover from the emerging risks and threats to come. The events programme will also provide a space for young people in Skopje to have their say and create a vision for the future of the city in which they want to live.

"Solidarity in Skopje is still felt today wherever you go around the city. Boulevards, streets, buildings are monuments of solidarity. Hospitals and schools are named after the countries that helped, as are streets where entire neighbourhoods were rebuilt after the earthquake, and cultural and artistic facilities bear the names or are known by the names of the countries that helped."

Armen Grigoryan,
UNDP North Macedonia Resident Representative

Spotlight on 'RESISTANT': a project co-funded under the Union Civil Protection Knowledge Network Partnership call

RESISTANT is a 'Training and Knowledge Sharing Platform for First Responders, and Educational Tools for students' and citizens' awareness and preparedness against Natural and Manmade Disasters and Risks'.

RESISTANT trained first responders through educational training in safety, including tools for the characterisation of hazards and associated risks, operational training on mock-up real-scale transport, and innovative virtual reality (VR) training that replicated entire accident scenarios, intervention strategies and tactics.

Integrated with the facilities of International Hellenic University's Virtual Control Room (VCR), the VR training included the whole chain of command, and communication between all members of the first response team, facility managers, and the public – from volunteer firefighters, to school children and people with disabilities.

The facilities of VCR (Virtual Control Room), IHU Campus. © IHU

The project undertook an observatory study of existing initiatives and training infrastructure, and created an overview of lessons learned, as well as current initiatives, procedures, and resources in disaster management across the RESISTANT network.

"The VR training will expand training potential and the effect of educational and operational training. It will reproduce entire accident scenarios, intervention strategies, and tactics, including the whole chain of command and communications between all members of the first response team, facility managers, and the public."

Prof. Dr. Dimitrios Emmanouloudis,
International Hellenic University (IHU)

Next, RESISTANT developed educational training to equip first responders with state-of-the-art safety knowledge, which included tools for the characterisation of hazards and associated risks. Operational-level training included practical table-top and full-scale exercises based on different emergency scenarios.

RESISTANT is now updating the emergency scenarios in its training programme to reflect the latest developments in intervention strategies and training tactics for search and rescue, utilise tools for assessment of hazards and risks focusing on cross-border situations, and using Southeast Europe as a case study.

The education and training infrastructure also provided opportunities for the general population (pupils, residents of endangered areas, citizens with disabilities, tourists, and municipality employees) with the end goal of drawing up action plans for future emergency preparation and disaster response.

The project was led by the IHU (Greece) in partnership with the Association of Officers and Sub-Officers of the Hellenic Fire Corps (Greece), Konnektable Technologies Limited (Ireland), the military academy General Mihailo Apostolski in Skopje (North Macedonia), Croatian Crisis Management Association (Croatia), the Evia Rescue Team (Greece) and Rescue Team DELTA (Greece).

More at: https://www.resistantproject.eu/

EU research in support of disaster risk reduction policies

Increasing disaster risk reduction capacities and developing resilient societies are central topics in the civil protection landscape today. The Horizon Europe Cluster 3 on 'Civil Security for Society' supports the implementation of EU policy priorities on security, including cybersecurity and disaster risk reduction and resilience. Disaster-Resilient Society (DRS) is one of the four main thematic areas covered by the programme. The 2023 call will be published on 29 June 2023, and will cover six topics in the DRS thematic area with a budget of EUR 33.5 million, dealing with the specific research areas described below.

The aim of the programme in the DRS thematic area is to strengthen prevention, mitigation, preparedness, and response capacities, as well as to improve cross-sectoral aspects of response. It does so by building on lessons learned from various crises, such as the COVID-19 pandemic, natural hazards and man-made disasters.

After two successful calls for proposals in 2021–2022, the programme is now ready to adopt its work programme for 2023–2024. The DRS thematic area will bring together a wide range of research and innovation activities that directly support the Sendai Framework for action, the UCPM or the EU Climate Adaptation Strategy. Environment policies covering the Water Framework and Flood Directives and the Seveso III Directive are also targeted.

Some of the specific areas of research include building societal resilience by increasing risk awareness and preparedness among citizens, and implementing improved disaster risk management and governance. Here, crisis prevention related to a digital breakdown and management of CBRN threats to agricultural production is one example of a research activity. Improved harmonisation and/or standardisation in the area of crisis management and chemical, biological, radiological and nuclear substances and explosives (CBRN-E) is another focus – for example, in response to biological toxin incidents, or alert and impact forecasting systems in areas impacted by natural disasters. Lastly, the DRS sector focuses on strengthening the capacities of first and second responders. For instance, by introducing robotics for use in hazardous environments, or technology solutions for enhanced decision-support systems.

CERIS event on Disaster Risk Management-related research.© EU

In addition, networking of training centres for the validation of tools and technologies in case of CBRN incidents is open to international cooperation, and thus directly supports implementation of the Sendai Framework for action.

Information-sharing and synergy-building between projects under the Community for European Research and Innovation for Security (CERIS) initiative (which has close links to the Knowledge Network) complement the research programme.

Upcoming in disaster risk management:

- **9–11 May 2023, Athens** – Technical workshop on technologies for first responders coordinated by the Search & Rescue project and involving a range of DRS projects
- **16–17 May 2023, Toulouse** – Forum on societal resilience and risk governance coordinated by the EC (HOME)
- **13–15 June 2023, Brussels** – Joint event of the eNOTICE, PROACTIVE and PANDEM-2 projects on synergies between the network of CBRN training centres, research and development on interactions between security practitioners and vulnerable civil society, and pandemic preparedness
- **4–7 December 2023**, **Brussels** – CERIS DRS annual event, coordinated by the EC (HOME)

UNECE Convention on the Transboundary Effects of Industrial Accidents 30th anniversary and way forward

The year 2022 marked the 30th anniversary of the United Nations Economic Commission for Europe (UNECE) Convention on the Transboundary Effects of Industrial Accidents (TEIA). The Convention aims to protect people and the environment against the devastating effects of industrial accidents by strengthening prevention, preparedness and response efforts in Europe. At the 12th meeting of the Conference of the Parties (CoP), which took place in Geneva from 29 November to 1 December 2022, Parties reviewed recent accomplishments and recognised the need to address emerging issues.

Devastating aftermath of the explosion at the Beirut port.© Mehr News Agency

These ongoing and emerging challenges are top concerns for the Convention. Topics related to the energy transition and changes of energy sources were addressed, alongside cybersecurity and natural hazard-triggered technological (Natech) accident risks stemming from wildfires.

The CoP adopted an ambitious work plan for 2023–2024, including activities that are aligned with the Convention's long-term strategy. These include, for example, improving Natech risk management, which resulted in a Decision on Natech risk management in the ECE region and beyond. Preventing accidental water pollution, as well as assisting countries in Eastern and South-Eastern Europe, the Caucasus and Central Asia in strengthening policy, governance and transboundary cooperation are among the other planned activities.

Members from 42 parties from from all over the Pan-European region gathered at the CoP. © UNECE

Russia's war of aggression on Ukraine has already led to various industrial accidents, including as a result of attacks on industrial facilities. The risk of further accidents is high, with potential to also affect neighbouring countries. In light of Ukraine's accession to the Convention in October 2022, readiness to support the country in addressing issues of industrial safety and reconstruction was an important topic for the Parties. Following the accession of Ukraine, 42 Parties, including the EU and its Member States, are now part of the active network the Convention has fostered. Cross-boundary cooperation, improving industrial safety policies and developing a 'safety culture' are some of the network's central goals.

The Convention and related UN tools provide important guidance for industry to ensure safety in new endeavours regarding a switch of energy supply sources and new, alternative forms of energy. Thanks to this framework, countries in Europe have developed and improved their industrial safety policies, cooperation across borders, and consequently, their disaster risk governance.

UNECE is one of the five regional commissions under the jurisdiction of the United Nations Economic and Social Council. It was established to promote economic cooperation and integration among its member states. The commission is composed of 56 member states, most of which are based in Europe.

Adopted in 1992, the UNECE TEIA Convention was approved by the EU in 1998. Mainly inspired by the EU Seveso Directive, the Convention aims to protect people and the environment against the effects of industrial accidents. Since its inception, the Convention has been supporting countries with improving industrial safety, and disaster response and preparedness to avoid future accidents.

More information:

- UNECE media release
- COP12 information and documents
- UNECE/OECD seminar on the effective management of technological risks of accidents triggered by natural hazards (Natech)
- Focal point for the UNECE TEIA in the EC: ENV-SEVESO@ec.europa.eu

IN CASE YOU MISSED IT...

EU MODEX for Urban Search and Rescue Modules in Denmark

The Urban Search and Rescue (USAR) Modules and Other Response Capacities participated in an EU MODEX that took place from 20 to 23 January 2023 in Tinglev, Denmark. Participants from four countries tested their preparedness and response capacities in this 48-hour exercise, which simulated an earthquake that had severely impacted public and private infrastructure. In addition to search and rescue activities, participants had to use their soft skills by engaging with issues of a strategic, political, and cultural nature, enriching the authenticity of the exercise. The full mission cycle was tested at the extremely challenging USAR exercise site.

EU Host Nation Support table-top exercise in Moldova

The second Host Nation Support (HNS) table-top exercise (TTX) was conducted from 22 to 24 February 2023 in Chișinău, Moldova. The national authority was joined by an EU Civil Protection Team (EUCPT), a Technical Assistance and Support Team (TAST), and three modules – USAR and two EMT 1 to test the HNS capacities. The scenario of the exercise focused on a severe earthquake with cascading effects, including a toxic cloud from the damaged chemical factory, and shortages in the electric and power supply resulting in blackouts and unrest. The realism of the scenario was enhanced by the use of VR-based components. Chains of command and control when activating the UCPM, meeting the requirements of the incoming assistance and testing the interoperability of national and international actors were the focus of the exercise and these were practised successfully.

EU MODEX on marine pollution in Finland

The Discussion-Based EU MODEX on marine pollution took place from 27 February to 2 March 2023 in Porvoo, Finland. The exercise brought together on-shore and off-shore stakeholders to take part in four sessions corresponding to four phases of an emergency: alert, response, environmental response, and long-term impact. After the conclusion of the exercise, the main findings were presented in the form of good practices and identified gaps. The wrap-up conference reflected the need for similar events.

EU MODEX on CBRN risks in France

From 28 February to 3 March 2023, the CBRN EU MODEX took place in Lyon, France. Modules from four countries participated in the exercise. The scenario involved a storm triggering fires, pollution, and accidents in an industrial area. Widening the scope of a response to predominantly chemical concerns, the exercise also involved inputs regarding compromised radiological sources and biological pathogens. It facilitated the certification of three CBRN Detection Modules, and also incorporated the unique French Field Emergency Network Infrastructure and Communication Squad (FENICS), which enables teams in the field to access critical communication services through smartphones alone.

COMING UP

Arctic Reihn 2023:

Full-scale exercise on Arctic Radiation Exercise in High North, Bodø (Norway)

08-12 May

TbiEx 2023:

Full-scale exercise on wildfires, Didi Lilo (Georgia)

14-17 June

OPPORTUNITIES

'Knowledge for Action in Prevention and Preparedness' call for proposals

A new (and yet familiar) flagship activity of the Knowledge Network, the 'Knowledge for Action in Prevention and Preparedness' (KAPP) call for proposals is waiting for collaborative ideas.

The call aims to strengthen cooperation among EU member states and UCPM participating states on disaster prevention and preparedness, and support full-scale exercises in civil protection areas such as risk assessment, anticipation and planning, risk awareness and preparedness, early warning, and institutional preparedness, all of which contribute towards implementation of the Disaster Resilience Goals (DRGs). The call merges the three previous calls; 'Prevention and Preparedness', 'Knowledge Network Partnership' and 'Full-Scale Exercises', to streamline the application process and extend the core elements of network and community.

For the three call topics - 'Prevention', 'Preparedness' and 'Full-Scale Exercises' - a consortium of a minimum of three legal entities from three different eligible states is required. The consortium coordinator must be a public or private entity for 'Prevention' and 'Preparedness', or a civil protection public entity for 'Full-Scale Exercises'.

Funding per project will range from EUR 400 000–1 million for 'Prevention' and 'Preparedness' projects and EUR 500 000–1 million for 'Full-Scale Exercises' (up to 85% of the total cost).

An information day on the call for proposals took place on 10 March 2023. The recording of the event is available on the KAPP call page on the Knowledge Network online platform, along with reference documents and more information about the call.

Project proposals must be submitted through the Funding & tender opportunities portal of the European Commission. The call closes on 4 May 2023 at 17:00 Brussels time.

Funding and tenders information: KAPP call for proposals

'Prevention and Preparedness' grants - Technical Assistance for Disaster Risk Management

A new call for proposals is open for national civil protection or other relevant authorities for disaster risk management grants. The grants provide financial support for the development of strategic disaster risk management actions, with the aim to prepare investments or strengthen the institutional and policy framework for disaster risk management. The grants will also contribute to supporting the implementation of the Disaster Resilience Goals (DRGs).

National civil protection or other disaster risk management authorities in EU Member States, UCPM participating states or in one of the four countries aspiring to become participants of the Mechanism (Georgia, Kosovo, Republic of Moldova and Ukraine) are eligible to apply.

Through the Multiannual Financial Framework (MFF) and the Next Generation EU (NGEU) financial programme, EUR 6.5 million in funding has been made available. The NGEU contribution is for actions to prevent and prepare for large-scale health-related crises (like the COVID-19 pandemic). A list of grants awarded during the last four years is available.

An information event on this call took place on 23 March 2023. More information, including a recording of the event and presentation, are available on the Knowledge Network Platform.

Project proposals must be submitted through the Funding & tender opportunities portal of the EC. The deadline for submission is 24 May 2023.

More information: ECHO calls for proposals page

Cross-border resilience and crisis management study

Two firefighting planes from Italy and Greece joined their French counterpart in fighting the fires. © EU

In December 2022, the EC launched a study mapping risks in EU border regions and identifying cross-border cooperation agreements, tools and processes for good risk governance.

The study will map the exposure and vulnerability of 43 EU land borders at the local level, four maritime borders, and six borders in EU candidate countries to a number of natural and man-made hazards. It will also provide an overview of existing agreements, tools and processes for disaster risk prevention, preparedness and response in border areas. The ten case studies drafted will emphasise effective governance approaches. The study will also analyse legal, capacity, and institutional gaps, and provide recommendations for improvement. Detailed maps will be created.

The study team **invites stakeholders to get in touch by 15 May** in case they wish to:

- Provide data and datasets on risk exposure, vulnerability and impact in border areas;
- Provide evidence of cross-border cooperation agreements, tools and processes for disaster prevention and response in EU border areas;
- Share insights on possibilities for improvement of legal and governance aspects of risk management in border areas.

In case you want to contribute in written form or through online or face-to-face discussions, please get in touch with elisabetta.marinelli@technopolis-group.com.

Exchange of Experts in Civil Protection programme: Share your experience, knowledge and skills

Are you a civil protection expert willing to share your expertise and gain new skills? Or a civil protection organisation willing to host experts? The Exchange of Experts in Civil Protection programme could be for you.

The Exchange of Experts programme helps to strengthen the EU civil protection system and the effectiveness of transnational cooperation through short-term exchanges (typically five working days) for civil protection experts (including experienced volunteers and personnel in EU member states, UCPM participating states and eligible third countries).

Why should you apply?

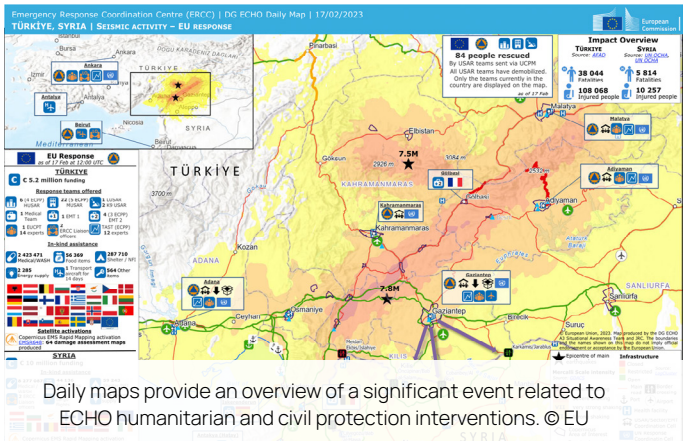
- Share your experience and knowledge;
- Gain knowledge through real learning experiences;
- Access specific expert knowledge;
- Build your network with other experts.

How do I apply?

For more detailed information and to apply, go to the Exchange of Experts website: https://www.exchangeofexperts.eu/.

SCIENCE

The science behind the EU's response to the earthquakes in Türkiye and Syria



Daily maps provide an overview of a significant event related to ECHO humanitarian and civil protection interventions. © EU

By providing an integrated scientific perspective and regularly updated information, the European Commission's Joint Research Centre (JRC) and the ERCC have been supporting decision-making at both political and on-the-ground levels since day one of the emergency in Türkiye and Syria.

32 minutes after the first earthquake, the Global Disaster Alert and Coordination System emitted a red alert to warn the humanitarian aid community that international assistance would likely be necessary to cope with a major disaster. Soon after, Türkiye reached out to the ERCC. The centre activated the UCPM – initially requesting USAR teams – and activated the Copernicus Emergency Management Service (CEMS).

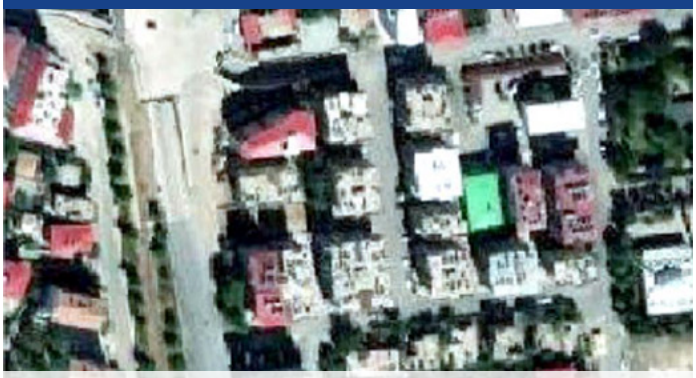
Soon after, based on needs highlighted by the ERCC, ECHO Daily Maps were developed to provide information on the impact of and response to the event. The JRC's Disaster Risk Management team established an internal group to exchange resources, expertise and news. This group produced several emergency reports which were sent to ECHO and ARGUS, a Commission-wide information and communication tool to support the crisis management and coordination mechanism.

These reports showed and/or modelled possible – or already happening – damage to the built environment, post-disaster scenarios such as dam breaking, migratory consequences and misinformation trends and the health situation (current cholera outbreaks and monitoring for other possible health issues) in affected areas.

Particularly relevant work shared in these reports was performed by the Social Media for Disaster Risk Management (SMDRM) AI algorithm, which processed more than 1 million user-generated messages on Twitter to identify messages requesting help. Specific location information was georeferenced and shared to help rescuers prioritise areas in which to look for survivors.

In less than 48 hours, CEMS started delivering the first maps of the event, identifying the infrastructure – buildings, dams, or gas and oil pipelines – affected. Other maps showed the situation in flood-prone areas the location of humanitarian camps. A report by the CEMS Drought Observatory showed that Türkiye and the Maghreb region are under warning of drought conditions. The compound effects of the earthquake and the drought may worsen water availability for agriculture and energy.

PRE-EVENT: Situation as of 27/09/2021 00:00 UTC



POST-EVENT: Situation as of 07/02/2023 08:00 UTC

The figures show the damage in a given area in Türkiye by comparing an old satellite image with one recently acquired by the Copernicus Emergency Management Service. © EU

River flood risk is increasing: what are the best adaptation measures to protect lives and save assets?

To face the increasing intensity and probability of floods in most parts of Europe due to global warming, flood adaptation strategies are needed. New research co-developed by scientists from the JRC and published in 'Nature Climate Change' compares the costs and benefits of flood risk reduction measures in Europe. The study estimates that in the EU and UK, river flooding currently causes annual damage of about EUR 7.6 billion and exposes around 160 000 people a year to inundation. In a 3°C global warming scenario and without climate change adaptation, flood damage in Europe would rise to EUR 44 billion per year, exposing nearly 500 000 Europeans every year until the end of the century.

Hence, flood adaptation is crucial to offset rising river flood risk in Europe related to climate change, the papers warns, but it can be cost-effective. Creating water detention areas, building river dykes, floodproofing buildings, and relocating people and assets are key flood adaptation measures. These measures can considerably lower projected flood losses in Europe until 2100 in the three scenarios of global warming assessed (1.5°C, 2°C and 3°C).

The rivers Inn (back) and Danube (front) flood the old city of Passau, southern Germany. © EC

A combination of different measures optimised at the level of river basins are likely the best way to maximise local benefits and minimise the drawbacks of each action. Reducing flood peaks using detention areas is economically the most attractive option: each euro invested would save four euro in avoided damages (in a 3°C warming scenario).

In a 3°C temperature increase scenario, the cost-benefit analysis shows that detention areas to reduce flood peaks would be the most beneficial economic choice, and could help lower the projected flood losses in Europe from EUR 44 billion per year to EUR 8.1 billion per year at the end of the century. It might also significantly reduce (by 84%) the number of people exposed to floods. The optimal implementation of this measure would need less than 2% of the overall cropland area in Europe and require a EUR 2.6 billion per year investment until 2100, with a benefit-to-cost ratio of 4.2.

Strengthening existing dyke systems is also cost-effective in most countries in Europe, but with considerable variation between countries in terms of risk reduction potential and cost-benefit ratios. Despite being less economically attractive, adaptation through building flood proofing and relocation can help to reduce the impact in areas frequently hit by floods, or with a high concentration of people or valuable goods.

Host your local and EU disaster risk and loss data in the Risk Data Hub

The Risk Data Hub (RDH) is a Geographic Information System (GIS) web-based collaborative platform used to look up, host, and share disaster risk and loss data – crucial information to support disaster risk prevention and risk management.

The platform offers a service the 'User Corner' – to accommodate and disseminate results related to external projects. Mainly addressed to national authorities, it provides a solution for accessing, storing and managing losses and risk data in a flexible and customised way that serves policy access well. The outcome of these successful collaborations materialised recently into three new User Corners:

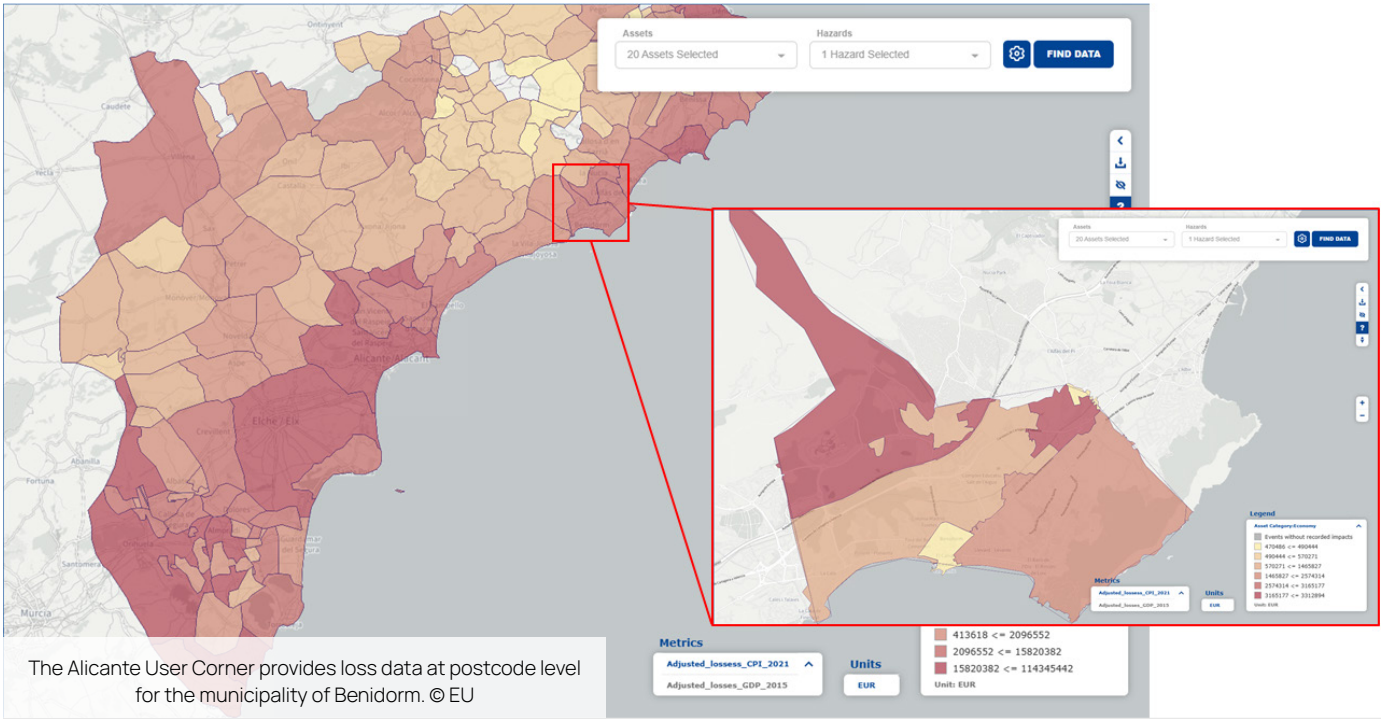
- The Flood Fatalities for Territories in the Euro-Mediterranean (FFEM) Region database that shows the number of fatalities and detailed information about the profile of victims and the circumstances of the accidents over 12 study areas. This required the coverage of Turkey and Israel, going beyond the scope of the platform's study area. These countries represent the first example of non-EU countries, demonstrating the platform's continuous expansion and development of the platform.

- The Alicante Province Economic Losses database , which hosts loss data provided by the Spanish National Insurance System. Losses are expressed in terms of compensation pay-outs of insured assets damaged by flash floods in the past 25 years.

- The new European Central Bank Physical Risk showing a set of indicators developed by the European Central Bank (ECB) which take into account risks stemming from climate-change-induced natural hazards that can affect the performance of financial institutions in the euro area. This 'corner' with financial information shows that the platform can host data beyond the field of disaster risk management.

Andrea Sibilia, Data Scientist at the Risk Data Hub, said: "The Risk Data Hub – Europe's risk and loss hub – showed its flexibility by covering different geographical levels and disaster risk data, hosting diversified data types."

Additional information on these three external projects which are now hosted in the Risk Data Hub is available on the dedicated page for each User Corner. If you explore the Risk Data Hub and you want to create a dedicated 'User Corner' where your data can be saved, returned to and worked on again, get in touch with JRC's development team: jrc-risk-data-hub@ec.europa.eu.



The Alicante User Corner provides loss data at postcode level for the municipality of Benidorm. © EU

Highlights from recent UCPM exercises

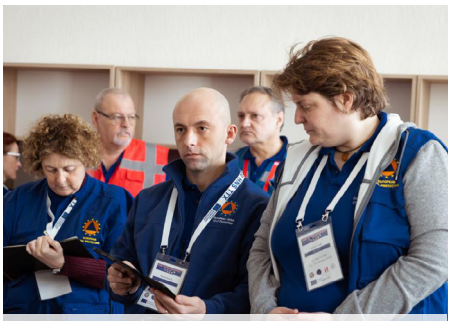
EU MODEX for USAR modules, Denmark, January 2023, © EU

EU MODEX for USAR modules, Denmark, January 2023, © EU

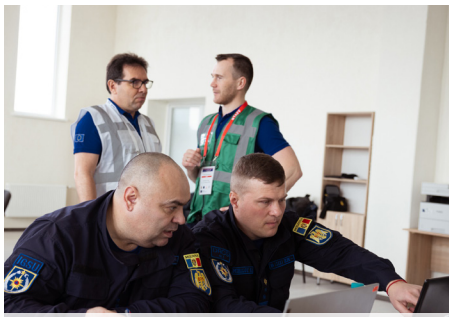
EU MODEX for USAR modules, Denmark, January 2023, © EU

EU MODEX on CBRN risks, France, February-March 2023, © EU

EU MODEX on CBRN risks, France, February-March 2023, © EU



EU Host Nation Support exercise, Moldova, February 2023, © Daniel Bointner



EU Host Nation Support exercise, Moldova, February 2023, © Daniel Bointner

EU MODEX on marine pollution, Finland, February-March 2023, © EU

To learn more, go to:

Want to keep up to date about events
in civil protection and disaster risk management?
Then check out the events section on the Knowledge Network online platform.

European Civil Protection and Humanitarian Aid Operations - Union Civil Protection Knowledge Network
E-mail: ECHO-CP-Knowledge-Network@ec.europa.eu - Website: https://civil-protection-knowledge-network.europa.eu

KR-AF-23-002-EN-N

#CivProKnowNet