

Union Civil Protection Knowledge Network



Dear Readers,

Civil protection is all about people. It is about first responders helping citizens hit by disasters, about strong solidarity between countries, about volunteering, raising awareness, training together and working as a team. Civil protection is also about systems, emergency centres, operational planning and procedures, and how they need continuous coordination and collaboration. Civil protection, finally, is about science and data, risk management, gap analysis, strategic insight, anticipation, knowledge sharing, and many, many other aspects.

The seventh edition of the European Civil Protection Forum will bring all these dimensions together in Brussels on 28-29 June 2022. Under the overarching theme *Towards faster, greener and smarter emergency management*, the Forum will allow for a joint reflection on the current and future role of the Union Civil Protection Mechanism (UCPM), whose success story is globally acknowledged.

Preceded by four warm-up sessions over the last 18 months on cross-sectoral cooperation, Modex@10, the Knowledge Network and international cooperation, the Forum will set a specific focus on the impact of climate change and related extreme weather events, on new threats and the changing risk landscape, on the role of the UCPM beyond Europe's borders, and the opportunities of digitalisation and innovation. It will also be the perfect occasion to show the progress made on the Knowledge Network online platform.

The European Civil Protection Forum is the largest high-level event on cooperation in the fields of European civil protection and disaster management and is part of the broader efforts of the Knowledge Network to bring the civil protection community together, network, exchange knowledge, share experiences and good practices, and to always learn further.

This edition of the Forum, initially planned for 2020, had to be postponed in the middle of the COVID-19 pandemic and will now be hosted in Brussels at a time of war, destruction, and immense suffering in Ukraine. The war reminds us of the values of our Union and has shown once again the strong capacity of the UCPM to assess, coordinate, unite and channel the immense solidarity and the common will to help each other before, during, and after disasters strike.

I am very happy to lead the dedicated team that will make the 2022 edition of the Forum once again a success. Together with Raluca, Anna, Ruben, Alex, Alicja and many other colleagues in ECHO, we have spared no efforts in getting everything ready so we can host you in the best possible conditions.

We count on your participation, in person, in Brussels at the end of June, because you know better than anyone else that there is no such thing as European Civil Protection without...you!

Maarten Vergauwen

Team Leader - Civil Protection Policy Development
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Coming of age: the Union Civil Protection Mechanism at 20 - reflections of a "dinosaur"

Contribution from Dr Peter Billing, Head of Unit and Deputy Director for Emergency Management and rescEU, Directorate-General for European Civil Protection and Humanitarian Aid Operations

Recent crises have once again tested the capacity of the UCPM to cope with major disasters. During the COVID-pandemic the number of requests for assistance has sky-rocketed to an all-time peak, with more than a hundred in 2021. More than 46 million doses of vaccines were channelled through the UCPM, together with myriads of medical items.



The early days: the MIC
© Peter Billing

The Russian war of aggression against Ukraine has opened yet another chapter: more than 38.000 tonnes of assistance have so far been channelled through the three UCPM hubs established in Poland, Slovakia and Romania since the beginning of the Russian war against Ukraine. All Member and Participating States are contributing to the response effort, including basically all imaginable civilian assets, from ambulances or fire trucks to dosimeters, and from de-mining equipment to diapers etc. In addition, more than 400 medically impaired persons have been "MEDEVAC-ed" from Ukraine to 12 countries. Even million-worth private donations (medicines, vaccines, sanitation items) are now channelled through rescEU. The rescEU safety net currently also encompasses medical and CBRN assets

following aerial firefighting capacity already introduced since 2019. This is the UCPM at cruising speed.

Very few of those around in the first years after its creation in 2001 would have ever imagined such a development for this incredibly flexible instrument named UCPM. I always miss the "European" in its official name.

Seeing the many young, committed and professional colleagues nowadays running the Emergency Response Coordination Centre (ERCC), I sometimes wonder if they are aware of the modest beginning we come from. When I started in this business almost two decades ago, there was no 24/7 ERCC, no transport funding, no European Civil Protection Pool nor rescEU assets, no CECIS (Common Emergency Communication and Information System). Communication was based on fax-machines. Duty officers were on call, entering the crisis room in a black-as-pitch office building in the middle of the night to "activate" the legendary "MIC" (Monitoring and Information Centre, the predecessor of the ERCC). Resources were tiny compared to today: 11 million EUR and one unit with 18 people.

Credit needs to be given to the pioneers like the late Alessandro Barisich, Juan Pedro Lahore or Olga Kakaliagou, devoted men and women on "both sides of the fence", in Member States and the Commission, who moulded the Mechanism in often tenacious, sometimes tough and yet ultimately constructive negotiations.



Commissioner Kristalina Georgieva and two young officials
in front of a MIC videowall
© Peter Billing

Important milestones were achieved with subsequent revisions of the legislation in combination with more staff and budget. 2007, for instance, saw the birth of the transport co-financing (at the time still to be used in "exceptional circumstances"), consular support and the civil protection module concept. 2010 milestone was the merger with ECHO's humanitarian branch, often compared to a forced marriage, but ultimately a wise decision yielding substantial efficiency gains in the response to emergencies. The legislative review of 2013 brought the creation of the 24/7 ERCC and the strengthening of prevention and preparedness activities. The disastrous 2017 fire season in Portugal triggered the establishment of the rescEU concept in 2019, another key milestone.

Needless to say that none of this would have been possible without the support of the numerous national experts seconded to Brussels who helped to inject life into this project, blending perfectly together with a bunch of committed Commission officials.

Yet, there is no room for complacency. When I see the challenges ahead, be it the climate crisis, demographic change or geopolitical convulsions triggered by Russia's war of aggression in Ukraine, I realise that we cannot take anything for granted. We all have an obligation to maintain the achievements and nourish further developments of our system. "Failure is not an option" as my former Director Jean-Louis de Brouwer said when looking at the largely unfinished construction site that was supposed to become the ERCC one day, with only a few weeks left until its planned inauguration.

Have we managed to get ahead of the curve? Not really, I think. At best we kept abreast with the evolution of disasters. It is therefore essential that we collectively enhance our capacity to anticipate, prepare and prevent. We have therefore developed the "ERCC 2.0" concept. This initiative is built on three pillars: enhancing cross-sectoral emergency management, strategic anticipation and foresight as well as capability development.

Cross-sectoral emergency management	Strategic anticipation and foresight	Capability development
<ul style="list-style-type: none"> • Closing gaps in existing automatic alert systems and between support systems; • Develop multi-hazard alert dashboard; • Capacity development support to MS; • Awareness raising about the UCPM and ERCC beyond CP authorities. 	<ul style="list-style-type: none"> • Develop a Scientific and Technical Facility to advise the ERCC; • Enhance internal capacities for foresight and strategic anticipation activities; • Strategic anticipation through scenario building together with other Services; • Engage with like-minded partners. 	<ul style="list-style-type: none"> • Further develop the ERCC's operational planning and coordination role; • Adapt ERCC's physical/technical infrastructure; • Strengthen the duty-system; • Shaping the further development of the EU response capacity within the UCPM framework, including the ECPP and rescEU.

Only if we continue to relentlessly enhance the UCPM, draw thorough and honest lessons from our activities and remain open to change, we will succeed. Indeed, failure is not an option. We need to keep pushing. We owe it to our children.

Dr Peter Billing has held several functions in emergency management, civil protection and humanitarian aid since 1999. He is currently Head of Unit and Deputy Director for Emergency Management and rescEU in Directorate-General for European Civil Protection and Humanitarian Aid Operations of the European Commission. He will be retiring on 31 July 2022.

The Ukraine crisis through the eyes of the ERCC

The dramatic escalation of hostilities in Ukraine in recent months, as tragic as they are, has yet again demonstrated the effectiveness of the Union Civil Protection Mechanism as one of the primary tools for operational crisis management in Europe. By working through ECHO Emergency Response Coordination Centre, with every EU Member State, two other Participating States, and many other partners – including those in the private sector – all actors have



contributed to what has become the largest and most complex cross-sectoral UCPM operation to date. Besides Ukraine, the UCPM supports Moldova and many other affected European countries that have taken in millions of people fleeing the war in recent months.

The numbers speak for themselves: since February, Ukraine alone has made 70 requests for assistance through the Mechanism, including medicines and medical supplies, shelter materials, hygiene items, food, PPE, and fire-fighting equipment, as well as for agriculture supplies and energy infrastructure to ensure critical societal functions over the longer term. So far, more than 38 000 tons of UCPM assistance, including medical supplies

from the rescEU medical stockpiles and contributions from the private sector channelled via a rescEU warehouse in Belgium, have been handed over to Ukrainian authorities. In most cases, these deliveries have been made via the EU logistical hubs set up in Poland, Slovakia, and Romania. In addition, the ERCC has helped to deploy at least 50 UCPM experts as part of EU Civil Protection Teams in Poland, Slovakia, and Moldova. The UCPM has also deployed 11 ERCC Liaison Officers to ensure effective coordination with the ERCC in Brussels, host countries, and other involved international and non-EU country partners, including the US, the UK, and Canada, for example. Furthermore, the ERCC has helped coordinate at least 480 Medevac operations, ensuring the safe transport of patients from sites in Ukraine, Moldova, Poland, and Slovakia to medical facilities elsewhere in Europe.

A considerable amount of work has gone into ensuring that an operation like this is as efficient and effective as possible and is enacted as early as possible. In this case, the ERCC began actively monitoring the situation in early December and began organising cross-sectoral coordination meetings in early February. These brought together stakeholders from many different sectors including civil protection, consular preparedness authorities, and public health and energy actors to discuss specific issues as they emerged and evolved over time.



The situation in Ukraine shows no signs of improving anytime soon; besides not knowing when the war will be over, there continues to be considerable uncertainty about how it will be fought and where the focus will be going forward. Equally, the effects on Europe and, indeed, globally, continue to be unclear, not least where migration and energy and food supply are concerned. In order to reduce surprise and ensure UCPM readiness in the future, the ERCC is working both in-house and with Member States and other partners to anticipate potential developments, especially any cascading effects that could have wider implications.

The potential lessons of the response to the Ukraine crisis to date are many, and the ERCC is already hard at work collecting and beginning to reflect over them. The Civil Protection Forum in June will be an opportunity to hear about the lessons of other partners, and to reflect collectively over our experiences thus far and how we can continue to support Ukraine, Moldova and other frontline countries going forward.

AFAD's role as regional chair of INSARAG (Africa/Europe/Middle East)

Interview with Governor Yunus Sezer,
Head of the Disaster and Emergency Management Authority (AFAD)

Turkey has increased her capacity and capabilities in the field of disaster management in recent years. Could you tell us about AFAD, which played an important role in this process? Also, could you tell us about the disaster management structure and risk mitigation programmes developed by AFAD?

On 17 August 1999, an earthquake with a magnitude of 7,6 hit the Marmara region, where more than 30% of Turkey's population lives. This event was a milestone in Turkey's approach to disasters, as it changed radically the state mind set from a "crisis management" to a "risk management" approach. The state started focusing on taking preventive measures, being cautious and prepared before disasters occur. This transformation paved the way for the birth of AFAD.

Since our establishment as [AFAD](#), Turkey's Disaster and Emergency Management Authority, risk mitigation has been our focus. To put this into practice, we have prepared plans such as Turkey's Disaster Response Plan, Turkey's Disaster Risk Reduction Plan (TARAP) and Provincial Disaster Risk Reduction Plans ([IRAP](#)). The TARAP we are about to complete, systematises risk mitigation across the country. The IRAPs are local reflections of TARAP specifically for the cities we have completed and put into practice in all of our 81 provinces. We also commissioned the IRAP Monitoring and Evaluation Software, where central and local institutions follow one another.



Turkey has recently assumed the chairmanship of the Africa/Europe/Middle East (AEME) regional group of INSARAG – what is the role of this setting and who are the members?

The International Search and Rescue Advisory Group ([INSARAG](#)) is a network of disaster-prone and disaster-response countries and organisations dedicated to Urban Search and Rescue (USAR) and operational field coordination.

INSARAG was established in 1991 to facilitate coordination between international USAR teams who make themselves available for deployment to countries experiencing devastating events of structural collapse, primarily due to earthquakes. INSARAG has become a model for humanitarian aid with over 90 member states and organisations and has demonstrated that cooperation in disasters can be conducted successfully with standards, principles and operating procedures.



The overall mission of INSARAG Regional Chairs is to promote the INSARAG methodology and guidelines and encourage participation in the INSARAG regional group, including activities such as INSARAG regional earthquake response simulation works. They actively coordinate the activities of the regional group organising meetings in the region or participating as INSARAG in relevant events in the region or beyond. As Turkey, we have assumed the INSARAG Africa, Europe and Middle East (AEME) chairmanship throughout 2022. We are proud to be a part of this humanitarian network and to be one of the three regional chairs around the world.

At the recent INSARAG Global Steering Group meeting in Geneva in May, you presented the regional workplan for 2022. Could you tell us more about it?



Ayda's little hand hold by AFAD personnel during İzmir earthquake © AFAD

The activities to be carried out throughout 2022, during our AEME Presidency have been planned around 4 topics reflecting the main axis of the INSARAG 2021-2026 Strategic Plan.

The first one is the development/maintenance of quality standards. As you know, some INSARAG activities had to be postponed due to the Covid-19 pandemic. Among these, the INSARAG External Classification and External Reclassification activities. In this context, our Istanbul and Ankara teams which will undergo External Reclassification have also been affected, and it seems that the activities of these two teams can be delayed until 2024. Therefore not only our country's teams, but

also all teams in the region and globally, must maintain the criteria they have met in classification.

For this reason, we announced at the meeting on 10 May that we will host the 2022 AEME SIMEX on 10-12 October in Istanbul. Its field exercise dimension is open to all teams interested in participating.

Our AFAD teams in 9 big cities of Turkey are also accredited within the scope of INSARAG National Accreditation, based on the certificate we received from INSARAG in 2017. In addition, within the scope of AFAD accreditation system we have developed in Turkey, 38 teams and more than 1000 personnel from public, civil society and private sector organisations have been accredited in Urban Search and Rescue.

Turkey has been an excellent host for the MODEX earthquake exercise in Tekirdağ in 2021. UNOCHA was also present. How can MODEX better connect with INSARAG?

First of all, it was really exciting to come together in Tekirdağ, Turkey's soil on the European continent, on the occasion of MODEX. As Europeans, we implemented a valuable practice to keep Europe away from the effects of disasters. Therefore, the EU MODEX Tekirdağ exercise gave us hope for the common future of our region. As European countries, our meeting is important for the preparedness of our continent and our region for disasters. It means a demonstration of the will to resolve big issues.



Cat rescued in Konya by AFAD personnel © AFAD

We can make this will that we have demonstrated in Europe more inclusive, by lifting it to a global level with INSARAG. We can take this unity within the continent to the global level. We can encourage UCPM to work hand in hand with UN agencies. Collaboration between UCPM and UN agencies should not only be confined to intervention. I am of the opinion that cooperation should also be developed on preparedness and risk reduction.

How in your view, can we strengthen the partnership between the UCPM and INSARAG?

Countries that are members of both the UCPM and INSARAG can begin to play more active roles within INSARAG. I think that UCPM and INSARAG can quickly start developing a partnership thanks to the

actions. For instance, we can bring together UCPM's MODEXs with INSARAG's ERE SIMEXs. We can ensure the two entities earn the skills for working together and act in sync. We can have trainings co-organised by the two. We can ensure both structures get in harmony with one another, both theoretically and practically.

As Turkey's AFAD, you have important efforts carried out on risk and damage reduction, on the heading of preparedness. Can you share some of these examples?

We strived to "create disaster awareness in the society" with the "Turkey is Prepared for Disasters Campaign" we launched in 2014. Recently with the 2021 Disaster Training Year, we made significant progress in terms of public information. The "2022 Year of Disaster Exercises" sets the right time to put knowledge into practice. We have a target of 54.302 drills this year.

We have launched the AFAD Volunteering System to contribute to the dissemination of an awareness of disaster preparedness and volunteering in the society. In approximately 3 years, 535.000 thousand people applied to become AFAD Volunteers.

We implement the AFAD Accreditation System to reduce disaster risks and damages during the response process. So far, we accredited the search and rescue, nutrition and in-kind donation warehouse management teams of 41 NGOs and organisations. We even assigned duties to these accredited teams during the EU's "Tekirdağ Modex Exercise".

FOR THE COMMUNITY



Call for experts for a thematic UCPM Peer Review

The European Commission is looking for experts to take part in a peer review in Romania in September/October 2022. The first since the COVID-19 pandemic, the peer review will identify areas for improvements and highlight good practices within the disaster risk management (DRM) system in Romania. ECHO will select four peers and manage the peer review as part of the UCPM Peer Review programme.

In collaboration with UCPM national authorities, ECHO will select four experts with experience in:

- Policy and institutional aspects of DRR/DRM;
- Risk assessment and disaster loss data;
- Training, volunteers, information and communication; and
- Risk financing.

Who can apply?

Experts in the thematic areas listed above can express their interest in taking part in the peer review. More details of the expertise required can be found [here](#).

The call is open to staff in civil protection authorities and disaster risk management organisations in UCPM Member and Participating States as well as Enlargement, Eastern and Southern Neighbourhood countries.

Please note peers are not paid for their involvement but take part in the review on a voluntary basis. Travel expenses are covered.

How to apply?

Interested experts should send their application to: ECHO-CP-PEER-REVIEW@ec.europa.eu.

Candidates should provide a CV, if possible in the Europass format, with their experience in civil protection and disaster risk management covering prevention and preparedness, especially on the areas of expertise listed above.

Deadline for applications: Tuesday 28 June 2022.

UCPM Peer Review programme

Peer reviews on disaster risk management and civil protection systems allow countries or regions to reflect on their readiness to cope with natural and man-made disasters and identify ways of improving risk prevention and preparedness.

The [programme](#) is available to civil protection authorities of UCPM Member and Participating States, and Enlargement and Neighbourhood countries.

rescEU: a success story of EU solidarity

The tragic wildfires of 2017 triggered a realisation among EU political leaders that natural disasters have become more complex, frequent and can overwhelm national response capacities.

With the conviction that "a Europe that protects its citizens has to be there in times of need" (Jean-Claude Juncker, former President of the European Commission), in 2019 the European Commission proposed to revamp the Union Civil Protection Mechanism by creating rescEU, the first reserve of civil protection response assets at EU level. It intends to provide assistance in overwhelming situations where existing capacities at national level and those pre-committed to the European Civil Protection Pool are not able to ensure an effective and sufficient response ('safety net principle').



The need to step-up disaster preparedness with additional capacity response was then further evidenced during the COVID-19 pandemic. In 2021, following a call made by the European Parliament and the Council to reinforce the EU crisis management system, the EU co-legislators agreed to further reinforce the UCPM and the rescEU reserve, in record time. The Mechanism became better prepared to respond to emergencies and crises of a transboundary and cross-sectorial nature. The area of transport and logistics was included among the priority ones, and the Commission was granted for the first

time, under specific conditions, the possibility to directly procure rescEU capacities.

Today, rescEU represents one of the most tangible examples of EU solidarity. The Commission and UCPM Member and Participating States continue working together to define and develop new and innovative capacities, with ten implementing acts adopted by the Commission so far. In parallel, some rescEU means are already being regularly deployed for the safety of EU citizens, for example to fight wildfires, to support the response to the COVID-19, or to ensure the medical evacuation of patients from Ukraine and neighbouring countries.

rescEU: how does it work?

Who decides in which areas rescEU capacities shall be developed? The UCPM basic act identifies four priority areas for the development of rescEU capacities: 1. aerial forest-firefighting; 2. capacities to respond to chemical, biological, radiological, and nuclear incidents (CBRN); 3. capacities for emergency medical response; and 4. transport and logistics capacities. In consultation with Member States, the Commission defines the capacities rescEU shall consist of, taking into account (potential) disaster scenarios at EU level, identified and emerging risks, and overall capacities and gaps at Union level. In 2021, the Commission and Member States decided to introduce 'temporary shelter' capacity as part of the rescEU reserve. Currently, the establishment of a new rescEU capacity on energy supply is being considered.

How are rescEU capacities defined? The Commission defines the minimum quality requirements of rescEU capacities in consultation with Member and Participating States' experts. Once these are established, the Commission drafts an implementing act containing them, which is then submitted to the Civil Protection Committee (composed of Member and Participating States representatives) for agreement. Quality requirements are usually based on established international standards, if existing.

Who procures and owns rescEU capacities? rescEU capacities are, as a general rule, acquired, rented, leased or contracted by Member and Participating States, who also host the procured capacities within their territory, and are their legal owners. In the area of transport and logistics, also the Commission can rent, lease, or otherwise contract rescEU capacities.



The revision of the UCPM basic act in 2021 introduced an important novelty: in duly justified cases of urgency, and by means of a special procedure, the Commission may acquire, rent, lease or otherwise contract rescEU capacities. However, the Commission's 'direct procurement' is limited only to material means and any necessary enabling support services, excluding civil protection modules consisting of personnel.

Who finances rescEU capacities? The Commission finances the development of rescEU capacities at 100 %. In addition, the Commission finances at 100 % of transport costs and at least 75 % of the operational costs when the capacities are deployed.

How does the Commission financing for the development of the capacity work? Once a rescEU capacity has been defined through the adoption of an implementing act, the Commission opens a call for proposals aimed at receiving projects by the Member States interested in developing the capacity. The Member States whose proposals correspond to the requirements foreseen in the call receive a grant for the development of the capacity.

Who decides on the deployment of rescEU capacities? rescEU capacities shall be always made available by the hosting Member States for UCPM response operations. The decision on their deployment is taken by the Commission (Emergency Coordination Centre), in coordination with the Member State hosting the capacity and the State requesting assistance to the UCPM. That is why it is said that rescEU capacities are 'national capacities but with EU obligations'. When not being used for response operations under the UCPM, rescEU capacities may be used for national purposes, provided that they stay available for UCPM activations.

Where can rescEU capacities be deployed? The use of rescEU capacities is mainly intended for response operations taking place in the UCPM Member and Participating States territory. However, if a disaster outside the European Union could significantly affect one or more Member States or their citizens, rescEU capacities may be deployed in third countries.

rescEU: the state-of-play of the development of the capacities

The below table presents a short overview about the current state-of-play for the development of rescEU capacities (updated as of 10 June 2022).

rescEU capacity	Description – background	Existing agreements & state-of-play
Aerial Forest-Fire-fighting (AFFF) – rescEU 'proper'	12 medium amphibious planes for Southern Europe to be developed by Greece, Spain, France, Croatia, Italy, Portugal, first delivery estimated in 2026. Heavy helicopters and possibly light firefighting planes for north-eastern Europe.	- Sweden: lease of two light amphibious airplanes, already operational. - France and Greece: ongoing acquisition of two medium amphibious planes each. In 2022, Italy and Portugal have submitted an application for two medium amphibious planes each.
AFFF – rescEU 'Transition'	Due to the long time needed to procure AFF capacities, provisional arrangement (valid until the end of 2024) to ensure availability of existing national resources under rescEU from 15 June to 30 September every year.	Call for proposals launched every year ahead of the summer forest-fire season. Evaluation of proposals for 2022 currently being finalised.

rescEU capacity	Description – background	Existing agreements & state-of-play
Stockpiles of Medical countermeasures	Created at the beginning of the COVID-19 pandemic, it includes a variety of PPE, ICU equipment, and laboratory supplies items.	Currently, nine stockpiles developed and operational in Germany, Romania, Denmark, Greece, Hungary, Sweden, Belgium, Slovenia, and the Netherlands. Grant agreements for additional items with Croatia recently signed; with Spain currently being signed.
Medevac HID	Capacity for the medical evacuation (MEDEVAC) of highly infectious disease (HID) patients via short-range flights within Europe.	Grant signed with Norway; capacity is already operational.
EMT-2	Three emergency medical teams type II (EMT-2) capacities with 24 specialised care teams to be developed by a consortium comprising nine Participating States (and three supporting Participating States).	Proposal received and currently being evaluated by DG ECHO.
CBRN decontamination	To decontaminate from CBRN agents: infrastructures, buildings, vehicles, equipment, critical evidence or affected persons.	Grant agreements already signed with Germany and Croatia, currently being signed with Spain.
Stockpiles of CBRN countermeasures	Developed in collaboration with DG HERA, call for proposals launched in March 2022, deadline: 16 June 2022.	
Mobile laboratory capacities and CBRN detection, sampling, identification, and monitoring (DSM)	To ensure CBRN security if there are large scale and high-profile public events.	Call for applications to be launched (most likely) after summer 2022.
Temporary Shelter	Call for proposals launched on 2 June 2022 for the development of the permanent capacity. Direct grants for the procurement of emergency shelter capacities currently being signed with Romania and Sweden in the context of the war in Ukraine.	
Transport and Logistics	Provide transport and related logistics services for persons, including patients and teams involved in response operations, material, or equipment, with a focus on multi-purpose air transport capacity	Call for proposals launched on 1 June, with deadline 8 September



FROM THE COMMUNITY

Digital technology in civil protection: the next revolution?

Year 2100. Roads over oceans. Wearable screens. Intelligent fridges with 3D printed food... We are not there yet! But the future is already here: new technologies are leading the way.

Through the years, we have seen how the latest innovations and the development of new technologies are impacting our daily life. Nowadays, birds share the sky with drones and humans welcome robot colleagues.

Civil protection is not an exception to this technological revolution. Since the 2000s, through the Union Civil Protection Mechanism's Prevention and Preparedness Programme, the European Commission is financing civil protection projects with one aim: innovating and improving the way we prevent and prepare for the consequences of disasters. Through these decades, we have learned that high technology can be one of our strongest allies to face emergencies.

To expand Europe's disaster preparedness and prevention capacity, ECHO is supporting projects experimenting with the newest technological innovations. Let's explore a few of them!

AIDERS project: Artificial intelligence to support decision-making

In Cyprus, Artificial Intelligence is being used to help first responders to make rapid and better-informed decisions... even if they are not at the location of the emergency!

The team of the 'Real-time Artificial Intelligence for DEcision support via RPAS data analytics' – or the '[AIDERS project](#)' – identified a common problem for first responders: information collected by drones is limited to snapshots of the situation on the ground. If decision-makers have only a narrow picture of the emergency, situational awareness and subsequent decision-making becomes even more difficult.

The AIDERS project, led by the Kios Center of Excellence of the University of Cyprus aims to better support decision-making in emergencies. They developed an online machine that uses algorithms to process and analyse the data collected from drones. Through this operation, the team creates real-time situational maps of the incident. The information is collected through sensors like visual or thermal cameras on board of the drones.

This innovation allows decision-makers to have a clear understanding of situation in the field. As a result, they can make better-informed decisions... truly a game changer!

Study: Applicability of Virtual and Augmented Reality in civil protection

In Czechia, the General Directorate of the Fire Rescue Service led a study on the applicability of Virtual and Augmented Reality (VR/AR) technologies. The study assesses what systems are in the market, and how they can be applied to reinforce the prevention, preparedness, and response activities of the Czechia Fire Rescue Service.

The use of VR/AR technologies in civil protection is still limited. However, they can significantly increase first responders' preparedness. For example, these systems could be used to practice very specific and high-risk responses, such as search and rescue operations or evacuations in adverse environments. VR/AR technologies can also be used to prevent post-traumatic stress disorder or cope with other psychological impacts. For instance, they offer the possibility to train first responders in a virtual environment in which they can react or express emotions with a guided conversation.

Is Virtual Reality likely to be a game changer for training of emergency responders?

CRISIS project: Geographical Information Systems to promote knowledge sharing

North Macedonia, Italy, Albania, and Greece joined forces to overcome one of greatest issues in cross-border disaster preparedness: knowledge sharing. A consortium coordinated by the Ss. Cyril and Methodius University in Skopje is leading the 'Comprehensive RISK assessment of basic services and transported infrastructure' ([CRISIS](#)) project. By using a Geographical Information System (GIS), CRISIS aims to map disaster risks for basic services and transport infrastructure in the regions participating in the project.

GIS is a system that creates, manages, and analyses all types of geographical data. The data are then connected to a map which integrates it with location information. By applying this process, CRISIS can harmonise the information based on cross-border multi-hazard assessment, needs assessment and multi-risk assessment of the various regions. To ensure knowledge sharing and accessibility, this cross-border information is compiled in an online format.

How to access EU funding for civil protection prevention and preparedness?

The UCPM through ECHO co-finances national and cross-border projects for prevention and preparedness.

If you are a national civil protection authority, you can apply for the single country grants ('Track 1'). This funding is available to provide national civil protection authorities with technical assistance to prepare physical investments or to support the development of new policies and legislation.

If you are a cross-border consortium of civil protection authorities, universities, NGOs, private sector and/or international organisations, you can apply to the multi-country partnerships grants ('Track 2'). This funding promotes cross-border collaborations for disaster risk management between the Union Civil Protection Mechanism's Participating States, and Enlargement and Neighbourhood countries.

If you want to know more about the civil protection funding for prevention and preparedness projects, you can visit the ['Calls for proposals'](#) page on the DG ECHO website or scan this QR code:





Horizon Europe Civil Security for Society Programme: Community-building in support of the UCPM

Horizon Europe's [Civil Security for Society](#) programme, in particular its Disaster-Resilient Societies section, supports the implementation of EU policy priorities on security, disaster risk reduction and resilience.

Research on disaster risk reduction and resilience focuses on better understanding, knowledge and situational awareness of disaster-related risks, empowering citizens to act, which in turn improves the resilience of European society.

It also looks at more efficient cross-sectoral, cross-discipline, cross-border coordination of the disaster risk management cycle from international to local levels (from prevention, preparedness to mitigation, response, and recovery). Research initiatives lead to enhanced sharing of knowledge and coordination on standardisation in crisis management and CBRNE.

Finally, research helps strengthen the capacities of first responders in natural and man-made disasters so that they can be better prepared, have access to enhanced situational awareness, can respond in a faster, safer and more efficient way, and can more effectively proceed with victim identification, triage and care.



This research work is complemented by the programme's Network of Practitioners and the Community for European Research and Innovation for Security ([CERIS](#)) which has developed close links with the Union Civil Protection Knowledge Network.

Disaster-Resilient Societies' main thematic research areas are:

- (1) Societal Resilience (increased risk awareness and preparedness of citizens)
- (2) Integrated Disaster Risk Management and Governance
- (3) Strengthened capacities of first- and second-responders.

Projects funded in 2021 are now starting, and are working on improved understanding of risk exposure, integrated disaster risk reduction for extreme climate events, enhanced assessment of disaster risks (including scenario building based on historical data and projections), prioritisation of research programming in standardisation related to natural hazards and/or CBRN-E sectors, and fast deployed mobile laboratories to enhance situational awareness for pandemics and emerging infectious diseases.

The 2022 call for proposals opens at the end of June, also covering these topics. The deadline for submissions is November 2022 and proposals will be evaluated in early 2023.

The Disaster-Resilient Societies community has developed strong collaboration with third countries, adapting to the trans-national dimension of different natural and man-made hazards and their drivers (such as climate change). Connections are also made with the Union Civil Protection Mechanism, including with the Union Civil Protection Knowledge Network, UCPM prevention and preparedness projects, in developing additional reserve capacities under rescEU for major and simultaneous disasters, and by co-financing the deployment of Member States' national response capacities.

More information:

- [Horizon Europe Cluster 3](#)
- [CERIS](#)

Contact: HOME-CERIS@ec.europa.eu

SCIENCE

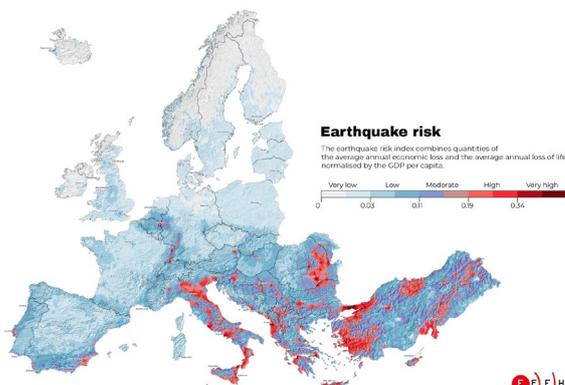
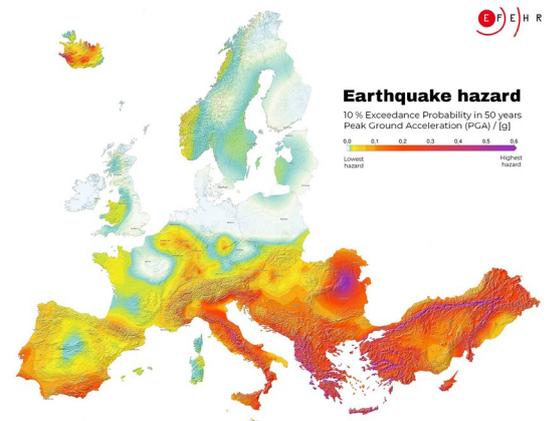
European Seismic Hazard and Risk Models: improvements in earthquake modelling

The European Seismic Hazard and Risk Models 2020 provide updated information for lessening the impact of future earthquakes on the built environment and people's wellbeing. Earthquakes can't be prevented or predicted with high levels of accuracy, but accurate modelling can reduce their impact.

An update of the European [Seismic Hazard](#) model and, for the first time, a Seismic [Risk](#) Model have just been released, helping understand and compare where strong shaking is most likely to occur, the frequency of earthquakes, and their potential impact. The datasets at the heart of the European Seismic Hazard and Risk Models have been harmonised – a complex undertaking given the vast amount of data and highly diverse tectonic settings in Europe.

The European Seismic Hazard and Risk Models are the collaborative work of seismologists, geologists, and engineers across Europe, and were funded by the EU's Horizon 2020 research and innovation programme. These joint efforts contribute to establishing mitigation measures and making communities across Europe more resilient.

Open to all, the earthquake hazard and risk models also support effective trans-national disaster mitigation strategies for the definition of insurance policies, and up-to-date building codes at European and national levels. Specific hazard maps from the earthquake hazard model will serve as an informative annex for the next generation of the EU building standards code (Eurocode 8).



Understanding earthquake risk

The main drivers of earthquake risk are older buildings, high earthquake hazard, and urban areas. When analysing seismic risk, the potential impact on the built environment and on people's well-being due to future earthquakes are the focus. Information on local soil conditions, the density of buildings and people, the vulnerability of the built environment and robust earthquake hazard assessments all contribute to a better understanding of the earthquake risk.

According to the European Seismic Risk Model 2020, the highest earthquake risk is in urban areas, for example in Istanbul, Catania, Bucharest and Athens. Turkey, Italy, Romania and Greece, the countries in which these cities are located, experience almost 80% of the modelled average annual economic loss of 7 billion euros due to earthquakes in Europe.

An updated earthquake hazard model with advanced datasets

'Earthquake hazard' describes potential ground shaking due to future earthquakes and is based on knowledge about past earthquakes, geology, tectonics, and local site conditions.

Significant effort has been made to extend the main underlying datasets in the new version of Europe's earthquake hazard model, leading to a more comprehensive assessment. Consequently, ground shaking estimates have been adjusted: there are lower estimates in most parts of Europe, but higher ground shaking estimates in some regions in western Turkey, Greece, Albania, Romania, southern Spain, and southern Portugal.

The updated model also confirms that Turkey, Greece, Albania, Italy, and Romania are the countries with the highest earthquake hazard in Europe.

Earthquake hazard across Europe: <http://www.hazard.efehr.org/en/home/>

Earthquake risk across Europe: <http://www.risk.efehr.org/>

SCIENCE



Drought: a global challenge for societies

Weather and climate extremes heavily affect human and natural systems. Extreme events, such as drought and heatwaves, can cause losses, fatalities, and affect key socio-economic sectors as well as ecosystems. Drought events are complex phenomena often developing over longer time periods and influenced by climate- and human-related factors. The impacts of drought events can propagate well beyond the place of occurrence, e.g. through market links and dependencies among different regions of the world. [Concurrent](#) events, for instance, in key agricultural producing regions may [shock the global market](#) and have medium-to-long term effects. Recurrent drought events may also limit the copying capacity of both societies and natural systems.

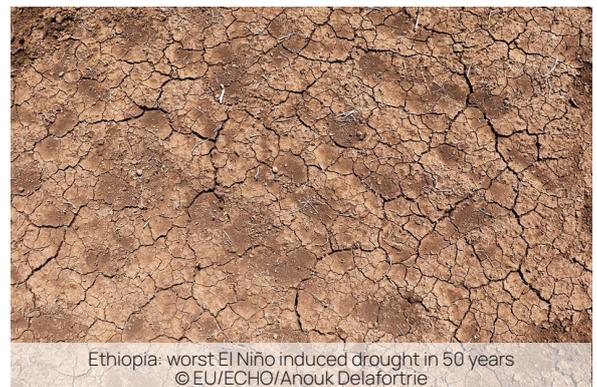


Looking at the decades ahead, climate change projections point to an increase [both in frequency and intensity](#) of these events and the emergence of unprecedented ones. For instance, [the 2018 drought](#) that affected central and northern Europe was unique in at least the last 500 years by considering spring-to-summer conditions. However, such an event may become the norm if no effective mitigation strategies will be

implemented. Drought events may also heavily reduce [climate suitable crop production](#) areas, posing a challenge for sustainable climate change adaptation in agriculture.

The impacts of drought can be exacerbated by heatwaves. In winter 2021-2022, for instance, northern Italy has experienced [a severe-to-extreme lack of precipitation](#), especially from December to April. In some areas of the region, almost no precipitation was observed and the hydropower system has been impacted. An early heatwave in May limited the beneficial effects of some rainfall events that occurred in April-May and posed further threats to the agriculture sector.

Monitoring and forecasting drought as well as heatwaves is of primary importance. The [European](#) and [Global](#) Drought Observatories (EDO and GDO, respectively) of the [Copernicus Emergency Management Service](#) serve this scope. By combining multiple sources of data, EDO and GDO detect, characterise, and predict drought events and heatwaves. The [European Drought Observatory for Resilience and Adaptation](#) was recently launched to move towards a multi-sectoral drought risk early warning system and to contribute to enhancing drought resilience and adaptation (recognising the importance of effective European cooperation).



Detecting and attributing drought, tracking and predicting its spatio-temporal evolution are still challenging tasks, and often imply dealing with large volumes of data having higher uncertainties. The optimal integration of AI tools and methods can help address this issue. Exploratory research activities at the European Commission Joint Research Centre, international initiatives such as the ITU-WMO-UNEP [Focus Group on AI for Natural Disaster Management](#), dedicated EU Horizon2020 projects such as [CLINT](#) and [XAIDA](#), have been recently launched to boost development and research.

LEARNING

ResponSEE full-scale exercise tests emergency response capacities in Bosnia and Herzegovina



© ResponSEE / Vanessa Scheiner / Sebastian Hirschmugl

The [ResponSEE](#) full-scale exercise took place in Sarajevo (Bosnia and Herzegovina, BiH) from 27 to 29 April 2022. The exercise tested national procedures and capacities in case of a large-scale emergency requiring [Union Civil Protection Mechanism](#) activation and deployment of international teams.

The EU-funded ResponSEE project, which ran the exercise, aims to strengthen disaster preparedness in the Western Balkans and increase interoperability between disaster response capacities and procedures. The project also works to enable international cooperation on disaster response and bring Albania and Bosnia and Herzegovina closer to the UCPM.

The ResponSEE full-scale exercise was based on a full mission cycle for national and international response to a major earthquake (and cascading effects) taking place during a pandemic. It involved an EU Civil Protection Team, a Liaison Officer from the Emergency Response Coordination Centre, members of the UN Disaster Assessment and Coordination (UNDAC) Team, as well as urban search and rescue, firefighting, mountain rescue, water purification, medical response, and dog handling teams from BiH, Albania, Austria, Montenegro, Romania, and Slovenia.

In total, 11 national and eight international teams, as well as several NGOs and international organisations (the UN Resident Coordinators Office, UNDP, EU Delegation, OSCE, World Vision, Save the Children, NATO, UNESCO and Blue Shield), took part, along with other entities.



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Bringing Bosnia and Herzegovina closer to the UCPM

European Commissioner for Crisis Management, Janez Lenarčič, also attended the full-scale exercise.

Mirnesa Softic, the UCPM National Exercise Coordinator for Bosnia and Herzegovina, spoke about what this exercise represents for the country in taking its final steps towards becoming a Participating State in the UCPM:

“The ResponSEE exercise is a continuation of Bosnia and Herzegovina’s commitment to joining the EU Civil Protection Mechanism. Civil Protection agencies from all levels of our government have showcased the skills and coordination in navigating some of the most complex natural disasters.”

I fully support Bosnia and Herzegovina’s request to join the EU Civil Protection Mechanism. I am confident that becoming a member of our European civil protection framework will ensure Bosnia and Herzegovina benefit from stronger crisis response whenever large-scale crises strike. Together, we can protect and save lives.

Janez Lenarčič, European Commissioner for Crisis Management



LEARNING

Full-scale 'DOMINO' exercise puts EU emergency response capacities to the test

From 16–19 May 2022, emergency response teams from France, Germany, Belgium, Austria, and Spain took part in the EU-funded full-scale civil protection exercise 'DOMINO'.

The exercise, which was the culmination of a year and a half of efforts by the French, German and Spanish Ministries of the Interior, the Belgian Federal Public Service, the Austrian Ministry of Defense and the Valabre Entente pour la forêt méditerranéenne, aimed to help better prepare participants to respond effectively in case of a disaster.

Janez Lenarčič, Commissioner for Crisis Management, attended the exercise. He also met with the President of the Provence-Alpes-Côte d'Azur Regional Council, Renaud Muselier, and heads of EU civil protection authorities to discuss current and future challenges in crisis prevention, preparedness and response at European level.

Live simulations provide a unique and much-needed opportunity for emergency personnel to come together to strengthen their preparedness for large-scale disasters. I would like to thank France, as well as Austria, Belgium, Germany and Spain for their contribution to the organisation of the largest large-scale exercise ever carried out in recent memory. Let me assure you that the EU Civil Protection Mechanism remains available to provide urgent assistance in the event of major disasters or other emergencies.

Janez Lenarčič, European Commissioner for Crisis Management

The exercise area, which covered the municipalities of Martigues, Châteauneuf-les-Martigues and Fos-sur-Mer, was chosen due to the several petrochemical industry sites located around the Etang de Berre. In reality, the chain reaction in the practice scenario would expose the local population and environment to 'major risks'; 148 schools were within the territory targeted by the exercise.

FR-Alert

DOMINO was also the occasion to test the FR-Alert system. This is the new alert system which allows the population to be informed by telephone. Set up at the end of June, it will provide real-time warning to anyone present in the area of a terrorist, climatic or chemical disaster.

The DOMINO 2022 full scale exercise, with the support of the European Commission, has allowed not only to identify the gaps to be filled in the management of a large scale crisis at the national level, but also to test the indispensable European solidarity in action in the face of numerous catastrophic events.

Lieutenant-Colonel Christophe Debray



© Ministère de l'Intérieur (France)

A total of 21 countries were represented during this exercise engaged in the EU Civil Protection Teams, as observers or as evaluators.

The scenario

The DOMINO exercise simulated response, including disaster medicine, to an unprecedented chemical risk and maritime pollution event in the industrial risk basin of Fos-sur-Mer, near Marseille (South of France), which shelters over more than 20 [Seveso](#) sites. It was based on first responders' and decision makers feedback following the massive explosion at the French Lubrizol plant in Rouen in September 2019.



© Ministère de l'Intérieur (France)

FR-Alert has never been tested in France on a real population. This new technology will make it possible to reach all telephones in a given territory without the risk of network saturation. Operational on all telephones, it is intended to be generalised in France.

LEARNING

EU Modex León 2022: field exercise prepares ground and aerial forest firefighting teams for the real emergencies



An EU MODEX field exercise took place from 9 to 13 May in León, Spain, testing the forest firefighting capabilities of teams from Croatia, France, Greece, Italy, Portugal and Spain.

As the forest fires season in Europe begins, with the season getting longer and more [intense](#) and record temperatures already arriving in [Spain](#) and other countries, the need to prepare and train for the devastating effects of wildfires has never been higher.

The scenario being tested by the '[EU MODEX León 2022](#)' exercise was wildfires in hot, dry conditions, requiring both ground and aerial forest firefighting and Spain's recent experience of this type of wildfires offered a closed to real experience for all of the teams involved.

The forest firefighting teams were tested over two days, day and night.

The hot, dry weather conditions in León during the exercise replicated real-life conditions perfectly but meant that real fires could not be safely lit, so fires were simulated using different types of tape and lights during night-time. Adding to the pressure, the 'media' were demanding updates and other role players representing coordination bodies and emergency services played their roles very convincingly! Virtual teams were brought in to make the environment even more complex, dynamic and fast-moving.



© Vlad Petre, EU MODEX

The exercise was managed and hosted by Spain's Minister of Ecological Transition and Demographical Challenges, Junta de Castilla y León and Directorate-General for Civil Protection and Emergencies.

France, Greece, and Portugal provided ground forest firefighting (GFFF) and ground forest firefighting using vehicles (GFFF-V) capacities. Croatia's involvement was with an unmanned aerial system (UAS) and Italy provided aerial forest firefighting capacity. They were joined by aerial forest firefighting response capacities from Italy and Spain and specialised ground forest firefighting regional teams.

EU MODEX León 2022 was a very successful exercise revealing a high level of coordination between teams, especially when aerial forest firefighting capacities were in action. A challenging environment for all the teams involved made for a great learning opportunity to cooperate in the planning and execution of field operations.

As Angela Iglesias Rodrigo from Miteco put it: "we learned many things, not only about fires, not only about operations but about networking and learning to work with other nationalities".

NEW RESOURCES



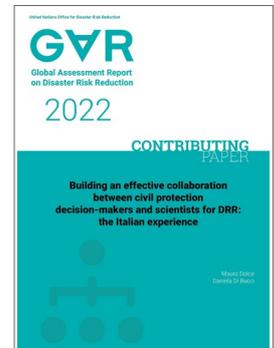
Eurogeographics annual review 2021

The EuroGeographics [Annual Review 2021](#) has just been launched and is publicly available. It contains 26 country case studies from 31 members, and most of them illustrate how mapping tools can be used for civil protection and disaster management activities. Find out more about EuroGeographics [here](#).

NEW RESOURCES

Global Assessment Report on Disaster Risk Reduction 2022

The United Nations Office for Disaster Risk Reduction released the Global Assessment Report on Disaster Risk Reduction 2022 ([GAR2022](#)) looking into how governance systems can evolve to better address the systemic risks of the future. The report highlights that the climate emergency and the systemic impacts of the COVID-19 pandemic point to a new reality. In this context, understanding and reducing risk is fundamental to achieving genuinely sustainable development. The report shows that the best defence against future shocks is to transform systems now, to build resilience by addressing climate change and to reduce the vulnerability, exposure and inequality that drive disasters.



EU tools to respond to natural disasters

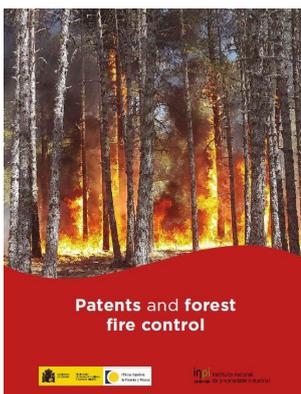


EU tools to respond to natural disasters

The European Parliament has published the report on [EU tools to respond to natural disasters](#). The document pays attention to the European Union Solidarity Fund and the potential synergies and overlaps with other EU instruments including the Emergency Aid Reserve, the EU Civil Protection Mechanism as well as Cohesion Policy.

The DRMKC Risk Data Hub Users' Guide

The [report](#) presents the main functionalities of the DRMKC Risk Data Hub (RDH) web portal. It is meant to provide users with concise guidance on how to use the tools offered by the platform. The paper showcases the main features of the Risk Analysis module and of the Disaster Loss Data module. It also covers the methodologies behind the risk estimation – exploring its main components – and behind the calculation of losses – providing insights onto the classification of fatalities and economic cost. In addition, it recounts the detailed procedure to upload data into the RDH.



Patents and forest fire control

This [study](#) aims to present the most promising technologies in the field of firefight and control of wildfires. It also offers a broader perspective, revealing the main initiatives and policies related to the fight and control of forest fires, adopted by the Iberian institutions.

The collaboration between the Portuguese Institute of Industrial Propriety and the Spanish Patent and Trademark Office provided an opportunity to carry out a study, using the technical information provided by patents on the sustainable management of the forest, the fight against desertification, the prevention of soil degradation and the loss of biodiversity, on the analysis of the evolutions of patents related to the control of forest fires.

COMING UP



PROFOUND Full-Scale exercise



The multiple location-based full-scale field exercise will take place from 30 August to 3 September, 2022 in Hungary, Slovakia and Romania. The scenario will simulate parallel flooding in Tisa and Danube rivers, occurring at the same time but in different tributaries and sections. More information available [here](#).



BALANCE Full-scale exercise



The full-scale exercise will take place from 10 to 14 October 2022 in Boka Kotorska Bay (Montenegro). Following the Table Top and Command Post exercises it will focus on operational cooperation of all involved partners after a large-scale earthquake. Civil protection teams will be able to train in different urban search and rescue techniques, protection of cultural heritage and working with persons with disabilities.



Fachtagung Katastrophenvorsorge

German Conference on Disaster Risk Reduction

The conference will take place from 25 to 27 October, on-site in Berlin on the first day with live streaming, followed by two days of digital sessions and if feasible presence sessions in Germany and abroad. The event aims to create opportunities for international and national experts in disaster risk reduction to network and exchange ideas on current issues and new developments. The overarching global theme of complex and overlapping crises will be particularly in focus this year. The event will be held in German and English.

More information [here](#).

Flood Knowledge Summit 2022



The United Nations University together with other regional partners will host a [Flood Knowledge Summit 2022](#) on 7-8 July 2022 at UNU-MERIT in Maastricht, the Netherlands to take stock of lessons learnt and develop ways forward.

A preliminary programme is available [here](#).

Practical information on attending the conference is available [here](#).

Would you like to receive future updates on the **Union Civil Protection Knowledge Network** directly to your mailbox? If yes, please let us know by filling in this [short form](#).