EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR EUROPEAN CIVIL PROTECTION AND HUMANITARIAN AID
OPERATIONS (ECHO)
Strategy and Policy
Prevention and Preparedness Capacity Building

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UCPKN DRM Science & Planning working group

Indicative Deliverables 2025 ([1])

TOPIC 1: Multi-hazard risk approach for tackling complexity of disasters

Expected Outcome: MS/PS and EU services increase their capacity to deal with multi-hazard risk and supported by cutting edge AI/ML applications under Disaster Resilience Goals (DRGs) #1 Anticipate and #3 Alert.

Expanding capacity-building for dealing with multi-hazard risk and real-world utilisation of artificial intelligence (AI)/machine learning (ML) is an identified need. This is based on the working group's meetings in 2024, internal consultations, and the Knowledge Series workshop on "AI for DRM." The workshop especially marked a first stepping stone in the exploration of the potential of new technologies within DRM for the Commission as a whole.

During the workshop, several existing challenges and potential for follow-up were identified and more activities are planned for 2025. Among others, workshop participants highlighted the need for more training materials and learning opportunities. Likewise, the working group requested in June 2024 that showcasing examples of civil protection-relevant applications from Destination Earth and other similar digital twins will be the first step to make them better understood and usable.

TOPIC 1 FLAGSHIP

In Q2 of 2025, the Commission will conduct **a capacity-building workshop on Multi-Hazard Risk Approach and Artificial Intelligence** following the initial scoping workshop of 22 October 2024.

It will, among others, demonstrate new Commission initiatives, such as integrating AI into the Global Wildfire Information System (GWIS) to develop a wildfire decision support system or into the Global Situation System (GSS) which will be released to MS/PS in 2025; or presenting AI studies at the European Crisis Management Laboratory (ECML), as well as different UCPM and Horizon Europe projects that have mature applications for multi-hazard risk use along with AI and ML applications.

([1]) Based on the strategic goals and subject to change per new Commission priorities (e.g., implementation of the EU Preparedness Union Strategy) and budget planning

The workshop's aim is to target practitioners in the Commission as well as Member and Participating States to learn more about the application of existing AI/ML tools in their daily work on prevention and preparedness activities in a multi-hazard risk landscape.

It will familiarize the users with [Destination Earth's](#) capabilities and give them hands on experience of the system. At the same time the workshop will help to gather requirements for the DRM users and help to identify potential gaps in human/technological capacity in CP authorities to take advantage of AI-powered tools. The workshop will be supported by the implementing entities of the Destination Earth initiative and will aim at providing hands-on guidance on the currently available tools for DRM. The event will include a UCPKN DRM Science and Planning working group in-person meeting (travel reimbursement foreseen).

Furthermore, DG ECHO together with relevant services will develop a **knowledge product** or primer for the EU, partners and MS/PS that will showcase in a concise manner the key entry points and good practices on how artificial intelligence and machine learning can be practically used in governmental work (such as Destination Earth) while complying with ethical needs. Other AI-related training or capacity building activities are being explored, for example, as an e-learning course or via DG JRC.E1.

Additionally, further training or knowledge exchange events on AI and ML tools will take place as part of the Destination Earth flagship initiative under DG CNECT's lead:

− **4th Destination Earth User eXchange**, (DG CNECT.C1, implemented by ECMWF, ESA, EUMETSAT): Continuing from the 3rd User eXchange, this aims to convene current and prospective users of Destination Earth (DestinE) and developers of the DestinE system. The event is hosted by ESA and will offer both in person attendance (Week of 23 June, Vienna, Austria) and remote participants.

− **Destination Earth Impact Sector Pilot Services and Machine-Learning Demonstrators** (DG CNECT.C1, implemented by ECMWF): A set of pilot services and demonstrators aimed at showcasing the added benefit of DestinE capabilities, including for DRM users. The objective is to demonstrate the added value of the data produced by the weather-induced extremes and climate change adaptation Digital Twins, for some of the sectors most directly affected by climate change or weather-related natural disasters.

− **Training on machine learning in Destination Earth** (DG CNECT.C1, implemented by ECMWF): A complete training pipeline from data to prediction is currently implemented. Training resources will also be established for DestinE users and policymakers within the Commission – including users in the field of DRM.

As to DG JRC's activities, **the Copernicus Emergency Management Service (CEMS) Annual Conference** will be held in-person in October 2025 in Milan and dedicated to floods, wildfires, drought as well as on demand and exposure mapping. Target audience includes risk practitioners at national and regional level. It could possibly be organized together with the DRMKC (Disaster Risk Management Knowledge Centre) Annual Seminar. On March 19, DG.JRC.E1 will hold a [workshop](#) on **Future of Conflict Early Warning: New Technologies and Policy Impact** in Brussels. The conflict workshop will be a closed session with an aim to invite MS/PS from relevant ministries.

In the 2nd half of 2025, a possible **high-level Research and Innovation event on Artificial Intelligence for DRM** could, for example, be integrated in conjunction with meetings of the [Global Initiative on Resilience to Natural Hazards through AI Solutions](#).

TOPIC 2: Behavioural insight for whole-of-society of preparedness

Expected Outcome: MS/PS and EU services increase their risk communication capacities and support to population preparedness under DRG #2 Prepare. New initiatives under the strand will be explored throughout 2025.

As part of the upcoming preparEU initiative under DRG #2 Prepare and in response to the [Special Eurobarometer on disaster risk awareness](#), a comprehensive capacity building offer is planned for risk awareness and gaps in risk communication capacities in Member and Participating States and on a European scale.

TOPIC 2 FLAGSHIP

This dedicated learning pathway will target professional audiences from within CP/DRM competent authorities in MS/PS. As a first step in Q1 of 2025, a **framing note examining needs and good practices in risk communication** will be developed in collaboration with risk communication experts to set the scene and guide further developments. This will be followed by a workshop on 9-10 April 2025 to assess ways to enhance capacities under preparEU together with MS/PS. Further, in the second half of 2025, two pilots **training-of-trainers courses** will be produced and delivered, targeting representatives from MS/PS. The initiative is to be based on solid evidence from the Commission's in-house behavioural insights as well as academia and capacity-building projects from UCPM and Horizon Europe research.

In addition, the following scientific activities are to support population preparedness:

– **Behavioural insights for a whole-of-society disaster resilience** (DG ECHO.B3): A Knowledge Primer on the need to underpin EU activities in risk communication and population preparedness with scientific evidence is already in production and will be ready in Q2 of 2025.

– Since autumn 2024, DG ECHO.B.3 has been hosting a **Knowledge Series** designed to connect practitioners from across the EU and beyond to drive innovation within the Union Civil Protection Mechanism. The first iteration of the series attracted more than 600 participants in-person and online over three events (nature-based solutions, AI for DRM, and global rapid damage estimate). A Knowledge Series event on **Inclusive Preparedness** (gender equality and inclusion in DRM – showcasing projects which are actively addressing this) will take place on 12 March, in collaboration with the World Bank. Another session on **Youth Action for Societal Preparedness** is planned for the week of 21-25 April.

– **Studies on citizen response and disaster preparedness behaviour** (DG JRC.S1): DG JRC's [Competence Centre on Behavioural Insights](#) (CCBI) will conduct a study testing citizen response and their susceptibility to (mis)information during disasters. The study is planned to run in 2025 and will use an immersive VR environment to simulate disaster events. A further proof-of-concept study the CCBI is intending to start in select MS will

examine the impact of imagining a disaster scenario on citizens' disaster preparedness intentions and behaviours.

– The **4th Social Media-driven DRM** (SMDRM) workshop will be held in Castelo Branco, Portugal 27-28 March focusing on combination of DG JRC's AI and 'development + operations' (devops) tools to extract information from social networks in near real-time during crisis.

CROSS-CUTTING: Capacity building, climate change, emerging topics, and research project engagement

Expected Outcome: Horizon Europe projects and the next research Framework Programme 10 (FP10) serve the needs of MS/PS and EU services, gaps between policy-science-operation are reduced, and topical knowledge (e.g., climate resilience) for DRM is shared openly.

CROSS-CUTTING FLAGSHIP

Providing technical input of the working group to the Horizon Europe research programme is one of the main tasks of DG ECHO.B3. The drafting of the last work programme for Horizon Europe in 2026-2027 will proceed throughout Q1-Q2 of 2025. DG ECHO will input and mainstream needs of the UCPM, based also on MS/PS feedback, as well as of the humanitarian sphere into appropriate clusters of Horizon Europe, such as **Cluster 3 Civil Security for Society** and **EU Mission: Adaptation to Climate Change**. These topics will be available for proposals in 2026-2027.

Similarly, DG ECHO will communicate to the MS/PS authorities of Horizon Europe calls opening in 2025 as soon as applicable.

Other cross-cutting activities include:

– **Events of the Community for European Research and Innovation for Security (CERIS)**, such as technological solutions for first responders on 27 March in Brussels and the annual Disaster Resilient Society (DRS) event on 19-21 May in Brussels (DG HOME.F2).

– **Mediterranean Forum** hosted by the EU Mission: Adaptation to Climate Change on 19 June 2025, Bologna, Italy.

– **"EU's scientific needs for Disaster Resilience" session at the European Geosciences Union General Assembly**, (DG ECHO.B3 and DG JRC.E1): A scientific needs session will be organized at the EGU 2025 General Assembly (with 20,000+ participants) on 28 April. It will inform the scientific community how to interpret the latest policy documentation, such as the Preparedness Union Strategy, in orienting their research and funnel their output back to the EU's needs to have an impact and added value for society.

– **Evidence for Policy in DRM Summer School**, (DG ECHO.B3 and DG JRC.E1): The 4th iteration of the school will be hosted in Barcelona on 29 September – 1 October 2025. It intends to replicate the previous version with lessons learnt and emerging priorities.

- Possible further developments of disaster scenarios under DG ECHO's **scenario-building initiative**. The UCPKN DRM Science and Planning working group would be involved and consulted in the process.

- The **Risk Data Hub** (RDH) will continue development on its loss and damage database as well as composite indicators for vulnerability under DG JRC.E1 and ECHO.B2. Possible trainings will be organised for MS/PS to improve accessibility.

New user engagement capabilities supported by cross-cutting AI and ML tools will be delivered as part of the Destination Earth initiative:

- **Destination Earth end-to-end AI workflow capabilities** (DG CNECT.C1, implemented by EUMETSAT): Empower users to define and execute the entire AI workflow life cycle, from data to model operations. The initial capability is to enable users to fuse, tailor and harmonize large sets of data for AI applications. This will be extended to subsequent capabilities, like AI model development and training, AI model inference, AI-ready infrastructure and MLOps. AI/ML applications showcase the combined usage of Digital Twin outputs and satellite data.

- **Destination Earth Advanced Applications and Services** (DG CNECT.C1, implemented by ESA): The objective is to define, implement, and provide support and dedicated services for the users planning to develop operational services on the DestinE platform, including AI-powered services.

Other topics the Knowledge Series are being considered – including Q&A session on integrating UCPM/Horizon Europe projects to the EU scientific disaster risk management system and dialogue on result comparison (DG JRC).

In addition, synergies on knowledge exchange with the EU Mission: Adaptation for Climate Change will be explored due to the proximity of the sectors and the Working Group's research needs' survey results (see question 3c). The Mission hosts online events that would be clearly useful for the DRM community, for example:

- *Leveraging funding for climate adaptation: innovative funding options for climate adaptation projects, 26 March.*

- *Heatwaves and Health – Joint event with REACHOUT, 9 April.*

See the full catalogue here.