Ongoing activities
in the demonstrators

Deliverable D1.1

Version 1.0
(23 December 2023)

The HuT

1. Technical references

Project Acronym	The HuT
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*   PU = Public

      PP = Restricted to other programme participants (including the Commission Services)

      RE = Restricted to a group specified by the consortium (including the Commission Services)

      CO = Confidential, only for members of the consortium (including the Commission Services)

1.1. Document history

Version	Date	Lead contributor	Description
0.1	18.09.2023	Jo-Ting Huang-Lachmann (HEREON); Anke Schlünsen-Rico (HEREON); Cicilia Steffi Lukman (HEREON)	First draft
0.2	12.10.2023	Anna Smetanova (GWP CEE)	Critical review and proofreading
0.3	30.11.2023	Jo-Ting Huang-Lachmann (HEREON); Anke Schlünsen-Rico (HEREON); Cicilia Steffi Lukman (HEREON)	Edits for approval
1.0	23.12.2023	Michele Calvello (UNISA)	Proofreading, final version

2. Table of contents

2.1. List of Tables

2.2. List of Figures

None

3. Overview of ongoing activities in the demonstrators

WP1 is the platform where ten demonstrators each individually as well as collaboratively carry out The HuT activities at the implementation level. To continuously facilitate the ongoing activities across ten demonstrators, WP1 organised and facilitated a series of exchanges and meetings to which all demonstrator leaders and associated partners from all work packages were invited to. These meetings took place quarterly and are named Demonstrator Management Board Meetings (DMB meetings) and they will continue quarterly. As D.1.1, we structure our deliverable report according to the DMB meetings, where these online meetings go beyond just meetings. For reporting progress and sharing front-runner experience, **spotlight presentations** were scheduled where demonstrators shared their progress and experience to inspire more demonstrators to move forward. For reporting ongoing activities regularly, **pitches** were the occasions for demonstrators to share regular progress. **Cross-WP activities related to DEMs** were also organised so other WP and Task leaders could also better facilitate ongoing activities with the demonstrators. In total, we have ten demonstrators and the following table provides more background information on this. The details of DMB meetings, as well as ongoing activities are elaborated in the next section and sub-sections. The conclusion section aims to provide our reflection on lessons learned. The presentation slides during the DMB meetings as well as cross-WP activities related to DEMs are included in the appendices for providing more details.

Table 1: The 10 demonstrators

ID (DLead)	Site	Country	Area (km2)	Boundaries	Events
DEM1 (UPV)	Valencia city	Spain	134 + 29501	Administrative (local government) and physical (2 river basins)	D, H
DEM2 (UPC)	Val d'Aran region	Spain	650	Administrative (regional government)	F, L, S
DEM3 (UNISA)	Lattari mountains	Italy	300	Administrative (local government) and physical (mountain range)	F, FF, L, S
DEM4 (VU)	Vilnius city	Lithuania	401	Administrative (local government)	F
DEM5 (HEREON)	Schleswig-Holstein state and harbour cities	Germany	466 km of coastline	Administrative (regional and local governments)	H, S, F
DEM6 (IMO)	East fjords	Iceland	3500	Administrative (local government) and physical (fjord)	L, S
DEM7 (KOTIVIZIG)	Hungarian Tisza River basin	Hungary	7180	Administrative (regional government) and physical (river basin)	F

DEM8 (CMCC)	Ogliastra province	Italy	1855	Administrative (intermediate local government)	D, FF, H
DEM9 (BGS)	Dorset county	UK	2653	Administrative (intermediate local government)	F, L, S
DEM10 (UNIGE)	Bern canton	Switzerland	5960	Administrative (regional government)	F, L, S

4. Clusters for mutual learning

Ten demonstrators are developing various human-centric and technology-driven activities to drive implementation for local disaster risk reduction and climate change adaptation. The demonstrators, work packages and task leaders recognise the importance of forming clusters to enable more exchanges for mutual learning. Therefore, we have identified the following clusters in the first year for mutual learning. The classification of clusters is not limited to only these defined topics, but it works as the initial dialogue and will be open for expanding further cluster discussions and exchanges. The regular meetings of demonstrator management board meetings starting from the second year of the project will also start to form in clusters to continuously stimulate mutual learning.

4.1. Cluster 1: Early warning communication

Some demonstrators (e.g. East Fjord in Iceland, Dorset, Hungary) have carried out interviews with stakeholders (citizens, target groups, public authorities, etc.) to collect users' needs to develop early warning communication tools (websites, Apps, mapping, scenarios, or decision-making information). Furthermore, in Ogliastra, first needs and opportunities in terms of fire risk prevention through land management activities were collected. The final aim is to collect information on prevention planning under current and future conditions. It is useful to share the user-oriented design features and user experience in order to better design effective communication via early warning. For instance, what types of information on which natural hazards, structure of civil protection and emergency management system, languages, types of needed risk assessments and contingency plans, needed preparedness from different user groups, background of different user groups, communication channels, update frequency, interface, layout design, and more. These key features of early warning communication will be picked up as the first cluster discussions to be shared across demonstrators for mutual learning in the next demonstrators' meeting in the second year.

4.2. Cluster 2: Forecast services based on hazard types

Some demonstrators (e.g. Valencia, Val d'Aran) are in the process of developing relevant forecast services according to the hazards they are targeting, for instance, heatwave, landslide and rainfalls. For instance, heatwave and urban heat island forecasting under impacts of climate change is currently developed in Valencia. Furthermore, multi-hazard forecast in combination of snow, flood, and landslides by using real-time IoT monitoring for landslide and flood modelling in Val d'Aran. Learning from the best practices of existing forecast services and the shared workflow to integrate data and local knowledge is useful.

4.3. Cluster 3: Initiating stakeholders' engagement for local DRR nexus forum

Some demonstrators (e.g. Vulnius, Hungary) are at the initial stage of engaging stakeholders. It is useful for them to learn from scientific partners from other work packages (e.g. University of Helsinki) who have more experience in stakeholder engagement, and from other Demonstrators

who have leveraged contacts from mayors and key stakeholders through previous and existing networks (e.g. Valencia, Schleswig-Holstein, Bern). We have started the "matchmaking" work to pair up the partners who can mutually learn from each other, this way, the more front-runners can support the followers demonstrators. Furthermore, experiences of using science-art and serious gaming activities to initiate stakeholders' engagement are also exchanged in the project across work packages and demonstrators. For instance, two demonstrators (e.g. Bern, Glückstadt in Schleswig-Holstein) have pre-tested and run serious gaming activities in collaboration with WP3 and shared a report of lessons learned for further implementation and upscaling.

5. DMB meetings

The DMB meetings were held quarterly from January to July 2023, with a total of three meetings. It is primarily conceived as a platform for the exchange of experiences on demonstrator level activities across the project.

5.1. First DMB meeting

The first DMB meeting took place on 24 January 2023. It was moderated by WP1 leader and minuted by the assistant.

5.1.1. 'The HuT for Me and You' - template

We introduced the 'The HuT for Me and You' template, which was made available with D.1.4, a guiding tool for co-creating narratives with local actors, see further information in "Guidelines to co-develop The Hut for Me and You narratives in your Demonstrator", in deliverable 1.4, table 1: "Narratives cross-cutting themes for pathways to actions".

They cover six thematic areas in seeking to define what constitutes a "safe haven" and how it needs to be implemented, a media gallery to share any kind of images and/or videos and a milestone gallery for any kind of progress.

The template is a living document to keep track of the activities at DEM level where each DEM is required to provide specific input in its designated template on the activities carried out so far. The contents are visible to all DEMs in a way that they can inspire each other.

Once the templates are filled with content, WP1 will distil them for D.1.5.

The work in progress will be reported further in month 38.

5.1.2. First DEM spotlight presentation

Frontrunner DEM 6/East Fjords leader shared its progress via a spotlight presentation to encourage other DEMs to become active here.

Main items:

The Eastfjords are prone to landslides, which are becoming more frequent due to climate change.

Challenges:

(1) Maintaining public awareness of natural hazards. This would require the development of educational material. In order to compile teaching material accompanied by visual material, reference was made to the Artist-in-Residence programme of the Goethe Institute in Denmark (link). It supports the residency of visual artists in cooperation with the Skaftfell Centre for Visual Art in Seyðisfjörður, Iceland.

(2) Proposal to create a digital The HuT communication platform, eventually in an interactive format. Discussions on this are already underway with the municipality and local policy. Meeting with reference groups and representatives of companies in the danger zone already held.

(3) Real-time communication information, e.g. during periods of heightened risk.

(4) Action items:

- Revise the hazard maps.

- Build up a monitoring system.

5.1.3. Cross-WP activities related to DEMs

As cross-WP activities related to DEMs, WP1 together with WP5 introduced the Science-Art Menu, integrated in D.1.4 and it will be also be reported in D5.5. The inclusion of art is recommended for all DEMs. It is an effective format for engaging with local actors.

GWP CEE (WP5) reported the transfer pathways in relation to DEM activities. Those were identified within and between DEMs in proposal stage, and later revisited in two ways – in Innovation Fair Prototype (October 2022) and subsequent survey. Within the task 5.2.2 CMCC, UNISA, HEREON and GWP CEE developed a prototype of Innovation Fair as an in person event, where DEM leaders were exchanging information and discussing innovation and collaboration. Subsequent survey – presented and evaluated by GWP CEE mapped short and long-term commitment of DEM for co-development of transfer within the HuT activities. Within the DMB meeting those results were presented.

The project PMs summarised the results of their survey. The aim was to collect details of various activities related to the working groups and to facilitate interaction with and between the DEMs. There is still the question of how to streamline these data.

5.1.4. Activating the DEMs

All DEMs are invited to share their experiences and let WP1 know what barriers there are and where we can provide support to move the process forward.

5.2. Second DMB meeting

The second DMB meeting took place on 18 April 2023. It was moderated by WP1 leader and minuted by the assistant.

5.2.1. Second DEM spotlight presentation

DEM3/Monti Lattari leader shared its progress and work experiences.

Based on the region-specific hazards, DEM focused efforts on a limited set of activities that have been selection driven by stakeholder requirements and available internal skills or research interests.

The area covers 32 municipalities. These are the main stakeholders for DEM3, they are in charge of Civil Protection (Municipal Civil Protection Plans) and Land use planning (Municipal Development Plan).

Activities undertaken so far:

(1) First DEM plenary meeting held in Municipality of Sorrento, within which DEM activities of Champion stakeholders for DEM have been identified.

(2) One-to-one meeting with the Mayor, Councilor for Civil Protection and technical staff at Municipality of Amalfi where the development of joint activities was discussed, such as a data

portal for civil protection users, improving monitoring and promoting citizen science experiences, developing a training programme for local administrations.

(3) Technical field visit at Amalfi to identify areas for the installation of precipitation, soil moisture and river discharge sensors, with the assistance of local experts and taking into account the occurrence of previous events.

(4) Workshop with volunteers and technical staff of Amalfi, responsible for civil protection, to co-design the training course for local administrations and volunteers and the functionalities of a data platform.

(5) Technical field visit in Sorrento to identify areas for the installation of precipitation, soil moisture and river discharge sensors with the assistance of local experts, taking into account the occurrence of previous events.

Re **IoT monitoring**

Focus on deep valleys. As there is no strong expertise in IoT monitoring, support will be provided by partners (BGS, ARANTEC, UPC, NGI) with whom various meetings are already planned.

Re **Data Portal**

Content of the data portal will be:

- Use cases, access policies for the Municipal Operational Center/C.O.C. (human sentinels, communities/tourists).
- Dashboard coupled with a simplified emergency mobile app.
- Key information available offline to manage potential power outages during emergencies.

Re **Human sentinels data portal**

These are citizen experts, such as hikers, trekkers, civil protection volunteers, who mainly provide geo-located reports (pictures, short sentences) on potential vulnerabilities and impacts.

Re **Training for Municipal technical staff and volunteers**

Training for municipal technical staff and volunteers. A training plan was jointly set up during the meetings in Amalfi.

Long term planning

DEM3 will be the main user of the activities carried out under Task 1.5. Preliminary results will be shared at the General Assembly 2023. Two main approaches will be applied:

- Work closely with the Municipality of Amalfi to define several events that highlight the potential bottlenecks in the current system.
- Work on a key event that occurred in a similar geomorphological context and resulted in significant damage to communities and assets.

5.2.2. DEM pitches

With the aim that all DEMs share their activities to date and provide an incentive to those who are struggling to get started, each DEM leader briefly reported on the status quo.

DEM 2

- Carried out a field visit with Arantec, visited the monitoring sites in Val d'Aran and organised a meeting with the mayor.

- Already started to fill in the template of The HuT for Me and You.

- Conducted a workshop with high school students entitled "Build your first rain gauge", a simple and inexpensive rain gauge.

- Is planning a 1-year project with schools in Val d'Aran.

- Is realising cross-activities with the island: educational material.

DEM 4

Although heavy precipitation and flooding are the main hazards, there is no specific weather forecast for the region. The goal is to develop a local weather forecast.

DEM 5

- Production of a German language info sheet for The HuT with the support of WP6, to be discussed with the Mayor and distributed at the upcoming district festival.

- Upcoming personal meeting with the Mayor of Glückstadt.

- Participation in the district festival in Glückstadt. Preparation of information material about The HuT and a serious game that fits the theme, in close exchange with GFZ.

DEM 7

- First stakeholder meeting series in summer, each with homogeneous stakeholder groups.

- DEM proposed to be in the spotlight at the next DMB meeting.

DEM 9

- First stakeholder engagement workshop in June/July, currently in the process of identifying and mapping key partners.

- The objective is to find out with scientists where the gaps are.

- DEM9 is not trying to actively change current practice, but intends to use existing dissemination strategies that end users are already familiar with. The goal is to improve communication using new methods and technologies/tools.

DEM 10

- Conception of a serious game for the canton of Bern, based on team decision-making.

- Organization of an event in September 2023 with mayors, advisors and firefighters.

5.2.3. The HuT logbook for DEMs

DEM leaders will be asked to fill in the section of the table related to their demonstrator on a monthly basis, providing a brief update on ongoing and planned activities. The reason for this is to close the gap in knowledge transfer between DEMs. The aim is to track all the progress made by the DEMs. This content will then be used to feed into the newsletter of the WP6. The CDE local desks gather any information undertaken locally.

5.2.4. Cross-WP activities related to DEMs: International DRR Nexus Forum (I-DRRnF)

UNIGE (WP5) who is leader of task 5.2 (presented the concept of International DRR Nexus Forum (I-DRRnF) workshop series (D5.3) and the roadmap for the first workshop on "Upscaling people centered warning systems" to be held at the General Assembly in October 2023. This concept is part of the deliverable 5.3 and will be reported within the deliverable. This is linked to the local DRR Nexus Forum to be held at the 10 demonstrators. Therefore, this dialogue is important.

5.3. Third DMB meeting

The third DMB meeting took place on 4 July 2023. It was moderated by WP1 assistant and minuted by DEM3 leader.

5.3.1. DEMs common ground

Reminder of upcoming deliverables of DEMs within WP1.

In this context, DEMs were asked to report on their activities at the Local Nexus Forum and their development of narrative/s at the next General Assembly in Valencia.

5.3.2. DEMs current status of progress and barriers

With the aim that all DEMs share their activities to date and provide an incentive to those who are struggling to get started, each DEM leader briefly reported on the status quo.

DEM 1

- Accompanied the Science-Art activities intended for the General Assembly in Valencia.

- The processing of satellite images for heatwaves and UHI studies is progressing. A digital twin for the identification of adaptation measures to deal with heat waves/droughts is under development. CMIP6 scenarios have been downloaded and processed.

- A meeting with the municipality will be arranged after summer.

- CMCC and UPV will schedule a meeting to discuss a HuT strategy for managing climate data.

DEM 2

- Focused on modelling and monitoring activities to manage floods and landslide events. During this period, data collection was carried out with the support of local authorities. Installation of devices is in planning.

- For the social aspects, the narrative "Build your first rain gauge" will engage high school students to raise their awareness of the impact of precipitation.

- Data portal under development: currently addressing data management issues (usage policy).

DEM 4

- Visited company in charge of flood protection and received information on the current system for dealing with pluvial floods.

- In addition, contact has been made with CMCC to assess the potential changes in the intensity-duration-frequency curve caused by CC (updates on this activity will be released soon).

DEM 5

- The local newspaper of Glückstadt published details of the HuT project.

- A first serious gaming experience took place at one of the Glückstadt district festivals (supported by GFZ).

DEM 9

- First stakeholder meeting in DORSET (Local Resilience Forum: emergency planning, climate change, hazard management, environment agency) on how to explore and communicate weather forecasts and climate information and how to support the warning value chain (as suggested by Golding et al., 2021).

- BGS activities on IoT monitoring are being developed with support from the University of Bournemouth.

DEM 10

- Serious games developed in previous European projects will be considered and eventually revised. Interviews with selected stakeholders are planned.

5.3.3. Further spotlights

DEM 7

A meeting was held with stakeholders from water agencies, local administrations and national governments to present the HuT. The participants provided useful insights and suggestions: ensuring standardisation, extending the coverage, and ensuring reliable adoption. A short summary of the meeting will be shared with The HuT partners.

DEM 8

The first stakeholder meeting is planned for October 2023 (2nd in March 2024, 3rd in Sep/Oct 2024), the stakeholder landscape has already been framed, and a plan for the topics will be presented.

A second activity related to Task 3.3 - the development of innovative insurance products (e.g. community-based products) - is being developed with a catastrophe-modelling framework with the support of LEITHA and IIASA.

The third pillar is related to the activities aimed at increasing awareness about fire risk.

5.3.4. The template for The HuT for Me and You narratives

All DEM leaders are requested to fill in the living document directly, reporting on their activities. DEM5 will take the lead in completing its section and providing practical guidance on how to proceed.

5.3.5. Cross-WP activities related to DEMs: Innovative Science-Art Transfer Report on ECCA 2023 Dublin

WP1 and WP5 (represented by HEREON) provided a brief overview on the first art-science cooperation within The HuT, to explain to the demonstrators the benefits of science-art for community involvement. The cooperation was developed by HEREON, UNISA, CMCC, GWP CEE and Full Circle Playback Theatre. The playback theatre performance and discussion session was prepared by artists and scientists together. The event "Staging Early Warning System Stories" took place in Dublin at ECCA 2023, and was followed up with three performances online. All those four events are part of WP5 science-art cooperation framework, were evaluated, and their results will be nearer described in D5.5.

5.3.6. Cross-WP activities related to DEMs: Announcement on I-DRRnF Forum in Valencia.

WP5, represented by UNIGE (T5.2 leader) represented the I-DRRnF Forum. The concept was co-developed with ALL CONTRIBUTORS here. The umbrella concept will focus on transferability aspects (replicability, mindset change, institutionalisation). The session is expected to last 3 hours. The focus for Valencia will be on "scaling deep", the challenge of proper stakeholder engagement. Partners will share their experiences (DEM10, DEM9). Best practices will also be presented from a local perspective (capitalising on Valencia's expertise). A short survey will be conducted to prepare the event. The event will be reported in D5.3. This is linked to the local DRR Nexus Forum to be held at the 10 demonstrators. Therefore, this dialogue is important.

6. Conclusions

The DMB meetings were generally well attended and crowded with presentations and discussions. It is a useful format to get a general picture of the ongoing activities at the demonstrator level, and it is also a platform for WP and Task leaders to communicate with Demonstrators.

The demonstrators who were already advanced in their activities participated actively. The vision is to let these frontrunners motivate and inspire more ongoing activities for other demonstrators.

For the advanced demonstrators, their presentations and reports reflected well the direction of their roadmap to carry out activities for fast-track implementation. However, not all the demonstrators are showing the same level of active reporting or advanced progress, and this shows which demonstrators need additional support and gives WP1 leaders the opportunity to think about further tailored support.

WP1 will provide additional assistance in one-to-one discussions at the upcoming General Assembly and continue the series of DMB meetings remotely after this exchange in person. To better incorporate the internal and external communications, WP1 and WP6 will co-host the DMB meetings together and the series will be DMB and local CDE Desk meetings. This way, the demonstrators meet more frequently (every two months instead every three months), and WP1 and WP6 work closer together with demonstrators to better communicate ongoing activities for communication and exploitation.