



The HuT

‘The HuT for Me and You’ Narratives

Deliverable D1.5

DEVELOPED WITHIN

WP1 Demonstrators’ Arena, T1.4 ‘The HuT for Me and You’

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1. Technical references

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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

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3. 'The HuT for Me and You' Narrative

At this point, we refer to the definition already given in Deliverable D.1.4 under item 3.3. "What is a narrative?" and take up its main objective stated therein, which is the unity of knowledge from formal and non-formal sources. Narratives can convey messages by telling stories or spreading news, to such an extent that they can influence behavior, improve our ability to anticipate or prepare for action, and help structure decision-making, governance and policy-making. This is why the co-creation of narratives in societies is so important for disaster risk reduction in the context of climate extremes, as already mentioned in D.1.4.

On this occasion, we would like to briefly differentiate the term "narrative" from "story" and "storytelling" in climate change research. While stories are used as an approach for research and investigation, narrative analysis is used as a way to crystallise arguments and assumptions. Storytelling is a means of understanding, communicating, and influencing others. In social sciences the term narrative is often used to denote non-fiction and constructed, formal, and official cases, e.g. what institutions generate and reflect in general discourse about an issue. Bushell et al. furthermore propose developing an "unifying strategic narrative" to better engage audiences (Moezzi et al., 2017).

The increasing importance of narratives as a positive agent for climate change adaptation in general is certainly also due to the fact that with the beginning of the era 'post-truth' and 'alternative facts' (Oxford Dictionaries' 2016 word of the year, defined as: "objective facts are less influential in shaping public opinion than appeals to emotion and personal belief"), there is a growing need to see relationships and dynamic systems that integrate people and things, where quantitative data is abundant and social communication networks are increasingly prolific (Moezzi et al., 2017).

R. Shaw and Corner argue that the public engages more positively in climate change discussions when the conversations are situated within narratives that validate their values and identity (Moezzi et al., 2017).

The definition of narrative given in D.1.4 and extended in D.1.5 is building the common ground for the co-production of "The Hut for Me and You" at demonstrator's level, a safe haven from climate extremes for all.

4. Our approach

In Deliverable D.1.4 we explained under item 4. "Guidelines for co-creating 'The Hut for Me and You' narratives in your demonstration site" and under 4.1. "How to create local narratives". As part of D.1.4 we have developed a template to specifically screen their activities towards "The Hut for Me and You' narratives in your demonstration site". It is a living document, accessible and visible to all demonstrators to enable them to find out about each other's activities and to share where necessary.

We asked each demonstrator to fill in their respective template and report on their risks and opportunities, their main target group, the transfer potential both within the project and beyond, the activities they carried out, and their concrete next steps.

In this way, each demonstrator will have a clear picture of the disaster risk reduction including climate change adaptation (DRR including CCA) they intend to achieve through The HuT project and will be able to plan their strategies accordingly.



5. Results of 10 Narrative Templates

Table 1: The 10 demonstrators

Lead)		Country	Area (km ²)	Authorities	Stakeholders
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

All the Demonstrators are still developing their narrative about their definition of a safe haven and their path to achieving it. However, they have a clear picture of the key needs of the multi-hazard risks they will address in this project and the strategies and tools they will need to develop to achieve DRR including CCA in their respective areas.

Following are the completed templates of the demonstrators from DEM 1 to DEM 10.



DEM 1 Valencia

<p>Leitmotiv: Droughts and heatwaves: How to cope with the future climate in Valencia?</p>	
<p>Objective:</p> <ol style="list-style-type: none"> 1. Raising awareness of the problem and the risks associated with drought and heat waves for the city of Valencia. 2. Prepare the citizens and the city to be resilient to events such as heatwaves and droughts. <ol style="list-style-type: none"> 2.1. Identity vulnerable (heat island) areas based on both the physical phenomena of heat radiation due to the sun and infrastructure, and vulnerability analysis of the population within the city (lower income and higher age) 2.2. Communicate to the population when a heatwave is going to occur. 2.3. Propose improvements to the morphology of the city with NBS, to have a better adaptation to climate change and multi hazard risks. 	
<p>Target group: Valencia City Council (Open data) Universitat de València: Earth Physics and Thermodynamics Department Universitat Politècnica de València: Drawing Department, Mechanical and Materials Engineering Department, Urban Planning Department and Hydraulic Engineering and Environment Department Confederación del Río Turia</p>	<p>The HuT Expertise: WP2 - Warning systems DEM2 Val d'Aran Region - Platform development HEREON - Health-related heatwaves indices GFZ - Task 4.3: Exposure modeling Valencia CMCC - Climate change scenarios, selection, and correction</p>
<p>DRR and CCA to achieve:</p> <ul style="list-style-type: none"> • Indices and warning systems for drought and heat waves at different scales. Integrate some of the warnings to the existing systems. • Propose urban planning strategies to cope with heatwaves. • Raise awareness. 	<p>Transfer potential: Other cities seeking to reduce their Urban Heat Islands. Water resource systems vulnerable to drought (Mediterranean, California, Australia), also including vulnerable urban environments.</p>
<p>1. What is a safe haven for Me and You? Water (Beach & River) Green areas / Public space (Public squares & Parks, especially the Turia River Park).</p>	
<p>2. What are our risks? Misuse of water resources. Having a city model that does not include green spaces (shadows). Unplanned city growth that does not take into consideration the heat island effect and the strategic use of green infrastructures and</p>	

NBS. People drowning in the sea or river or becoming too exposed to the sun while swimming.
3. What are our opportunities? To be able to present urban design tools to reduce heat in the city, especially if they are NBS. Provide a warning platform for heatwaves events.
4. How to build our safe haven together? Scientific information: Heatwave forecast, satellite images and urban morphology characteristics. Actions: Dissemination of the warning system, including against drowning when cooling off. Raising awareness about water management. Inform the population on how to deal with heat waves. Promote design recommendations as an urban regulation.
5. What are our next steps to build The Hut for Me and You? Scientific data: 1. Heatwave forecast, 2. Satellite images 3. Urban morphology characteristics. 4. Demographic analysis Actions: 1. Dissemination of the warning system. 2.1. Raising awareness about water management. 2.2. Inform the population on how to deal with heatwaves. 3. Promote design recommendations as an urban regulation.
6. Have we reached our safe haven yet? The Hut and beyond. Not for now, working towards that.

Media gallery:



Milestone diary:

25/10/2023 - Presentation of the results of the collaboration with Professor Chele Esteve from the UPV Industrial Design and Product Development Department.

25/10/2023 - Inauguration of Salva Mascarell's Art Exhibition, commissioned by Chele Esteve in the Botanical Garden.



DEM 2 Val d’Aran Region

Leitmotiv: Building my first rain gauge	
Objective: Increase awareness of rainfall measurement systems and their usage for flood and landslide forecasting by implementing low-cost technology	
Target group: <ul style="list-style-type: none"> • High-school Students and teachers • Technicians of municipality and local administration • Other interested persons (society) • Universities • Stakeholders 	The HuT Expertise: <ul style="list-style-type: none"> • Vielha municipality • ARANTEC • UPC • Workshop of how to build a simple rain gauge and its interaction with arduino
DRR and CCA to achieve: <ul style="list-style-type: none"> • Implement low-cost rain gauge as a complement for the actual rain gauge network. • Increase network rain gauge density to have a better rainfall spatial representation. • Implement a real-time communication system among the new rain gauges users during flood-landslide episodes. 	Transfer potential: <ul style="list-style-type: none"> • Other areas in Catalonia and Europe with data-scarce regions. • Water sector specialists (engineers, stakeholders). • Schools and other academic institutions. • Administrations
1. What is a safe haven for Me and You? A place with the least probability of hazard where affected people are aware and properly prepared to act during an evacuation and emergency plan. Awareness should be spread out primarily from basic education level (schools) and disseminated by communication media and stakeholders.	
2. What are our risks? Landslides, flash floods are the major natural hazards. Other hazards like droughts and wildfires have a minor focus. Of key importance are the cascading effects.	
3. What are our opportunities?	



<p>We have ARANTEC as a partner and their perfect network to the administration and emergency units. It's a small region and personal contacts are easy.</p>
<p>4. How to build our safe haven together?</p> <p>By our prototype of EWS and increasing awareness in society.</p>
<p>5. What are our next steps to build The Hut for Me and You?</p> <p>Design and development of our EWS</p>
<p>6. Have we reached our safe haven yet? The Hut and beyond.</p> <p>Not yet, but we are working on it...</p>
<p>Media gallery:</p> <p>We have taken photos of our meetings and field trips, but publicly available media are only photos and Tweets (see @MarcelHurlimann or @arantec)</p>
<p>Milestone diary:</p> <p>28-03-2023: First meeting with ARANTEC and local stakeholders at Vielha, (capital of Val d'Aran region). Discussion about cooperation and further steps</p> <p>15-11-2023: Participation on Vielha Scientific Week in order to promote importance of rainfall monitoring and Early Warning Systems</p>



DEM 3 Lattari Mountains

Leitmotiv: Knowing the mountain environment to cope with weather-induced risks	
Objective: Our goal is to increase and consolidate the knowledge and awareness of decision makers (e.g. Administrations) and communities for weather-induced risks and mitigation measures. It requires the full involvement in co-design and co-develop solutions of all the stakeholders; for example, citizen associations can act as human sentinels (for example hikers who know the Lattari Mountains area and its critical issues well or civil Protection volunteers already helping the Municipalities) to support local stakeholders in risk management (i.e. risk due to landslides, forest fire, heavy precipitation events, flash floods etc.).	
Target group: <ul style="list-style-type: none"> - Local governments (Amalfi and Sorrento Municipalities) - Regional Civil Protection - Citizens' associations (e.g. environmental associations; hiking associations; territorial promotion associations etc.) - Local community - Tourist associations 	The HuT Expertise: <ul style="list-style-type: none"> - CMCC - University of Salerno - Amalfi Municipality - Sorrento Municipality
DRR and CCA to achieve: <ul style="list-style-type: none"> - Monitoring the investigated area using low-cost sensors with IoT technology - Human sentinels and serious games - Developing prototype insurance products - Assessment and improving the early warning system - Improving alert communication - Developing a web platform and/or app mobile to support the Municipal Operation Center to cope with weather-induced hazards 	Transfer potential: Amplification out: among the different municipalities in the area and then beyond DEM3 area Amplification beyond: scaling up the solution at governance level

1. What is a safe haven for Me and You?

- Improving the full warning systems and enhancing the prevention and preparation for weather-induced disasters
- Improving the risk awareness among the stakeholders (in a special way, tourists completely unfamiliar with such hazards) with training and information activities and by using serious gaming initiatives.
- Active involvement of citizens (as human sentinels) in surveillance and early warning.

2. What are our risks?

Due to the geo-morphological and climatic characteristics of the territory, different weather-induced risks affect the area, and they are posing severe threats to the population and assets:

- landslide or rockslides/rockfalls often cause road and rail closures after heavy rainfall events
- flash flood affecting very small, orographically complex basin
- forest fire, mainly human-induced, but favored by dry soil conditions and heatwave for triggering and diffusion
- increasing the severe storms (e.g. hail)

Moreover, the presence of many tourists significantly amplifies, especially in the summer season, the elements exposed to risk and the potential consequences of extreme weather events.

3. What are our opportunities?

To integrate the technical-scientific knowledge with human skills and abilities (for example using citizens as human sentinels) to support political decision makers in enhancing risk management.

4. How to build our safe haven together?

To create the Local DRR Nexus Forums composed of community, competent bodies, stakeholders with the aim of organically deal with critical situations due to weather-induced risks of the area.

5. What are our next steps to build The Hut for Me and You?

- Developing the web platform (and app mobile) design
- Creating a database of rainfall-induced risk events in the area (for example landslides)
- Organizing a new training meeting aimed to increase the involvement of citizens' associations, for example the trekkers who know the area and its criticalities (human sentinels)

- Develop a prototype for serious gaming exploiting hikers' routes.

6. Have we reached our safe haven yet? The Hut and beyond.

Not yet, but we are working on it. For example, we installed the IoT sensors in several points in order to improve the monitoring of the area.

Media gallery:

Below are some photos taken during the meetings with the municipalities of Lattari Mountains.



- Workshop 3.11.2022 (Sorrento): meeting with CMCC, University of Salerno and the most important municipalities of Lattari Mountains (presentation of The HuT project).



- Meeting 06.06.2023 (Amalfi): training meeting for the main stakeholders of Amalfi Municipality, citizen associations and Civil Protection volunteers with experts from the University of Salerno and CMCC.

Milestone diary:

- 3.11.2022 (Sorrento): first meeting with CMCC, University of Salerno and the most important stakeholders of municipalities of Lattari Mountains (presentation and discussion about The HuT project).

- 19.01.2023 (Amalfi): training meeting for the main stakeholders of Amalfi Municipality, citizen associations and Civil Protection volunteers with experts from the University of Salerno and CMCC.
- 06.06.2023 (Amalfi): training meeting for the main stakeholders of Amalfi Municipality, citizen associations and Civil Protection volunteers with experts from the University of Salerno and CMCC.
- October 2023: installation of IoT sensors for soil water content, soil water potential and water level monitoring
- November 2023: installation of IoT sensors for soil water content, soil water potential and water level monitoring.



DEM 4 Vilnius

Leitmotiv: Street flooding in Vilnius: common Knowledge, common Hut in climate extremes	
Objectives: To increase awareness about urban flooding caused by heavy rains in Vilnius and preparedness for extreme flooding situations. To co-create an algorithm of civil emergency (information, warnings, harmonization of actions of different agencies and inhabitants, etc.) in case of heavy rain and potential flooding. To support the weather-proofing design of drainage networks, urban surface water management and promote NBS in urban planning	
Target group*: <ul style="list-style-type: none"> • Vilnius municipality administration • Municipal Enterprise responsible for flooding consequences liquidation and prevention VŠĮ Grinda • Municipal planning enterprise “Vilniaus planas” • Civil Protection agency/its regional branch • Lithuanian agency of hydrometeorology • Local communities • NGO <p>*Under consideration, the format and dates will be decided after a special meeting with stakeholders in February 2024</p> <p>We are going to use existing climate orientated events for information gathering, dissemination, maybe co-creation.</p> <p>Also, Lithuania in 2024 will have the Year of Elections: Presidential elections in May; European Parliament in June, Lithuanian Parliament in October.</p>	The HuT Expertise: University of Vilnius CMCC Vilnius Municipality Serious games promoters etc. *Under consideration, will be decided after a special meeting with stakeholders in February 2024
DRR and CCA to achieve: <ul style="list-style-type: none"> • To update definitions and threshold of heavy rain in Lithuania, in support with CMCC 	Transfer potential: Other cities seeking to reduce urban flooding (river valley landscapes, areas with complex topography)



<ul style="list-style-type: none"> • Elaborate recommendations on warning systems for urban flooding at different scales. Propose some flooding warnings to supplement the existing system. • Propose urban planning strategies to cope with heavy rains causing streets flooding. • Raise awareness. 	
<p>1. What is a safe haven for Me and You?</p> <p>Public green areas, forests, upper valley terraces, upper slope positions, etc.</p>	
<p>2. What are our risks?</p> <p>Low awareness of climate extremes and possible damage of heavy rains in Vilnius.</p> <p>Lack of knowledge (misuse of forecasts, scattered information), lack of preparedness of institutions, water management services, inhabitants.</p> <p>Psychological stress, possible damage, and financial losses for everyone and collectively.</p> <p>Urban planning, raising technogenic pavement of surface and uncontrolled underground use, diminishing green spaces with natural ability to absorb rainwater.</p> <p>Surface water management is based only on engineering technological solutions but not green infrastructure and NBS.</p>	
<p>3. What are our opportunities?</p> <p>To co-create common knowledge and social supporting network of actors, which could help and give advice about best possible behavior at difficult climate extreme situations (heavy rains caused flooding)</p> <p>To introduce urban flooding cases into civil preparedness system</p> <p>To be able to present urban design tools to reduce possible flooding in the city, especially NBS. Provide a warning algorithm for heavy rain events.</p>	
<p>4. How to build our safe haven together?</p> <p>We still working towards that, using opportunities</p>	
<p>5. What are our next steps to build The Hut for Me and You?</p> <p>Scientific information: strengthening knowledge and use of proper forecasts.</p> <p>To suggest new thresholds of heavy rain.</p> <p>To map stakeholders and to carry out the Inquiry about their understanding and needs concerning Safe Hut. To organize stakeholder’s workshop</p>	

To seek that Municipal water management plan will be based on the newest scientific knowledge and to take part in its elaboration Working group.

Raising awareness about sustainable water management, NBS and green infrastructure.

Inform the population on how to deal with heavy rains and urban flooding.

6. Have we reached our safe haven yet? The Hut and beyond.

Not for now, working towards that.

Media gallery:



©Ilan Kelman

Milestone diary:



DEM 5 Schleswig-Holstein State

<p>Leitmotiv: Buddy system to support Glückstadt</p>	
<p>Objective: Our goal is to reach out to specific vulnerable groups (e.g. the elderly, people with disabilities) through our narrative co-creation process, to identify their respective needs and to provide appropriate tools for DRR and CCA. As the first pilot in Schleswig-Holstein, Glückstadt is actively involving the mayor, the municipality, communication managers, disability associations and the citizens' council to co-create a "DRR and CCA buddy system" to prepare for climate extremes.</p>	
<p>Target group: The city administration and the mayor are initially involved. → Access to his network, Mayor as multiplier, e.g. linkage with city newspaper (published article about the cooperation between the HuT and Glückstadt), references to city events. → Involvement in the local community: participation in one of the district festivals. ⇨ The District Festival already offered us the opportunity for a DRR Local Nexus Forum by having a The HuT stand: We were able to engage with different social groups and provide information about The HuT, played 2 serious games in the content framing and visitors shared their personal stories about storm surges in the past. → He also already presented The HuT and Glückstadt's pilot case as DEM 5 at the regular meeting of the party coalition.</p>	<p>The HuT Expertise: GFZ, leading serious gaming and dynamic exposure modelling, visited Glückstadt and currently develops activities tailored to Glückstadt. GERICS will be using the "climate outlooks" developed as the basis for future innovative "narrative-based climate information". Cost-benefit, cost-effectiveness and multicriteria analysis from WP3 to calculate CCA measures for Glückstadt.</p>

<p>As a result, each meeting triggers a domino effect that leads us to new people/groups.</p> <p>→ Discussions are already underway with the City's Art Association to work on a broader and more holistic level.</p>	
<p>DRR and CCA to achieve:</p> <p>We are currently setting up a series of stakeholder interviews and community workshops to gather a list of DRR and CCA measures. And we will carry out cost-benefit, cost-effectiveness and multi-criteria analysis and communicate the results to the mayor, the city administration, and the citizens' councils.</p>	<p>Transfer potential:</p> <p>Our approach can be transferred to other harbour cities in Schleswig-Holstein on the North Sea and Baltic coasts.</p> <p>To this end, the Mayor of Glückstadt has already offered to introduce us to the Round Table of Mayors in the region.</p>
<p>1. What is a safe haven for Me and You?</p> <p>Rubber boots: "I am prepared to live with the risk of flooding and use the early warning to know when to put on my rubber boots and evacuate." (Enjoy living near the coast and willing to live with the risk. I feel safe as long as there is an early warning).</p> <p>Concrete floors: "I would like to know the long-term risk so that I know how much to invest in my home and how long my children can live here. That is why I have decided to use concrete floors instead of wooden floors on the ground floor. (Risk-aware and eager to know the long-term future. Feeling safe now but uncertain about the future).</p>	
<p>2. What are our risks?</p> <p>Flooding is the main risk, mainly because Glückstadt is surrounded by 3 rivers (Elbe, Rhin and Stör). The critical infrastructure providers and the mayor are discussing how to deal with multiple risks, such as power outages in winter and flooding. Public panic would be a major systemic risk.</p>	
<p>3. What are our opportunities?</p>	

It is a relatively small town of 14,000 people, and everyone knows each other through well-connected neighborhoods. Citizens volunteer to keep their neighbors informed through a buddy system, especially those who don't have access to digital early warning channels.

4. How to build our safe haven together?

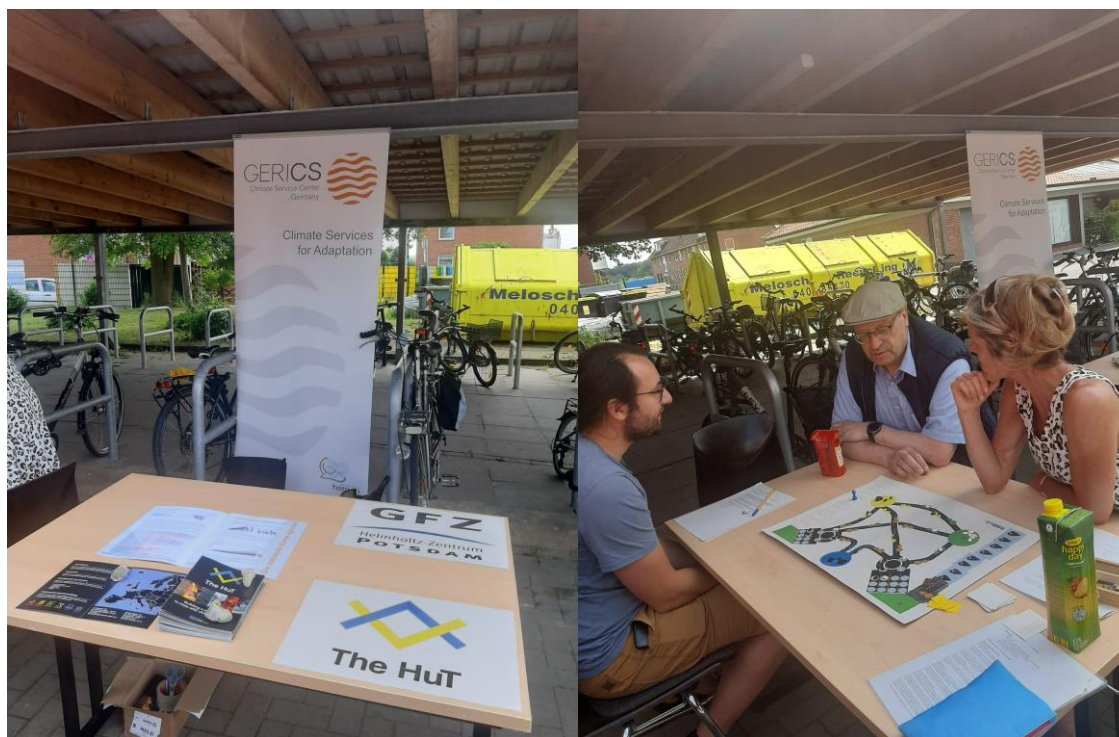
We would like to set up an effective buddy system to ensure that DRR and CCA activities reach the needs of our society (the elderly, people with disabilities).

5. What are our next steps to build The Hut for Me and You?

We want to know the risks of future climate impacts (flooding, sea level rise) and brainstorm with citizens and the city administration about what can be done.

6. Have we reached our safe haven yet? The Hut and beyond.

Media gallery:



Milestone diary:

Additionally, we reported to CDE and the serious gaming task in WP3.

DEM 6 East Fjords

<p>Leitmotiv: Creating an information platform on natural hazards for inhabitants of Seyðisfjörður.</p>	
<p>Objective: The goal is to create a “one-stop-shop” with information on relevant natural hazards aimed towards the inhabitants of Seyðisfjörður. It should make it easier for the inhabitants to find and have a look at hazard maps for their area, evacuation plans, real time information about the situation etc. It will also include educational material related to the natural hazards affecting the town.</p>	
<p>Target group: The main stakeholders are the inhabitants of Seyðisfjörður, but also the local government and people working for the municipality, the local police, the local SAR groups etc.</p> <p>The following activities have been conducted:</p> <ul style="list-style-type: none"> • Oct ‘22: The HuT project was introduced to snow observers as well as to landslide and avalanche specialists in Iceland at a workshop in Reykjavík. • Nov ‘22: The HuT project was introduced to the local government of Múlaþing. Ideas on the platform were discussed. The town councilors expressed great interest and came up with valuable input. • Jan ‘23: Meeting with the local chief of police. The HuT project and the idea of a platform introduced. Great interest from the police and valuable input. • Jan ‘23: On site meetings with reference groups of inhabitants in Seyðisfjörður. Focus on the need for information considering former catastrophes in the area. Output used for the design of the platform. • Jan ‘23: Visits to business managers in hazards zones in Seyðisfjörður. Focus on the need for information considering former catastrophes in the area. Output used for the design of the platform. • Jan ‘23: Open town hall meeting in Seyðisfjörður about The HuT project. Not many people attended (5) but the meeting 	<p>The HuT Expertise: IMO (partner in The HuT) has expert knowledge on natural hazards, runs a monitoring system and creates hazard maps.</p> <p>The Civil Protection (partner in The HuT) is responsible for daily administration of Civil Protection matters in Iceland and also has a coordinating role during periods of high risk. The Civil Protection hosts the website for the platform developed within The HuT.</p> <p>Austurbrú (partner in The HuT), holds expertise in local matters in the area, as well as in social studies. Austurbrú also represents the municipalities in The HuT project.</p>

<p>was held, and the discussions were productive.</p> <ul style="list-style-type: none"> • Oct '23: The platform developed in The HuT project was introduced in a workshop held in Neskaupstaður where about 70 participants working on avalanche and landslide related projects for the East fjords, participated. • Oct '23: Open town hall meeting in Neskaupstaður where the platform developed in The HuT project was introduced along with other presentations about avalanche- and landslide related things in the East fjords. About 120 participants. 	
<p>DRR and CCA to achieve: First round of meetings with reference groups and business managers in the area has already been conducted. These groups will review the first version of the platform when that is ready.</p>	<p>Transfer potential: Similar platforms or websites will be made for other areas in Iceland where natural hazards are a problem. The Civil Protection will host them. Similar platforms could be made anywhere in the world where societies are at risk due to natural hazards.</p>
<p>1. What is a safe haven for Me and You? It is important to maintain awareness in the society even during low-risk periods. People new to Seyðisfjörður should get information about the natural hazards and the inhabitants should be aware of the hazard zones where their houses or working places are standing. Educational material on the hazards, the hazard maps as well as the mitigation in place should be easily available to all inhabitants. It is important for the municipality to plan accordingly to the hazards and aim to lower the risk in the future through responsible planning and construction of permanent defense structures. The hazards should be monitored as well as possible and early warnings and emergency evacuations communicated clearly.</p>	
<p>2. What are our risks? The main risks in Seyðisfjörður in terms of natural hazards are landslides, slushflows and snow avalanches.</p>	
<p>3. What are our opportunities? Within The HuT the aim is to create an interactive platform (website) where inhabitants can access all existing information on the natural hazards in the area, both real time information as well as educational material, hazard maps, evacuation plans, information about the permanent mitigation measures, information about past events, etc. This should help maintain knowledge and</p>	

<p>awareness in the society, thus aiming towards a safer society. Also, the interactive nature of the platform makes it easy for inhabitants to report danger signs and concerns, as well as to ask questions.</p>
<p>4. How to build our safe haven together? See earlier answers.</p>
<p>5. What are our next steps to build The Hut for Me and You? The next step is to continue developing the website. The HuT partners in Iceland are working together on that, together with professional web page designers.</p>
<p>6. Have we reached our safe haven yet? The Hut and beyond. No.</p>
<p>Media gallery:</p>
<p>Milestone diary:</p>



DEM 7 Tisza River Basin

Leitmotiv: VÍZ24 app to support local municipalities in case of plural flood situation	
Objective:	
<p>Target group: Our main target group is composed of the municipalities (105 pieces) in the middle Tisza district. Our DRR actions VÍZ24 mobile application can support the activities of municipalities in case of a pluvial flood situation, so the municipalities and citizens are the beneficiary from DRR.</p> <p>The Middle Tisza District Water Directorate (so called KÖTIVIZIG with Hungarian acronym) (DEM7) organized the Local DRR nexus Forum in the frame of the HuT project on 7th of June in Szolnok, Hungary.</p> <p>The meeting's main aim was to collect useful and appropriate ideas and feedback from the stakeholders to fulfill the application's development as a main result, enhancing the sufficient management and prompt reaction in case of pluvial flood situations.</p> <p>39 participants took part at the stakeholder's meeting from municipalities vulnerable to pluvial flood, relevant experts of water management and disaster management, spatial planning experts and engineers.</p>	<p>The HuT Expertise: Our main partners are municipalities and planners.</p>



DRR and CCA to achieve:
 VÍZ24 mobile application
 New early warning system

Transfer potential:
 Every organization who takes part in managing flooding in urban areas could use the same mobile application.

1. What is a safe haven for Me and You?

Pluvial flood situations will always occur in future. So, we must prepare in different ways. In Hungary every municipality must make defense plans for pluvial flood situations. These plans contain every information for a successful defense. The VÍZ24 mobile application contains these plans, maps, important contact, and an alarm system. Our main aim is to distribute the application to more and more municipalities and people.

2. What are our risks?



Fluvial flood in the River Tisza and Zagyva and pluvial flood in urban areas in 105 municipalities.
3. What are our opportunities? We would like to develop the VÍZ24 mobile application in order to be more usable.
4. How to build our safe haven together? We use the resources of the HuT project, and the knowledge base.
5. What are our next steps to build The Hut for Me and You? Local DRR nexus forum (07.06.2023) already done Writing the development plans Implementing of further development Distributing
6. Have we reached our safe haven yet? The Hut and beyond. We just can go as close as possible to safe haven, but we can't reach it never.
Media gallery:
Milestone diary: Milestone 1: Local DRR nexus forum (07.06.2023) already done Milestone 2: Writing the development plans Milestone 3: Implementing of develop Milestone 4: Distributing

DEM 8 Ogliastro

Leitmotiv: A shared pathway towards fire risk mitigation and adaptation	
Objective: <ul style="list-style-type: none"> → Raising awareness of the problem and the risks associated with wildfire in the Ogliastro sub-region (Sardinia) → Co-design and co-develop prevention and risk mitigation strategies and options by applying innovative and integrated fire modelling, financial instruments, and participatory approaches. → Co-define effective pathways for adaptation and risk mitigation to reduce the impact of wildfires in the short and medium term 	
Target group: <ul style="list-style-type: none"> → Local administrations → Regional Forest Service and Forest management administrations (through their territorial services) → Regional Civil Protection → Farmers and breeders → Managers of tourist-recreational services → Fire management researchers and experts → Organization for the protection and representation of agricultural businesses (e.g., Confagricoltura) Format: <ul style="list-style-type: none"> → Workshops and focus groups → The first two exploratory focus groups were held on 9/11/2023, dealing with local policy and decision-makers (in the morning, 27 people) and with breeders and Confagricoltura (in the afternoon, 17 people) 	The HuT Expertise: <ul style="list-style-type: none"> → CNR → CMCC → Confagricoltura → IIASA → Leithà
DRR and CCA to achieve: <ul style="list-style-type: none"> → Co-design shared strategies (prevention and land management options) to cope with fire risk → Simulating fire behaviour potential under current and future climate, including prevention and land management options shared with the territory 	Transfer potential: Other areas in the Mediterranean region facing fire risk problems

<ul style="list-style-type: none"> → Developing prototype insurance products → Propose effective pathways for fire adaptation and risk mitigation 	
1. What is a safe haven for Me and You? <ul style="list-style-type: none"> → People-smart landscapes for fire and climate → Improving the fire risk awareness among stakeholders with workshops and results of simulation activities → Improving the willingness to be part of fire governance 	
2. What are our risks? <ul style="list-style-type: none"> → Forest, rural and wildland-urban-interface fires, mainly human-induced, which spread, and behaviour could be exacerbated and amplified by drought conditions and heatwave → Touristic pressure can, especially in the summer, amplify the risk in terms of increased hazard and increased exposure 	
3. What are our opportunities? <ul style="list-style-type: none"> → Personal contacts are crucial to create trust across different stakeholder groups. CMCC and CNR have strong relationships with Regional Forest Service and Forest management administrations and thanks to Confagricoltura as a partner we have contacts and direct communication with farmers and breeders. → CMCC, CNR and IIASA have models and approaches to integrate the technical-scientific knowledge in supporting policy and decision-makers along their pathway towards fire resilience. 	
4. How to build our safe haven together? <p>Building local community capacity by working together through a shared fire-smart landscape vision</p>	
5. What are our next steps to build The Hut for Me and You? <ul style="list-style-type: none"> → Simulating fire risk under current and future climate and landscape management options → Developing a prototype insurance product → Organizing at least three other workshops with local stakeholders dedicated to different themes (prevention strategies, communication and science, financing instruments) helpful to develop a shared fire-smart landscape vision 	
6. Have we reached our safe haven yet? The Hut and beyond. <p>Not yet, but we are working on it.</p>	

Media gallery:

Below two photos taken during the first two exploratory focus groups held on 9/11/2023, dealing with local policy and decision-makers (in the morning, 27 people) and with breeders and Confagricoltura (in the afternoon, 17 people)



Milestone diary:

Dec 22 – First meeting with IIASA to set up the modelling activities

Mar/May/Sept 23 – Meeting with LEITHA' to set up the activities concerning the development of the prototype insurance product

May/July/Sept – Stakeholder mapping and meetings with Confagricoltura to identify and contact stakeholders

Oct 23 - Annual meeting at UPV

Nov 23 - first exploratory focus groups

- 9/11/2023, from 10 to 12.30, with local policy and decision-makers
- 9/11/2023, from 15 to 17.30, with local breeders and Confagricoltura

During the two workshops, CNR and CMCC presented the “The HuT” project and the specific demonstrator n. 8. Subsequently, a short questionnaire was proposed related to the actions already implemented in the territory regarding prevention and mitigation, which will help us further to have a clear picture of the territorial context. Then, we invited participants to share the main problems and opportunities offered by the territory in adopting prevention and mitigation measures. Then we began to discuss the possible solutions that can be implemented collaboratively to overcome the critical issues detected.

DEM 9 Dorset

<p>Leitmotiv: Exploring the use of weather, climate, and natural hazard information in decision making</p>	
<p>Objective: We aim to investigate the best ways to consolidate existing monitoring, forecasting, and climate projection tools to enhance communication and dissemination of multiple hazards to stakeholders and the public.</p> <p>To reach this aim we need to understand how data, information, and tools are currently accessed and used in decision making. An initial knowledge exchange workshop was organised to understand the provision of weather, hazard, impact-based information to different users and identify how provision could be improved.</p>	
<p>Target group: We are engaging with the Dorset Local Resilience Forum (LRF). The LRF is the principal mechanism for multi-agency cooperation under the UK Civil Contingencies Act 2004.</p> <p>→ Key contacts are the LRF chair and the Met Office Civil Contingency Advisors</p> <p>→ Better engagement triggers a domino effect that leads us to new stakeholders/ people/groups.</p> <p>→ Access to the group has been established (overview presentations and initial stakeholder workshop) but is in early phase.</p> <p>Tourists</p> <p>→ Identified as key stakeholders and focus of future developments</p>	<p>The HuT Expertise: GRZ: dynamic exposure modeling</p> <p>CMCC: Climate change scenarios</p> <p>NGI: IoT</p> <p>DEM4: Synoptic vs NWP comparison shortrange forecasts</p> <p>DEM5: narrative based information and citizen engagement</p> <p>WP2: Warnings, focus and citizen engagement</p> <p>WP3: Climate proofing investigations</p> <p>WP4: Discussions are already in place with key Demonstrators and partners for IoT knowledge transfer (NGI, DEM2, DEM3)</p>

<p>DRR and CCA to achieve:</p> <p>Workshops to gather information on accessibility and useability of weather, climate, and natural hazard information in decision making. Increase familiarisation with UK/ local LRF working practices through continued engagement with this network of experts.</p> <p>Weather regime identification and links with future climate modeling</p> <p>IoT trials in demonstrator area to better support the Council understanding of landslide environment and conditioning.</p>	<p>Transfer potential:</p> <p>Improved knowledge sharing (Internal Amplification) on natural hazard and weather forecasting at the local scale (Dorset, BGS- MO)</p> <p>Lessons learnt with other Demonstrators and partners (Outward amplification)</p>
<p>1. What is a safe haven for Me and You?</p> <p>Access correct and timely information and data to improve understanding short term (response and planning) and long term (climate change adaptation and resilience). Better understand communities and their role in knowledge information flow. Scalability challenges with reference to multi-hazard, impact and vulnerability information and their use to assess severity and support prioritisation of actions. Roles and responsibilities when considering different lead times for information (i.e., short-range response and climate-oriented planning) Pathways for cross-temporal and spatial scale planning Evidence-based support for complimentary mitigation and decision making across timescales.</p>	
<p>2. What are our risks?</p> <p>Engagement from key parties when protocols and operating plans are already in place.</p>	
<p>3. What are our opportunities?</p> <p>Accessible and correct and timely information and data to improve understanding short term (response and planning) and long term (climate change adaptation and resilience)</p> <p>Increase familiarisation with UK/ local LRF working practices through continued engagement with this network of experts.</p>	
<p>4. How to build our safe haven together?</p>	

5. What are our next steps to build The Hut for Me and You?

Initial stakeholder workshop to gather information on accessibility and useability of weather, climate, and natural hazard information in decision making. Communicate the results through an infographic summary.

Improve engagement with UK/ local LRF working practices through continued engagement with this network of experts

Identify recurrence and format for future engagement with participants and expand network as appropriate

Consider options for community-level engagement workshops with a similar set of discussion themes

6. Have we reached our safe haven yet? The Hut and beyond.

Working towards this

Media gallery:





Milestone diary:

- **October 2022** – “The HuT Nexus” Kick off meeting
- **May 2023** – initial attendance at virtual Dorset LRF meeting/ Severe weather group meeting
- **June 2023** – initial Dorset Stakeholder workshop and on site field IoT meetings
- **October 2023** – Plenary meeting and GA Valencia

Linked engagement activity

- **October 2023** – Presentation “Landslides and the Jurassic Coast” given by Sam Scriven of the Jurassic Coast Trust and Catherine Pennington of the British Geological Survey. <https://www.youtube.com/watch?v=PGvzoLDsTRU>

DEM 10 Berne Canton

Leitmotiv: Raising risk awareness and preparedness	
Objective: Gaining trust and strengthening the relationships with key stakeholders to improve the DRM in the valley and raise the risk awareness and preparedness of the residents. Improve awareness regarding bathing and leisure time in the riverbed and about upstream-downstream issues.	
Target group: <ul style="list-style-type: none"> - Stakeholders involved in local DRM and emergency roles - Youth and schools - Local citizens - Regional/cantonal authorities - Local authorities 	The HuT Expertise: <ul style="list-style-type: none"> - GFZ for the development of the serious games - Hereon/UCL/GWP to exchange ideas and approaches to engage with high school teachers and students for an “art/science” project (under discussion) - UCL/Helsinki for warning communication and stakeholder engagement regarding the use/improvement and scaling of the EWS - NGI for monitoring (under discussion)
DRR and CCA to achieve: <ul style="list-style-type: none"> - Improving local capacities and response time in the warning and communication chain in relation to the floods early warning system installed in the valley - Possible improvement of the existing early warning system on the technological side and co-designing a financially sustainable maintenance plan. - Raising risk awareness and preparedness in the community through educational activities and training citizens using a serious game to improve collaboration, gain better 	Transfer potential: <ul style="list-style-type: none"> - Learning from community led DRM and EWS, which is common practice in the legal structure of Switzerland (e.g. community natural hazard advisor) - Understanding strengths and weaknesses of the “Swiss” approach and transfer gained knowledge for the implementation of DRM strategies and EWS in other regions



<p>understanding of roles which can ultimately aid the emergency response</p>	
<p>1. What is a safe haven for Me and You?</p> <p>Connection to nature, reading and knowing their environments as well as strong community bonds are seen as factors contributing to the feeling of living in a “safe haven”.</p> <p>Trust in public services: “Right now, in the community I would say it is reassuring to know that there is for example a functioning fire department. Just the knowledge that it works when needed, that you have seen it in action, that it functions, and that someone will come to help in an emergency is quite valuable. When you feel helpless, being able to call for assistance and having someone come to help is important. [...]. For me, it's really in the back of my mind that no matter how well-prepared I am, if things get tough, if my house is on fire, I need to have a good feeling in the back of my mind that a fantastic team will come and help me extinguish it. And if I don't have that anymore, then I go to bed with a bad feeling.”</p> <p>War and rockfall: “For me, here I feel completely safe in terms of natural hazards. What's almost more uncertain today is when you see the war in Russia and Ukraine for example, what is safe anymore? That concerns me almost more. But in terms of natural hazards, well, I think if you're a bit attentive to what the weather is doing, not much can happen. [...] However, we have a situation here; we have an alp house that is really a bit under the rock wall, It is called 'Fuhflue' now, from rotting, decaying. There has been some rockfall, but nothing significant, and yes, if a larger rock comes down, it will eventually fall onto our house. And that is, well, you think about it from time to time. [...] The probability is almost zero, but if it happens, and you are there, then it is probably over. But still, we live there. “</p>	
<p>2. What are our risks?</p> <p>The main risks in our demonstrator area are flashfloods, which carry a large amount of driftwood. Large events are quite rare, however a main issue is that the Zulg river is usually quite water scarce and small. The riverbed is widely used as a recreational area by the inhabitants of the valley, especially by the inhabitants of Steffisburg, the largest and furthest downstream settlement of the valley. Often, the weather can be good in Steffisburg where people are bathing while heavy thunderstorms build up in the head watershed (Eriz) of the valley. Heavy thunderstorms and thereby heavy precipitation in a short amount of time lead to a rapid increase of the water levels in the Zulg catchment (from 1-2m³/s to almost 200m³/s in 4min). People becoming less and less aware of how the weather and nature is behaving around us, the thunderstorms in Eriz (upstream) are left unnoticed by people in Steffisburg (downstream), hence people in the riverbed would not manage to leave the area in time when the flashflood is arriving unless warned by the emergency team. Meaning: many citizens are</p>	

not aware of the risk and are not paying attention to the changes in their surroundings, thus they do not adopt protective behaviors.

On a more general level, stakeholders are aware of and noticed changes due to the changing climate. Zulg valley being an agricultural area, changes in focus are especially the ones concerning agriculture. Citizens notice a seasonal shift, more weather extremes and are aware that adaptation measures are needed in order to be able to continue land use in an efficient and sustainable way. There are longer dry periods but also more heavy rain, less consistent snow cover and an earlier start of spring. All these weather and temperature related changes lead to the common agricultural practices not working as well as they did earlier.

3. What are our opportunities?

Despite realizing and being aware of the increase in extremes and weather related hazards and despite acknowledging that we need to adapt to a changing climate and mitigate risks, the local citizens are struggling to come up with opportunities and solutions on how to solve their emerging issues.

4. How to build our safe haven together?

We asked target groups (emergency and natural hazard management team members) and local citizens in which areas they would appreciate our help and how they think scientific projects can contribute to improving local conditions and possibilities. The stakeholders saw gaps where a scientific project could contribute concerning two instances. Firstly, on the technical side through a provision of better data and through sharing data. Secondly, citizens suggested that projects and actions from the scientific side should focus on strategies to raise awareness and specific actions to mitigate risks and adapt to climate change. One noted point in this respect was to find educational strategies to engage and motivate people belonging to all social groups in an interactive way and change preexisting beliefs and a tendency to minimize or neglect risk.

5. What are our next steps to build The Hut for Me and You?

- prepare and implement the serious games (in cooperation with T3.5 leader)
- prepare and implement a decision-making and warning communication analysis (in cooperation with T2.2 leader)
- improve monitoring system

6. Have we reached our safe haven yet? The Hut and beyond.

Not yet, but we are working on it.

Media gallery:

Milestone diary:

June 2023: Installation of new meteostation in the Zulg river catchment

August 2023: discussions with responsible stakeholders in the Zulg valley on synergies and data sharing of their newly installed runoff station in the headwaters of the Zulg watershed and the meteostation installed through the HuT

August 2023: Focus group discussion with members of the crisis management team in Steffisburg headwaters of the watershed

September 2023: Interviews with local citizens (farmers, members of fire brigade and local council) and with the regional natural hazards' unit.



6. Synthesis

The information provided by each demonstrator in the "The Hut for Me and You" template reflects that all demonstrators have found their necessary infrastructure for interaction with their specific target group at this level. This infrastructure enables them to pursue their regional objectives within the framework of The HuT. None of the demonstrators came up with a concrete narrative yet, but some of them are already on the home straight. We assume that the dynamics of interacting with the given community of each demonstrator will create the relevant narrative in the future.

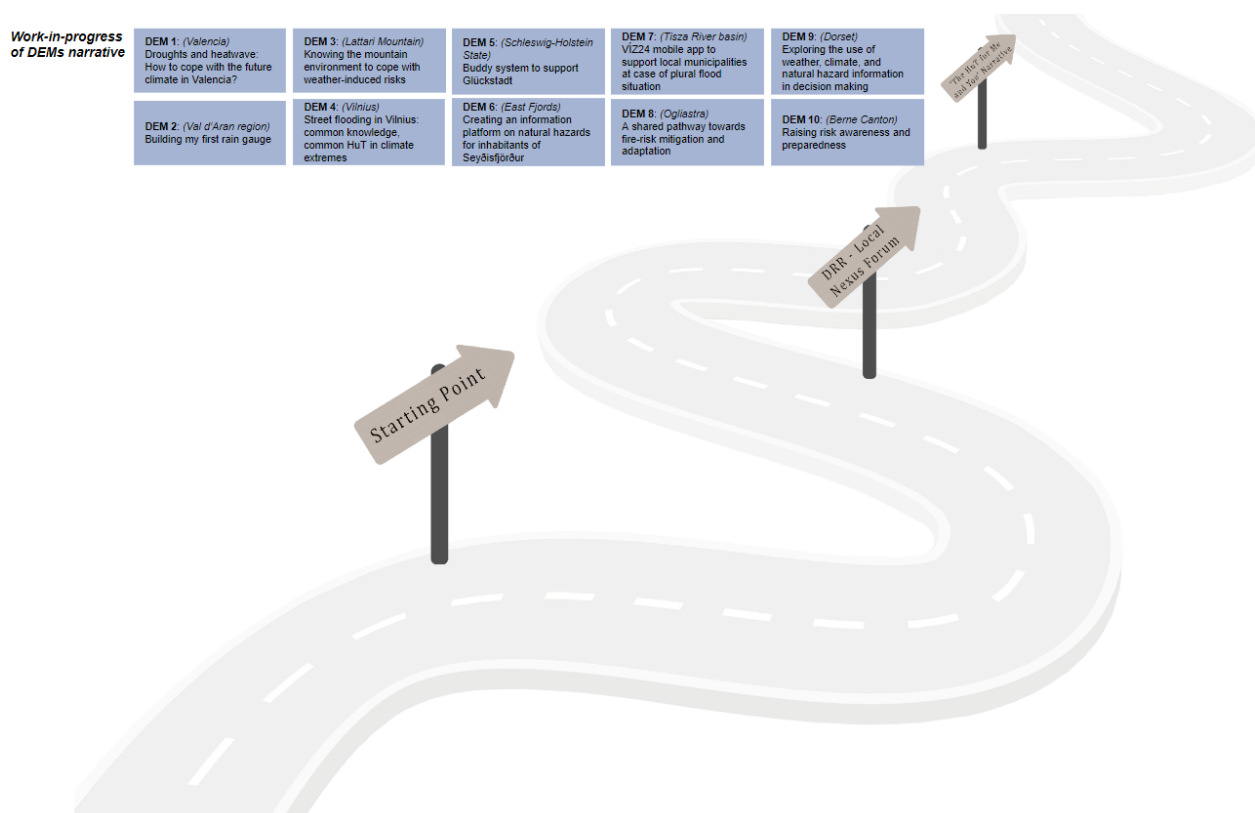


Figure 1: Approach to the relevant DEM narratives via the roadmap method

7. Spotlight at the 2nd General Assembly

As the organiser of the 2nd General Assembly, DEM 1 has included art as a collaborative actor in its programme. To this end, DEM 1 of the Universitat Politècnica de València engaged a colleague and professor from the UPV Industrial Design and Product Development Department. Under the guidance of WP1 (drawing on the expertise of GERICs' Climate Service and Art), The HuT was introduced to the professor and her students, focusing on DEM 1's research field. Additionally, the local Valencian artist Salva Máscarell was involved. Various proposals were made by the students, of which the jury selected two. In the end, three projects were created, including two art videos by the students and an installation by the artist. The latter, entitled "Welcome to Valencia 2050", was inaugurated during the General Assembly at the Valencia Botanical Gardens and will be on display there until 7 January 2024, with the aim of making as many people as possible aware of the region's climatic conditions and at the same time informing about The HuT.



Figure 2: Salva Máscarell with his art installation "Welcome to Valencia 2050" (photos by Ilan Kelman)

Artistic interventions can play a crucial role in strengthening communities. In doing so, a sense of belonging and, as a result, responsibility is triggered.

The art installation "Welcome to Valencia 2050" makes the invisible visible by means of a greenhouse symbolising the main issue of DEM1, i.e. water scarcity and drought. Entering the greenhouse, the compressed heat becomes tangible, the dryness visible through the cloudy leaves and its inherent drying process through the canvas.

A process of identification with the issue takes place in the heart of the greenhouse, which subsequently calls for responsibility and action.

The process outlined here is consistent with the long-term goal of a narrative. Local narratives connect people of the same region and inspire their responsibility for it.

That is why we are trying to integrate art as a catalyst for narrative development at demonstrator level.



8. The way forward: next steps

We will continue to use the infrastructure developed and outlined within D.1.4 and D.1.5, especially the The Hut for Me and You template, to guide the demonstrators in their steps to achieve a safe haven and address the risks in their arenas. We will further encourage demonstrators to develop their specific narrative, to develop stories together with local community groups and to use storytelling to bring people together to share knowledge about coping with extreme climate events and improving their resilience.

Our task remains to report the progress at demonstrator's level, including stakeholder mapping, resources, data, services, and products in order to develop new innovation for fast-track implementation in this project. Furthermore, we will focus on the customised (e.g. local languages) teaching materials and serious games developed in T2.4 and T3.2 for local capacity building, i.e. for the training of trainers.

The final update on the demonstrator's progress in developing their narrative will be in month 38.



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