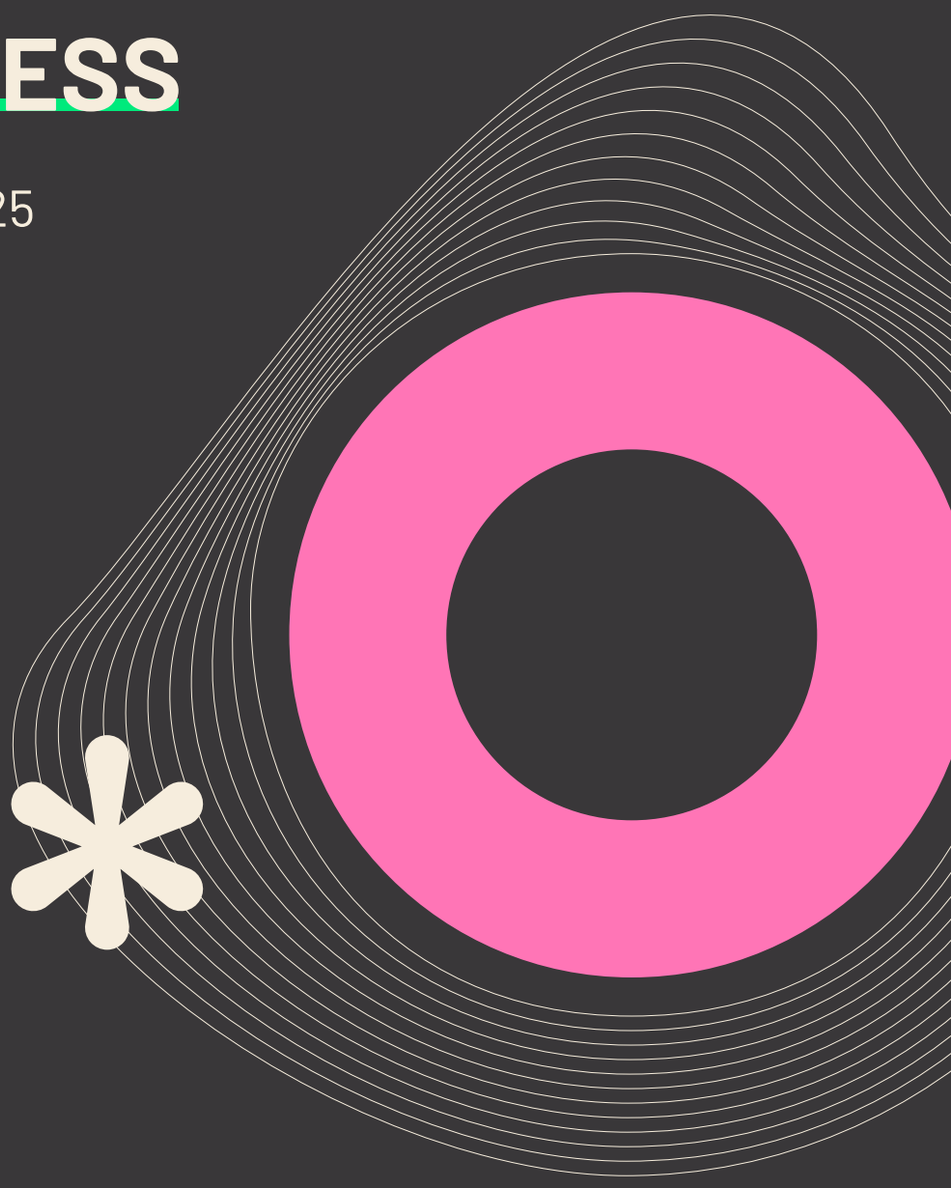
RESILIAGE
Revolutionising
community resilience

THE IMPACT OF VISUAL MESSAGING FOR DISASTER PREPAREDNESS

8th Edition - 15th July 2025



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INTRODUCTION

RESILIAGE is a three-year European research project (2023-2026) focused on enhancing community resilience through the integration of cultural and natural heritage in Disaster Risk Reduction (DRR). Funded by Horizon Europe, it explores how heritage, as a significant resource of local communities, can strengthen societal resilience in the face of natural hazards and extreme events. By conducting field research and engaging communities in multi-hazard scenarios, RESILIAGE aims to co-generate actionable knowledge, empowering communities to better prepare for and mitigate disaster risks, while also addressing the effects of climate change.

The project is led by Politecnico di Torino and involves 18 partners from 10 countries, including first responders, policymakers, citizen associations, and heritage organisations. Through its **five CORE Labs** established in different countries, RESILIAGE uses a **S**ystemic **R**esilience **I**nnovation (**SyRI**) framework to analyse governance, social interaction, and other critical factors. This framework identifies and improves practices that strengthen community resilience, using cultural heritage in disaster risk management and climate change adaptation. In addition, each CORE Lab specialises in a specific governance scale, including city district, municipality, municipality network, regional, and cross-regional.

By engaging stakeholders in collaborative and participatory processes, the project seeks to **create digital tools** and **soft solutions** that strengthen community preparedness and promote long-term strategies for disaster resilience.

CONTENT

Booklet #8 The Impact of Visual Messaging for Disaster Preparedness continues the exploration of **human factors in natural disaster risk management**, following up on the themes of **Booklet #7**.

The previous edition focused on the **timing of crises** (before and after an event) and how **poster-based communication** can influence public behaviour. This new booklet takes it further by examining how **video campaigns** can improve people's **preparedness for natural disasters**.

Why does this matter?

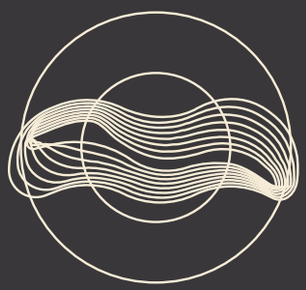
How people **perceive risk** plays a crucial role in how they respond during a disaster. Many individuals **lack clear knowledge** of what to do, and their actions may not always be safe or effective. Risk perception is influenced by **mental shortcuts (heuristics)**, which can lead to **cognitive biases**. As Jensen and Ong (2020) point out, understanding these perceptions helps improve emergency planning and motivates citizens to act before it's too late.

What did we do?

To assess the **impact of visual messaging**, RESILIAGE used the **RAISE tool** to carry out a **longitudinal online survey** across several CORE Labs in Europe. The survey took place in three stages:

1. **Initial questionnaire** – assessed preparedness levels, behaviours, knowledge, and influencing factors (e.g. emotions, perceived control, awareness of heritage vulnerability).
2. **Video campaign** – participants watched a **short video** about how to act during a flood.
3. **Follow-up questionnaires** – one immediately after the video, and another **four weeks later**, to measure changes over time.

Find out how **video campaigns** to raise awareness of the **risk of natural disasters** across Europe have had an impact on **disaster preparedness**. This knowledge is helping to shape more **resilient communities** and more **people-centred responses** to crises.



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Famenne - Ardenne
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FAMENNE-ARDENNE CORE LAB

FLOOD WARNINGS IN VR: WHEN VIDEOS AND SOCIAL CUES DRIVE SAFER CHOICES

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Virtual reality experiment: reactions to flooding

Flood simulation

A **flood scenario** was developed to immerse participants in a controlled and realistic virtual environment. Various **staged events** occurred at specific time intervals (see table) to observe changes in **stress levels** and **behavioural reactions** as the flooding escalated.

The **virtual setting** was a street where the participant began the simulation **sitting on the terrace of a fast-food restaurant**. As the flood progressed, participants had to choose one of three actions:

- **Stay in the street** (a dangerous choice),
- **Enter the fast-food restaurant** (also dangerous, as there was no upper floor),
- **Climb the external fire escape** (a safe option, providing access to higher ground).

To study the effect of **social influence**, participants were divided into three groups:

1. **Alone** in the environment.
2. **With virtual agents evacuating in different directions** (towards the fast-food restaurant or stairs).
3. **With virtual agents all evacuating in the same direction** (towards the stairs).

The first two conditions present a **high degree of ambiguity** and uncertainty, since in the first there is no social cue to guide the participant towards the right decision, and in the second the social cues are contradictory since the participants evacuate in different directions.

Flood simulation	
Time	**Event**
T0	Start of the simulation
T0 + 20sec	Waters stagnate on the ground
T0 + 50sec	Water level rises
T0 + 90sec	Alert notification
T0 + 110sec	Water above the knees
T0 + 115sec	Virtual agents evacuate

Representation of the VR experiment

People's reactions to natural disasters

Only **six inhabitants of the Famenne-Ardenne Geopark** took part in the study—already pointing to the need to **promote disaster adaptation research** and the use of **innovative tools like VR**.

Despite the small sample, some **noteworthy trends** emerged:

- **Three out of six participants evacuated only after receiving an alert notification**, highlighting the **critical role of timely emergency communication** in prompting action.
- **Ambiguous conditions**—being alone or surrounded by conflicting behaviours—tended to result in **delayed evacuations** and **unsafe decisions**, such as staying in the street or entering the fast-food restaurant.

This underlines the importance of **coherence between physical cues (e.g. visible escape options), communication cues (alerts), and social cues (others' behaviour)** in encouraging **faster and safer responses**.

To promote **social influence as a resilience factor**, the study recommends **training designated crisis referents**—people who can **guide others during emergencies**, either **through direct instruction** or **by example.**

Finally, it is striking that **half of the participants chose an unsafe evacuation route** and yet **felt relatively safe there**. This suggests an urgent need for **better education on flash flood risks**, especially to counteract the tendency to underestimate danger during fast-evolving crises.

Longitudinal online survey: communicating preparedness for natural disasters

Risk preparedness and past experiences

A striking **89% of participants identified flooding** as the most recent major natural disaster in this CORE Lab. Most had **thought about this event within the past six months**, with many recalling it as recently as one month ago—indicating **strong emotional memory** of the event.

The **number of disasters experienced**—whether recent or distant—appears to strongly influence **risk perception** and **self-perceived response capacity**. The more disasters someone has faced, the more they:

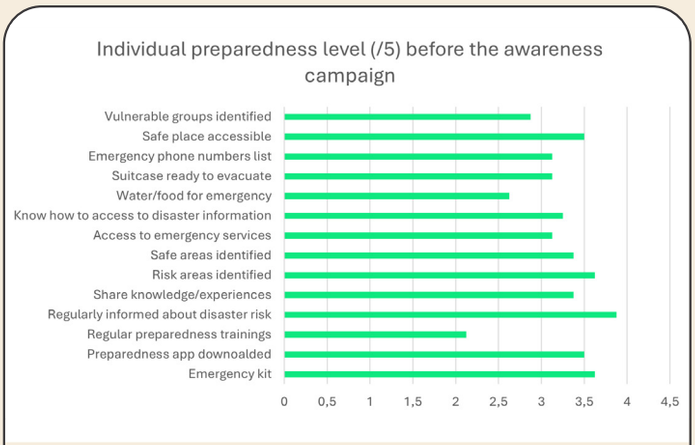
- **Perceive the risk as serious**, particularly through feelings of **fear** and **collective vulnerability**.
- Express a **stronger sense of personal control** over risk.

However, **more experience does not always translate into better preparedness**—a critical gap for risk communication strategies.

Risk preparedness, communication and affects

It may be helpful to **communicate broadly about disaster risk**, not just preparedness. The more familiar participants are with natural disaster risks, the more **in control** they feel.

Participants who felt **uninformed** about disaster risks also reported **low positive emotions**, pointing to a form of **intolerance of uncertainty** (Ladouceur et al., 2000). In this context,



Self-reported disaster preparedness levels across key indicators

informational campaigns could improve mental well-being.

However, caution is needed:

- The **more participants feared natural disasters**, the **more negative emotions** they felt.
- Higher fear was **linked to lower preparedness**, possibly due to **defensive processing**—a psychological mechanism that leads people to avoid distressing information (Blondé & Girandola, 2016).

Thus, while fear can raise awareness, **relying on fear-based messaging may backfire**. Instead, communication should:

- Encourage both **individual and collective action.**
- Reinforce the **feeling of control**, especially **personal control**, which is associated with **positive emotions** and **higher preparedness**.

Risk preparedness and cultural natural heritage

Perceiving natural disasters as a **collective threat** is another important driver of preparedness. One way to reinforce this perception is by showing how **cultural and natural heritage (CNH)**—symbols of community identity—are also at risk.

However, the survey revealed **no clear link** between viewing CNH as vulnerable and participants' preparedness levels. This may be due to:

- The **type of heritage seen as most vulnerable: natural sites**, which are **non-anthropogenic**.
- These sites may not be perceived as part of a **shared community identity**, unlike historical buildings or cultural landmarks.

It may therefore be beneficial to:

- Emphasise the vulnerability of **man-made heritage.**
- Reframe **natural sites** as key elements of **community identity**, to strengthen CNH's role in disaster preparedness.

Risk preparedness and risk awareness campaign videos

The **video campaign** had **no measurable effect on emotional states or risk perception.**

However, it showed a **negative trend in preparedness:**

- Both **knowledge-based** (e.g. awareness of risk zones or emergency numbers) and **behaviour-based** actions (e.g. downloading alerts, preparing kits) **tended to decrease** post-viewing.
- This suggests the **motivational impact of the video was weak**, highlighting the importance of **more engaging formats**, such as **training sessions (e.g. WP4).**

Still, some **positive effects** emerged:

- Participants who **initially felt uninformed** reported a **reduction in this feeling** over time, even weeks after watching the video.
- These participants also said the video **sparked their curiosity**, encouraging **information-seeking**, a key **active coping strategy.**
- Those who rated the video as **useful** showed **improved knowledge** of risk preparedness topics (emergency contacts, local threats, etc.)—but again, **no change in protective behaviours.**

Interestingly, participants who viewed disasters as a **collective threat** found the video **less useful**, possibly because it **focused on individual action.** This reveals the need to:

- **Balance individual and collective approaches** in campaigns.
- Reinforce **perceived behavioural control**, so individuals believe their actions matter—even when facing systemic threats.

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PREPARED BY EXPERIENCE: EARTHQUAKE VIDEOS AND THE POWER OF CONTROL

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Longitudinal online survey: communicating preparedness for natural disasters

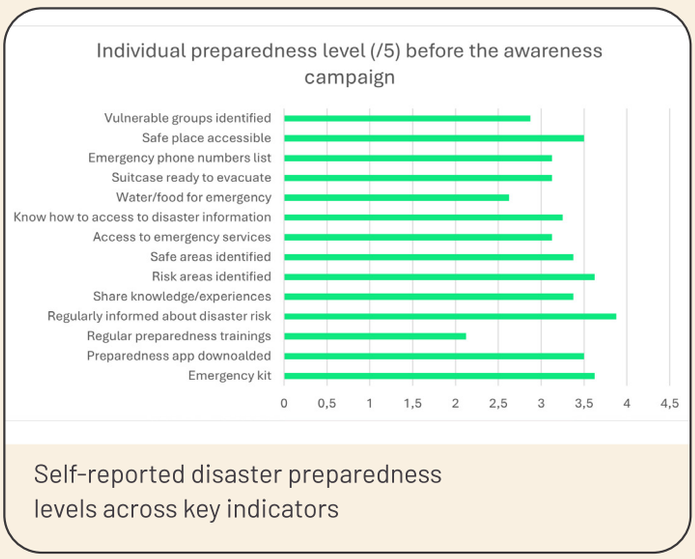
Risk preparedness and past experiences

A **majority of participants (40%) cited earthquakes** as the most recent major disaster in this CORE Lab. Other disasters included **floods (27%), heatwaves (11.5%), wildfires (11.5%)**, and **landslides (10%)**. These responses show Crete's **exposure to multiple natural hazards** and a **strong awareness of these risks** among residents.

Notably, the **main risk studied in RESILIAGE—earthquakes—was the most frequently recalled**, confirming its relevance to the local context. Most participants had thought about this event **within the last six months**, many **within one month**, indicating a **vivid memory** of the experience.

Importantly, participants who had experienced natural disasters:

- Showed **greater awareness** of the risk,
- Reported **higher perceived control** in emergencies, and
- Were **better prepared in terms of knowledge** (e.g. emergency numbers, risk zones, safe areas).



Self-reported disaster preparedness levels across key indicators

However, **this experience didn't necessarily lead to better behaviours**, such as preparing a kit or downloading an alert app. This suggests that people with **limited or no experience** remain **more vulnerable** and should be **specifically targeted by awareness campaigns.**

Risk preparedness, communication and affects

Unlike other CORE Labs, **participants in Crete did not show signs of "intolerance of uncertainty"**—they did not report negative emotions linked to a lack of knowledge.

This may be due to their **already high perception of disaster risk.** Even so, the data shows that:

- The **more people felt informed**, the **more they felt in control,**
- A sense of **control boosted positive emotions**, and
- **Greater knowledge** was linked to **better preparedness.**

This suggests that communication should focus not only on preparedness actions but also on helping citizens **understand risks**, thereby reinforcing a **sense of empowerment.**

While **fear appeals should be used cautiously**, fear was **not associated with negative emotional impact** in this group. This indicates that **risk communication may have more** flexibility in Crete without harming psychological well-being.

Risk preparedness and cultural natural heritage

A **notable finding** in Crete was the **strong correlation between feeling in control and viewing CNH (Cultural and Natural Heritage) as a driver of resilience**—for example, participants agreed that **maintaining local traditions and heritage motivates them to prepare for disasters.**

This highlights the **unique role of CNH** in this region. Moreover:

- When **traditions** were seen as vulnerable to disasters, participants reported **increased fear**, a pattern **not observed with other heritage types.**
- Therefore, it may be effective to **focus preparedness efforts on protecting vulnerable traditions**, as this could enhance both **emotional engagement** and **readiness to act.**

Risk preparedness and risk awareness campaign videos

Interestingly, **watching earthquake awareness videos led to a perceived decrease in knowledge**, which may seem counterintuitive. However, this likely **triggered curiosity and information-seeking behaviour,** a **key step in preparedness.**

Despite being judged as **easy to understand**, the video prompted participants to feel they **needed to learn more—a desired effect** for this type of campaign. The increased perception of risk-related knowledge gaps persisted even **four weeks later**, indicating a **lasting cognitive impact.**

Additional insights:

- Those with a **higher sense of control** were also **more curious** after viewing the video.
- The campaign seemed to **increase preparedness knowledge**, though **not behaviour** (e.g. no uptick in kit preparation or app downloads).
- This suggests the **video format may be effective in Crete**, but needs to be **part of a broader strategy** for sustained behavioural change.

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WILDFIRES ON SCREEN: FROM FEAR TO ACTION THROUGH AWARENESS VIDEOS

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Longitudinal online survey: communicating preparedness for natural disasters

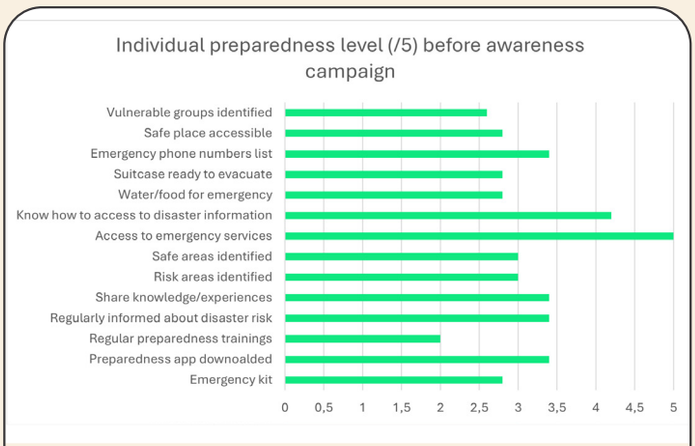
Risk preparedness and past experiences

All participants in this CORE Lab **identified wildfires** as the **most recent major natural disaster.** Most said they had thought about this event **within the last 6 months**, or even **within the past month**, showing how **vividly the event is remembered.**

The survey also found that the **number of disasters experienced**, whether recent or in the past—strongly affects how people:

- **Perceive risk**, particularly through **fear** and a **sense of collective vulnerability**,
- And how much **personal control** they feel they have in managing risk.

However, even with greater experience, this **does not always translate into improved preparedness behaviours**, a key gap for targeted risk communication.



Self-reported disaster preparedness levels across key indicators

Risk preparedness, communication and affects

It may be helpful to **communicate more broadly about disaster risk**, not just preparedness strategies. The findings show that:

- **Familiarity with risk** improves the **perceived sense of control.**
- A **lack of knowledge** is linked to **low positive emotional states**, which may reflect **intolerance of uncertainty** (Ladouceur et al., 2000).
- In this context, **risk communication may improve mental well-being** by reducing uncertainty.

Unlike some other CORE Labs, Naturtejo showed that:

- A **higher level of fear** was linked to both **greater risk perception** and **higher preparedness.** This suggests that, in this case, **fear-based messaging could be effective**, especially if it highlights the **growing threat of natural disasters** like wildfires.

However, **fear should still be used carefully**, as excessive fear may cause avoidance or denial in some populations (Blondé & Girandola, 2016).

The study reinforces the need for communication that:

- **Promotes both individual and collective action**, and
- Enhances the **feeling of control**, especially **personal control**, which is associated with **positive emotions** and **higher preparedness.**

Risk preparedness and cultural natural heritage

One important factor in preparedness is whether people see disasters as a **collective threat**, something that affects the whole community.

However, in Naturtejo, the survey found **no clear link** between concern for **CNH** and levels of preparedness or risk perception.

This may be because the **most vulnerable heritage type cited was natural sites**, which are **non-anthropogenic**. Participants may not associate these sites with **collective identity** in the same way they might with cultural buildings or traditions.

It could be helpful to:

- Raise awareness of the **vulnerability of man-made heritage**, or
- Emphasise how **natural sites contribute to community identity.**

Framing CNH as part of a **shared vulnerability** could help drive **community-level preparedness.**

Risk preparedness and risk awareness campaign videos

Due to **low response** (only one participant completed the post-video survey), no conclusions can be drawn specifically for Naturtejo. However, joint analysis with **Famenne-Ardenne** and **Trondheim** reveals some common trends:

- The **video campaign had no noticeable effect** on positive or negative emotions or on risk perception.
- However, there was a **decline in preparedness** after viewing, both in terms of **knowledge** (e.g. knowing risk areas, emergency contacts) and **Behaviour** (e.g. preparing kits, downloading alert apps).

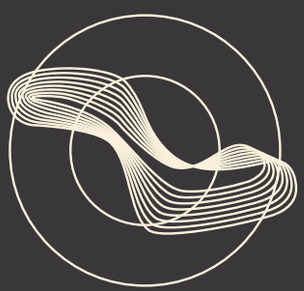
This suggests that while the videos conveyed information, their **motivational impact was limited**, underscoring the value of **more engaging tools**, such as **WP4 training sessions.**

That said, there were **positive outcomes:**

- Participants who **felt uninformed before** saw this perception improve after the video—and even **weeks later.**
- This points to a **stimulated curiosity and active information-seeking**, which is a **critical component of risk preparedness.**
- However, those who saw disaster as a **collective threat** rated the video as **less useful**, possibly because it focused on **individual actions.**

This highlights the need to:

- **Balance individual and collective perspectives** in communication,
- Reinforce **perceived behavioural control**, so individuals believe **their actions matter**—even in collective crisis contexts.



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EVACUATING VIRTUALLY: HOW VIDEO AND VR SIMULATIONS INFLUENCE BEHAVIOUR

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Virtual reality experiment: reactions to wildfire simulation

A **wildfire scenario** was designed to immerse participants in a **controlled virtual environment** and assess how they respond under stress. The aim was to observe **behavioural choices and stress levels** as the simulated fire progressed through a sequence of timed events (see table).

The setting was a **wooded natural park** with a **hiking trail**. Each participant began the simulation **seated on a bench** (see image). As the fire emerged, they were confronted with **three possible evacuation choices:**

- **Stay in the danger zone** (a dangerous decision),
- **Follow the path toward the parking lot** (also dangerous, as it leads **toward the fire**),
- **Take the left-hand path, away from the parking lot** (the **safe decision**, as it leads **away from the fire**).

To analyse the role of **social influence**, participants were placed in one of three conditions:

1. **Alone** in the virtual environment.
2. With **virtual agents evacuating in different directions**, creating conflicting social cues.
3. With **virtual agents evacuating in the same direction** (away from the parking lot), offering a **clear and consistent cue.**

The first two setups introduced a **high degree of ambiguity and uncertainty:**

- In the **first**, the lack of social cues may cause hesitation or unsafe choices.
- In the **second**, the presence of contradictory cues may confuse the participant and delay appropriate action.

This simulation was used to better understand how **environmental cues**, **social behaviour**, and **perceived risk** interact in **real-time decision-making** during a wildfire emergency.

Wildlife simulation	
Time	**Event**
T0	Simulation starts
T0 + 20sec	Smoke appears
T0 + 40sec	Fire is visible and ambient sound (birds) stops
T0 + 50sec	Virtual individuals stop to watch at the fire
T0 + 80sec	Fire gets bigger
T0 + 110sec	Alert notification

Representation of the VR experiment

People's reactions to natural disasters

Participants from the **Trondheim Red Cross CORE Lab (**TRC) were generally **highly alert to the initial environmental signs of danger**, such as smoke or fire cues—an encouraging sign of their ability to recognise emerging threats.

However, the **choices made during evacuation varied significantly**, depending on the **presence and behaviour of virtual agents:**

- Participants who were **alone** often made **less safe decisions**, such as moving **toward the fire.**
- Those surrounded by **virtual individuals evacuating in the correct direction** were **more likely to follow the safe path.**

This indicates that **social cues strongly influenced decision-making**, often **more than environmental cues.** Interestingly, although the conditions created **varying levels of ambiguity**, they did **not significantly affect stress levels**—which remained **consistent across all groups.**

These results highlight the value of:

- **Training crisis referents**—individuals able to **guide others toward safe behaviour** in emergencies through **clear, visible leadership.**
- Preventing **altruistic behaviour that may lead to self-endangerment.** Some participants followed others out of a desire to help, despite the risk. The presence of many **first responders and volunteers** in the sample may explain this tendency—but **such instincts must be managed carefully** in urgent situations.

The simulation also revealed that:

- **Most participants who were alone chose unsafe evacuation routes**, reinforcing the need to **clearly communicate correct behaviour** during disasters.
- Alarmingly, **only two participants said they would notify emergency services**, underscoring the need to **raise awareness of the importance of alerting authorities.**
- **Alert notifications** significantly influenced decisions, proving the value of **early warning systems** that can **prompt immediate, informed action.**

Additionally:

- **Physiological stress data** showed **no significant difference in stress levels** between experimental conditions. This challenges the **common assumption** that people panic in ambiguous disaster situations (Fahy & Proulx, 2009).
- **Gender had no effect** on evacuation decisions or stress levels—**men and women responded similarly** across scenarios.

Longitudinal online survey: communicating preparedness for natural disasters

Risk preparedness and past experiences

In Trondheim, **42% of participants identified landslides** as the most recent major natural disaster. Others cited **flooding (25%), heatwaves (8%)**, and **other hazards** like hurricanes and urban fires (25%). Around **half of the respondents** reported thinking about this event **within the last six months**, suggesting it left a **strong emotional impression.**

Interestingly, **42% had never experienced a natural disaster**—unlike in other CORE Labs. Here, the data shows that:

- The **number of past experiences** is **not** a key factor in how people **perceive risk** and their **confidence to respond.**
- Those with more experience were not necessarily more aware or better prepared—suggesting that **other factors may shape perception and readiness** in this CORE Lab.

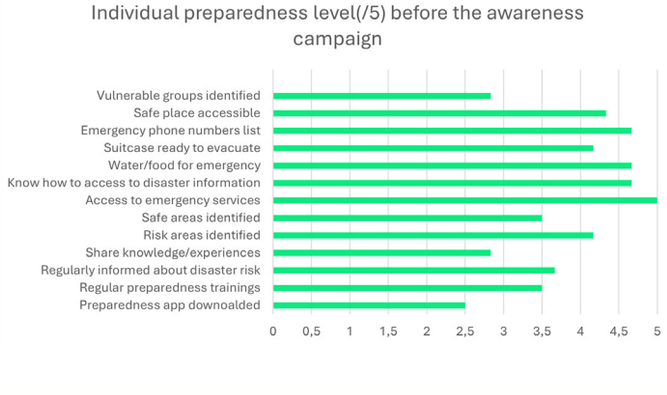
Risk preparedness, communication and affects

Communication efforts should not only focus on preparedness actions but also on **increasing general familiarity with disaster risks.** This is because:

- The more familiar people are with natural hazards, the **greater their perceived control.**
- A **lack of knowledge** is associated with **low positive emotions**, indicating a possible **intolerance of uncertainty** (Ladouceur et al., 2000).

Regarding the use **of fear in communication:**

- Research (Blondé & Girandola, 2016) shows that fear can lead to **defensive avoidance**, where people ignore or deny the threat.



Self-reported disaster preparedness levels across key indicators

- In Trondheim, however, **fear was not linked to higher preparedness**, nor did it lead to a strong negative emotional impact.
- This suggests that **fear-based messaging may not be harmful here,** but it is also **not effective in motivating preparation.**

As in other CORE Labs, reinforcing the **feeling of control**—especially **personal control**—remains a **key factor**. It is strongly associated with both **positive emotions** and **higher preparedness** levels.

Risk preparedness and cultural natural heritage

In Trondheim, participants who perceived **cultural natural heritage (CNH) as vulnerable** were also more likely to report **protective behaviours.** This suggests that CNH can play a **motivating role in preparedness**—even if the underlying psychological mechanisms aren't yet fully understood.

This highlights CNH's potential as a **driver of community resilience,** deserving greater visibility in local disaster risk management efforts.

Risk preparedness and risk awareness campaign videos

While the **video campaign** had **no measurable effect on emotions or overall risk perception**, some trends were observed:

- There was a **decline in preparedness** after watching the video—both in **knowledge** (risk areas, info sources) and **behaviours** (e.g. preparing emergency kits, downloading alert apps).
- This suggests a **lack of motivational strength** in the videos, reinforcing the need for **more engaging tools** (e.g. WP4 training).

However, there were **positive effects on information-seeking:**

- Participants who **previously felt uninformed** about natural disaster risks reported **feeling more informed** after the video—and even several weeks later.
- These participants also said the video **aroused their curiosity**, encouraging **active engagement**, which is a valuable **coping strategy** in preparedness.

Additional findings:

- Those who found the video **useful** gained **better factual knowledge** (e.g. emergency numbers, hazard areas)—but **this did not lead to behavioural change.**
- Participants who perceived risk as a **collective threat** were the ones who found the video **least useful**, likely because the content focused on **individual actions.**

This points to the need to:

- **Balance individual and collective preparedness messaging**, and
- Reinforce **perceived behavioural control**, so people feel that their actions—however small—**do make a difference.**

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TURKEY

KARSIYAKA CORE LAB

HEATWAVES IGNORED: BRIDGING THE GAP BETWEEN RISK PERCEPTION AND VIDEO IMPACT

Core Lab
Karsiyaka
TURKEY

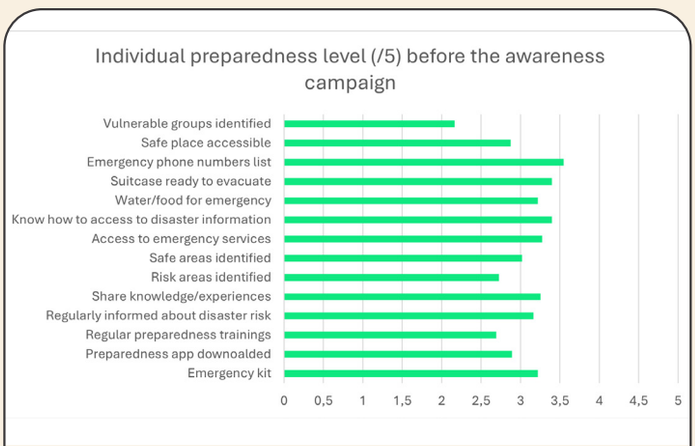
Longitudinal online survey: communicating preparedness for natural disasters

Risk preparedness and past experiences

Nearly **91% of participants cited earthquakes** as the most recent major natural disaster they experienced. Only small percentages cited **floods (3.5%), forest fires (3.5%)**, and **landslides (2%)**. **No one mentioned heatwaves**—even though they are a **key focus of the RESILIAGE project** and a **major local hazard.**

This highlights a **critical awareness gap**: while earthquakes dominate memory and attention, **heatwaves remain underestimated**, even though they pose serious risks in the region.

In fact, most participants said they had thought about their last disaster **within the last six months**, and many **within just one week**—suggesting that disaster risk is **frequently on people's minds**, which may contribute to **stress, anxiety**, and even **psychological strain.**



Self-reported disaster preparedness levels across key indicators

Additionally:

- The **more natural disasters someone had experienced**, the more likely they were to **see future risk increasing.**
- However, this **did not lead to stronger preparedness** or a higher sense of control—highlighting a **disconnect between awareness and action.**

Risk preparedness, communication and affects

While **risk perception** is essential, it must be addressed carefully. In Karsiyaka:

- Participants with **higher risk perception**—particularly those who feared future disasters—also reported **more negative emotional responses.**
- This suggests that **fear-based communication may have adverse psychological effects** and could be **counterproductive** in encouraging preparedness (Blondé & Girandola, 2016).

Instead, communication should:

- **Build familiarity** with disaster risks to enhance **perceived control.**
- Promote both **individual and collective actions** people can take, reinforcing their **ability to make a difference**.

Notably:

- A **higher sense of knowledge** about disaster risk is associated with **greater preparedness.**
- The **feeling of personal control** is also linked to **fewer negative emotions** and **better readiness.**

Therefore, communication should:

- **Raise awareness about heatwaves** specifically—**without fear appeals.**
- And focus on **empowering citizens** through clear, practical actions they can take.

Risk preparedness and cultural natural heritage

A **unique finding** in this CORE Lab was the **positive correlation between a sense of personal control and viewing cultural natural heritage (CNH) as a source of resilience**—for example, statements like:

"Maintaining cultural traditions or heritage events motivates me to prepare for disasters."

However, there are **mixed effects:**

- When **built heritage** (e.g. religious, historical buildings) was seen as vulnerable, participants felt **less control.**
- When **natural heritage** was perceived as threatened, participants reported **lower levels of preparedness.**

This suggests that while CNH can **motivate adaptation**, emphasising its **vulnerability alone may undermine resilience** by making people feel **helpless**.

Hence, communication around CNH should **highlight its role in resilience and adaptation**, rather than framing it only as a risk.

Risk preparedness and risk awareness campaign videos

Participants who watched the **heatwave awareness videos** reported a **decline in perceived knowledge** about disaster risk. While this may seem negative, it likely reflects:

- A **realisation of knowledge gaps**, prompting people to **seek more information**—a critical **preparedness behaviour.**

Additional findings:

- The video was considered **clear and easy to understand**, so the drop in perceived knowledge likely reflects **growing awareness**, not confusion.
- However, the video had **no impact on actual preparedness behaviours** (e.g. making a kit, using an app).

Interestingly:

- **Participants with more disaster experience** rated the video as **more relevant**, affirming the **value of awareness campaigns** for experienced audiences.
- There was **no correlation** between participants' initial risk perception or control levels and how useful they found the video—suggesting that **this format can engage a wide audience.**

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