Swedish Civil Contingencies Agency

Report

Understanding, Reaching and Engaging Vulnerable Groups

Insights from the preparEU Pilot Workshop on Risk Communication and Preparedness

Workshop: Vulnerable Groups and Preparedness – Reaching Out and Engage
Stockholm, Sweden 19–20 March, 2024

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Introduction

Over the last three decades, the number of disasters affecting the world has increased rapidly. Between 1980–1999, a total of 4212 disasters were reported globally, with an estimated 3.25 billion people being affected. In the following period, between 2000–2019, that number increased to 7348 disasters – and over 4 billion affected people. During this time, the economic losses resulting from disasters have almost doubled, from 1.63 trillion to 2.97 trillion US dollars.

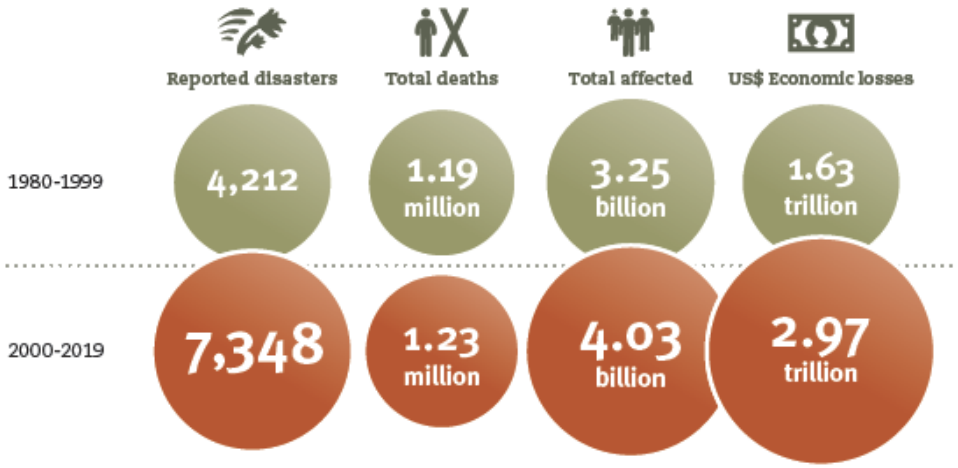

Figure 1. Between 2000 and 2019, both the frequency of disasters and their human toll rose compared to the period from 1980 to 1999, affecting billions and nearly doubling economic losses. Source: Gubic, M. (2024). *Engaging Stakeholders and Groups at Risk in the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030*, The preparEU Pilot workshop, Stockholm, Sweden.

As the world faces increasingly frequent and complex disasters, the importance of risk prevention and preparedness becomes ever greater, both on the individual and societal level, and both locally, nationally and globally. One important aspect of preparedness is *risk communication*, and making sure that all people – regardless of socioeconomic status, abilities, gender, race, or sexual orientation – have access to timely and accurate risk information to make informed decisions and take appropriate actions to prepare for different crises.

But how can we communicate about risk in a way that ensures that all people, including 'vulnerable groups' and individuals, are included and empowered in the face of crises? *Who* should be considered vulnerable in the first place? And *what* do we actually mean when we talk about risk, vulnerability and resilience? Is

vulnerability a static characteristic, where a person or entity either is, or is not, vulnerable, or rather a dynamic and context dependent phenomenon? What have we learned from previous disasters and crises, and are there ways of analysing vulnerability and risk, and common strategies and approaches for communicating about risk, that can strengthen our collective disaster preparedness and resilience, both as individuals, communities and societies?

The preparEU Pilot Project

The Disaster Resilience Goals (DRG), adopted by the European Commission and its member states, aim to boost disaster resilience in civil protection, in order to better prepare European countries for natural hazards, including earthquakes, floods, and wildfires. Following the Swedish EU Presidency in 2023 emphasising a whole-of-society approach to resilience, Sweden, along with Norway, Belgium, and Spain, launched **preparEU Pilot Project** in February 2024.

Want to learn more?

You can read more about the The Disaster Resilience Goals (DRG) by following this link:

https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/european-disaster-risk-management/european-disaster-resilience-goals_en

The preparEU Pilot Project is supporting DRG goal number 2: Prepare, increasing risk awareness and preparedness of the population. More specifically, the project aims to explore different ways of implementing a European dimension on national risk communication activities. The partners will present conclusions and recommendations on how the Member/Partner States can cooperate with concreate actions on an EU-level, to increase risk awareness and preparedness of the population across the union.

One of the first deliveries of the project was to arrange a workshop focused on highlighting new and relevant research and good practices for reaching and engaging groups at risk in order to strengthen their resilience. The workshop was held on March 19–20, 2024 in Stockholm, and was subtitled 'Vulnerable Groups and Preparedness – Reaching Out and Engage'.

The workshop brought together researchers, practitioners, and representatives from various EU projects, national authorities, and civil society organisations. This report summarises key themes and insights shared during the workshop, encompassing both theoretical concepts such as risk and vulnerability, and practical perspectives for communication specialists and practitioners involved in risk information across EU member states. The report aims to serve two primary purposes: to consolidate insights from the workshop for future use within the

preparEU Pilot Project, and to provide valuable information for practitioners working in risk communication across the European Union.

How to Read the Report

The report itself is based entirely on the presentations from the workshop, with no external sources being used. It is divided into two main sections, with a concluding third section summarising key takeaways. The first section discusses central concepts such as risk and vulnerability, and outlines theoretical views and frameworks developed within various projects and initiatives. This section also looks at policy recommendations for inclusive risk and crisis communication, as well as for more inclusive disaster risk reduction, aimed at the local, national, EU, and global level.

The second section describes the experiences of first-responders and practitioners engaged in risk and disaster communication with vulnerable groups across Europe, highlighting common challenges and strategies. The third section distils essential insights for risk communicators and policymakers. On page 44, readers will find a further reading section, along with a list of names and contact information for all the speakers from preparEU Pilot Workshop.

1 From Theory to Policy – Understanding Risk and Vulnerability From the Ground Up

Defining the Terms

Before attempting to prevent, prepare for, reduce or mitigate crises and disasters, one needs first to define and understand a few central concepts. One such concept is *risk*. What do we mean when we talk about risk? What *is* a risk, and what does it mean to be, or to not be, at risk, in a particular situation?

In everyday use, risk is often understood as 'the likelihood that something bad will happen'. A slightly more specific definition is 'the potential for some unwanted event or outcome to happen', and an even more technical definition could be 'the combination of a specific scenario, the likelihood that it would happen and the negative consequences it could bring'. Within risk research, the latter is often referred to as the *risk triplet*.

> **The Risk Triplet**
>
> Within risk research, risk is often understood as the combination of a specific scenario, the likelihood that it would happen and the negative consequences it could bring.

Another concept that is central to discussions on disaster preparedness and reduction, but is often not defined in a precise way, is *vulnerability*. Most people agree that risk and vulnerability are somehow tied together, but how? Within risk research and risk management, the source of something negative is called a *hazard* and the existence of hazards can bring about *risks*. But for a risk to actually bring about negative consequences, someone or something needs to be *vulnerable* to the hazards, so that they might cause harm – otherwise there is no risk. Think of the human body; to function, it is dependent on water, food, oxygen etc, making humans vulnerable to certain hazards.

> **Vulnerability**
>
> Vulnerability can be understood as 'the characteristic of being exposed to the possibility of being harmed, disrupted or damaged'.

A definition of vulnerability that works for both humans and societal systems, then, is 'the characteristic of being exposed to the possibility of being harmed, disrupted or damaged'. Another way to understand vulnerabilities are as weak points; *what* is

it that might get harmed, disrupted or damaged and *how*, i.e what type of harm or damage can it sustain?

Analysing Risk and Vulnerability

With risk being the combination of a specific scenario, the likelihood that it would happen and the negative consequences it could bring, the next question becomes; how do we *analyse* risk? First of all, people analyse risks all the time in order to minimise harm, often in a non-systematic and intuitive way, and often without thinking consciously about it. But in risk research and risk management, risk analysis is often understood as 'the systematic analysis of the various risks associated with something, for example a certain activity or system'.

Within risk research, however, a risk analysis is understood as just one step in a risk *assessment*, which is a more comprehensive process of identifying, evaluating, and prioritising all potential risks associated with a certain phenomenon, assessing their likelihood and potential consequences, and then determining appropriate measures to manage or mitigate the risks.

Risk Analysis

Risk analysis can be understood as 'the systematic analysis of the various risks associated with something, for example a certain activity or system'.

This means that after one has analysed all risks, the next step in the risk assessment process is to do a risk *evaluation*, i.e determining which of the identified and analysed risks to prioritise. The risk evaluation, in turn, forms the input to the risk *treatment*, that is, the process of identifying and implementing strategies for managing the risks, for example avoiding, reducing, increasing, limiting, etc.

Figure 2. A risk assessment involves first identifying the context, then analysing and evaluating all risks, determining what risks to prioritise. The last step is the risk treatment, which involves identifying and implementing appropriate measures to mitigate the risks. Once the risk is managed, it is time to review and learn from the last crisis, as well as to monitor, communicate and inform about possible new risks.

Risk Management in Practice

When doing risk analysis and assessment, it is important to note that risk is almost always best understood and analysed by simultaneously considering vulnerability aspects, together with the hazards and the likelihood that they will occur. This type of combined risk and vulnerability analysis takes into account both what can cause harm, i.e the hazards and risks, as well as *whom* or *what* is to be protected and how they can be harmed or damaged, i.e the vulnerabilities.

In other words, including vulnerability in the general understanding of disaster risk makes it possible to acknowledge that disasters and their risks do not only depend on the severity of the hazards, nor on the sheer number of people and assets affected, but also on certain vulnerabilities and exposure characteristics within the affected groups, structures or societies. An affected group's level of vulnerability and exposure can help to explain why some particular hazards can lead to severe disaster impacts, while others do not (See figure 3).

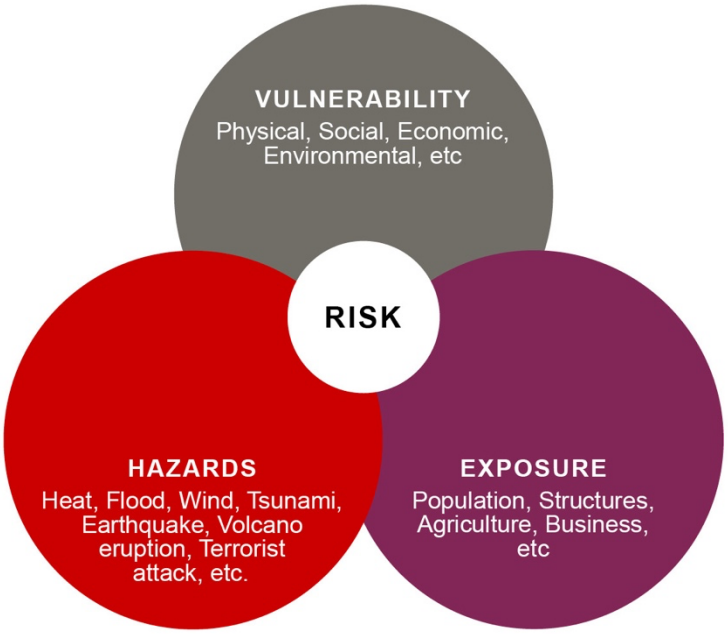

Figure 3. A *hazard*, like a drought or a flood, can bring about *risks*. Risks, in turn, can bring about negative consequences, but only if something or someone, a person, population, structure or some other entity, is *vulnerable* and *exposed* to the hazards. That is, that they might get damaged or harmed by the negative consequences. Vulnerability, therefore, can be understood as the 'characteristic of being exposed to the possibility of being harmed, disrupted or damaged'.

When implementing this type of analysis as a risk management tool in real-life crisis scenarios, it is also useful to think of vulnerabilities on different levels, both in terms of *societal functionality* and in terms of the *daily activities and lives* of individual citizens. Given the complexities of modern societies, we know that our socio-technical systems are not perfectly reliable. We cannot know exactly when or in

what way, but we know with some certainty that at some point they will fail, partly or completely – either due to natural or man-made causes. *Societal* risk management aims to manage this by reducing vulnerabilities in our societal systems.

On the individual and 'human' level, people and groups have different needs and therefore different vulnerabilities depending on the situation. Put simply, different hazards turn into risks at different times for different people. Think of a cold winter day without electricity. In this situation, when people's homes start to get cold, two vulnerable groups could be immunocompromised and elderly people, who could be at risk much faster than other groups.

Remember!

Risk is almost always best understood by simultaneously considering vulnerability. A combined risk and vulnerability analysis takes into account both what can cause harm and *whom* or *what* needs to be protected.

As shown in this section, risk and vulnerability are complex and interrelated concepts. Similarly, risk and vulnerability assessment and disaster preparedness planning are complex tasks that require a holistic approach and coordinated efforts, on both the societal and individual level. The next section will outline various frameworks for vulnerability, resilience, and disaster risk reduction, developed at both the national, EU and UN level.

Theoretical Frameworks for Risk, Vulnerability and Disaster Risk Reduction

The BuildERS Project – Building Resilience in Europe

In the previous section, vulnerability was defined in relation to the concept of risk. Another way of understanding vulnerability is in relation to the concept of *resilience*. Within the multinational consortium project titled 'Building European Communities' Resilience and Social Capital', i.e **The BuildERS Project**, researchers have developed a theoretical framework and a model for understanding the relationship between resilience and vulnerability.

BuildERS was a part of the EU's **Horizon programme** in the period 2019–2022, and aimed at strengthening European communities' resilience against natural and human-induced disasters by enhancing social capital and risk awareness. The project developed tools and innovations with stakeholder groups like first-aid responders and citizens, while also seeking to understand vulnerable populations' perceptions around risk, empower stakeholders, and analyse the potential of new

digital technologies and social media for social resilience and disaster responsiveness.

A Theoretical Model for Vulnerability and Resilience

In a nutshell, the BuildERS model (Figure 4 below) shows how vulnerability and resilience are always intertwined, and how there is a dynamic relationship between vulnerability and resilience in the three crisis phases – *pre-crisis*, *acute crisis*, and *post-crisis*. This dynamicity emphasises the need for an intersectional perspective on vulnerability. Intersectionality means that different aspects of a person's identity, like gender, social class, possible disabilities, socio-cultural context, and race often interact and overlap. This, in turn, can affect their vulnerabilities and experiences in the face of crises.

Vulnerability, within the BuildERS project, is defined as 'entities' (individuals, groups, society) dynamic characteristic of being susceptible to harm or loss, which manifests as situational inability to access adequate resources and means of protection to anticipate, cope with, recover and learn from the impact of natural or man-made crises'.

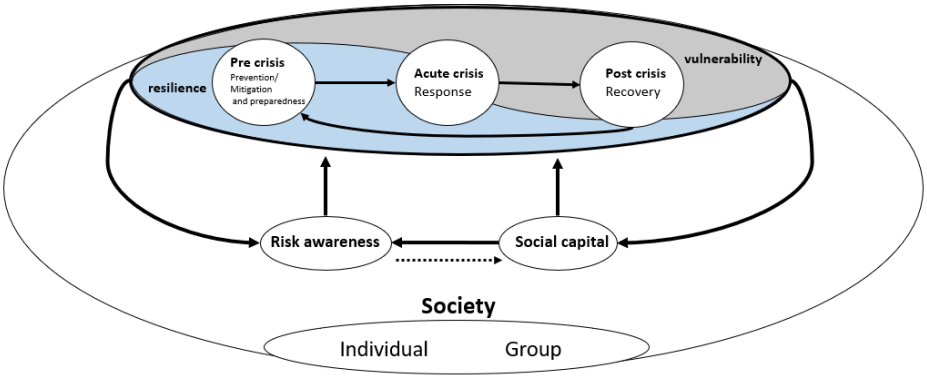

Figure 4. The BuildERS Model illustrates how a group or society's social capital and risk awareness affect its level of resilience and vulnerability by affecting its ability to cooperate before, during and after a crisis. Source: Morsut, C., Kuran, C. (2024). BuildERS Project: Findings on Vulnerability, Risk Awareness, Risk and Crisis Communication. The preparEU Pilot workshop, Stockholm, Sweden.

Two other relevant concepts in the *BuildERS* model are *Social Capital* and *Risk Awareness*. Social capital refers to the networks of relationships and trust within a certain community that enables its members to work together and support each other. Risk awareness refers to a person or group's ability to perceive and understand the potential dangers in a situation and how they might affect oneself, other people and property. Strong social capital can often bolster higher risk awareness within a community or society, which, in turn, can further strengthen trust and social capital.

The BuildERS model can thus be understood in the following way: On a 'normal day', individuals, communities and societies find themselves in a *pre-crisis phase*. Then, more or less suddenly, an *acute crisis* of some sort occurs; it could be a pandemic, flood, terrorist attack or some other unwanted event. Once the event has occurred, the social capital and risk awareness within the society will affect its level of vulnerability and resilience, and thereby its ability to 'come together' in mitigating the crisis. After responding to the crisis, the society finds itself back in a 'new' pre-crisis phase, during which it is critical to learn from the previous crisis and work on prevention and preparedness for future crises.

Intersectionality

Intersectionality acknowledges that individuals may face multiple forms of discrimination or disadvantage based on their intersecting identities, such as age, sex, gender, ability, and race.

With regards to risk communication and disaster risk reduction, applying an intersectional perspective is crucial for recognising the unique vulnerabilities of different groups within society. By considering intersecting factors, authorities can tailor and implement risk communication strategies to effectively reach and engage diverse communities, ensuring that no one is left behind in disaster preparedness efforts.

The central idea is that vulnerability and resilience are always influenced by how individuals and groups use social capital and understand risks. At the same time, some individuals or groups, labelled as vulnerable, can show resilience capacities or respond better than others, generally regarded as strong. In order to understand and address this, the BuildERS project recommends a multi-layered approach, analysing both individual and societal levels, and thinking critically about how to categorise different segments of society, such as by ethnicity, age, class or some other category. In other words, applying an intersectional perspective.

Two Perspectives on Vulnerability

As outlined above, the BuildERS project proposes that vulnerability can be viewed from two distinct perspectives: a *static* view and a *dynamic* view. The two perspectives differ not only in how they conceptualise vulnerability, but also in *who* or *what* is considered vulnerable. The *static* view relies on past data and experiences to identify vulnerable individuals and groups. This approach can be useful, but it has clear limitations, as it is not capable of considering how a person or group's level of vulnerability can change depending on the situation.

On the other hand, the *dynamic* perspective, which was promoted by the BuildERS project, views vulnerability as context dependent and as unfolding and changing over time across different factors that are themselves not fixed, such as age, ability, income, and social status. This intersectional view allows for more analytical flexibility, as the same person or group can be vulnerable in one crisis, and resilient in another.

Remember – everyone can be vulnerable!

Vulnerability is often assumed to be a fixed state, with people and groups either being, or not, being vulnerable. But think of the last time you visited a country where you did not know the language and could not read signs, etc. In that situation, you were obviously vulnerable to more risks, that is, more susceptible to harm or loss, than in your home country, simply as a result of not understanding the language. This shows that vulnerability is context dependent, and that anyone can, in principle, be vulnerable. It all depends on the situation!

During the Covid-19 pandemic, for example, it quickly became evident that vulnerability was not a fixed state, but fluid and evolving, requiring constant reassessment of who was at risk and which groups were in need of additional support. Older people were generally regarded as vulnerable and at higher risk, but older people with high socio-economic status were able to protect themselves, and were therefore not, necessarily, more vulnerable than younger, less affluent, people and groups. Young people, on the other hand, were considered resilient, but the pandemic showed the extent of vulnerabilities that young people developed due to, among other things, isolation as a result of school closures.

Starting from this dynamic view, and assuming an intersectional view of reality, the BuildERS project offer the following technical definition of vulnerability: 'entities' (individuals, groups, society) dynamic characteristic of being susceptible to harm or loss, which manifests as situational inability to access adequate resources and means of protection to anticipate, cope with, recover and learn from the impact of natural or man-made crises'.

"Both within policy and research contexts we must become much better at sharing information. There is a wealth of knowledge available, but all too often we find ourselves 'reinventing the wheel' because we are unaware that others have already faced similar challenges and found solutions." – Claudia Morsut, Associate Professor in societal security, University of Stavanger, Norway.

Policy Recommendations for Inclusive Risk and Crisis Communication

One of the main outputs of the BuildERS project was a set of policy recommendations targeted at authorities at the EU level, the national level, and the local level, including national agencies, regional authorities and municipalities. Covering three main areas, better disaster planning and management; more inclusive risk and crisis communication; and stronger social capital, they aimed at improving strategies for reducing societal vulnerabilities during crises.

Policy Recommendations for National, Regional and Local Authorities

- Create Inclusive and Tailored Communication
  - Use and improve multi-channel communication
  - Identify and use appropriate mediums to reach vulnerable people during a crisis
  - Adapt communication strategies to different disaster types
  - Support intermediaries to communicate effectively with vulnerable people.

- Improve Communication Strategies
  - Train government officials and first responders in crisis communication strategies
  - Tailor and improve communication with vulnerable persons
  - Collaborate with intermediaries for effective crisis communication
  - Utilise diverse channels and tools for risk communication
  - Emphasise trust-building as part of public crisis communication
  - Develop and evaluate a social media strategy, including guidelines for risk communication, and regularly use social media to build trust
  - Provide social media training to crisis communicators
  - Ensure that information is communicated regularly and often during a crisis.

Did you know?

Vulnerable individuals and groups are the most susceptible to misinformation and disinformation during a crisis. Recognising this is crucial, especially for risk communicators and practitioners working with risk and crisis information.

- Address Information Disorder
  - Establish international collaboration networks to work against disinformation
  - Proactively address information disorder through information- and media literacy training, and 'social media literacy' education campaigns.

Policy Recommendations to the European Union and its Member States

- Compile and circulate best practices in risk and crisis communication
- Help member states adopt best practices for inclusive communication
- Facilitate the formation of "Risk and Crisis Communication Collaboration Networks"
- Establish international collaboration networks to work against disinformation.

Want to learn more?

You can learn more about the BuildERS Project and the model for vulnerability and resilience by visiting **builderproject.eu**. Here, you can also find links to research papers, policy briefs, reports and other publications, interview videos, innovations such as games and mapping tools, and a Handbook on how to improve societal disaster resilience..

"Disasters amplify the inequitable aspects of the world we live in." – Special Representative of the UN Secretary General for Disaster Risk Reduction.[1]

UNDRR and The Sendai Framework for Disaster Risk Reduction

As seen in previous sections, disasters tend to discriminate in the sense that impacts of disasters are felt differently by different groups. They also tend to disproportionately affect the most vulnerable, such as children and poor people. While preventing disasters altogether is impossible in our complex societies, an all-of-society and comprehensive security approach can significantly reduce disaster risks and help to build resilient communities – both at the local, national and global level.

At the global level, the *United Nations Office for Disaster Risk Reduction*, UNDRR, is the UN System Focal Point for Disaster Risk Reduction (DRR). The agency is also the custodian for **The Sendai Framework for Disaster Risk Reduction**, which was endorsed by the UN General Assembly in 2015. The Sendai Framework advocates for 'the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries'.

[1] The special representative of the UN Secretary General for Disaster Risk Reduction did not participate in the preparEU Pilot Workshop.

The Sendai Framework has seven global targets:

1. Reduce disaster mortality
2. Reduce the number of people affected by disasters
3. Reduce economic losses from disasters
4. Reduce damage to critical infrastructure and medical and educational facilities
5. Increase national and local disaster risk reduction strategies
6. Increase support to developing countries
7. Increase early warning coverage.

Engaging Stakeholder Groups in Disaster Risk Reduction Processes

In any given society or population, different subgroups will have different needs, knowledge, skill sets and resources, which all need to be taken into account and used for DRR planning. According to the Sendai Framework, the only way to achieve fully inclusive policies and actions is to include these different stakeholder groups from a very early stage in the planning process.

Did you know?

Only 5 percent of the countries in Europe and Central Asia consult young people in disaster risk reduction (DRR) planning, even though it is widely accepted that young people and children are some of the most vulnerable and at risk groups during and after disasters.

However, a review of the implementation of the Sendai Framework shows that the world is significantly lagging behind when it comes to involving and engaging with stakeholders and groups at risk, and that there is a need to work collectively to prioritise and accelerate these efforts in all DRR processes.

Engaging Youth

A 2024 survey study about engagement of children and youth in DRR processes in the Europe and Central Asia region showed that youth are insufficiently engaged. Only 31 percent of the national DRR authorities provide opportunities for children and youth to have direct influence on DRR decision making at the national level. Only 5 percent of the countries in the region consult youth in DRR planning, and 0 percent engage children and youth in collecting DRR related data. Additionally, only 13 percent of recovery programmes include specific needs of youth.

> "Youth is not only a demographic, it is not even a tool, it is a valuable resource without which policies will not be carried out to their fullest potential, regardless of how well-written they are." – Alexandre Draghia, UN Youth Representative for Romania[2]

[2] Alexandre Draghia did not participate in the preparEU Pilot Workshop.

Another problem is that when children and youth are engaged they are viewed as 'beneficiaries' or 'target groups', rather than as active stakeholders that can contribute to improving policies and decision making. Youth, however, do not see themselves as vulnerable. They want a seat at the table in decision making processes. Children and youth are also important to engage since they are often early adopters, and children can often function as a way to reach immigrant parents with communication and DRR information.

The study also showed that engagement of young people in governance processes often means involving youth *focused* organisations, which represent young people, rather than youth-*led* organisations, which *consists* of young people. This effectively means that young people are not actually engaged and involved in the decision making processes, even though there is a clear need for such involvement. The study made the following recommendations:

- Create spaces for consultations with children and youth regarding strategies for DRR;
- Elevate the status of children and youth from beneficiaries to partners and stakeholders;
- Create mentorship opportunities for young advocates and leaders to further build their capacities in DRR governance.

The Sendai Gender Action Plan – Engaging Women

Although women are affected more by disasters than men, gender is not mainstreamed in DRR processes. As a response, a Gender Action Plan has been developed, which aims to guide UN member states and accelerate achievement of the Sendai targets. The plan involves substantially increasing resource allocations, activities and impacts of gender-responsive disaster risk reduction, as well as substantially decreasing gender-related disaster risk by 2030.

Engaging People with Disabilities

A 2023 review of DRR policies and actions in Europe and Central Asia found that there is no systemic disaggregation of data by disability. Without disaggregated data it is not possible to understand risk properly with regards to this particular group, how risk impacts the community and how to manage it. The review also showed that only 5 out of 55 surveyed countries had some disability inclusive DRR policy in line with Sendai, and only *one* country had a state allocated budget for disability protection. Similarly to the engagement and involvement of youth, people with disabilities are still referred to as 'beneficiaries', rather than as partners or stakeholders.

Stakeholder Engagement Mechanism

In an attempt to improve engagement, UNDRR gathered representatives of eight stakeholder groups in a 'Stakeholder Engagement Mechanism' to jointly develop a

position paper, which outlines key actions for policymakers and DRR stakeholders to consider for strengthening effective, inclusive, and resilient DRR policies across all levels. One key point was that insufficient funding makes it difficult for disability organisations that want to get engaged in DRR processes. Another key challenge was that these groups often lack sufficient technical knowledge on the topics discussed. Hence capacity building and further funding is critical.

Recommendations for Inclusive DRR

To effectively engage diverse stakeholder groups in disaster risk reduction (DRR) and enhance policy implementation across Europe, the following integrated recommendations are essential, according to UNDRR:

- Allocate financial and human resources specifically for enhancing the participation of varied stakeholder groups in DRR policy making, ensuring their insights and experiences inform decision-making processes.

- Strengthen the capacity of diverse groups, including young people, women, and persons with disabilities, to actively contribute to DRR strategies and actions.

- Systematically collect and utilise disaggregated data by age, sex, and disability to tailor DRR initiatives and improve risk knowledge.

- Mainstream gender and integrate youth and disability perspectives throughout all DRR processes to ensure inclusive and equitable solutions.

- Foster local solutions by collaborating closely with communities, thereby aligning DRR measures with the specific needs and priorities of residents.

- Develop partnerships with representative organisations, including those led by youth and persons with disabilities, to enhance coordination and leverage their unique insights.

- Ensure that all risk communication is accessible, and that critical infrastructure and services are designed to meet the diverse needs of vulnerable groups.

- Acknowledge the impact of climate change as a significant, overarching factor in DRR strategies, requiring adaptive and forward-thinking approaches.

The Dynamic Taxonomic Approach of the CORE Project – Vulnerability Before, During and After a Disaster

The CORE Project, short for 'sCience & human factOr for Resilient sociEty', is a multidisciplinary EU project composed of research institutions, small and medium enterprises and first responder organisations. The projects' objectives are to:

1. Define and apply a crisis modelling framework able to describe disaster scenarios and dynamics according to human, social and societal variables and organisational aspects under cascading effects.

2. To define and test suitable indicators to assess the weight of human factors and social and societal aspects in societal resilience to disasters, providing an insight into resiliency diversity among European regions and social groups at local scale.

3. To define and apply a suitable methodology for more efficient use of social media in disaster situations, based on the analysis of information flow prior to, during and after the disaster as well as on analysis of how information in social media is influencing risks perceptions and how tools to fight misinformation could be used by various stakeholders during the crisis management.

4. To deliver a set of guidance materials to implement and monitor initiatives with local communities to improve preparedness, adaptability, and resilience to risks by and for all social groups.

The CORE Disaster Scenarios Analysis Framework

In order to measure, control and mitigate the impact of disasters, particularly on typically vulnerable groups such as disabled, elderly, poor, as well as women and children, the CORE project developed a *Disaster Scenarios Analysis Framework* and a specific *Case Study Template*, that allows researchers and others to analyse disasters using a consistent and standardised approach.

The framework aims to provide a robust and rigorous way of forensically analysing all manner of disaster scenarios in order to identify best practices and lessons learned to improve Disaster Risk Reduction (DRR), and to allow everyone to collect, analyse and compare the same type of data.

The Case Study Template, with its accompanying guidelines, documents the location, time and date of a disaster, and describes in detail all phases and aspects of the disaster, including the surrounding context, key events before, during and after, responses and mitigating measures, and the harm and damage caused. It also

contains information on loss of lives and casualties, as well as economic and environmental impacts.

ANNEX 3 - CASE STUDY TEMPLATE VERSION 3 (FINAL)

CASE STUDY X: Disaster Scenario Y	
Guidance notes *are provided in red text offering additional description and direction of the response/s required in each field.*	
Incident	*Provide a brief title to best describe the disaster*
Location	*Provide details of the specific location of the disaster, including name of the building, premises, street, village, town, city, area, region, and country*
Time & Date	*Provide the time and date the disaster occurred*
Description and timeline of the incident	
Provide a detailed description of the disaster (minimum of 1k words), including a narrative which describes the context of the disaster, including times and dates of key events, issues and incidents that occurred as the disaster unfolded. Describe the nature of the disaster, the response, the damage, and disruption caused, together with information concerning loss of life, casualties, and the wider economic, environmental, and other associated impacts. The description of the incident should provide an informative account of the disaster.	
WP2	**Task 2.2: Natural & manmade disaster case study identification, research & analysis**
What were the public information sharing challenges?	
Provide a detailed analysis of identified issues, concerns and challenges when sharing public information about the disaster. Include perspectives from citizens engaged in the disaster, emergency first-responder agencies and public authorities.	
What were the ethical issues?	
Provide a detailed analysis of any identified ethical issues, concerns or challenges that impacted upon the disaster, the emergency and public authority response or other aspect of the disaster.	
What lessons have been learned?	
Provide a detailed analysis of any lessons that have been learned following the disaster by public authorities, NGO's, emergency service responders, community groups or other body, group, network, or association.	
What were the cascading effects across events, sectors and supply chain disruptions? Including the inevitability or unforeseen chain of events affecting the response to the disaster? What were the societal vulnerabilities in health and retail sectors?	
Provide a detailed analysis of any cascading effects following the disaster, including impacts following unfolding events on different sectors and supply chains. Include any unforeseen chain of events or unintended consequences of actions taken that impacted upon the disaster. Also describe the specific societal vulnerabilities in health and retail sectors within the jurisdiction, regional, locality, community and/or neighbourhood where the disaster occurred.	

Figure 5. The CORE Project Case Study Template. Source: The preparEU Pilot workshop, Stockholm, Sweden.

Applying the framework and template outlined above, the CORE project conducted a comparative analysis of seven types of hazards: earthquakes, terrorist attacks, industrial accidents, flash floods, tsunamis, forest fires, and the Covid-19 pandemic.The Dynamic Taxonomic Approach

When developing the Disaster Scenarios Analysis Framework and Case Study Template, the CORE project's focus was on identifying vulnerable groups of people. To achieve this, they adopted a dynamic taxonomic approach, aimed at classifying, organising and understanding factors that could either exacerbate or alleviate vulnerability across the entire disaster management cycle: *before*, *during*, and *after* a disaster. Drawing inspiration from the Sendai framework (See section 1.X.Y), and its priorities for action in mitigating disaster risks, the CORE project identified minimising exposure and vulnerability as key objectives.

Want to Learn More?

You can learn more about the CORE Project's disaster scenarios analysis framework, and download The Case Study Template. Follow this link: https://www.euproject-core.eu/images/deliverables/CORE-D2.1-Natural%20and%20man-made%20disaster%20scenarios%20analysis%20framework.pdf

The CORE Vulnerability Roadmap

To enhance effective disaster planning, management, and resilience policies, a *Vulnerability Roadmap* was developed within the CORE project, highlighting 'Critical Vulnerability Indicators' (CVIs) or 'Vulnerability Drivers', organised into categories for clarity and understanding.

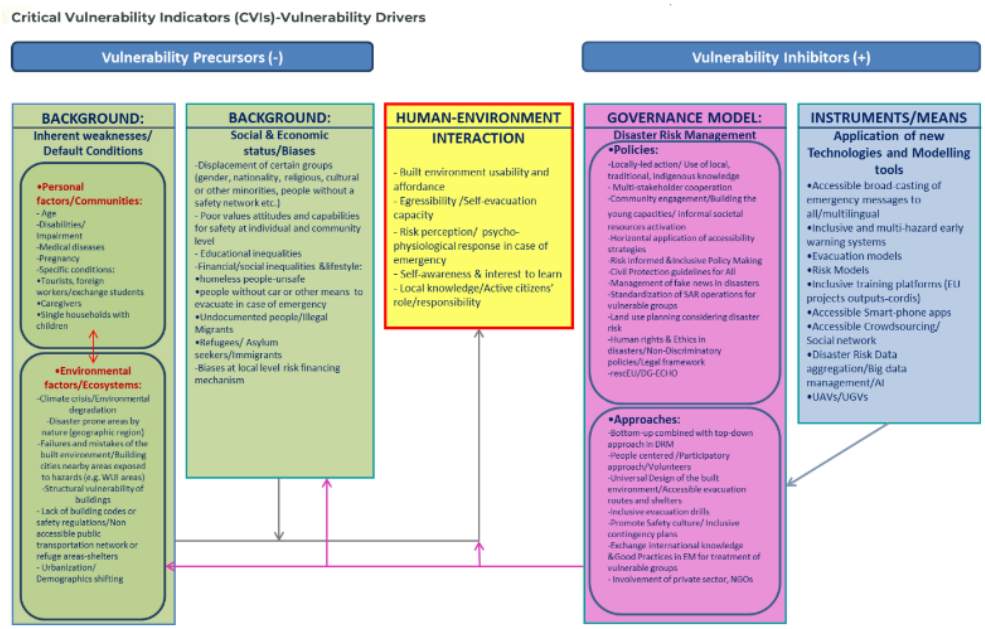

Figure 6. The CORE Project Vulnerability Roadmap highlights and categorises critical vulnerability indicators.

According to the CORE Vulnerability Roadmap, the primary concern regarding vulnerability, as highlighted by the interdependency arrows, is the need to focus on how people interact with their surrounding environments. These vulnerability drivers involve:

- Usability, affordability, accessibility and functionality of built environments
- Capacity (physical, economic, social) to evacuate independently
- Perception of risk and psycho-physiological response during emergencies
- Self-awareness and interest and willingness to learn
- Local knowledge and the role of active citizens in disaster preparedness.

In addition to the overview of vulnerability drivers provided by the Vulnerability Roadmap, the CORE project also attempted to understand how and why certain groups of people defined as 'vulnerable' are vulnerable in *all* phases of a disaster, both before, during, and after. The analysis resulted in 10 categories or types of vulnerable groups being identified, who are all at risk before, during and after a crisis:

- Age
- Disability/Impairment or other diseases
- Pregnancy
- Caregivers/carers
- Tourists, foreign workers/exchange students
- Homeless people
- Discriminated people due to gender, ethnicity, religion or any other reason
- People without a social safety network/Internally displaced people
- Undocumented people/Illegal Migrant
- Refugees/ Asylum seekers/Migrants

Here it is once again crucial to note that vulnerability can often be a combination of these different types, such as disability and age, resulting in synergistic effects on disaster impact that must be addressed in the disaster management cycle.

The CORE Human Centredness Taxonomy for Plans and Procedures

Acknowledging human variability, which sets the background for vulnerability, is essential for implementing inclusive safety practices that ensure equal treatment for all and guarantee equal opportunities to be safe and recover. Designing emergency plans and procedures that prioritise equality and inclusion at every step of risk management requires that resource allocation and all activities consider the variability and specificity of human needs.

The CORE project has designed a checklist for assessing plans and procedures with reference to human variability to determine how well an emergency plan or

procedure accommodates the specific needs, characteristics, and abilities of individuals – factors which, if not properly addressed, could lead to vulnerability.

This set of human-centredness indicators can be used for the design and review of a single plan or procedure within a single organisation, or for the review of roles, skills, and working methods necessary for the design of plans or procedures themselves. The checklist also aims to support cooperation among different sectors and organisations directly and indirectly involved in risk management activities, providing a common framework for identifying needs and resources and facilitating subsequent data exchange. The human-centred indicators have been designed to:

- Build clarity in all organisations regarding owned, known, and managed data, stockpiled goods, equipment, and skilled/licensed personnel
- Pre-set communication and coordination channels within the same organisation and among different organisations
- Deploy and allocate resources to reach the most vulnerable
- Reduce inequalities in the impact of an event.

The checklist itself is organised according to four objectives, with the following taxonomy. For each human-centredness indicator, the checklist proposes a series of open explanatory items guiding the evaluator in eliciting:

Checklist

- **Who:** the roles and responsibilities defined to achieve the related objective through that indicator.
- **What:** the resources considered in the plan or procedure to support the objective's achievement through that indicator (e.g., data, stockpiled goods, equipment, skilled/licensed personnel, etc.).
- **How:** the process to achieve the related objective through that indicator (e.g., procedures, decision chain, continuous improvement).

From Passive Recipients to Active Resource – Human Factor Methodology

The research project 'From Passive Recipients to Active Resource' (2021–2024) at Chalmers University of Technology, Sweden, aims to develop methods, strategies, and guidelines for how people and groups with varying needs can be involved as active resources in society's crisis management.

By tapping into these groups' knowledge and experiences, the project also aims to identify and propose guidelines for how communication can be tailored to all individuals in society during crises. The project's expected outcome is to support municipal, regional and national authorities in preventing, managing, and recovering from crises.

The theory used in the project is called 'Human Factors Methodology' and the research area is called Human Factors Engineering, exploring human cognitive and physical abilities and their limitations in order to design safe, effective and comfortable products and services for all.

User Centred Approaches in Risk Communication

User-centred approaches prioritise the needs, preferences, and experiences of end-users throughout design and implementation processes.

In risk communication and disaster prevention, adopting a user-centred approach ensures that communication strategies are tailored to the specific needs and contexts of diverse communities.

By involving end-users in the development of communication materials and initiatives, authorities can enhance engagement, comprehension, and adherence to risk mitigation measures, ultimately improving disaster preparedness outcomes for all members of society.

Universal Design – Design for All

Universal design aims to create products, environments, and communication that are accessible and usable by people of all ages, sizes, and abilities.

It involves optimising for so-called 'extreme' users, i.e individuals with specific needs, physical, cognitive, or other, that can serve as focal points for optimising usability and accessibility. By focusing on these users, the design can benefit a much wider range of individuals, promoting accessibility and usability for a diverse population.

In risk communication and disaster risk prevention, universal design can ensure that information and resources are accessible to everyone, including those with disabilities or diverse needs.

The approach considers various aspects of human diversity, including ability, language, culture, gender, and age. By embracing universal design principles, authorities can enhance inclusivity and ensure that risk information reaches all members of society.

The 7 principles of Universal design.

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size and Space for Approach and Use.

The research and product development within the project is based on a *user-centred approach*, and follows the principles of *Universal Design*, such as 'simple and intuitive use' and 'perceptible information'. This means that end-users, such as people with physical or cognitive disabilities, are involved in every step of product development as active collaborators, and engaged in co-creative workshops in which products are tested and changed through iterative processes.

Want to Learn More?

Go to the project website to learn more about the ‘From Passive Recipients to Active Resource’ Project’s participants, activities and publications:

https://research.chalmers.se/en/project/10489

2 The Practitioners' Perspectives – Insights from First Responders and Risk Communicators

Following the theoretical groundwork laid out in the previous section, this section discusses more *practical* perspectives gleaned directly from the field. Through case studies, from first-responders in Italy to crisis communication specialists in Norway, it shares real-world experiences of frontline actors across Europe, offering tangible examples of communication strategies and engagement efforts aimed at reaching and engaging vulnerable groups before, during, and after disasters and crises.

Reaching Migrant Communities: Insights from the Covid-19 Pandemic in Norway

Throughout the pandemic, several migrant groups in Norway saw higher than average rates of confirmed Covid-19 and related hospitalisations, thus highlighting the need for tailored and targeted communication strategies.

The Norwegian Directorate of Health works to promote health and resilience, and aims to be a driving force for sustainable, coordinated and equitable health and care services. During the pandemic, the health authorities in Norway worked together on providing information to migrant communities. The use of various platforms for communication and targeted social media advertisements have been important components of their communication strategy.

Throughout the pandemic, the Norwegian health authorities learned important lessons on how to reach, interact with and engage migrant communities. These lessons have great value when planning communication, both during a crisis and in ordinary times.

Understand and Involve Your Audience

A key objective in any communication is to understand the target audience's needs and perspectives. By involving and listening to migrant groups at an early stage, the health authorities gained a clear understanding of their concerns around and attitudes towards the pandemic, as well as insights into how they consumed media and public information. This helped the authorities to formulate messages, identify channels, spread information and design communication that actually reached migrant groups. By using this approach, the authorities were able to affect the target audiences' attitudes and behaviours, helping people to navigate the pandemic more effectively.

The main insight here is that persons at risk, whether migrants or some other group, always have knowledge that is essential to formulating and implementing effective communication. In Norway, a few keys to understanding migrant communities and tailoring communication and information to their needs were:

- Cultivating relationships built on trust, respect and empathy
- Listening to the groups' concerns, experiences and insights
- Keeping in mind the heterogeneity within migrant communities
- Considering factors such as language, cultural background and socio-economic status
- Activating spokespersons/role models/micro-influencers within different communities.

Be Creative, Flexible and Sensitive

When trying to engage with groups that may have different media habits than the mainstream, it is important to embrace innovation and flexibility in communication strategies. The Norwegian Directorate of Health's communication team recommends exploring unconventional approaches, as long as they align with the communication goals. Identifying the target audience's media habits, channel preferences, languages and communication barriers is important and requires actively involving stakeholders and representatives from target communities

Remember!

When communicating with migrant communities, adapt messages and materials so that they resonate with the target audiences' cultural norms, values, habits, health literacy levels and languages. At the same time, make sure that the information remains correct.

After identifying where the target group is most active and receptive, you can experiment with platforms and channels. Consider using social media platforms,

community forums, mobile apps and community-based organisations – ethnic, cultural or religious – to disseminate information.

Do not be afraid to adapt messages and materials so that they resonate with the cultural norms, values and languages of migrant communities, while at the same time making sure that the information remains correct.

Translate, Adapt and Update Information

Perhaps the most important aspect of risk and crisis communication with migrant communities is investment in translating and adapting communication materials. This will ensure that all migrant communities have access to timely and accurate information to make informed decisions and take appropriate actions to protect their health.

When adapting and translating risk and crisis information, accuracy must be prioritised, while taking into account relevance and appropriateness, as well as literacy levels and preferred communication channels.

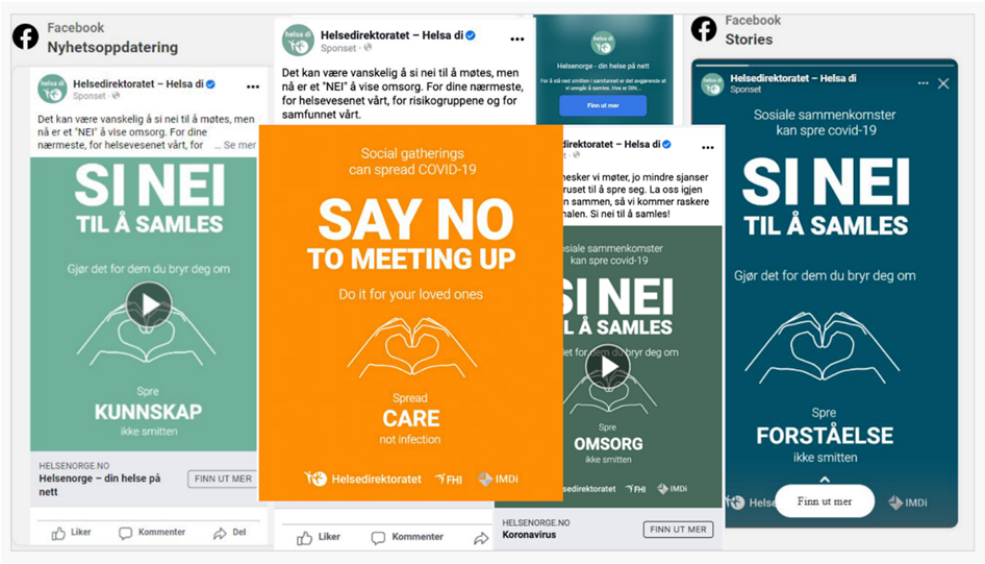

Figure 7. During the Covid-19 pandemic, Norwegian health authorities translated and tailored messages and communication materials in up to 50 languages, ensuring that risk information reached everyone. Source: Nordstrøm, C. (2024) Reaching migrant groups – Experiences from the Covid-19 pandemic 2020-2022. The preparEU Pilot workshop, Stockholm, Sweden.

Once adapted, translated and disseminated, communication materials must be continuously updated and refined, in response to evolving public health guidance and recommendations. Remember to remove outdated information. During the Covid-19 pandemic, the health authorities translated messages and information about social distancing, infection, risk groups and vaccines into up to 50 different languages, continuously updating the information in all languages.

Figure 8. A few examples of translated and tailored communication materials from Norwegian health authorities. Source: Nordstrøm, C. (2024) Reaching migrant groups – Experiences from the Covid-19 pandemic 2020-2022. The preparEU Pilot workshop, Stockholm, Sweden.

Use Micro-Influencers!

In today's complex information landscape, effective communication with diverse communities requires innovative strategies. In Norway, 'micro-Influencers', that is trusted figures within local communities or groups, became important messengers of public health messages.

Rather than focusing on mainstream influencers who may lack relevance to the target audience, the health authorities worked with grassroots leaders and organisations to tailor health messages, thereby amplifying engagement within specific migrant communities.

These micro-influencers often had modest followings on, for example, social media platforms, but wielded significant influence within their local communities, whether cultural, ethnic, linguistic or religious.

Micro-Influencers

As trusted figures within local communities such as migrant groups, micro-influencers can play a crucial role as intermediaries for conveying public health messages.

Through micro-influencers, authorities can bridge the gap between migrant communities and the rest of society, disseminating vital health information and promoting positive behaviours before, during and after a crisis.

In this work, the Norwegian health authorities partnered with specialised communication agencies well versed in minority micro-influencer outreach, which further enhanced the effectiveness of their efforts.

In practice, guiding the micro-influencers was also found to be important, while at the same time empowering them to adapt information and messages to their communities, as they possess intimate knowledge of their audiences' needs and preferences.

The Norwegian experience indicates that authorities can – and sometimes need to – embrace unconventional communication strategies to reach underserved groups

who may not engage with traditional or mainstream media channels. Leveraging micro-influencers is an example of how authorities can bridge the gap between migrant communities and the rest of society, disseminating vital health information and promoting positive behaviours before, during and after a crisis.

Emergency Preparedness and Inclusive Rescue Initiatives in Italy

In Italy, the National Fire and Rescue Service has gained valuable experience in rescuing individuals with specific needs, both through exercise activities and through management of emergency events even on a large territorial scale, as in the case, for example, of the floods in Emilia Romagna in 2023. The NFRS are now actively promoting inclusive rescue initiatives.

Training First Responders

One valuable insight is that effectively rescuing individuals with specific needs requires proper training.

Rescuers must first learn to identify these individuals and understand who needs assistance, and then know how to assist them appropriately.

Rescuers also need to learn how to behave towards people with specific needs in these stressful situations, learning how to interact with them in a sensitive way, and understanding their unique requirements and needs.

Through different types of exercises, the National Fire and Rescue Service has gained valuable experience in rescuing individuals with specific needs.

The National Fire and Rescue Service uses ‘picture cards’ containing instructions about the rescue. These alternative communication methods can aid first responders in understanding and assisting individuals with specific needs, like people with autism.

Rescuing and Interacting with Groups with Specific Needs

The Italian National Fire and Rescue Service's experiences provide valuable insights and effective strategies for enhancing inclusivity and accessibility in disaster response efforts. Here are some of their lessons learned:

- People and groups with specific needs often face barriers to communication and interactions during crises. During covid-19, for example, it quickly became clear that masks, even those used by first responders, made lip-reading difficult for the deaf. Another example concerns first responders’ protection equipment that can hinder communication for persons with autism, as it can appear both scary and confusing.

Remember

People and groups with specific needs often face ‘extra’ barriers to communication and social interactions during crises. During the Covid-19 pandemic, for example, masks made lip-reading impossible for the deaf and hard of hearing.

- Vulnerable individuals suffer the most in crises, and most rescue operations involving individuals with specific needs concern older people, rather than, as is sometimes assumed, people with disabilities.

- Practical tools like 'rescuer cards', containing information about the individual and their needs, and alternative communication methods like picture cards containing instructions about the rescue and simple messages about individuals' health status and safety, can aid rescuers and other first responders in understanding and assisting individuals with specific needs, like people with autism.

- Inclusive rescue strategies that consider the needs of all individuals are essential for effective disaster response and management.

- Rescue operations are often performed collaboratively, involving both the rescuer and the person to be rescued. The effectiveness of these operations may also depend on our ability to build this synergy along a cultural pathway that must accompany us in daily life.

Involving People with Disabilities in Crisis Management Research

Section X above describes how user centred and universal design approaches were used in the Swedish research project 'From Passive Recipients to Active Resource' (2021–2024) at Chalmers University. In the project, people with various types of disabilities and their interest organisations were involved as co-creators in the development of inclusive crisis management methods and strategies. By viewing people with disabilities as active resources, rather than passive recipients, researchers could tap into their experiences and knowledge and glean important insights.

Findings from the Co-creation Process

One important finding from the co-creative research process is that people with disabilities are more likely than others to be negatively affected during a crisis or catastrophe. During the Covid-19 pandemic, for example, a disproportionate amount of people with intellectual disabilities died, even though this group was not more 'physically' sensitive to the virus.

This observation lines up with the theoretical discussion on vulnerability in section 1, which emphasised the importance of analysing risk and vulnerability using an intersectional lens.

Another important finding is that many individuals with disabilities actually possess the physical and cognitive ability to assist themselves during crises and disasters – provided they have access to the right information and understand what actions to take. This underscores the vital importance of effective, tailored risk and crisis communication that reaches everyone. Many people who end up requiring assistance during emergencies could have managed on their own, thereby freeing up resources for others, if only they had access to information.

> "I don't think society knows me and my needs in a crisis." – Research participant with Aphasia (language disorder after brain injury)

The co-creative process also found that people with various communication difficulties face similar challenges and have similar needs during crises and disasters. They need:

- **Time to process** and understand the information.
    - Authorities need to communicate as early and often as possible – both before, during and after the crisis. Communication should, if possible, be in real time.

- **Short and concise** information and messages.
  - Use simple words that are easy to recognise and understand.
  - Use clear facts. Do not force recipients to rely on their own interpretations.
  - Do not repeat information.

- **Help in finding and accessing** relevant information.
  - Authorities need to work actively to make information accessible and easy-to-find for people with disabilities.
  - Information must be accessible through both digital and physical means.
  - Basic and critical information should be available at crisis centres and physical meeting points. This includes information about:
    - What has happened
    - Why it has happened
    - What people [with disabilities] should do
    - When and how new information will come
    - Where people [with disabilities] should go for support.

Communication Aids for People with Limited Speech

Another important insight from the co-creative research process relates to communication aids. As many people with intellectual disabilities have limited speech, they need different kinds of communication aids – both to make themselves understood and to understand others.

One example is a so-called 'communication passport', a printed folder that persons with disabilities such as aphasia or down's syndrome can bring with them – in principle at all times, but especially during crises.

The communication passport contains important information about their communication challenges and needs, contact information to relatives, and needs for additional support, etc. Just like the 'picture cards' used by the Italian National Fire and Rescue Service, these alternative communication methods and aids can be crucial for understanding and assisting individuals with specific needs, like persons with aphasia, autism and down's syndrome.

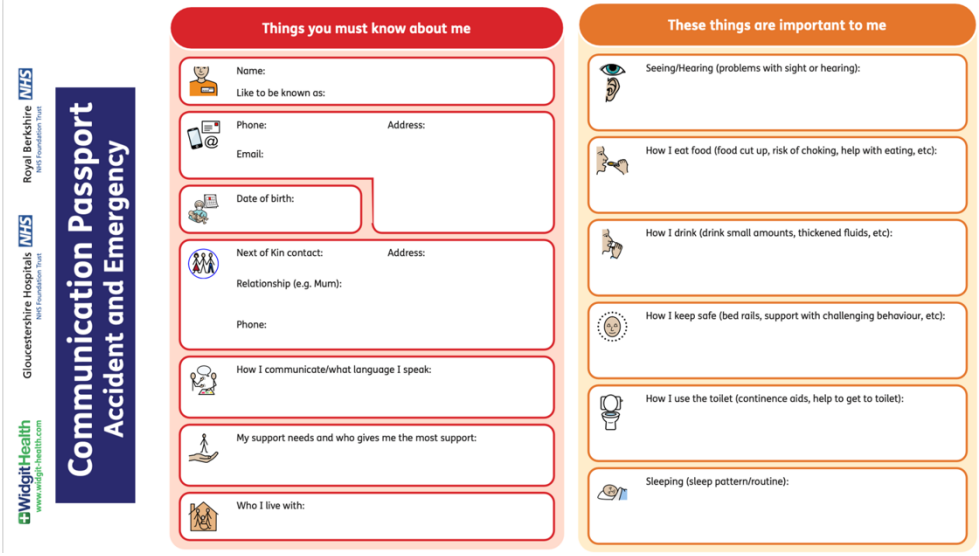

Figure 9. 'Communication passports' can be a great communication aid for people with disabilities resulting in limited speech, such as aphasia or down's syndrome. Source: Osvalder, A-L, Stark, E. (2024) Swedish Research Project: From Passive Recipients to Active Resources. The preparEU Pilot workshop, Stockholm, Sweden.

So-called 'augmentative and alternative communication' (AAC) methods are another form of communication aids, covering a wide range of methods, tools and techniques that support or replace spoken communication – both to help produce speech and understand broken speech.

AAC methods can include text-to-speech technologies, communication displays and computers, such as tablets with special programmes containing symbols with sounds, as well as pictures and videos to complement speech.

Figure 10. Communication computers contain symbols with sounds.

Remember!

Even blissymbols, pictograms and other image-based communication tools can be interpreted differently by different groups, depending on the cultural context, the group and the situation. Therefore, it is always important to test them beforehand on the group you want to reach.

Figure 11. So-called 'communication displays' are visual and/or auditory AAC (Augmentative and Alternative Communication) tools that present symbols, pictures, or words to support individuals in expressing themselves effectively, as well as in understanding others. Communication displays have proved to be useful and effective communication aids for people with disabilities, both in daily life and during crises. Source: Osvalder, A-L, Stark, E. (2024) Swedish Research Project: From Passive Recipients to Active Resources. The preparEU Pilot workshop, Stockholm, Sweden.

Crisis Communication Challenges and Insights from Engaging with Vulnerable Groups

PROACTIVE is an EU-project that focuses on how practitioners, particularly law enforcement agencies and first responders, can get better at responding to the needs of vulnerable groups during operations related to Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) incidents. PROACTIVE, in this context, is short for PReparedness against CBRNE threats through cOmmon Approaches between security praCTItioners and the VulnerablE civil society.

CBRNe, whether accidental or terrorist-based, can have a high impact on society, and PROACTIVE aims to increase practitioner effectiveness in managing large and diverse groups of people in a CBRNe environment. More specifically, the project aims to identify issues in CBRNe incident response and pinpoint deficiencies in current practitioner protocols and resources regarding vulnerable groups by testing, evaluating and validating these against the requirements of civil society, particularly vulnerable groups of citizens.

PROACTIVE also aims to enhance real-time communication using tools like mobile apps, to test and evaluate selected tools through field exercises involving a diverse population, and ultimately to provide recommendations for EU standards on CBRNe technologies, ensuring inclusivity for all citizens. The project combined three workstreams: research, innovation and action, which included three joint field exercises with role play volunteers.

Figure 12. PROACTIVE is an EU-project that focuses on how practitioners, particularly law enforcement agencies and first responders, can get better at responding to the needs of vulnerable groups during operations related to CBRNE incidents. Source: Strömberg, D. (2024) Crisis Communication Challenges and Lessons Learned Engaging with the Vulnerable Civil Society. The preparEU Pilot workshop, Stockholm, Sweden.

Research Findings

In order to get continuous feedback from the end-users throughout the project, both a 'Practitioner Stakeholder Advisory Board' containing first responders, and a 'Civil Society Advisory Board' containing vulnerable citizens were set up.

One important observation made here was that these two groups differed substantially, both in how they behaved and responded to incidents, and in what type of conclusions and insights could be drawn from their feedback. First responders and practitioners are trained to react and respond in consistent and predictable ways to manage CBRNe incidents, according to their standard operating procedures.

Members of the Civil Society Advisory Board, in contrast, are not trained in CBRNe response. They also represent a wide and diverse range of conditions, disabilities, and identities, and, as discussed in section 1.X above, their vulnerability is not a fixed state but a combination of context and personal factors.

Did you know?

Less than half of all surveyed first responder organisations provide information related to chemical, biological, radiological and nuclear incidents to the public – and only one in four provide information in more than one language!

This diversity and complexity made it more difficult for the research team to draw general conclusions from the Civil Society Advisory Board's feedback, compared to the Practitioner Stakeholder Advisory Board. Instead, it prompted the research team to explore new ways to effectively capture their needs and experiences.

During the research part of the PROACTIVE project, surveys were conducted with first responder practitioners. Out of 400 total participants, less than half (194) indicated that their organisation provided information related to chemical, biological, radiological and nuclear incidents to the public. And only one in four confirmed that their organisation provided this type of information material to the public in more than one language.

Overall, the survey found that practitioners rarely consider the needs of vulnerable groups in their communication strategies for major emergencies, and rarely provide information in additional language formats, e.g. Braille and sign language.

Innovations

Through focus groups and co-creative workshops, a Pre-Incident Public Information Material was developed within the PROACTIVE project, providing detailed step-by-step instructions for protecting oneself during the initial stages of CBRNe incidents.

Figure 13. The PROACTIVE Pre-Incident Public Information Material provides a detailed step-by-step guide for protecting oneself during the initial stages of CBRNe incidents. Find the material here: https://proactive-h2020.eu/wp-content/uploads/2023/06/PROACTIVE_Final-Pre-Incident-Information-Material_.pdf Source: Strömberg, D. (2024) Crisis Communication Challenges and Lessons Learned Engaging with the Vulnerable Civil Society – The PROACTIVE Project. The preparEU Pilot workshop, Stockholm, Sweden.

Field Exercises

As a part of the PROACTIVE project, field exercises were conducted across Europe, featuring role-playing volunteers to observe first responders and law enforcement officers in action. The exercises included scenarios simulating chemical threats in railway settings and biological and chemical threats in a university reception, with over 50 percent of volunteers representing vulnerable groups.

> "As a first responder, I am trained in 'saving lives', but not in communicating with vulnerable people. Yet, communication saves lives!" – First responder participating in the PROACTIVE field exercises.

A key takeaway from these exercises was the critical role of effective communication between responders and victims, which often lagged or lacked clarity, contributing to victim uncertainty. First responders who participated expressed that their training typically overlooks communication skills, highlighting the need for improved training and exercises involving interactions with diverse groups.

The PROACTIVE project and the field exercises thus highlight the importance of carrying out field exercises that includes testing tools and observing responder interactions, where the public, including vulnerable groups, participate as volunteer victims. Today, first respondents are only trained in – and therefore are only prepared for – dealing with non-disabled people. The project also highlights the necessity for follow-up focus groups to evaluate responder performance in identifying and interacting with individuals with various needs.

Aide Memoire for training practitioners

Based on insights and lessons learned from the exercises, an 'Aide Memoire' for training exercises involving vulnerable groups was developed.

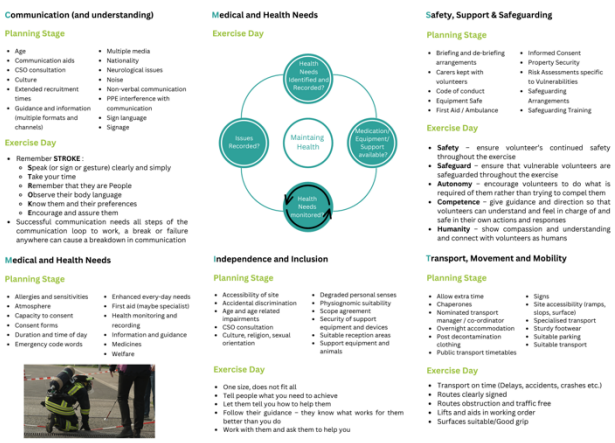

Figure 14. An 'Aide Memoire' for training exercises involving vulnerable groups was developed within the PROACTIVE project, based on insights from field exercises involving representatives vulnerable groups. Source: Strömberg, D. (2024) Crisis Communication Challenges and Lessons Learned Engaging with the Vulnerable Civil Society – The PROACTIVE Project. The preparEU Pilot workshop, Stockholm, Sweden.

The PROACTIVE project underscores the importance of education for first responders, specifically focusing on effective communication with individuals with diverse needs. Insufficient communication leads to reduced compliance, particularly among those with disabilities who require tailored communication.

To enhance compliance and trust, first responders, law enforcement officers and other practitioners must prioritise the delivery of accurate, timely, honest, and transparent information, especially in high-stakes incidents such as those involving chemical, biological, radiological, and nuclear hazards, where rapid action is crucial to prevent further contamination and ensure public safety.

3 Conclusions, Key Takeaways and Policy Recommendations

Drawing on both the theoretical groundwork laid in section 1, which underscored the dynamic and multifaceted nature of vulnerability, and section 2, which offered real-world experiences from frontline practitioners working with vulnerable populations, this final section attempts to distil and present essential insights from the preparEU Pilot Workshop.

In short, it underscores the importance of tailoring risk communication strategies to the diverse needs of vulnerable groups, engaging them meaningfully in the process, and fostering flexibility and creativity in communication approaches. It also synthesises policy recommendations spanning the local, national, EU, and global level to fortify risk and disaster preparedness efforts, emphasising the allocation of resources and the integration of vulnerable groups into all stages of risk management.

Essential Insights from The preparEU Pilot Workshop

Vulnerability is a fluid and dynamic phenomenon. Understanding and analysing it, therefore, requires a holistic approach, considering both the individual and societal level, as well as social factors such as age, ability, gender, race, ethnicity and socioeconomic status. This, in turn, means that anyone can, in principle, be vulnerable – it all depends on the disaster at hand and the context within which the disaster unfolds. Using an intersectional lens allows us to recognise and understand the unique vulnerabilities of different groups and individuals within society.

In order to engage and involve vulnerable groups, risk communicators must embrace diverse strategies, channels and approaches. Most important is to involve and empower stakeholders in the communication process – as early and as often as possible. Innovative communication strategies, such as leveraging micro-influencers within 'hard-to-reach' groups, are also essential for reaching and supporting vulnerable communities before, during and after crises.

Investing time and resources in translation, adaptation, and continuous updating of communication materials is also paramount to ensure equitable access to risk information for all. Universal design principles offer pathways to ensure accessibility and usability, facilitating the dissemination of critical risk information to all members of society, particularly those with specific needs.

By prioritising inclusive risk communication practices and understanding the diverse needs and perspectives of its target audiences, authorities can foster resilience and empower communities to navigate crises more effectively.

On the policy level, there is an urgent need to allocate both human and financial resources to involve and empower diverse stakeholder groups in risk communication processes and disaster risk reduction efforts. It is also important to foster and improve collaboration and coordination between countries as well as between authorities on the national level, compiling and circulating best practices in risk communication and disaster risk reduction, DRR. Finally, there is an urgent need to address information disorder in order to ensure the resilience of all individuals and communities.

Takeaways for Risk Communicators – How To Reach and Engage Vulnerable Groups

Risk communicators play a crucial role in supporting vulnerable groups before, during and after crises. In order to become even more efficient, risk communicators need to:

Understand the Target Group

- Involve and empower stakeholders early on in the communication process.
- Learn the groups' specific needs, attitudes, preferences and media habits.

Dare to be Creative

- Use multiple channels and approaches.
- Experiment with unconventional strategies like micro-influencers and multimodal approaches like picture cards.

Translate, Adapt and Update

- Translate, adapt and continuously update risk information.
- Make sure information is available in accessible formats – apply universal design principles.
- Find a balance between relevance, accuracy and appropriateness.
- Keep in mind different groups' literacy levels and preferred communication channels.
- Use inclusive and culturally sensitive language – language matters!

Policy Recommendations for Inclusive Disaster Risk Reduction

The following is an attempt to synthesise several projects' and initiatives' policy recommendations for fostering more inclusive risk communication and enhancing disaster risk reduction efforts, both on the local, national EU, and global level.

1. Allocate Resources for Stakeholder Engagement

- Dedicate financial and human resources to involve diverse stakeholder groups in risk communication processes, as well as in disaster risk reduction (DRR) policy making.
- Strengthen the capacity of young people, women, persons with disabilities and other vulnerable communities to actively contribute to DRR strategies, including risk communication efforts.

2. Mainstream Gender and Integrate Youth and Disability Perspectives.

- Systematically collect and utilise disaggregated data by age, sex, and disability to tailor DRR strategies and improve risk knowledge.
- Incorporate gender, youth, and disability perspectives in all risk communication processes to ensure inclusivity.
- Foster local solutions by collaborating closely with communities, aligning measures with their specific needs and preferences.

3. Ensure Inclusive and Accessible Risk Communication

- Develop partnerships with representative organisations, including youth and disability-led groups, to enhance coordination and leverage unique insights.
- Ensure all risk communication is accessible, and that critical information infrastructure meets diverse needs.

4. Enhance Crisis Communication Strategies

- Train government officials and first responders in effective and inclusive risk and crisis communication.
- Collaborate with intermediaries to communicate effectively with vulnerable groups.
- Utilise diverse channels and tools for risk communication, prioritising trust-building.

5. Combat Information Disorder

- Establish national and international collaboration networks to combat disinformation and misinformation.
- Proactively address information disorder by promoting media literacy through education and awareness campaigns.

6. Facilitate Best Practice Sharing and Collaboration

- Compile and circulate best practices in risk and crisis communication to help EU-member states adopt inclusive communication and DRR strategies.
- Assist EU-member states in adopting inclusive communication strategies.
- Establish Crisis Communication Collaboration Networks to foster collaboration and coordination.

Further Reading and Resources

This report is based on presentations from the preparEU Pilot Workshop subtitled 'Vulnerable Groups and Preparedness – Reaching Out and Engage', that was held in Stockholm on 19–20 March, 2024.

The purpose of the report is to highlight key insights and themes from the workshop, rather than to be a comprehensive summary. It therefore does not cover all presentations from the workshop, and interested readers might want to go beyond this report in order to deepen their understanding of the projects, initiatives and case studies presented during the workshop.

Below is the full two-day programme from the workshop, including names and titles of all presenters, and the titles of their presentations. Where available, links to presentations, project websites, publications and other resources are included.

Workshop Programme

DAY 1: 19 March, 2024

Presentation of the PreparEU Pilot-project
Christina Andersson, Swedish Civil Contingencies Agency, MSB, project manager and Project Management Group

Inclusion of Disability Perspectives in Municipal Crisis Planning
Arvid Lindén, Advisor on disability policy, The Swedish Agency for Participation
Malin Hardenberg, Advisor on disability policy, The Swedish Agency for Participation

The Swedish Agency for Participation website:
https://www.government.se/government-agencies/swedish-agency-for-participation--myndigheten-for-delaktighet/

Promoting Accessible Information for Different User Groups and Needs
Daniel Frelén, Strategic developer, The Swedish Agency for Accessible Media
Lisa Olsson Dahlquist, Strategic developer for research, The Swedish Agency for Accessible Media

The Swedish Agency for Accessible Media website: https://www.mtm.se/english/

BuildERS Project: Findings on Vulnerability, Risk Awareness, Risk and Crisis Communication
Claudia Morsut, Associate Professor in societal security University of Stavanger, Norway
Christian Kuran, Associate Professor in societal security University of Stavanger, Norway

The BuildERS project website: https://buildersproject.eu/

Reaching Migrant Groups – Experiences from Communication During the Covid-19 Pandemic 2020–2022
Charlott Nordstrøm, Senior Advisor, Directorate of Ministry of Health, Norway

Swedish Research Project: From Passive Recipients to Active Resources
Anna-Lisa Osvalder, professor in Human Factors Engineering, Chalmers University of Technology
Elin Stark, Speech and language pathologist, PhD student, Lund University and Chalmers University of Technology
Jonas Borell, Senior lecturer, Lund University

From Passive Recipients to Active Resource Project website:
https://research.chalmers.se/en/project/10489

DAY 2: 20 March, 2024

Engaging Stakeholders and Groups at Risk in the Implementation of the Sendai Framework for Disaster Risk Reduction 2015 – 2030 – Current Status, Gaps, Challenges and Opportunities
Milos Gubic, Associate Programme Officer, United Nations Office for Disaster Risk Reduction (UNDRR), Regional Office for Europe and Central Asia.

- The Sendai Framework (UNDRR website) https://www.undrr.org/implementing-sendai-framework/what-sendai-framework
- Youth Engagement Survey – Europe and Central Asia (2024) https://civil-protection-knowledge-network.europa.eu/news/survey-youth-engagement-drr-europe-and-central-asia-ddl-04022024
- Disaster Risk Reduction Policy Review – Europe and Central Asia (2023) https://www.undrr.org/report/rar-2023-europe-and-central-asia

The CORE Project: Peoples' Vulnerability Before, During and After a Disaster: The Dynamic Taxonomic Approach
Stefano Zanut, Italian National Fire and Rescue Service, INFRS
Monica Crisan, Licensed Social Worker and Head of Social Inclusion Unit, Italian Red Cross – Vicenza Branch

- The CORE Project website: https://thecorepro.com/
- The CORE Project's disaster scenarios analysis framework (including The Case Study Template): https://www.euproject-core.eu/images/deliverables/CORE-D2.1-Natural%20and%20man-made%20disaster%20scenarios%20analysis%20framework.pdf

The CORE Project: Human Centeredness Indicators for Disaster Management Plans and Operations
Gabriella Duca: Ph.D, EurErg Certified Ergonomist President Organization: Head of Human Factors Integration Lab Fondazione ISSNOVA Institute for Sustainable Society and Innovation, Italy

Why DRR Policies, Strategies and Actions Should be Completely Inclusive and Involve Meaningfully Persons with Disabilities
Nadia Hadad, Executive Committee Member EDF/ Co-Chair The European Network on Independent Living, ENIL

Crisis Communication Challenges and Lessons Learned Engaging with the Vulnerable Civil Society – The PROACTIVE Project
Daniel Strömberg, Coordinator, Umeå University, Sweden.

- The PROACTIVE project website https://proactive-h2020.eu/
- The PROACTIVE Pre-Incident Public Information Material https://proactive-h2020.eu/wp-content/uploads/2023/06/PROACTIVE_Final-Pre-Incident-Information-Material_.pdf

Psychosocial Intervention Plan in Belgium: Preparedness, Community Work and How we Take Care of Vulnerable Groups
Astrid Fortuin, Psychosocial Manager, Public Service of Public Health, responsible for the organisation and coordination of medical and psychosocial assistance in large-scale incidents, Belgium

Vulnerable Groups Rights in Times of Crisis: Experiences from Turkey
Nadire Ozdemir, Assoc. Prof. dr, Ankara University, Faculty of Law, Turkey

Participants at the two-day 'Vulnerable Groups and Preparedness – Reaching Out and Engage' preparEU Pilot workshop, held in Stockholm on March 19–20, 2024.

Swedish Civil Contingencies Agency

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