



SYNERGIES

Preparedness Cases Booklet

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SYNERGIES

Introduction

Welcome to the **SYNERGIES Preparedness Cases Booklet**. This booklet offers a practical overview of the SYNERGIES project's work, focusing on its three preparedness cases. It provides insights into the **information collected**, the **unique challenges and needs** each site faces in disaster management, and the current **state of the art in preparedness** at each location.

You will also find an introduction to the innovative results currently being developed, which will be tested in these sites. The goal is to equip communities, organisations, and decision-makers with tools and knowledge to strengthen preparedness and improve crisis response.

SYNERGIES is a European co-funded project (2023–2026) dedicated to fostering a culture of disaster preparedness.

With a **collaborative approach**, we engage first and second responders, citizens, civil society organisations, research and education systems, authorities, and our focus revolves around **five key preparedness needs**: involving all relevant actors, strengthening education and training, effective communication with citizens, managing spontaneous volunteers, and ensuring sustainable solutions.

SYNERGIES builds on the outcomes of six previous projects (ENGAGE, RESILOC, LINKS, IMPACT, BUILDERS, Ready2Help), coupled with a thorough analysis of current needs and best practices in preparedness as identified by end-users.

The project combines these outcomes and needs with existing state of the art research and practices, focusing on three specific aspects of preparedness: **citizen empowerment, communication** and **spontaneous volunteering**. Building on research stemming from previous EU-funded projects, SYNERGIES integrates findings and refines practices related to preparedness, and guides **three real-life Preparedness Cases in Réunion island, Malta and Rotterdam**.



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La Réunion

CONTEXT

Situated in a **cyclone-prone area** of the Indian Ocean, La Réunion is an island especially vulnerable to **significant damage and disruptions** caused by severe weather events. In fact, it faces **7 out of the 8** major natural risks defined by French Civil Protection: tropical cyclones, landslides, flooding, marine submersion, volcanic eruptions, forest fires, and earthquakes. **Cyclones**, in particular, occur in the Southwest Indian Ocean region **every year** and sometimes **affect the island directly** (the latest being Belat in Jan. 2024), **potentially triggering other hazards** (e.g., landslides, flooding).

Such events **threaten lives** and can heavily **impact the island's daily life**, infrastructure (power, communication, water, roads, food distribution), agriculture, and environment. As a result, local authorities **implement prevention, monitoring, and intervention measures** to mitigate risks and safeguard the population. The island's diverse population (comprising permanent residents and tourists) includes various at-risk groups whose vulnerabilities amplify the potential impacts of disasters.

VULNERABLE CATEGORIES

- Homeless;
- Elderly people;
- Communities isolated (e.g., Mafate) or at risk of isolation (e.g., Cilaos);
- Population without digital access;
- Pexs;
- People with social or financial difficulty;
- People with physical or mental disability (e.g., reduced mobility);
- People requiring medical equipment or assistance;
- People with language difficulties.

SELECTED HAZARDS

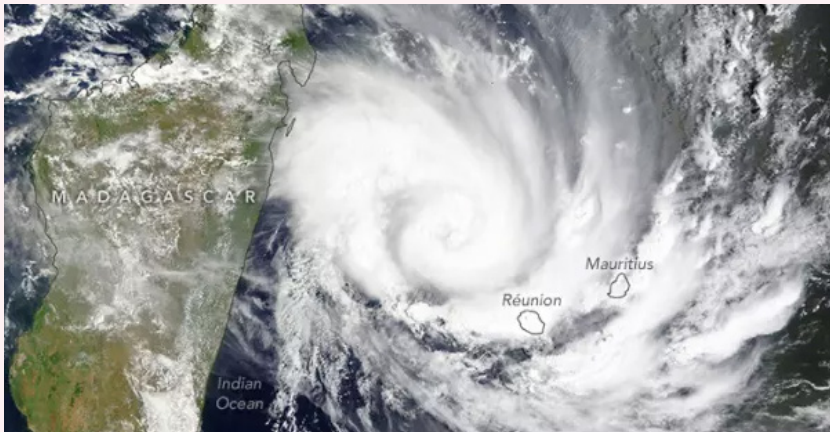


Tropical cyclones

POPULATION

885,700
Residents

Approximately



Réunion and Mauritius, islands in the southwest Indian Ocean, were lashed by a strong storm system in January 2024. Credit: NASA Earth Observatory. Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)

NEEDS AND CHALLENGES

01 Engaging the community

Engaging specific **vulnerable populations** presents unique challenges: the socio-economic context of La Réunion, characterised by **high unemployment and poverty**, exacerbates these vulnerabilities. To enhance community resilience, it's crucial to increase **awareness** and **knowledge** about risks among all age groups, from youth to adults. While cyclones are a significant threat to La Réunion, they also serve as a reminder of **the importance of preparedness** for all types of hazards. Cyclone preparedness not only strengthens resilience against these recurring mega-events but also improves **readiness for cascading risks** that often accompany them.

Furthermore, effective coordination among local authorities and stakeholders is essential. Although numerous events are organised each year, particularly before and after the cyclone season, achieving **meaningful involvement and engagement** of all stakeholders in a strategic approach remains a challenge.

Finally, fostering a **culture of risk awareness** among residents can further enhance community preparedness. Developing tools and resources in complement to those already available in the region to **educate and empower** residents can contribute to this goal identified by local stakeholders.

02 Disaster Preparedness Communication

Effective communication is crucial in disaster preparedness. However, challenges arise in reaching **specific demographics**, such as young people, young adults, and non-Francophone populations. To address these issues, detailed knowledge about existing successful disaster **communication solutions and tools** is helpful to inspire local developments and practices.

Strengthening collaboration between **official bodies and community stakeholders** can also enhance outreach efforts. For instance, local associations and social housing organisations can offer valuable insights into community communication needs and dynamics; such organisations might partner with the project to test results.

Another critical component is managing the flow of **"upstream" information** originating from the population and directed to authorities (requests for assistance, incident reporting during crises, etc.). Tools are needed both to **keep residents informed** about ongoing risks and to ensure that **their feedback reaches decision-makers**. However, managing and validating this influx of information remains a complex challenge. Recent local development projects aim at addressing this aspect.

03 Engaging Spontaneous Volunteers

The surge of spontaneous volunteers during crises presents both **opportunities** and **challenges**. Issues such as accountability, traceability of actions, effective communication, and a lack of qualification among volunteers can hinder efforts. To maximise the positive impact of these spontaneous contributions from the population, it is crucial to establish mechanisms that **support and coordinate** their efforts. These mechanisms should include, for instance:

- **Roles and responsibilities:** identifying organisations and roles in charge of on-boarding and coordinating spontaneous helpers.
- **Resource provision:** providing volunteers with essential resources to accomplish their tasks, such as equipment, supplies, and training.
- **Supporting community self-help:** empowering communities to organise and support their own recovery efforts while clearly outlining the scope of volunteer activities to avoid duplication and ensure safety.

By addressing these challenges and implementing these strategies, the power of spontaneous volunteers can be harnessed to enhance **disaster response and recovery efforts**.

Malta

CONTEXT

Malta is a small island nation, popular tourist destination and has seen a significant influx of Third Party Nationals in recent years, exceeding 150,000 in the last decade. This rapid demographic change has presented **challenges**, including **language barriers** and increased **strain on resources**. The island is vulnerable to earthquakes, and while the seismic risk is considered low, the potential consequences of a significant earthquake could be severe. Modern buildings, particularly those constructed without building codes are at **greater risk of collapse**. In the event of a major earthquake, a **significant portion of the population**, estimated to be at least 75% within the first six hours, could be affected. Vulnerable groups, including the elderly, people in institutions, children, individuals with special needs, tourists, foreign workers, and Third Party Nationals, may be particularly at risk.

VULNERABLE CATEGORIES

- Elderly
- Children
- People with special needs
- Tourists
- Foreign workers
- Third Party Nationals: a great influx (over 150,000 in the last ten years) of Third Party Nationals present challenges and rapid demographic change and language barrier.

SELECTED HAZARDS



Earthquake and consequent building collapse

POPULATION

553,214
Inhabitants

Approximately



Malta seen from above. Credits: Reġjun Tramuntana

NEEDS AND CHALLENGES

01 Engaging the community

Empowering citizens in crisis response is increasingly recognised as essential, yet several challenges hinder its implementation in Malta. A key issue is the **shortage of volunteers**, driven by **limited awareness of opportunities** and a **lack of structured coordination**. The Civil Protection Department, traditionally responsible for incident management, currently lacks mechanisms to safely integrate both organised and ad hoc volunteers into response operations. To address this, developing **multi-agency structures** is vital to **clarify roles**, **identify stakeholders**, and **establish effective coordination frameworks** among the CPD, NGOs, and community groups. Structured post-incident debriefing is also crucial to highlight interoperability challenges and improve collaboration.

Another major gap is the **absence of social mapping**, particularly for foreigners and third-country nationals who are often disconnected from administrative systems. **Identifying community leaders** and **fostering engagement** with these groups would unlock their potential as valuable crisis response assets.

Addressing these challenges through volunteer recruitment, improved coordination, and inclusive community engagement can significantly enhance Malta's **resilience** and **crisis response capabilities**.

02 Disaster Preparedness Communication

Malta's current system for alerting the public heavily relies on **digital channels**, leaving the population **vulnerable** in the event of utility disruptions. To enhance resilience and public trust, it is imperative to **diversify communication channels**. By establishing both high- and low-tech communication methods, authorities can ensure that critical information reaches the public reliably, even during crises.

Prompt and decisive action from authorities is crucial to effectively guide public response. **Transparent and timely messaging**, coupled with diverse communication channels, would foster **public trust and compliance**. This integrated approach would significantly improve Malta's capacity to respond effectively to emergencies and protect its citizens.

03 Engaging Spontaneous Volunteers

Spontaneous volunteers are a **valuable resource** during emergencies in Malta, but their effectiveness is often **limited** by a lack of coordination. To fully harness their potential, civil protection authorities need to establish **clear communication channels** and **well-defined roles** for both ad hoc and organised volunteers. Over reliance on mobile phones poses risks, as network disruptions can lead to communication breakdowns and disorganisation.

Structured protocols for volunteer training, **preparation**, and **integration** are essential to ensure their support is optimised. Clear role definitions and expectations can help prevent **redundancies**, **miscommunication**, and **unintended actions** that may overlap with other response efforts.

By addressing these challenges, Malta can better organise spontaneous volunteers, enhance coordination, and improve its overall emergency response capabilities.

Rotterdam

CONTEXT

Rotterdam, a major port city in the Netherlands, has seen significant **demographic changes**, with an increasing immigrant population. This diversity brings challenges, such as **language barriers** and **varying levels of cultural awareness**. Although the city has a relatively low risk of flooding, the complexity of **cascading hazards** underscores other significant threats, such as chemical incidents. When chemical incidents result from flooding, the situation becomes particularly **dangerous**, as the safety protocols for these hazards **conflict**: flooding typically requires evacuation, while chemical incidents necessitate sheltering indoors.

The Rozenburg district, home to 12,000 residents, has an **aging population**, with many over 45 and around 3,000 aged 65 or older. This, combined with potential language barriers, increases the **community's vulnerability** in emergencies. While first responders are well-prepared for emergencies, preparedness of citizens is less emphasised. Fire prevention teams provide advice and guidance to help citizens prepare for fire, but **readiness for large scale cascading events remains a challenge**. The district's limited escape routes and the impact on surrounding areas, including hospitals and shelters, could worsen the situation during an emergency.

VULNERABLE CATEGORIES

- Hospitals and nursing homes
- Shopkeepers
- Civilians, especially the elderly and those with language barriers

SELECTED HAZARDS



Flooding and related events, like chemical spills releasing toxic gases

POPULATION

655,468
Inhabitants

Approximately



Rozenburg district, located in close proximity to the harbor industry, highlighting its unique challenges. Credits: Openbaar Lichaam Gezamenlijke Brandweer

NEEDS AND CHALLENGES

01 Engaging the community

To enhance community resilience and empower citizens, a **multi-faceted approach** must be implemented. **Increasing civil participation** requires **identifying the diverse needs and vulnerabilities** within the community, **engaging informal leaders** such as religious figures and neighborhood associations to improve communication, and **promoting local initiatives** to foster a sense of responsibility, preparedness and ownership.

During the cold phase of crisis management, **raising awareness** is critical. Communication strategies should be **tailored to diverse populations**, including those with limited (digital) literacy or language barriers, through the development of **clear and accessible information materials**. Citizens need actionable information, including specific steps to take in emergencies.

Moreover, **regular drills and exercises** should be organised to ensure the community practices emergency responses for scenarios like floods or chemical incidents. Establishing a robust **legal framework and liability coverage** for spontaneous volunteers is essential to enhance resilience. **Clear regulations and training** can ensure the safe and effective integration of citizen volunteers into emergency responses, **protecting their well-being** and **encouraging wider participation** while reducing risks for all involved.

02 Disaster Preparedness Communication

To ensure the safety and well-being of all Rotterdam residents during a crisis, **effective communication** is essential, particularly in addressing public awareness, information access, and the diverse needs of the community before disasters occur. Raising awareness of potential risks requires **clear, actionable, and high-quality information** to empower the population to make informed decisions and take protective measures. **Overcoming the digital divide** is crucial, ensuring that information reaches all persons, regardless of age or technological literacy. This can be achieved through a **range of communication channels**, including traditional media, social media, SMS alerts, and community outreach programs.

Additionally, given Rotterdam's cultural diversity, **tailoring messages** to different cultural groups and language preferences will improve understanding and compliance with safety measures. Bridging communication gaps with **visual aids, simplified language**, and **multilingual content** will ensure that all segments of the population are effectively reached.

03 Engaging Spontaneous Volunteers

Spontaneous volunteers (SVs) in the Rotterdam area, while highly motivated, **often operate in a self-organised manner**. In the Rotterdam context, (spontaneous) volunteers are largely delegated by the safety region to the Red Cross; the Ready2Help system helps with the registration process of volunteers.

While (spontaneous) volunteers are already an **active part of crisis management**, the process can still be improved. **Fostering a sense of ambassadorship** among volunteer leaders can empower them to mobilise and coordinate their peers. By **understanding the various formal and informal volunteer efforts** underway during a crisis, authorities can better **integrate** SVs into the response, ensuring that they complement rather than hinder the work of first responders.

SYNERGIES Results

The SYNERGIES project is dedicated to enhancing disaster preparedness through innovative tools and strategies. Building on insights from past projects and real-world feedback, we are developing seven key results designed to address critical aspects of disaster preparedness. Tested in our three Preparedness Cases, these results focus on citizen empowerment, communication and spontaneous volunteering.

01 - ENGAGING THE COMMUNITY



Navigable Atlas of Best Practices and guidance material for citizen empowerment

This navigable platform provides tools, solutions, lessons learned, guidance material, good practices, and ethical guidelines for citizen engagement.

TARGET USERS

Formal leaders (e.g., authorities, first responders, social workers) and informal leaders (e.g., CSOs, NGOs, organised volunteers).



Roadmap and training modules

The roadmap defines capacity-building strategies to improve preparedness. Training modules build related skills and capacities based on roadmap requirements.

TARGET USERS

Community leaders in disaster risk management (e.g., local authorities, first responders, social workers) and educators.



Self Assessment preparedness tool

It helps identify actions to enhance preparedness by assessing vulnerabilities, affected groups, and resilience-strengthening factors.

TARGET USERS

Formal and informal leaders in disaster risk management who aim to enhance community preparedness.

02 - DISASTER PREPAREDNESS COMMUNICATION



Early Warning Tool

This tool designs audience-tailored early warning messages using keywords.

TARGET USERS

Disaster management authorities.



Knowledge Base for Innovative Channels and Communication

This repository provides resources and guidance for authorities to engage citizens through innovative communication strategies during the preparedness phase.

TARGET USERS

Disaster management authorities and crisis managers.

03 - ENGAGING SPONTANEOUS VOLUNTEERS



Table top game on role of spontaneous volunteers

This simulation game trains authorities in managing organised and spontaneous volunteers during disasters.

TARGET USERS

Disaster risk management authorities responsible for volunteer management.



Support System for integrating Spontaneous volunteers in preparedness plans

This system offers best practices, lessons learned, and guidance for managing spontaneous volunteers during crises, tailored to different actors involved.

TARGET USERS

Organisations responsible for preparedness plans and volunteer management.



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