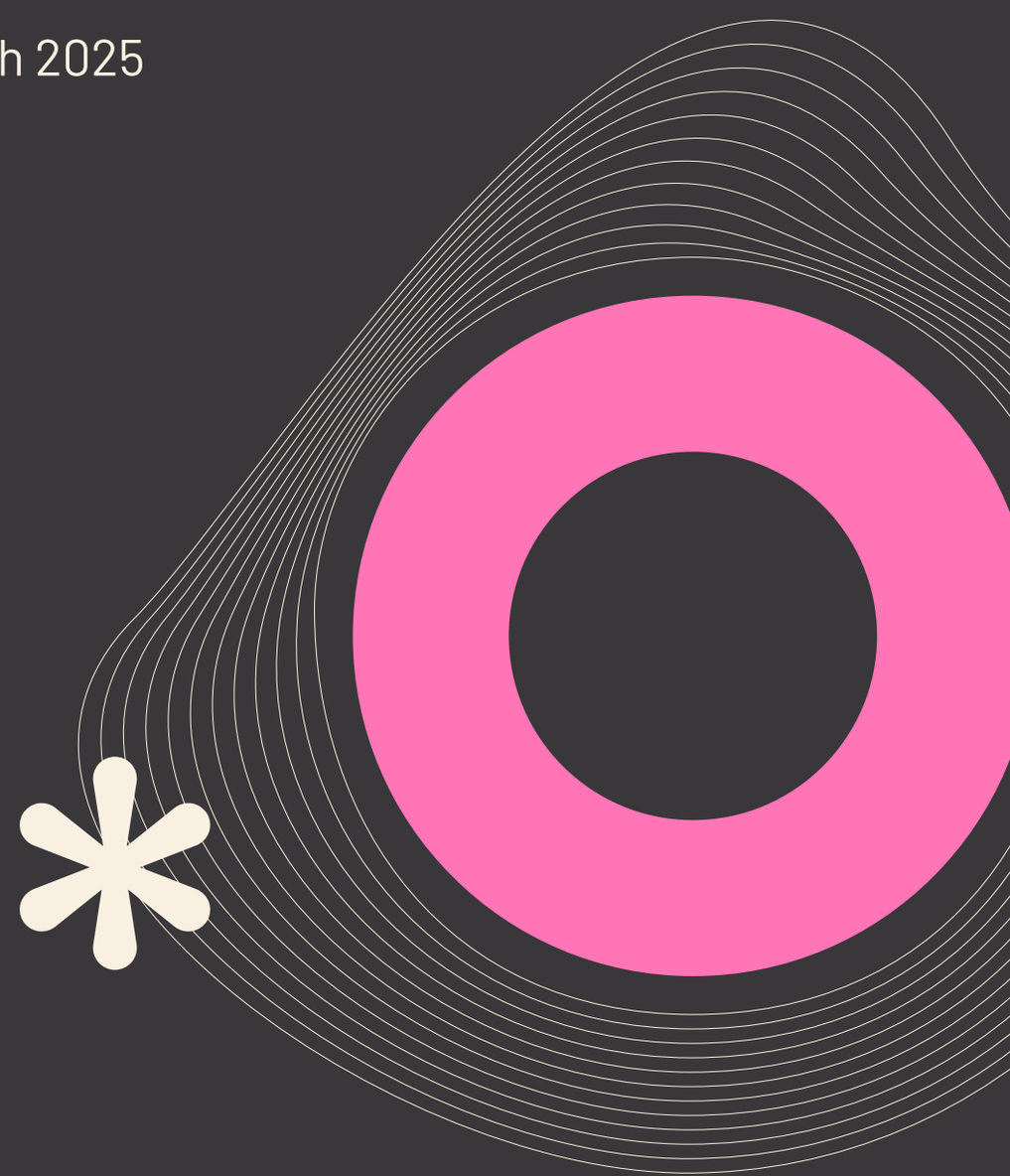
RESILIAGE
Revolutionising
community resilience

POLICY GAPS IN THE CORE LABS OF RESILIAGE

5th Edition - 15th March 2025



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INTRODUCTION

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

The project is led by Politecnico di Torino and involves 18 partners from 10 countries, including first responders, policymakers, citizen associations, and heritage organisations. Through its **five CORE Labs** (COmmunity REsilience Labs) established in 5 different countries - **Famenne-Ardenne (B), Crete (GR), Naturtejo (PT), Trondheim (NO), and Karsiyaka (TR)**-, RESILIAGE uses a **Sy**stemic **R**esilience **I**nnovation (**SyRI**) framework to analyse governance, social interaction, and other critical factors. This framework identifies and improves practices that strengthen community resilience, using cultural heritage in disaster risk management and climate change adaptation. In addition, each CORE Lab specialises in a specific governance scale, including city district, municipality, municipality network, regional, and cross-regional.

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

CONTENT

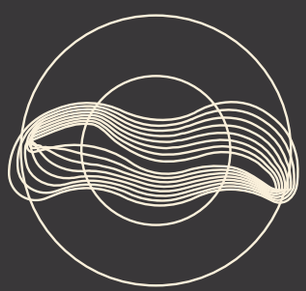
The **Booklet #5: Policy Gaps in the CORE Labs of RESILIAGE,** presents key findings from the analysis of disaster preparedness plans within the CORE Labs of RESILIAGE. The review focused on **identifying policy gaps, evaluating preparedness strategies, and highlighting challenges faced** by the CORE Labs in Famenne-Ardenne, Crete, Naturtejo, Trondheim, and Karsiyaka. The objective is to support the development of more **effective preparedness plan guidelines** that integrate diverse disaster perspectives, local contexts and multi-hazard scenarios.

A structured Analysis Framework was developed to evaluate each CORE Lab's preparedness plans. The assessment included a **literature review of policy documents** at national, regional, and city levels, **interviews with CORE Lab** partners, **workshops with stakeholders** such as experts, citizens, first responders, and public authorities, and **field studies** focusing on cultural heritage, local needs, and institutional environments.

However, the literature review identified several key gaps and obstacles in disaster preparedness planning across the CORE Labs. **Limited citizen involvement** was observed, with minimal participation of residents in the planning stages of disaster risk management plans. There was a **lack of awareness and training,** with insufficient education and proactive measures leading to inefficient disaster response. Additionally, **community engagement during preparedness, response and recovery phases** was weak, reducing overall resilience. Coordination issues emerged from **ambiguous agency roles and redundant assignments,** causing inefficiencies during responses. Moreover, **funding constraints** limited investment in preparedness activities, infrastructure resilience and emergency capabilities. The literature review also found **weak partnerships between governmental agencies and NGOs,** creating gaps in aid distribution and resource management. **Cultural heritage protection was overlooked,** with no involvement of heritage experts in disaster risk management processes.

Barriers in policy implementation were also highlighted. **Language barriers** created difficulties in accessing local policies. There was also a **discrepancy between policy and practice,** where some institutions demonstrated effective practices despite inadequate policies, while others failed in implementation despite having well-drafted plans.

In the following pages we will focus on identifying gaps and strengths across key areas to inform more effective disaster preparedness and response strategies within the RESILIAGE project.



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Famenne - Ardenne
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GAPS AND OPPORTUNITIES IN DISASTER MANAGEMENT IN FAMENNE-ARDENNE

The emergency management system in Belgium is well-defined at the municipal, provincial and federal levels. Starting at the federal phase, 3 bodies are activated within the National Crisis centre: an evaluation and assessment, a coordination and an information cell.

At the operational level, each emergency is handled by intervention services. Their tasks are divided into **5 so-called discipline**s (sectors) within a command post. **Relief operations; medical; sanitary and psychological services; police; logistical support and information to citizens** (discipline 5).

Institutional and administrative framework

There is a **lack of clear integration and harmonisation** between the levels of government, particularly when transitioning from provincial to federal phases. The roles and responsibilities across different levels may overlap, leading to **potential delays in decision-making during a crisis.** Cooperation and coordination challenges negatively impact disaster response efficiency and effective response to disasters. Institutions and first responders (FRs) conduct different periodic exercises, but the **lack of coordination** makes it difficult for stakeholders to stay updated on procedures and checklists. A major shortcoming is the **absence of mechanisms for civil involvement** in the preparedness planning phase.

Financing and resources

The **absence of a specific budget allocation for risk management** across different levels of government and relevant actors poses a significant challenge. Limited financial resources pose a **challenge for risk management obligations** particularly in underfunded municipalities and regions.

Multi-hazard risk assessment

While detailed analyses exist for many hazard types at the national level, **only flood risks have been extensively assessed within the region,** creating a gap in comprehensive risk assessment for other hazards. The Flood Risk Management Plan for Wallonia **lacks detailed statistical and GIS-based data,** limiting the precision of risk mitigation strategies. There is no integrated approach to address vulnerabilities across other regions or for hazards beyond floods (e.g., limited data on refugee populations and their disaster risk exposure).

Critical infrastructure and environmental protection

There are **no references to additional energy or water resources planning** during emergencies although critical infrastructure is defined and relevant institutions (public or private) have effective communication with the government. It is also stated that **old infrastructures and buildings** do not comply with latest regulations. Environmental protection is also not part of the risk management plans. The cities within the region have an adaptation plan covering the environmental issues but there is **no link or references with risk management plans.**

Building regulations and land use planning

Wallonia has taken **steps to integrate sustainable development** into post-disaster rebuilding, zoning plans taking into consideration the disaster risks for Wallonia have been prepared. There is **no reference to nationwide building regulations.** The lack of technical capacity and expertise among local officials complicates the effective implementation of building control mechanisms.

Heritage as a driver

There is a notable **absence of comprehensive plans to protect tangible cultural** heritage in disaster risk management. While CORTEX has an online tool for recording flood impacts, **the preservation of cultural heritage,** both tangible and intangible, requires **more focused attention** and integration into broader risk management strategies.

Training, education and public awareness

While Belgium has established training and education programmes for emergency management, there is a **need for more cross-sectoral and multi-hazard training exercises.** Additionally, public awareness campaigns, although present, are not widespread or impactful enough, to effectively inform citizens about hazards and individual preparedness measures. The materials within national platforms are informative for citizens and can be found in different languages but the **extent of public awareness and engagement remains questionable.**

Effective preparedness, early warning and response

There is a need for **continuous improvement in the technology and channels used to disseminate alerts** to ensure broader coverage and more reliable communication. The **BE-Alert system,** despite its wide implementation, faces **challenges in public awareness** and participation.

Recovery and rebuilding

The recovery and rebuilding processes, while structured, **lack a dedicated budget** for risk management, which can delay the implementation of necessary measures post-disaster. Moreover, the **learning process** following crises needs to be **more systematically integrated** into the planning and updating of emergency management strategies to ensure continuous improvement. The online tool for floods within **CORTEX can be a good example** for other disasters as well. It is also stated by stakeholders that there are **not sufficient aid or financial incentives** for businesses and citizens.

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GAPS AND OPPORTUNITIES IN DISASTER MANAGEMENT IN CRETE

The disaster management framework in Crete falls under broader national policies established by the Greek government. The General Secretariat for Civil Protection, under the Ministry of Climate Crisis and Civil Protection, holds primary responsibility for disaster prevention and mitigation. This centralized approach ensures consistency in disaster risk reduction (DRR) across Greek regions, including Crete.

Institutional and administrative framework

The National Disaster Management Mechanism, provides a **comprehensive framework** that covers **all aspects of disaster management,** from planning and preparation to immediate response and rehabilitation. The document defines the roles of central and local authorities, outlining coordination, communication, and logistics strategies. Despite comprehensive national policies and documentation, **shortcomings exist in resource evaluation and unclear cooperation mechanisms** at the local level, which hinder effective disaster response.

Financing and resources

The **financial documentation lacks detailed information** regarding funding mechanisms available for disaster management in Crete. Alternative financing mechanisms for risk reduction are scarce. **Financial resources for risk reduction are insufficient,** limiting the implementation of disaster resilience measures.

Multi-hazard risk assessment

The detailed **risk assessments are outdated** and require revisions. The risk and vulnerability assessments **identify key vulnerabilities** within the adaptation plan, such as: socio-demographic factors (population distribution and vulnerable groups), impacts on buildings and infrastructure, cultural heritage considerations.

Certain vulnerabilities like socio-demography of the population, buildings and infrastructures to be affected, cultural heritage is identified within the risk and vulnerability assessment and adaptation plan. The assessment considers agriculture, forestry, biodiversity, and fisheries, but **does not include references to vulnerable groups** such as the elderly and disabled at the national or regional level.

Critical infrastructure and environmental protection

The Greek Anti-Seismic Regulation and other building codes aim to protect infrastructure from earthquakes. However, there is **no information on enforcement** or updates regarding these regulations in Crete. Older infrastructure remains vulnerable, highlighting a need for reinforcement and modernization.

The Special Adaptation Plan to Climate Change fine-tunes national climate adaptation policies at the regional level.

However, **disaster risk management plans are not integrated with climate adaptation strategies,** causing missed opportunities to leverage ecosystems in disaster management.

Building regulations and land use planning

The Revised Regional Spatial Framework from 2017, defines spatial planning guidelines for Crete and outlines expansion policies for residential areas, cities, and villages, along with land use restrictions. The **restrictions prohibit construction in seismically vulnerable** and flood-prone areas, but enforcement and implementation mechanisms remain unclear.

Heritage as a driver

The protection of cultural heritage is overseen by the Ministry of Culture and Sports, with a focus on **safeguarding monuments and sites from disasters.** A key role in policy-making for cultural heritage protection and in the approval of major interventions at monuments, sites and state museums is played by three collective bodies of the Ministry of Culture and Sports: Central Archaeological Council, Central Council of Recent Monuments and Council of Museums.

However, **disaster management plans do not explicitly address cultural heritage** protection in Crete. Given Crete's rich historical and cultural assets, there is a strong need for dedicated disaster preparedness strategies that involve heritage experts.

Training, education and public awareness

The Academy of Civil Protection (A.PO.P.) is a **newly established institution** providing training on crisis management. The framework follows the "Prevention, Preparation-Readiness, Resilience" approach, **aligning with national policies.** In addition, special emphasis is placed on prevention, which is an effective long-term tool for reducing the risk of natural disasters and protecting society against them. **Brochures and guides exist for people with disabilities,** outlining disaster response measures.

Effective preparedness, early warning and response

The **national early warning system** represents a **major improvement,** but its adaptation to Crete remains unclear. Ensuring that the early warning system is fully operational with localised alerts and tailored responses is crucial.

Recovery and rebuilding

Safety and health concerns remain significant challenges post-disaster, with unclear governance structures affecting response efforts. A dedicated State Aid webpage provides recovery information for disaster-affected individuals. However, **local businesses face difficulties** accessing information and navigating bureaucratic processes.

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GAPS AND OPPORTUNITIES IN DISASTER MANAGEMENT IN NATURTEJO

The **National Authority for Emergency and Civil Protection** (ANEPC) operates in mainland Portugal with the **mission to plan, coordinate and implement emergency and civil protection policies.** Its responsibilities include coordinating civil protection agents, managing emergency planning at all levels and ensuring international cooperation in civil protection policies.

The **National Civil Protection Emergency Plan** (PNEPC) is directly linked to Regional and District Civil Protection Emergency Plans and indirectly to Municipal Civil Protection Emergency Plans. These plans define responsibilities, organisational methods, operational frameworks, and resource mobilisation strategies to ensure effective emergency management.

Institutional and administrative framework

While ANEPC's regional and sub-regional structures are well-defined, detailed **information on local civil protection units' effectiveness,** particularly at the parish level, **is lacking.** Civil involvement in planning and public awareness about drills remains a shortcoming.

Despite a well-structured National Civil Emergency Planning System, there are **gaps in understanding** how well municipalities integrate into this system and how efficiently they make decisions during crises.

Stakeholders highlight a **lack of coordination in resource management,** including financial, material, and human resources.

Communication between emergency services and citizens needs improvement, requiring tailored strategies for different population groups.

Financing and resources

There is an **absence of creating funding mechanisms** for disaster resilience. This financial gap could hinder the effective implementation of risk management obligations, particularly in underfunded municipalities or regions.

Multi-hazard risk assessment

Local governments' emergency plans include detailed risk assessments. However, there is a **significant gap in disaster prevention measures,** particularly for forest fires. Local governments maintain a Municipal Forest Defense Plan Against Fires alongside Emergency Plans, but these **plans lack preventive activities,** except for the "Safe Village, Safe People" programme.

Critical infrastructure and environmental protection

Most critical infrastructures are owned and operated by the private sector, but there is **insufficient information on public-private collaboration** for resilience. High dependency on electricity and communication systems poses a risk to disaster response effectiveness. No references exist to additional energy or water resource planning during emergencies.

The **omission of environmental protection** within the scope of municipal emergency planning is a **notable gap.** There could be stronger integration of climate adaptation plans and other environmental protection legislation with emergency planning.

Building regulations and land use planning

Land use planning policies focus on public safety, but **their effectiveness and enforcement remain unclear.** No control mechanisms ensure the implementation of regulations.

Heritage as a driver

Cultural and natural heritage is absent from emergency plans, preventing heritage experts from participating in disaster risk management (DRM) processes. Traditional knowledge on forest and village maintenance is **not being passed down to younger generations,** leading to the loss of effective local resilience practices.

Training, education and public awareness

Guidance documents and manuals exist, but **their usage and effectiveness remain uncertain** at the local level. There is limited information on training programmes aimed at increasing public awareness. **Training needs and drill** planning are **rarely referenced in emergency plans.**

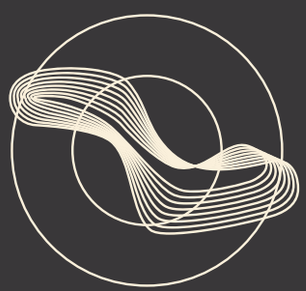
National-level brochures and emergency materials exist in multiple languages, particularly for tourists, but these **resources are insufficient at the parish level.**

Effective preparedness, early warning and response

Gaps exist in communication during the response phase. Timely updates and improved public information dissemination are needed.

Recovery and rebuilding

Guidelines exist for the establishment and management of Population Concentration and Support Zones, but **more clarity is needed** on their implementation and effectiveness at the local level. There are **no clear references to relief efforts** targeting affected citizens' needs.



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GAPS AND OPPORTUNITIES IN DISASTER MANAGEMENT IN TRONDHEIM

Municipalities play a key role in the implementation of disaster risk reduction, as they are responsible for societal planning, land use planning, and critical infrastructure development. They also **coordinate disaster prevention** efforts across sectors and oversee local preparedness planning.

The foundation of civil protection at the **municipal level lies in awareness and knowledge** of risks and vulnerabilities. A holistic risk and vulnerability assessment guides targeted efforts to reduce risk, enhance preparedness, and improve emergency response capabilities.

Institutional and administrative framework

The Norwegian Directorate for Civil Protection (DSB) reports to the Ministry of Justice and Emergency Preparedness and maintains an overview of various risks and vulnerabilities across local, regional, and national levels.

Municipalities are **responsible for safeguarding local populations,** conducting risk and vulnerability analyses, and establishing cooperative platforms for social security work.

Security and Emergency Preparedness authorities **recommend municipal emergency councils** and many municipalities already have one. Emergency plans at the municipal level must be coordinated with other relevant actors, such as security and defense organisations, healthcare agencies and emergency services.

The Trondheim preparedness plan **clearly identifies responsible bodies** and organisational capabilities. The Crisis Management System (CIM) is used in Trondheim to enhance emergency response coordination.

Financing and resources

The municipality must document its adapted social security and preparedness measures in the annual budget. **Activities are financed** by DSB and other relevant institutions.

Multi-hazard risk assessment

DSB published a new edition of Analyses of Crisis Scenarios (ACS) in 2019, containing 25 risk assessments of potential serious adverse events in Norway. ACS assessments take a social science approach, using qualitative data, expert evaluations and broad stakeholder participation.

Some analyses, particularly those related to natural disasters, incorporate **technical and quantitative data for risk calculations.** Municipalities must conduct comprehensive risk and vulnerability analyses, mapping and assessing the **probability of different unwanted events** and their **impact** on the community.

Critical infrastructure and environmental protection

The Norwegian Water Resources and Energy Directorate (NVE) oversees the national flood, **landslide** and avalanche warning system. Regional warnings are issued by NVE, but **local authorities must monitor high-risk areas** such as valley slopes and avalanche channels. In case of flooding, landslides or avalanches, there are a number of **emergency response authorities** that collaborate their efforts.

Building regulations and land use planning

Under the Planning and Building Act, safety provisions are mandatory in all urban planning. Land use planning requires risk and vulnerability assessments. The Act enables zoning areas requiring special attention due to risk. Technical regulations (TEK17) set safety standards for floods and landslides.

Municipalities **oversee land use planning,** ensuring that new constructions comply with flood, landslide and avalanche safety standards. Developers must **conduct hazard studies** before any construction.

Trondheim's Climate Change Adaptation Plan includes **consideration of climate risks** by the Building Affairs Office Sustainable construction frameworks.

Heritage as a driver

The Cultural Heritage Act provides strong **legal protection for heritage sites.** Trondheim has a Cultural Heritage Plan (2013-2025). A municipal cultural heritage map **highlights protected sites** to increase public awareness.

Trondheim's Climate Change Adaptation Plan includes cultural heritage inventories, risk assessments and maintenance strategies. However, the Municipal Emergency Plan **does not reference cultural heritage protection.**

Training, education and public awareness

Regulations mandate that municipalities maintain **training programmes** for crisis management personnel. Employees assigned crisis management roles must receive **adequate training** in order to be compliant to be able to have a role in DRM. There are **no references to public awareness campaigns** in the municipal emergency plan.

Effective preparedness, early warning and response

The Norwegian Meteorological Institute (MET) issues an **extreme weather warnin**g when it is likely that the weather will cause extensive damage or a risk to life and property in an area, such as a region, county or a large part of a county.

Recovery and rebuilding

There are **guides to prepare contingency plans** for schools especially kindergartens, health and welfare, food and water supply within the preparedness plan of Trondheim.

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GAPS AND OPPORTUNITIES IN DISASTER MANAGEMENT IN KARSIYAKA

In İzmir Province, the Provincial Disaster Response Plan (TAMP) is prepared under the Presidency of the Provincial Governor, coordinated by AFAD Provincial Directorate, with contributions from various institutions and organisations. TAMP is developed within the framework of the **Disaster and Emergency Response Services Regulation** and outlines pre-disaster, during, and post-disaster response planning at the provincial level.

The plan includes "Local Level Working Group Operation Plans" to define the roles and responsibilities of stakeholders involved in disaster response and emergency coordination.

Another **key component** of disaster preparedness in the city is the **Provincial Risk Mitigation Plan** (IRAP) that includes risk assessments and hazard scenarios, SWOT Analyses for each hazard, mitigation actions and responsibilities assigned.

However, response teams appear to be **predominantly composed of central government entities,** with **limited local-level** engagement.

Institutional and administrative framework

While the institutional structure is clearly defined, there is a **lack of clarity in coordination** between **national and local authorities** during disasters. Stakeholder roles are not explicitly detailed, leading to potential inefficiencies in response efforts.

Some personnel serve in **multiple commissions,** which can hinder effective collaboration. Protocols for power delegation and coordination mechanisms are unclear or insufficient.

Financing and resources

No specific budget is allocated for **disaster management,** with financial planning relying on estimations and departmental budgets. The absence of a dedicated disaster fund creates **uncertainty in resource availability** during emergencies. **Limited incentives and aid programmes** for disaster risk reduction hinder proactive preparedness efforts.

Multi-hazard risk assessment

There are a **various number of hazards** assessed but **heatwaves are notably absent** from the national disaster management framework. Hazard analyses are conducted at a broad scale, with insufficient district- or neighbourhood-level assessments.

Although local studies on heatwaves exist, they are **not integrated into the broader disaster management** framework. Disaster plans include provisions for people with disabilities and those requiring medical assistance at home, but other **vulnerable groups** (e.g., children, the elderly, and immigrants) are **not adequately addressed.**

Critical infrastructure and environmental protection

Critical infrastructure mitigation focuses on earthquakes, floods and fires, with **no consideration for heatwaves** and other hazards.

Older infrastructure and buildings do not meet modern safety regulations, increasing vulnerabilities.

TAMP and IRAP do **not reference environmental protection,** despite İzmir having a Climate Adaptation Plan. Environmental considerations are not integrated into disaster preparedness and response frameworks. **Limited awareness** exists regarding the role of ecosystems in disaster risk reduction.

Building regulations and land use planning

Disaster-prone area rehabilitation efforts are ongoing, but their effectiveness and integration into broader risk reduction strategies are unclear. Micro-zoning studies initiated after recent earthquakes are nearing completion, yet **local expertise and capacity remain insufficient.** Public consultation processes for disaster risk measures are limited, reducing community engagement.

Heritage as a driver

Cultural heritage protection is included, but a comprehensive approach covering both tangible and intangible assets is lacking. Collaboration with **heritage experts** on disaster-related planning **remains minimal.**

Training, education and public awareness

Training initiatives focus on first responders and personnel, but **public awareness campaigns and volunteer training remain insufficient.** Limited public knowledge about heatwave risks is a significant gap.

Risk and crisis awareness within communities is **low, particularly for heatwaves.** Even first responders lack adequate guidance on heatwave preparedness and response.

Effective preparedness, early warning and response

Early warning systems exist for earthquakes and meteorological events, but their effectiveness across **all hazards is not fully assessed.** Integration and regular testing of early warning systems remain insufficient.

Recovery and rebuilding

Recovery and rebuilding efforts involve assembly areas and urban transformation projects, yet **alignment with energy efficiency goals** and modern building codes is **inconsistent.**

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