

D2.3

Indicators for Systemic Community Resilience Assessment and Monitoring

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Table of Contents

1. Executive Summary.....	6
2. Introduction.....	7
3. Methodology.....	10
3.1. Description of workflow.....	10
3.2. Description of operationalisation procedure & delineation	12
3.3. Description of capital dimensions and their relationship to the SyRI framework ...	14
3.3.1. Cultural Resilience.....	15
3.3.2. Economic Resilience.....	15
3.3.3. Environmental Resilience	16
3.3.4. Historical Resilience	16
3.3.5. Psycho-social Resilience	16
3.3.6. Social Resilience.....	16
3.3.7. Technological Resilience.....	16
3.3.8. Gender.....	17
3.3.9. Role of CNH.....	17
3.3.10. Relationship to the SyRI framework	17
3.4. Description of datasets	18
3.4.1. Primary data (Project-internal sources)	18
3.4.2. Secondary data (Project-external sources)	18
3.4.2.1. Community Resilience Disaster Index (CDRI)	18
3.4.2.2. Resilient Europe and Societies by Innovating Local Communities (RESILOC).....	19
3.4.2.3. Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community-based Resilience (SHELTER)	19
3.4.2.4. Heritage for Rural Regeneration (RURITAGE)	19
3.4.2.5. United Nations Framework Convention on Climate Change (UNFCCC).....	19
3.4.2.6. Sendai Framework	20
3.5. Limitations.....	20
4. Indicators for Systemic Community Resilience Monitoring and Assessment.....	22
4.1. Descriptive statistics of indicators	22
4.1.1. Indicators by Capital Dimension	22
4.1.2. Indicators by SyRI framework.....	23
4.1.3. Indicators by SyRI framework and DMC	24
4.2. Indicators by capital dimension and SyRI framework	26
4.2.1. Psycho-social dimension	26
4.2.2. Social dimension	29
4.2.3. Cultural dimension.....	45
4.2.4. Economic dimension	62
4.2.5. Environmental dimension	68
4.2.6. Historical dimension.....	72
4.2.7. Technological dimension.....	76
4.2.8. Gender dimension.....	87
4.2.9. CNH dimension	91



5. Outlook.....	97
6. References	98
7. Annex	99
7.1. List of fully classified indicators	99
7.2. List of indicators grouped by SyRI framework	135



Table of Abbreviations and Acronyms

Abbreviation	Meaning
BP	Best Practice
CC	Climate Change
CD	Capital Dimension
CCA	Climate Change Adaptation
CDRI	Community Disaster Resilience Index
CH	Cultural Heritage
CNH	Cultural Natural Heritage
COO	Coordinator
CORE lab	Community Resilience Laboratories
DMC	Disaster Management Cycle
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
KPI	Key Performance Indicator
LL	Lesson Learned
PP	Preparedness Plan
RECORE	Resource Ecosystem for Community Resilience
SD	Sustainable Development
SyRI	Systemic Resilience Innovation framework
T	Task
WP	Work Package



1. Executive Summary

The deliverable D2.3, “Indicators for Systemic Community Resilience Assessment and Monitoring” is a report that presents and summarises the work carried out in T2.5 (“Modelling of indicators for Systemic Community Resilience Assessment and Monitoring”) between months 10 and 18 (June 2024 to February 2025) of the RESILIAGE project. The outcome of T2.5 amounts to a collection of indicators for community resilience, including their prioritisation in the RESILIAGE Community Resilience laboratories (CORE labs). These prioritised indicators are to be understood among expected outcomes of the RESILIAGE project.

T2.5 ran in parallel with other tasks in WP2, and could draw on information from T2.1 “Conceptualising Community Resilience” and its ensuing internal report, on CORE lab-specific knowledge gathered during the field research in T2.2 “Investigation in the 5 COREs including past crises” as well as from experimental findings achieved in T2.3 “Investigating risk adaptation through the temporal dimension (pre-/post-crisis)” and T2.4 “Risk awareness & threat reaction simulation”. Findings presented in D1.1 “Repository of International Standards & Inventory of Lessons Learned of Disaster Management Preparedness” and D1.2 “Scoping review of socio-behavioural factors in crises and disasters” – which achieved a knowledge baseline for the RESILIAGE project – were also pivotal to the task.

The indicators are clustered within the Systemic Resilience Innovation framework (SyRI) of the RESILIAGE project, which identifies five main dimensions for defining and assessing community resilience: Active Memory, Adaptive Governance, Health and Wellbeing, Socio-Economic Resilience, and Social Interaction and Inclusiveness. The SyRI framework constitutes the strategy to innovating Community Resilience through the integration of a variety of interlinked dimensions, such as psychosocial, social, cultural, historical, environmental, as well as technological, CNH, and gender aspects, which are referred to as capital dimensions (CD) in this report.

The indicators presented in this report will feed the ongoing and future work of the RESILIAGE project through offering empirically-based signposts – both specific and general – that delineate markers of successful community resilience, at each stage of the disaster management cycle (DMC). By providing such clear measures of successful community resilience, this collection of indicators will underpin and improve the project’s efforts of assessment and monitoring, as well as provide support to other efforts. The indicators will prove useful in the ongoing identification of key performance indicators (KPIs) within the project, and in the project’s development of digital tools (WP3 and D.3.1).

The report is structured as follows: Chapter 2 (Introduction) presents the key aims and results of the task; Chapter 3 (Methodology) delineates the work steps undertaken to express the indicators; Chapter 4 (Indicators for monitoring Systemic Community Resilience) presents the indicators, itemised along the capital dimensions and the SyRI framework; Chapter 5 (Outlook) offers a view into the role of the indicators within the project as a whole; Chapter 6 (Annex) offers the indicators in full, as well as structured by the SyRI framework.



2. Introduction

In the face of increasing natural and human-made disasters, building community resilience is essential to ensuring the safety, well-being, and sustainability of affected populations. A fundamental assumption of the RESILIAGE project is that effective DRM goes beyond immediate response efforts; it must also involve proactive strategies that enable communities to prepare for, withstand, and recover from crises. For this purpose, at the proposal stage RESILIAGE identified five main dimensions of community resilience, encapsulated in the project's SyRI framework. Effective DRM must be tailored to sustainable development (SD), a global concept that should be specified to a local context, RESILIAGE's "glocal" approach.¹ Good DRM should also incorporate aspects that RESILIAGE defines as local cultural natural heritage (CNH). This CNH is identified by the project through community-based methodologies, using participatory approaches to foster long-term resilience – including through on-site workshops and interactive activities (T2.6, led by POLITO); investigations into psychological aspects and risk awareness (T2.3 and T2.4, led by UNIMES); and research into local social structures, to be identified and extracted through desk research and focus groups activities (T1.1 and T2.2, led by VICESSE).

Assuming such a systemic and holistic research approach, the RESILIAGE project seeks to establish and advance knowledge surrounding citizens' behaviours in moments before, during, and after crisis. By attaining such knowledge, it hopes to be able help co-create communities with high levels of resilience and improved DRM plans, and to ensure more equitable and attainable future SD.

In successful pursuit of these aims, RESILIAGE seeks to establish a comprehensive understanding of markers of community resilience, both general and locally specific. Understanding what makes communities resilient in the face of hazards and crises will help the development of guidelines and policy recommendations (T6.1 and T6.2) undertaken by the project, and will by extension help future-proof crisis-specific solutions to wider challenges caused by climate change (CC). As such, it is recognised that RESILIAGE activities should be underpinned by stable signposts of good and efficient local community resilience. Such signposts are in this project termed "indicators".

This deliverable is the culmination of an eight-month multi-partner effort stemming from the work conducted in WP2 "Modelling behaviours: Building the assessment and monitoring framework" and from the task T2.5 "Modelling of indicators for Systemic Community Resilience Assessment and Monitoring". It directly addresses the aforementioned desideratum, of establishing a fixed set of fixed community resilience indicators which can be used as a continual reference point for other project activities.

To this end, T2.5 focused on developing multi-dimensional and multi-scalar behaviour indicators, prioritised within the SyRI framework. Such indicators will feed tools (WP3) to help support resilience monitoring activities and upcoming design strategies for PPs

¹ From proposal stage, RESILIAGE has introduced the "glocal" concept to understanding crises and disasters, where the separation of global trends and local effects can no longer be drawn that clearly.



(T6.1). The indicators are inscribed in the RESILIAGE approach, which entails considering plural factors, including socio-economic, environmental, psychological, historical and cultural factors. These are included within the SyRI framework since the proposal as the five main dimensions for the assessment. They become keys for systemic innovation as they are dimensions to measure. Moreover, indicators enable another important overall objective, that is, to transform qualitative information into quantitative dimensions.

From the start, indicators were clustered along the following parameters:

1. Identification of hazards, climate change events, and future scenarios;
2. Cultural, environmental, and historical aspects of community resilience;
3. Psycho-social factors influencing risk perception and community adaptation;
4. Social and societal dimensions of resilience;
5. Technological, CNH and gender aspects.

Within the course of analysing the indicators collected, we decided to add “technological” aspects to resilience to this list. In addition, – according to the requirements identified by the Internal Report produced in T2.1 “Conceptualising Community Resilience and Ethical Perspective” (M10) – it was crucial to specifically highlight the overarching project dimension of “CNH” within the dimensions, as well as “gender” was added to be identifiable in the final indicator aggregation.

Throughout the length of the task, these characteristics were kept in mind and continuously helped shape the research framework. Based on extensive reviews of project-internal research, scientific literature, previous European projects, and the output of international organisations, this deliverable has produced a set of indicators that will serve to assess the community resilience of RESILIAGE’s five CORE labs, and that will feed RESILIAGE activities going forward.

While displaying a wide range, these indicators highlight the importance of integrating historical and cultural knowledge, strengthening partnerships between stakeholders, ensuring that all community members are accounted for, and fostering social identity and cohesion. The framework offered by these indicators provides a comprehensive and holistic approach to enhancing community resilience and to improving disaster PPs and recovery efforts.

This deliverable, which takes the form of a report showcasing the indicators and their creation, lays out the gathered indicators in detail, outlines their development, significance, and provides insights into how the indicators can be effectively implemented in present and coming RESILIAGE activities and DRM strategies.

This report presents and summarises the T2.5 results in the following chapters and ways:

- **Chapter 3. Methodology:** This section describes the workflow of the task, focussing especially on the practical decisions undertaken to specify the task objectives among the task contributors to best match the various requirements of subsequent WPs. The section then delves into the procedure of operationalisation, derived from the academic state of the art and adapted to the specific focus of the RESILIAGE project, which describes how indicators were



chosen and processed. It goes on to introduce the CDs as they relate to encapsulating various dimensions of “Systemic Community Resilience” and how they are related to the SyRI framework. Lastly follows a description of datasets, in which the various datasets collected or produced by task activities are delineated and described.

- **Chapter 4. Indicators for monitoring Systemic Community Resilience:** This section reproduces the indicators produced by the task. First, it provides descriptive statistics on the characteristics of the indicators included in this stage. It then lists the individual indicators for each CD, specified for each SyRI framework. The indicators are specified by unique identification, the measurable indicator, type of measurement, associated data type, relevancy to community resilience, and position within the DMC.
- **Chapter 5. Outlook:** This section offers an outlook on coming RESILIAGE activities as well as offering perspectives into the ways that the SyRI indicators gathered in this task can be employed to aid these activities. It delineates the steps taken in this task. These ranged from analysing the various data collected in WP1 and WP2, prioritising indicators for the characteristics specified, identifying available measures relating to each CORE lab, and the development of local preparedness plans in WP6.
- **Chapter 6. Annex:** The annex features a unique list of the indicators with all matrices, and characteristics associated, listed by their originating source dataset, as well as indicators sorted along the SyRI framework. These tables are available as .xlsx/.csv file to the consortium and will be the major source for further operations in the subsequent activities of WPs, ranging from adding actual data sets of the CORE labs, adding priorities of each CORE lab, adding the various RESILIAGE digital tools who will make use of a selection of these indicators, and on-the-ground preparedness plans. Moreover, they will identify potentially relevant indicators for associated CORE labs, and more generally for all end users of RESILIAGE Resource Ecosystem (RECORE), by considering RESILIAGE target groups. In that, this data base will be growing in complexity for a multitude of use cases in the project.



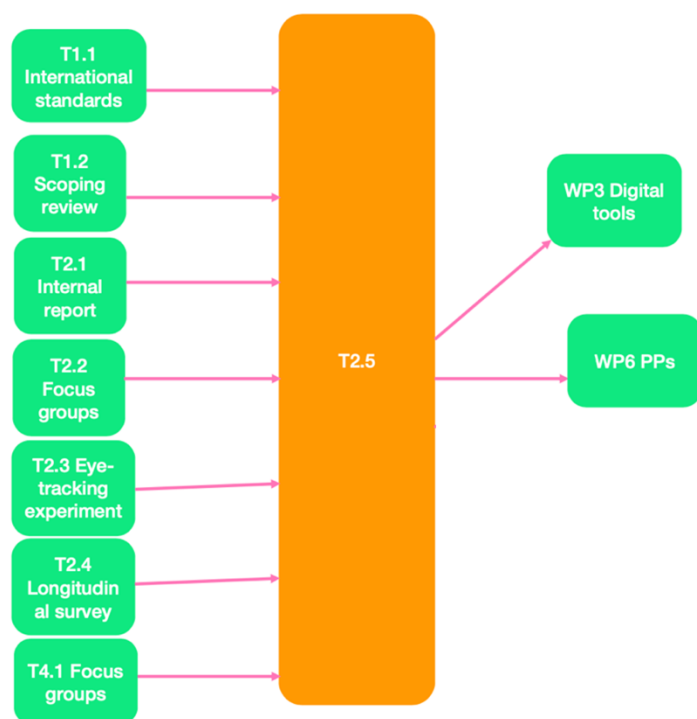
3. Methodology

Community resilience is a crucial aspect of DRM, as the actuality of good local resilience will ensure that communities can effectively prepare for, respond to, and recover from disasters. Community indicators thus help signal where a community might be succeeding – and where it might be failing – in its current methods of DRM. Creating such a collection of community resilience indicators was one of the chief aims of T2.5.

This section describes how the research of T2.5 was undertaken, delineating in particular the work procedures that were employed in conducting and completing the collection of community resilience indicators. In the below, this methodology and the discrete work steps undertaken are described in detail.

3.1. Description of workflow

As shown in Figure 1, T2.5 capitalises on previous project work.



To establish a baseline of knowledge for extant project-internal results, previous project research was revisited. This included results from **past desk research** (e.g. data collections in D1.1 and D1.2) as well as from **project-based field research** (e.g. data from D2.1 and D4.1). The findings of this research were closely scrutinised. Research results that were deemed instructional in nature were extracted to be processed into the collection of indicators.

The process of indicator identification consisted therein of the following steps:

1. Identifying data sources
2. Data coding and extracting from sources
3. Indicator formulation, prioritisation & exclusion of non-measurable data points
4. Indicator classification

Figure 1. Visualisation of project workflow of T2.5



All field study material (focus group and workshop transcripts in five CORE labs) that had been analysed from different partners and perspectives for documenting the CORE lab investigation, encompassing local DRM policies, cooperation & management practices, CNH drivers, and have been documented in D2.1, was coded for identifying gaps, BP, LL in response to DRM as well as factors impacting CR. In all, this list included 477 data entries, across all CORE labs, describing the coded material with the following categories:

- The **CORE lab** from which the data point was derived (if derived from field research)
- The **type** of data each entry constitutes (i.e. how it was previously labelled, e.g. a “Gap”, a “Best Practice”, etc.)
- The **description** of the data point (e.g. an identified *gap* amounting to “Lack of cooperation” at a particular CORE lab site)
- The **recommendation** associated with the data point, often affiliated with the previous description (e.g. “Foster better cooperation and collaboration among all stakeholders involved in crisis management”) to be further utilised in WP6 for developing preparedness plans
- The **partner** filling out the data point (for internal reference)
- The **source** from which the data point derives (e.g. deliverable, for internal reference)
- The **dimension** covered by the data point (i.e. the initial processing of the respective data point into an indicator)

To accomplish a complete overview of the results already attained within the RESILIENCE project, a second collection of indicators was derived from previous desk research pertaining to the scoping literature review, included in D1.2. This list contained LLs from academic literature on DRM and resilience, and constituted a total of 160 entries, with columns closely following the ones indicated in the list above.

A third collection of indicators included project-external results, entailing extant lists of indicators assembled by external experts and bodies, such as international organisations or previous research projects. The scope of these indicator collections, it was agreed, should revolve only around specialised topics that contain high pertinence to the RESILIENCE project, including community resilience, heritage, and DRM.

The final collection from this desk research amounted to six lists, derived from six different sources (described in more detail in the following chapter):

- Indicators collected in the **Community Resilience Disaster Index** (CDRI), developed by Mayunga (2009)
- Indicators for resilience collected in “D3.1 RESILOC Resilience indicators” by the Horizon 2020 **RESILOC** project: Resilient Europe and Societies by Innovating Local Communities (1 June 2019 to 30 November 2022; COO: Fraunhofer Society; <https://www.resilocproject.eu/>)
- Indicators for resilience collected in “D2.2. Historic Areas Systemic resilience assessment and monitoring framework” by the Horizon 2020 **SHELTER** project: Sustainable Historic Environments Holistic Reconstruction through Technological



- Enhancement and community-based Resilience (1 June 2019 to 31 May 2023; COO: Fundacion Tecnicalia; <https://shelter-project.com/>)
- Lessons Learned and KPIs collected in “D1.2. RURITAGE Inventory of Lessons Learned” by Horizon 2020 **RURITAGE** project: Heritage for Rural Regeneration (1 June 2018 to 31 August 2022; COO: University of Bologna; <https://www.ruritage.eu/>)
 - CH and CC indicators collected by the **UNFCCC** (United Nations Framework Convention on Climate Change)
 - Indicators for DRR as forwarded by the **Sendai Framework**

In all, these lists added up to 1409 individual entries. When added up with the project-internal findings, the complete indicators list at this stage amounted to a total of 1886 entries.

To slim down this wide selection of data points, and in the long run, to express these entries into indicators tailored to the specific purposes of RESILIAGE, it was agreed that a further selection process should be undertaken. As such, those entries that best signal ways to expressly measure (i.e. indicate) community resilience and to take into account heritage drivers within DRM were filtered out from this wide pre-selection.

Thus, even where existing indicator collections were gathered and integrated, a procedure of operationalisation – that is, of breaking down a notion or a conception into its operative parts – would have to be undertaken. The steps underlying this process are detailed in the below.

3.2. Description of operationalisation procedure & delineation

The approach undertaken by T2.5 is a novel one (and thus recognisably different from previous lists of indicators) insofar as the very concept of “community resilience” remains an in large part understudied one. For this main scope RESILIAGE has created an Internal Report as an outcome of T2.1 that has been conceived as a living document to be refined and implement during the project implementation.

This fact of a research lacuna is noted by Ostadtaghizadeh et al. (2015): “out of 675 papers using “community resilience” only 17 papers provided a way to measure it”.²

As primary reference for the process of operationalising RESILIAGE’s “Systemic Community Resilience”, we took note of Joseph Steven Mayunga, who in his dissertation “Measuring the Measure: A Multi-Dimensional Scale Model to Measure Community Disaster Resilience in the U.S. Gulf Coast Region,” (2009) presents a systematic approach to operationalizing community disaster resilience (CDR). His conceptualization

² This section discusses the specific operationalisation of „Community Resilience” in the context of crises and disasters, and how this conceptualization was adapted for the specific focus of RESILIAGE. For a general description of concept operationalization, and literature overview, see e.g. RESILIOC (2022) Deliverable 3.1 – RESILIOC Resilience Indicators (GA 833671); www.resilocproject.eu.



integrates multiple dimensions of resilience and provides a structured methodology to measure and evaluate community-level capacity to withstand, adapt to, and recover from disasters.

In RESILIAGE, resilience is defined as the ability of a system, community, or society exposed to hazards **to prevent, protect against, respond to, resist, absorb, accommodate, adapt to**, transform, and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management (UNDRR 2017, c.f. T2.1 Internal Report).

It is important to note that within T2.5, the intention was not to create a “Systemic Community Resilience Index”, but to collect indicators relevant for the dimensions already introduced. The scientific process of aggregation into a single measure was discussed, but dismissed for the purposes of the application of the indicators in WP3, allowing for the users of digital solutions to monitor individual aspects of CR and not scientific aggregates. In that we followed the approach proposed by Mayunga, for the conceptualization of “Systemic Community Resilience” using “Capital dimensions” through both theory-driven (review of academic literature and previous projects) and data-driven (empirical CORE field studies) approaches.

As such, another practical step in the workflow lay in pinning down the definitional scope of the indicators to be produced and presented within T2.5. This was done through an iterative process involving exchanges with all task partners and was closely connected to the drafting of the internal report developed in T2.1 (circulated in M13).

These dimensions would ensure that indicators would point towards and target CORE labs specific characteristics regarding hazard type, local historical-cultural dimensions, psychological aspects, and social aspects of the locality. Several of these dimensions would also help shed nuance on the different CORE locality, with the differing types and scales of local government and governance (as well as related community stakeholders) in mind.

With instructions on how to operationalise the gathered data at hand, task partners subsequently agreed to filter the entry points to the highest degree of relevancy, and to gather these entry points into a new list, by considering

- SyRI framework (i.e. which SyRI is most relevant to the data point)

And containing other aspects. They have been listed in tables following indicative columns in the list order:

- Unique-ID (i.e. running number of the initial dataset linked to the code for the originating source)
- Aspect to be considered (i.e. the wording of the sourced data entry as starting point for indicator creation and linking back to the source table)
- Unit of measure (i.e. if measurable, how the indicator may be measured)
- Derived from (i.e. the source of the data point)
- Indicator



- Relevancy (description of functional mechanism and relevancy to community resilience) (i.e. the tangible description of the indicator at hand)
- Associated CORE lab (i.e. pointing to whether the indicator has relevancy for respective CORE labs)
- Capital Dimension (i.e. which chief relevancy the indicator contains – cultural, economic, environmental, historical, psychological, social)
- DMC (i.e. which DMC stage is most relevant to the data point)
- Crisis/hazard specific (i.e. which RESILIAGE-related crisis/hazard applies to the data point)
- Responsible partner (i.e. which research partner treated the data point)
- Associated data (i.e. if the data point contains an extant data source)

This list, with a final count of 237 data points, was continually commented and improved upon by associated partners, e.g. by the leads of closely associated WPs such as WP3 and WP6.

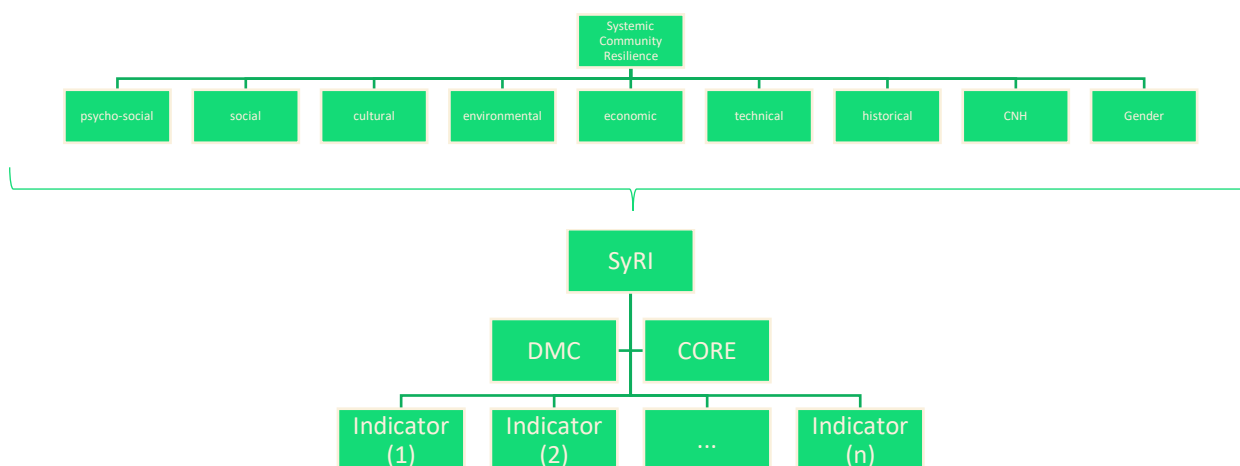


Figure 2. Operationalisation of "Systemic Community Resilience" through "Capital Dimensions" and structured by "SyRI framework", "DMC", and "CORE labs"

Because the SyRI framework is so central to the RESILIAGE project, it naturally follows that research efforts related to indicators should align closely with its structure. In order to ensure that resilience indicators are comprehensive and meaningful, Task 2.5 (T2.5) has developed a further sub-structure consisting of nine dimensions. These dimensions have been carefully selected as the most relevant for capturing the full complexity of community resilience. As detailed in the previous sections, these dimensions of community resilience are: Cultural, Environmental, Historical, Psychological, Social, Technological, CNH, and gender.

3.3. Description of capital dimensions and their relationship to the SyRI framework

The multi-dimensional approach underpinning T2.5 ensures that the indicators contribute to understanding local crisis scenarios, including how to characterise hazards, understand CC events, and how to be informed about local scenarios. To establish such



knowledge, according to the RESILIAGE approach, indicators of human factors in DRM not only should help identify present risks associated with resilience and disasters, but should also consider future vulnerabilities that may be exacerbated by ongoing CC.

As such, the specific local dimensions of each CORE lab must be carefully considered. This means that the cultural, economic, environmental, historical, psychological, social, and technological characteristics of the area should be fully appreciated and integrated into any assessment of local resilience. These plural human factors have been recognised by RESILIAGE as key to the project's research endeavours since the proposal stage. Accounting for these factors is crucial, as they shape the ways in which communities experience, respond to, and recover from crises – and the project can thus contribute to the development of more holistic and human-centred approaches to resilience-building

With all this in mind, a successful and useful collection of community resilience indicators must therefore be multi-dimensional. This deliverable for RESILIAGE indicators collection incorporates nine dimensions of community resilience related to identified human factors: cultural, economic, environmental, historical, psychological, social, and technological. Each dimension represents a distinct yet interconnected domain of resilience, influencing how individuals and groups navigate disruptions and adapt to changing circumstances. They are introduced below.

RESILIAGE conceptualisation of community resilience integrates the historical-cultural perspective in human-environment interactions. It considers that these historical-cultural human-environment interactions are especially enclosed in tangible and intangible Cultural Natural Heritage.

3.3.1. Cultural Resilience

Culture plays a fundamental role in shaping a community's identity, cohesion, and adaptive capacity. At the same time, cultural norms and traditions can sometimes act as barriers to adaptation, particularly when they discourage the adoption of new technologies or strategies for dealing with novel threats. Nonetheless, cultural knowledge – especially traditional DRM strategies, passed down informally through generations – often contains valuable insights into sustainable and adaptive practices. These localised forms of knowledge, while rarely captured in formal disaster policies, can provide practical solutions to contemporary challenges, such as community-led land management or indigenous fire-prevention techniques.

3.3.2. Economic Resilience

A community's financial stability and access to economic resources play a critical role in its ability to prepare for, withstand, and recover from crises. Economic resilience encompasses a broad spectrum of factors, including employment rates, job security, the diversity of local industries, the sustainability of small businesses, and the availability of financial safety nets such as public and private funds, emergency relief programs, and insurance coverage. Communities that invest in economic diversification, innovation, and equitable development are better equipped to adapt to economic downturns, shifts in global markets, and climate-related disruptions. For example, fostering local economies



that prioritise green industries, social enterprises, and cooperative business models can enhance both environmental and economic resilience simultaneously.

3.3.3. Environmental Resilience

The natural environment is a key determinant of community resilience, as environmental conditions influence a community's exposure to hazards and its capacity to mitigate risks. A community's relationship with its surrounding environment – encompassing land use practices, agricultural and industrial activities, and local, regional, and national environmental policies – directly impacts its ability to prevent, manage, and recover from disasters. Understanding and supporting community-led environmental stewardship is therefore essential in fostering sustainable and equitable resilience strategies.

3.3.4. Historical Resilience

A community's past experiences with disasters can offer highly valuable lessons that may shape current practices and resilience strategies. Historical resilience is reflected in various ways, including in policy changes following past crises, documentation of lessons learned, and the preservation of oral traditions and commemorative practices related to disaster preparedness. When employed strategically, a community's memories of past disasters will enable community leaders and citizens to recognise patterns, refine their approaches to DRM, and ideally, to avoid repeating past mistakes.

3.3.5. Psycho-social Resilience

Psycho-social resilience is fundamental to individual and community resilience. It determines how effectively persons cope with stress, trauma, and uncertainty in the aftermath of disasters and crises. In the long term, understanding and investing in psychological resilience enhances a community's ability to adapt, rebuild, and maintain hope in the face of ongoing challenges.

3.3.6. Social Resilience

The social dimension is crucial when considering local community resilience because an important component to resilience involves people, relationships, and shared knowledge. To consider social resilience thus means to focus on social ties, networks, and relationships, as well as the support systems that these help bring about. A socially cohesive community is more likely to advocate for its needs, participate in preparedness training, and hold authorities accountable. If people feel alienated from decision-making, on the other hand, they may be less likely to trust or follow emergency plans. In the longer term, socially resilient communities are better at sustaining local economies and cultural traditions after disasters, while if social bonds are weak, businesses may struggle to reopen, local traditions may erode, and younger generations may leave, further weakening long-term resilience.

3.3.7. Technological Resilience

Technology plays a crucial and increasingly central role in community resilience and DRM. The ability to exploit technology as a resource for community resilience by making



adequate use of technological tools and devices can enhance situational awareness, facilitate effective decision-making, and strengthen overall community resilience by equipping local actors with the tools to anticipate, respond to, and recover from disasters more effectively. In this sense, in the definition of the RESILIAGE indicators, this deliverable includes the technological factor among the human factors.

3.3.8. Gender

Throughout the processing of this data, the gender aspect of each indicator was placed front and centre, in line with recommendations issued by the UNDRR's *Gender Action Plan* and as advised by the internal report produced in T2.1. That is, where applicable, data points were operationalised to specifically factor in the aspect of gender in the resultant indicator. Thus, for instance, it is consistently recommended to complement local employment data with local data on the percentage of women (and, by extension, men) within such data. Such complementation ensures an improved picture of gendered dynamics within a locality and, ultimately, offers a more nuanced and multi-faceted view of the overall sociocultural, economic, and historical contexts and patterns within any given CORE lab. Moreover, such gendered specifications ensures that future project activities are guided into considerations revolving local gendered professional foundations, the need for gender-sensitive communication, and targeted awareness campaigns and communiqués with women and vulnerable groups in view.

3.3.9. Role of CNH

Another aspect that was continually kept in mind in the development of these indicators was the project-specific approach to CNH. That is, while other collections of resilience indicators may include some points about CH, RESILIAGE's particular way of seeing heritage was hardly reflected in these. While heritage is frequently understood as a more or less passive object to be observed and protected against hazards or CC through DRM policies, RESILIAGE analysed CNH as an driver of CR in DRM and DRR (T2.2, T2.6, T4.1, and T6.1/2), which – when deployed correctly – carries the capacity to aid effective crisis management and, in the long run, to contribute to more effective CCM.

3.3.10. Relationship to the SyRI framework

By considering the five SyRI dimensions already established by RESILIAGE for strategically integrating the dimensions of human factors to enhance and systemic innovating community resilience illustrated above, this D2.3 takes into account 7 dimensions to include:

The relationship between the identified dimensions and the SyRI framework is highly interdependent. These nine dimensions act as fine-tuning sub-categories, providing additional depth to each SyRI aspect. For example, if we wish to develop a thorough understanding of Adaptive Governance, it is crucial to examine it through the lens of all nine dimensions rather than as a stand-alone concept. By applying this multi-dimensional approach, we can better identify the various drivers and barriers to resilience that exist within different governance structures, processes, and practices.

As such – continuing with the example of Adaptive Governance – T2.5 has developed a set of indicators that capture not only the governance aspect itself but also its interconnections with cultural, economic, environmental, historical, psychological, social,



and technological factors. The same principle applies to all aspects of the SyRI framework, ensuring that the final indicator system is both holistic and adaptable.

By integrating this structured methodology, the RESILIAGE project aspires to produce a refined, evidence-based approach to assessing and strengthening community resilience, providing actionable insights that can be implemented across diverse settings.

3.4. Description of datasets

This section explains the variety of data sets that the task drew on to extract its various drafts of lists of indicators, including project-internal datasets as well as project-external ones (indicators used by relevant previous projects, indicators used by international organisations, etc.); what this amounts to is a bifurcated dataset, including indicators identified in the academic literature and previous projects (top down), as well as from our empirical investigation into the five CORE labs (bottom up).

3.4.1. Primary data (Project-internal sources)

In developing the list of community resilience indicators as an outcome of the RESILIAGE project, a first step entailed revisiting past results of the project itself.

Desk research: Results were extracted from deliverables D1.1 “Repository of International Standards & Inventory of Lessons Learned of Disaster Management Preparedness”, which recorded existed project-relevant international policies and standards, results from past EU projects on CC and CNH, and D1.2 “Scoping review of socio-behavioural factors in crises and disasters” aggregated information on the state of the art with regards to academic literature on project-related topics.

Field research: Findings from field research at the five CORE lab sites, undertaken on behalf of tasks in WP2 and WP4, included results from D2.1 “CORE survey: Gap analysis and Inventory of RESILIAGE Lessons Learned” presented LLs and other information which was deemed convertible into indicators. Similarly, D2.2 “Report on risk adaptation, risk awareness & threat reaction” reported on findings from the field which contained findings pertaining to CORE labs and DRM coordination, that was deemed relevant for the development of indicators. Finally, D4.1 “Needs analysis and training requirements definition” – like D2.1, based on findings from CORE lab focus groups – identified numerous on-site gaps, challenges, and needs which had evident relevance to the findings of this present report.

3.4.2. Secondary data (Project-external sources)

3.4.2.1. Community Resilience Disaster Index (CDRI)

T2.5 extracted and adopted numerous items from the CDRI, removing or tweaking where applicable. While the CDRI includes a variety of aspects of human existence, the aspect of heritage or CNH is nowhere explicitly addressed. Mayunga recognises that human capital may also involve local knowledge and skills based upon histories and memories of past disasters, but this is not worked out in detail or brought into the framework of



CNH. As such, here the RESILIAGE indicators go beyond Mayunga and draw from other sources, both internal and external.

3.4.2.2. Resilient Europe and Societies by Innovating Local Communities (RESILOC)

The Horizon 2020 project RESILOC studied disaster resilience across several sites in Europe and sought to strengthen local preparedness against hazards through digital and non-digital tools. One of the outcomes of this study, D3.1 “RESILOC Resilience indicators” encompasses a set of resilience indicators, which are of high pertinence to RESILIAGE. The final result is a set of indicators spread out across a matrix along six aspects of resilience: Governance, Social, Economic, Infrastructure, DRR, Environmental. This indicators list, and attendant approach, has much relevance to RESILIAGE and as a source was highly useful for the development of the RESILIAGE project indicators.

3.4.2.3. Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community-based Resilience (SHELTER)

The Horizon 2020 project SHELTER sought to develop data-driven and community-based resilience improvement of historic areas around Europe. SHELTER’s deliverable D2.2. “Historic Areas Systemic resilience assessment and monitoring framework” resulted in a list of 433 indicators, many of which are of high pertinence to the RESILIAGE project – with the distinction that while SHELTER and its indicators focus on the built environment, RESILIAGE’s focus leans towards intangible heritage. For the purposes of RESILIAGE’s indicators list, those indicators explicitly dealing with heritage as well as RESILIAGE-affiliated issues (e.g. project-relevant hazards, demographic concerns, economic issues, etc.) were extracted from the SHELTER collection. Those indicators collected by SHELTER that were deemed too technical or beyond the scope of RESILIAGE were not to be included in the RESILIAGE pool of sources.

3.4.2.4. Heritage for Rural Regeneration (RURITAGE)

The Horizon 2020 project RURITAGE conducted research into ways in which the local CNH of rural areas across Europe might be harnessed and employed to trigger an economic regeneration and general revitalisation of the area. Because heritage was at the centre of RURITAGE’s concerns, the project is of clear interest to RESILIAGE. For RESILIAGE’s indicators list, the RURITAGE’s collection of replicators and LLs was closely reviewed. In the end, what proved most interesting to the RESILIAGE indicators list was RURITAGE’s focus on accessibility and vulnerability, and RESILIAGE drew on these RURITAGE data points in creating its list of indicators.

3.4.2.5. United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC has a task force in charge of understanding the impact of CC on CH, and for developing strategies to improve CH sites’ resilience against CC-related hazards. To further the systematic work of the UNFCCC, its experts have created a long list of indicators to help guide research. This indicators list is of high relevance to the



RESILIAGE project, and all UNFCCC data points that were labelled as relevant to CH were drawn out and processed into RESILIAGE's list of indicators.

3.4.2.6. Sendai Framework

The indicators used to measure global progress in the implementation of the Sendai Framework, amounting in total to 38 entries, saw consultation by the RESILIAGE project. These served as useful reminders of certain central tenets – such as the centrality of economic stability and resilience in tackling CC hazards. Because the entries are so general in nature, however, they were of limited specific use to the RESILIAGE project.

3.5. Limitations

The process of collecting indicators for „Systemic Community Resilience“ presents methodological and conceptual challenges when relying on either top-down approaches, such as state-of-the-art literature reviews, or bottom-up approaches, such as the CORE lab empirical field studies.

Limitations of the Top-Down Approach

The top-down approach relies on existing theoretical frameworks, policy documents, and international best practices to identify resilience indicators. While this method ensures conceptual consistency and comparability across different contexts, it faces several scientific limitations:

- Lack of Contextual Sensitivity – Standardized indicators may not capture locally specific resilience factors, especially in communities with unique socio-cultural dynamics.
- Limited Empirical Validation – Many resilience indicators proposed in the literature are normative rather than empirically tested, leading to uncertainties in their real-world applicability.
- Static Nature of Indicators – Literature-derived indicators often assume resilience as a fixed set of capacities, failing to account for evolving socio-economic and environmental conditions.
- CNH as an Underexplored Factor – Most existing resilience models primarily emphasize physical, economic, and governance dimensions, overlooking the role of CNH in shaping community identity, adaptive learning, and disaster preparedness.

Limitations of the Bottom-Up Approach

The bottom-up approach derives indicators through community engagement, participatory research, and field studies, which enhances local relevance but introduces the following challenges:

- Data Inconsistencies – Empirical field data vary widely in quality and availability, making comparability across regions difficult.
- Subjective Biases – Community-reported indicators may reflect perceptions rather than objectively measurable resilience capacities, leading to challenges in standardization.
- Lack of Established Data Sources – Unlike economic and infrastructural resilience indicators, CNH-related indicators are not systematically collected, requiring the identification of novel data sources.



- Difficulties in Factor Validation – Without applying factor analysis or other statistical validation methods, it is uncertain whether identified CNH indicators reliably measure community resilience dimensions.

Dealing with RESILIAGE's Hybrid Framework Incorporating CNH as a driver

By including cultural and historical factors among the human factors RESILIAGE aims to advance the understanding of community resilience also considering heritage drivers. For the scope of this D.2.3 this assumption requires to define some related indicators. The SyRI dimensions provided by RESILIAGE approach already frames some important dimensions related to heritage dimensions to be considered in the definition of the indicators. Each of them enables to include relevant aspects. The framework of the “Active Memory” frames the dimensions related to collective memory and identities. The “Health and Wellbeing” frames new development in the conceptualisation of wellbeing that include the satisfaction of multiple needs comprehensive of cultural aspects; “Social Interaction and Inclusiveness” frames the heritage recognised role in fostering inclusiveness and peace in society; “Socio-Economic Resilience “ includes heritage tourism and its role in supporting local economies; “Adaptive Governance” frames the need to combine various types of city and territorial government that include regulations regarding heritage domain.

Given the relevance of this new approach to community reliance proposed by RESILIAGE to take into account heritage drivers, a specific attention and approach has been given to identify indicators that can take into account these opportunities. Moreover, by considering limitations of both approaches considered above for the identification of the overall RESILIAGE indicators, a hybrid methodology was attempted to consider heritage drivers as defined in RESILIAGE while ensuring methodological rigor. This requires:

- Combining Systematic Literature Reviews with Field Data Collection – Cross-referencing global best practices with localized empirical insights can refine CNH-related indicators.
- Developing Context-Specific Indicator Frameworks – Local participatory methods can identify qualitative and quantitative CNH resilience metrics.
- Applying Mixed-Methods Validation – Using factor analysis, expert validation, and community feedback loops, CNH indicators can be assessed for statistical robustness and practical relevance.
- Institutionalizing CNH Data Collection – Integrating CNH resilience indicators into municipal and national DRM frameworks ensures long-term data availability and policy integration.

While the integration of CNH as a community resilience driver is conceptually promising, its measurement remains methodologically challenging due to gaps that can be envisaged in identifying data sources and empirical validation. Our hybrid approach that leverages both top-down theoretical rigor and bottom-up empirical depth has intended bridge these gaps, ensuring that CNH will contribute meaningfully to disaster preparedness and sustainable resilience strategies. Further interdisciplinary research and multi-stakeholder collaboration will be essential to refining and institutionalizing CNH-based resilience metrics.



4. Indicators for Systemic Community Resilience Monitoring and Assessment

4.1. Descriptive statistics of indicators

4.1.1. Indicators by Capital Dimension

The chart displayed in Figure 4 presents a comparative analysis of various (and multiple) capital dimension associated with all indicators based on their frequency and percentage distribution. The x-axis represents the different capital dimensions. The left y-axis denotes the frequency of occurrence for each category, while the right y-axis represents the percentage distribution.

The **social indicators** category exhibits the highest frequency (173) and the largest percentage share (73%), highlighting its dominance among all capital dimensions. The **technological indicators** category follows with a frequency of 106 and a percentage share of 45%. **Cultural indicators** register a frequency of 79, corresponding to 33% of the total.

Other categories show varying frequencies and lower percentage distributions: **CNH-drivers indicators** (40; 17%; as subset of all cultural indicators), **economic indicators** (51; 22%), **environmental indicators** (31; 13%), **historical indicators** (21; 9%), **psycho-social indicators** (20; 8%), and **gender indicators** (27; 11%).

The graphical representation effectively combines bar charts for frequency (in green) and a line plot for percentage distribution (in orange), allowing a dual-perspective analysis of the data. The chart indicates a significant disparity among capital dimensions, with social and technological indicators receiving the highest emphasis, whereas historical and psycho-social indicators appear less prominent. This distribution reflects underlying research priorities, policy focus, or data availability related to these capital dimensions.

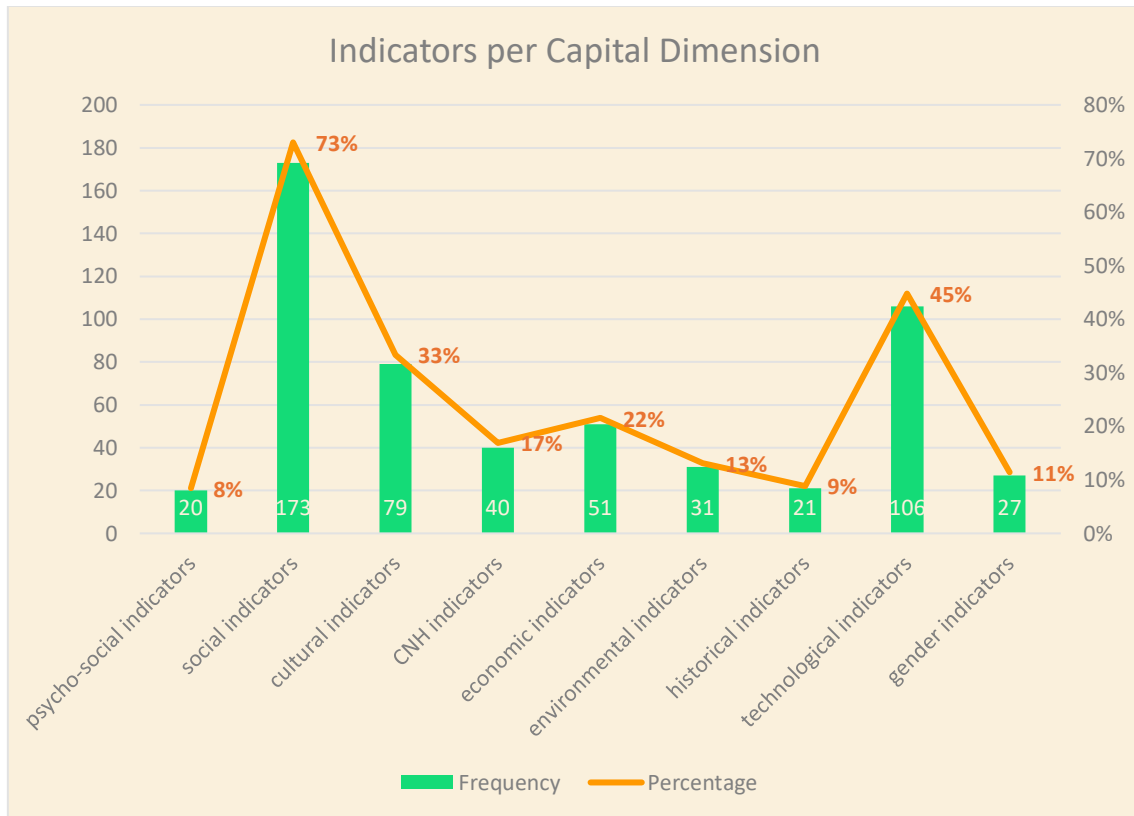


Figure 3. Indicators by capital dimension

4.1.2. Indicators by SyRI framework

Figure 5 illustrates the distribution of indicators within the **SyRI framework**. Each category is represented as a proportion of the total dataset, with percentage values indicating its relative importance.

Adaptive Governance is the most prominent category, accounting for **38%** of the total indicators. This suggests a significant emphasis on governance mechanisms that enable adaptability and resilience within the studied context. **Social interaction and Inclusiveness** follows with **20%**, highlighting the importance of equitable participation and social cohesion in resilience-building processes.

Socio-economic Resilience constitutes **17%** of the indicators, reflecting a focus on economic stability and the ability of communities to withstand socio-economic challenges. **Active Memory**, which represents the role of historical and collective knowledge in resilience, accounts for **13%** of the total. The lowest representation is found in **Health and Wellbeing**, which comprises **12%**, indicating a relatively smaller, though still relevant, focus on public health and overall well-being in the SyRI framework.

The visualization effectively demonstrates the varying emphasis on different dimensions within the SyRI framework. The dominance of **Adaptive Governance** suggests that governance structures play a crucial role in resilience-building. The balance among **Social interaction**, **Health & Wellbeing**, **Socio-economic Resilience**, and **Active Memory** suggests a recognition of the interconnectedness of social, health, economic, and historical factors in systemic resilience.

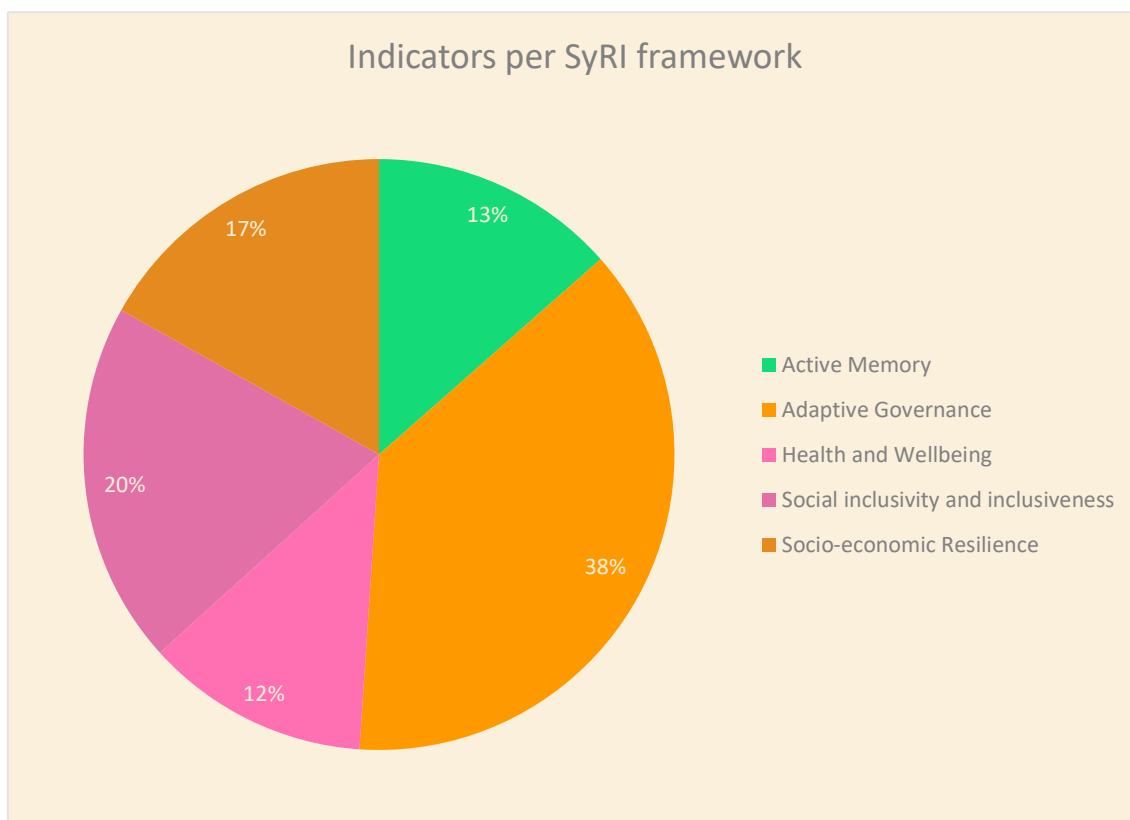


Figure 4. Indicators by SyRI framework

4.1.3. Indicators by SyRI framework and DMC

The chart titled “**Indicators by SyRI Framework and DMC**” visually represents the percentage distribution of disaster management cycle (DMC) categories across different dimensions of community resilience as defined within the **Systemic Resilience Innovation (SyRI) framework**. The five primary resilience dimensions presented in the chart include **Active Memory**, **Adaptive Governance**, **Health and Wellbeing**, **Social Inclusivity and Inclusiveness**, and **Socio-Economic Resilience**. Each dimension is further broken down into six DMC categories: **Preparedness**, **Response**, **Recovery**, **Prevention**, **Mitigation**, and **All**.

The **Active Memory** dimension is predominantly characterized by **Mitigation (42%)**, indicating that the majority of its indicators focus on reducing disaster risks through cultural preservation and knowledge retention. **Preparedness (11%)** and **Response (2%)** contribute to minor shares, while **Recovery (17%)** and **Prevention (7%)** play supporting roles. The **Adaptive Governance** dimension is largely driven by **Preparedness (55%)**, signifying its emphasis on structured coordination and policy measures before disasters occur. **Response (30%)** and **Mitigation (17%)** also contribute significantly, with smaller portions attributed to **Prevention (9%)** and **Recovery (2%)**.

For **Health and Wellbeing**, the indicators are primarily **Response-oriented (34%)**, highlighting the sector’s essential role in immediate disaster relief, medical aid, and crisis intervention. **Mitigation (17%)**, **Preparedness (7%)**, and **Recovery (17%)** support



long-term resilience, while **Prevention (9%)** plays a minor role. **Social Inclusivity and Inclusiveness** displays a **balanced distribution**, with **Mitigation (30%)** leading, followed by **Preparedness (21%)**, **Response (17%)**, and **Recovery (17%)**, emphasizing inclusive risk communication, social support structures, and representation of vulnerable groups in disaster governance. **Socio-Economic Resilience**, on the other hand, is **highly diversified**, with **Preparedness (36%)** and **Recovery (33%)** leading, signifying the sector's role in economic stability and infrastructure continuity. **Response (17%)**, **Mitigation (12%)**, and **Prevention (7%)** contribute to a multi-layered approach to socio-economic resilience in disaster contexts.

Overall, the distribution of indicators highlights distinct resilience priorities for each dimension within the **SyRI framework**, showcasing the varying degrees of emphasis on different stages of the disaster management cycle.

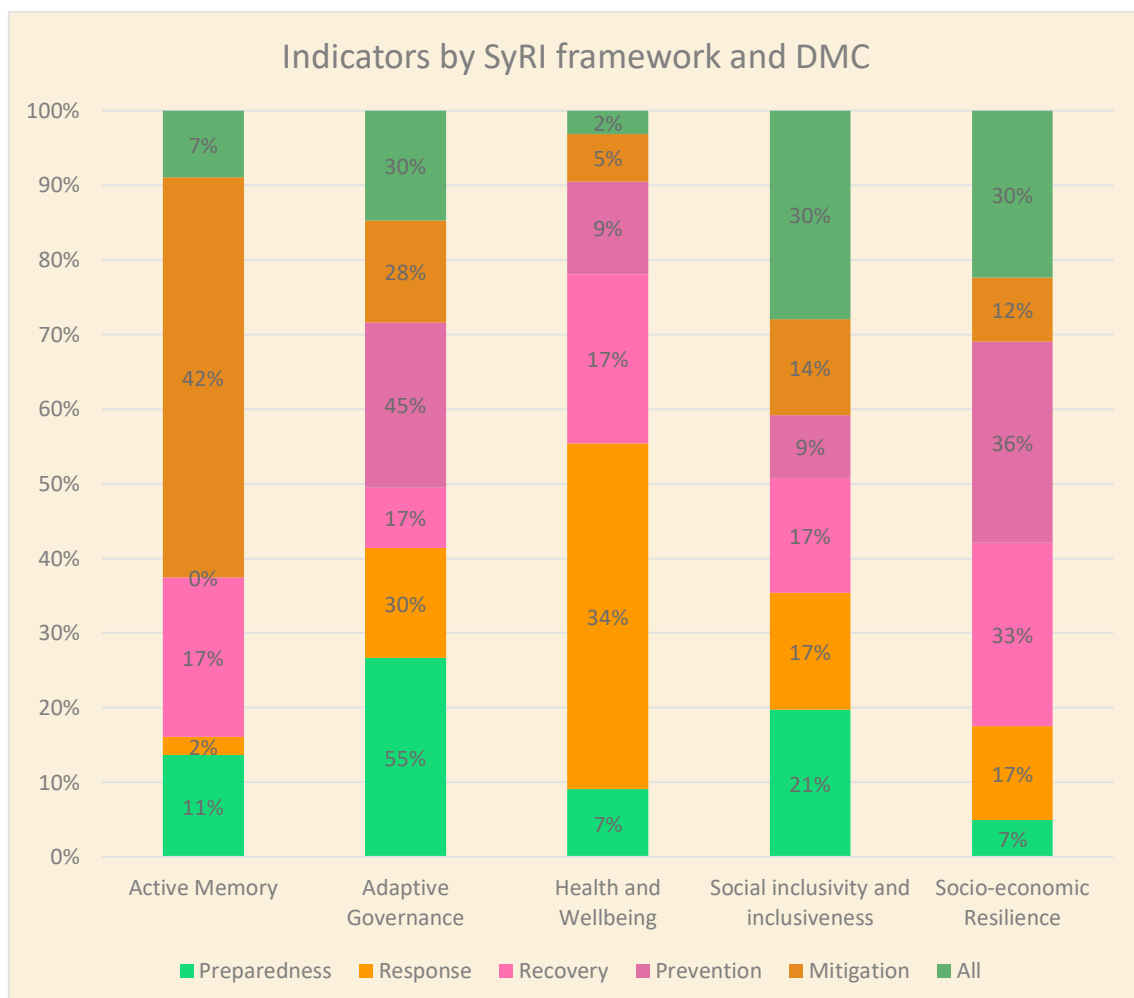


Figure 5. Indicators by SyRI framework and DMC



4.2. Indicators by capital dimension and SyRI framework

4.2.1. Psycho-social dimension

The table in this section presents a structured overview of **20 indicators** related to the **psycho-social dimension** of disaster resilience. These indicators are classified into four major thematic areas: **Active Memory, Adaptive Governance, Health and Wellbeing, and Social interaction and Inclusiveness**. Each category contributes uniquely to disaster preparedness, response, mitigation, and recovery, forming a crucial component of the **DMC**.

Active Memory (4 Indicators)

Active Memory indicators emphasize the role that cultural institutions and historical knowledge can play in disaster resilience. The **Number of cultural institutions (CDRI-0)** reflects the importance of museums, archives, and cultural centres as potential hubs for disseminating disaster-related knowledge. Similarly, **Local geographical knowledge (CDRI-16)** and **Knowledge about past crises (CDRI-23)** contribute to community resilience by preserving and utilizing historical experiences to enhance preparedness. The **Awareness level about heatwaves (CORE-171)** measures public preparedness and response capability for extreme heat events, ensuring early warning mechanisms are effectively utilized (DMC: Preparedness).

Adaptive Governance (5 Indicators)

Indicators in this category assess governance structures that facilitate DRR and community preparedness. The **Number of religious events related to DRR (CDRI-35)** highlights the role of faith-based organizations in promoting risk awareness. **Trust in state institutions (CORE-150)** and **Number of public awareness campaigns (CORE-157)** evaluate the effectiveness of governance structures in disaster communication and preparedness. **Public satisfaction with bureaucratic processes (CORE-225)** and **Protection measures for vulnerable groups (CORE-252)** focus on measuring equity in disaster governance and targeted interventions for marginalized populations, to ensure fair and efficient response strategies (Preparedness, Recovery, Response).

Health and Wellbeing (5 Indicators)

This category addresses mental and physical well-being during disasters. **Community awareness of resilience tools (SHELTER-79)** fosters mitigation strategies by equipping communities with essential knowledge. **Identifying vulnerable populations (CORE-173)** and **Outreach campaigns for at-risk groups (CORE-179)** enhance preparedness by targeting high-risk communities. **Mental health support programs (CORE-224)** play a pivotal role in post-disaster recovery, providing necessary psychological aid to affected individuals and response teams. **First aid knowledge (CORE-238)** ensures that individuals are trained to provide immediate assistance during disaster response, reducing casualties and promoting community-led first aid responses (Mitigation, Preparedness, Response, Recovery).

Social interaction and Inclusiveness (6 Indicators)

Social inclusion indicators highlight the importance of equitable access to disaster preparedness and recovery efforts. **The number of religious organizations (CDRI-**



3) plays a role in crisis support and community coordination. **Infrastructure investment for vulnerable groups (CDRI-17)** ensures disaster resilience planning is inclusive. **Percentage of the population with disabilities (CDRI-27)** aids in designing accessible disaster response mechanisms. **Physical information dissemination points (RESILOC-49)** enhance community awareness and emergency response capabilities. **Programs supporting elder engagement (SHELTER-63)** emphasize inclusive preparedness, and **Mapping the needs of vulnerable groups (CORE-180)** ensures that disaster communication strategies reach diverse populations effectively (All, Response, Preparedness).

The indicators presented in the table highlight the interdisciplinary nature of disaster resilience, integrating cultural, social, health, and governance-related factors. The **Preparedness phase** receives significant attention, with a strong focus on proactive governance, public awareness, and targeted interventions for vulnerable groups. **Response and Recovery indicators** emphasize mental health support, public satisfaction with governance, and adaptive strategies for disaster mitigation. **Social interaction** remains a cross-cutting theme across all phases, ensuring equitable access to resources and preparedness measures. These indicators collectively offer a robust framework for enhancing psycho-social resilience in disaster-prone communities.

Indicators related to the psycho-social dimension	Frequ
Active Memory	4
0-CDRI: Number of cultural institutions (Numerical quantity, per 100.000 / Local municipal statistics)	
Relevancy: Serves as information hubs and cultural resilience centers. (DMC: All)	
16-CDRI: Local geographical knowledge (Numerical quantity / Local municipal statistics)	
Relevancy: Represents local knowledge crucial for disaster resilience. (DMC: All)	
23-CDRI: Knowledge about past crises (n/a / Local municipal statistics)	
Relevancy: Reflects preparedness through historical disaster awareness. (DMC: All)	
171-CORE: Awareness level about heatwaves (Likert scale / Various official sources)	
Relevancy: Measures public awareness and readiness for extreme heat events. (DMC: Preparedness)	
Adaptive Governance	5
35-CDRI: Number of religious events related to DRR (Numerical quantity, per 100.000 / Religious organization reports)	
Relevancy: Reflects religious community involvement in disaster preparedness. (DMC: Preparedness)	
150-CORE: Level of trust in state institutions (Likert scale / Local municipal statistics)	
Relevancy: Measures public trust in government response capacity. (DMC: Preparedness)	
157-CORE: Number of information campaigns (Numerical quantity, annual / Public awareness campaign reports)	



Relevancy: Measures the effectiveness of public risk awareness campaigns.
(DMC: Preparedness)

225-CORE: Level of users satisfied with efficiency and fairness of bureaucratic processes (Likert scale / Various official sources)

Relevancy: Measures public satisfaction with disaster-related governance.
(DMC: Recovery)

252-CORE: Number of targeted protection measures implemented for identified vulnerable groups & women (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides targeted interventions for vulnerable and high-risk groups. (DMC: Response)

Health and Wellbeing

5

79-SHELTER: Community awareness and knowledge of resilience tools (Likert scale / Community disaster resilience surveys)

Relevancy: Encourages proactive community resilience measures. (DMC: Mitigation)

173-CORE: Number of vulnerable population in disaster zones (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Identifies and tracks at-risk populations needing special assistance. (DMC: Preparedness)

179-CORE: Percentage of outreach campaigns designed for vulnerable groups (Percentage / Various official sources)

Relevancy: Enhances outreach to at-risk groups. (DMC: Preparedness)

224-CORE: Total number of mental health support programs for crisis victims and professionals (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides mental health support during crisis recovery. (DMC: Recovery)

238-CORE: First aid knowledge (Numerical quantity / Local municipal statistics)

Relevancy: Measures individual emergency response knowledge. (DMC: Response)

Social cohesion and inclusiveness

6

3-CDRI: Number of religious organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Offers crisis support services and emergency aid coordination. (DMC: All)

17-CDRI: Budget spent on infrastructure for vulnerable groups (Local currency, per 100.000 / Local municipal statistics)

Relevancy: Reflects depth of preparedness for at-risk groups. (DMC: All)

27-CDRI: Percentage population with physical or mental disabilities (m/w/d) (Percentage / Local health statistics)

Relevancy: Measures accessibility needs in disaster planning. (DMC: All)

49-RESILOC: Number of physical information dissemination points in the community (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves public access to disaster-related information. (DMC: Response)

63-SHELTER: Percentage of government or NGO programs actively supporting elder engagement (Percentage / Various official sources)



Relevancy: Promotes elder engagement in disaster preparedness. (DMC: All)

180-CORE: Specific needs mapped of vulnerable groups & women (Numerical quantity / Various official sources)

Relevancy: Ensures inclusive communication for diverse populations. (DMC: Preparedness)

Total	20
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4.2.2. Social dimension

The table in this section presents a detailed overview of **173 indicators** related to the **social dimension** of disaster resilience. These indicators are categorized into four primary thematic areas: **Active Memory, Adaptive Governance, Health and Wellbeing, and Social interaction and Inclusiveness**. Each category contributes uniquely to disaster preparedness, response, mitigation, and recovery, forming an integral component of the **DMC**.

Active Memory (21 Indicators)

Active Memory indicators focus on preserving cultural and historical knowledge to enhance disaster resilience. The **Number of cultural institutions (CDRI-0)** highlights the role of museums, archives, and cultural centres in fostering community resilience. Other key indicators include **Local geographical knowledge (CDRI-16)** and **Knowledge about past crises (CDRI-23)**, which provide essential historical data for preparedness. **Awareness initiatives led by community leaders (CORE-183)** and **media engagement in historical disaster awareness (UN-94)** emphasize public engagement and risk awareness. Additionally, **documenting disaster testimonies (CORE-103, CORE-107, CORE-100)** and **memorial sites (CORE-113, CORE-227)** ensure that past events inform future resilience strategies (All, Preparedness, Mitigation, Recovery).

Adaptive Governance (55 Indicators)

Governance-related indicators assess systemic structures that facilitate coordinated disaster response. The **Number of civic and political organizations (CDRI-2)** reflects the strength of advocacy networks, while **coordination mechanisms (CDRI-21)** ensure effective crisis response. **Registered volunteers (CDRI-32)** and **stakeholder participation in preparedness planning (CORE-160, CORE-176)** highlight community engagement. Additionally, **the existence of risk assessment frameworks (SHELTER-72, CORE-74)** and **government reform plans for crisis efficiency (SHELTER-60)** are essential for structured disaster governance. Indicators such as **trust in institutions (CORE-150)** and **citizen participation in policy formulation (SHELTER-61)** measure public confidence and policy inclusivity (All, Preparedness, Response, Recovery, Mitigation).

Health and Wellbeing (27 Indicators)

This category focuses on healthcare infrastructure and public health preparedness. **The number of hospitals (CDRI-10), physicians (CDRI-12), and healthcare workers (CDRI-13)** assesses medical response capacity. **Cooling centers for heatwaves (RESILOC-44)** and **emergency outreach programs (RESILOC-47)** ensure proactive



crisis management. Indicators such as **mental health support programs (CORE-224, CORE-221)** and **first aid knowledge (CORE-238)** emphasize post-disaster recovery. Additionally, **community awareness of resilience tools (SHELTER-79)** and **vulnerable population tracking (CORE-173, CORE-179)** reinforce targeted interventions (Response, Preparedness, Mitigation, Recovery).

Social interaction and Inclusiveness (46 Indicators)

This section ensures equitable disaster resilience strategies for marginalized populations. **The number of nonprofit and religious organizations (CDRI-1, CDRI-3)** highlights community-led response efforts. **Budget allocations for vulnerable groups (CDRI-17)** and **percentage of populations with disabilities (CDRI-27)** assess inclusivity in planning. **Training programs for DRR (RESILOC-56)** and **community-wide drills (CDRI-39)** enhance preparedness. Additionally, **multilingual disaster guidelines (SHELTER-76)** and **gender representation in disaster response teams (CORE-337)** ensure inclusivity in communication and governance (All, Response, Preparedness, Recovery).

Socio-Economic Resilience (24 Indicators)

Economic stability significantly affects disaster resilience. **Per capita income (CDRI-4)**, **employment rate (RURITAGE-82)**, and **business establishments (RURITAGE-84)** indicate economic preparedness for crises. **Financial investments in disaster response (CDRI-37)** and **private-sector collaboration in risk management (SLR-90)** highlight institutional readiness. Additionally, **availability of early warning systems (CORE-245)** and **infrastructure resilience (CDRI-8, CORE-240)** ensure sustainability in crisis response (All, Prevention, Mitigation, Recovery).

The social dimension of disaster resilience integrates cultural, political, economic, and health-related factors into a comprehensive preparedness framework. **Adaptive Governance** indicators dominate, reflecting the emphasis on structured policymaking and coordination. **Social interaction** ensures equitable access to resources, while **Health and Wellbeing** indicators reinforce public health measures. **Active Memory** plays a crucial role in disaster awareness through cultural preservation, and **Socio-Economic Resilience** determines recovery potential. The diversity of these indicators highlights the importance of a **multifaceted approach** to DRM, ensuring sustainable and inclusive resilience strategies.

Indicators related to the social dimension	Frequ.
Active Memory	21
0-CDRI: Number of cultural institutions (Numerical quantity, per 100.000 / Local municipal statistics)	
Relevancy: Serves as information hubs and cultural resilience centers. (DMC: All)	
183-CORE: Number of awareness initiatives led by community or spiritual leaders (Numerical quantity, per 100.000 / Various official sources)	
Relevancy: Integrates historical disaster narratives into education. (DMC: Preparedness)	
16-CDRI: Local geographical knowledge (Numerical quantity / Local municipal statistics)	



Relevancy: Represents local knowledge crucial for disaster resilience.
(DMC: All)

94-UN: Number of TV programs, documentaries, books on past disasters (Numerical quantity, per 100.000 / Media and publication archives)

Relevancy: Indicates media engagement in historical disaster awareness. (DMC: Mitigation)

100-CORE: Number of platforms dedicated to disaster victims' testimonies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Captures and archives firsthand disaster experiences.
(DMC: Mitigation)

103-CORE: Total number of collected and archived disaster testimonies (Numerical quantity / Various official sources)

Relevancy: Ensures cultural documentation of disaster experiences.
(DMC: Mitigation)

107-CORE: Number of oral history records documenting disaster experiences (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Promotes cultural engagement in disaster awareness.
(DMC: Mitigation)

108-CORE: Frequency of cultural events honoring past disasters (Numerical quantity, annual / Various official sources)

Relevancy: Strengthens institutional responsibility for disaster memory.
(DMC: Mitigation)

111-CORE: Existence of an institutional strategy for cultural memory preservation (Y/N / Various official sources)

Relevancy: Facilitates digital storytelling for resilience awareness.
(DMC: Mitigation)

112-CORE: Number of social media channels for sharing disaster-related memories (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures accessible and visible sites for disaster remembrance. (DMC: Mitigation)

113-CORE: Number of established disaster remembrance sites (Numerical quantity / Various official sources)

Relevancy: Encourages local leadership in resilience awareness.
(DMC: Mitigation)

115-CORE: Percentage of schools incorporating disaster testimonies in curricula (Percentage / Various official sources)

Relevancy: Ensures disaster awareness is embedded in education.
(DMC: Mitigation)

128-CORE: Number of events on risk-related matters organized by cultural institutions (Numerical quantity, per 100.000 / Cultural institution reports and event records)

Relevancy: Enhances community awareness and preparedness through cultural engagement. (DMC: Mitigation)

129-CORE: Number of informational materials/campaigns organized for cultural institution professionals (Numerical quantity, per 100.000 / Training and awareness campaign documentation)

Relevancy: Equips cultural professionals with knowledge on crisis response and risk management. (DMC: Mitigation)



136-CORE: Number of activities organized in schools to critically discuss local traditions (Numerical quantity, per 100.000 / School activity reports and curriculum records)

Relevancy: Encourages intergenerational learning and awareness of cultural resilience. (DMC: Mitigation)

151-CORE: Population awareness and skills (n/a / Local municipal statistics)

Relevancy: Measures general public awareness of disaster response. (DMC: Preparedness)

171-CORE: Awareness level about heatwaves (Likert scale / Various official sources)

Relevancy: Measures public awareness and readiness for extreme heat events. (DMC: Preparedness)

172-CORE: Number of neighborhood leaders attending emergency coordination activities (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens community-based leadership in disaster response. (DMC: Preparedness)

177-CORE: Number of local knowledge-sharing workshops on disaster risk management (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages knowledge sharing on risk preparedness. (DMC: Preparedness)

226-CORE: Knowledge and experiences of elders is documented and archived (Y/N / Various official sources)

Relevancy: Documents community knowledge and experiences of past disasters. (DMC: Recovery)

227-CORE: Presence of memorials built to remember past catastrophes and victims (m/w/d) (Y/N / Municipal records and historical preservation agencies)

Relevancy: Preserves historical memory, reinforcing community resilience and recovery. (DMC: Recovery)

Adaptive Governance

55

2-CDRI: Number of civic and political organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Strengthens systemic support networks for advocacy and recovery. (DMC: All)

21-CDRI: Coordination mechanisms (Y/N / Local municipal statistics)

Relevancy: Reflects coordination capacity in crisis situations. (DMC: Preparedness)

24-CDRI: Number of registered residents per square km (m/w/d) (Numerical quantity, per 100.000 / Census data)

Relevancy: Indicates population density, affecting evacuation and aid distribution. (DMC: All)

32-CDRI: Number of registered volunteers (m/w/d) (Numerical quantity, per 100.000 / Volunteer registration databases)

Relevancy: Reflects community engagement in volunteer response efforts. (DMC: All)



41-CDRI: Existence of a protocol that clarifies the end of the crisis/emergency status (Y/N / Various official sources)

Relevancy: Establishes clear transition from crisis response to recovery.
(DMC: Response)

42-RESILOC: Number of large residential units with a manager (Numerical quantity / Various official sources)

Relevancy: Improves coordination and disaster readiness in residential complexes. (DMC: all)

43-RESILOC: Percentage of population demonstrating precautionary behaviors (Percentage / Various official sources)

Relevancy: Promotes individual responsibility in disaster preparedness.
(DMC: Preparedness)

51-RESILOC: Percentage of stakeholders able to access interpreting services during crises (Percentage / Various official sources)

Relevancy: Facilitates structured emergency planning. (DMC: Response)

57-SHELTER: Percentage of affected individuals who believe recovery promises have been fulfilled (Percentage / Public surveys)

Relevancy: Measures perceived effectiveness of disaster recovery efforts. (DMC: Recovery)

60-SHELTER: Presence of a formalized government reform plan for bureaucratic efficiency (Y/N / Various official sources)

Relevancy: Improves efficiency in crisis-related bureaucratic processes.
(DMC: All)

61-SHELTER: Percentage of municipalities with structured citizen participation mechanisms (Percentage / Various official sources)

Relevancy: Encourages inclusive community participation in disaster policies. (DMC: All)

62-SHELTER: Percentage of surveyed citizens who believe policies reflect local needs and realities (Percentage / Public surveys)

Relevancy: Measures alignment of disaster policies with public needs.
(DMC: Mitigation)

64-SHELTER: Number of available scientific infrastructure units for crisis monitoring (Numerical quantity / Various official sources)

Relevancy: Expands crisis monitoring through scientific infrastructure.
(DMC: Preparedness)

70-SHELTER: Number of coordination mechanisms between state and federal agencies (Numerical quantity / Various official sources)

Relevancy: Ensures structured coordination between government agencies. (DMC: All)

72-SHELTER: Existence and comprehensiveness of national risk assessment frameworks (Y/N / Various official sources)

Relevancy: Assesses comprehensiveness of national risk assessments.
(DMC: All)

74-SHELTER: Existence of a comprehensive national disaster risk management framework (Y/N / Various official sources)

Relevancy: Ensures national disaster policies cover all risk management aspects. (DMC: All)

75-SHELTER: Number of formally assigned stakeholders in national disaster management (Numerical quantity / Various official sources)



Relevancy: Tracks stakeholder engagement in disaster response systems. (DMC: All)

86-SLR: Number of professional and organisational DRR guidelines available on organisational level (Numerical quantity / Organizational policy documents)

Relevancy: Provides guidance on disaster risk reduction (DRR) best practices. (DMC: Mitigation)

89-SLR: Inclusion of risk indicators in urban planning policies; Mentioning of terms 'risk', 'uncertainty' in policies; Presence of elaborated risk metric (Likert scale / Urban planning policies)

Relevancy: Reflects disaster risk considerations in urban planning. (DMC: Mitigation)

116-CORE: Number of evaluations in frontline responder organisations completed (Numerical quantity / Various official sources)

Relevancy: Measures improvement in first response capabilities. (DMC: Mitigation)

120-CORE: Number of leadership training programs fostering ethical decision-making (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures crisis leadership training includes ethical decision-making. (DMC: Mitigation)

127-CORE: Number of civil protection job descriptions with detailed role definitions and coordination protocols (Numerical quantity / Emergency services workforce guidelines)

Relevancy: Improves coordination and clarity in emergency response roles. (DMC: Mitigation)

146-CORE: Number of shared initiatives among local stakeholders for disaster risk management (Numerical quantity / Disaster risk management stakeholder collaboration reports)

Relevancy: Improves collaboration among stakeholders for coordinated disaster response. (DMC: Mitigation)

150-CORE: Level of trust in state institutions (Likert scale / Local municipal statistics)

Relevancy: Measures public trust in government response capacity. (DMC: Preparedness)

157-CORE: Number of information campaigns (Numerical quantity, annual / Public awareness campaign reports)

Relevancy: Measures the effectiveness of public risk awareness campaigns. (DMC: Preparedness)

159-CORE: Presence of dedicated CNH protection agency (Y/N / Heritage protection agency reports)

Relevancy: Measures institutional commitment to cultural heritage protection. (DMC: Preparedness)

160-CORE: Number of consultation meetings with citizens in DRR planning (Likert scale / Local authority records)

Relevancy: Indicates the level of community involvement in DRR (DMC: Preparedness)

164-CORE: Emergency plans publicly accessible (Y/N / Government transparency reports)



Relevancy: Ensures public access to emergency preparedness information. (DMC: Preparedness)

165-CORE: Number of emergency plans available to different stakeholders (Likert scale / Emergency response plans)

Relevancy: Indicates availability of disaster response plans for key stakeholders. (DMC: Preparedness)

169-CORE: Presence of safety & security memorandums in public and private organizations (Y/N / Various official sources)

Relevancy: Ensures structured safety protocols in major institutions. (DMC: Preparedness)

174-CORE: Percentage of coordination protocols updated for cascading disaster scenarios (Percentage / Various official sources)

Relevancy: Improves response strategies for multi-layered hazard events. (DMC: Preparedness)

175-CORE: Frequency of inter-agency coordination meetings held (Numerical quantity, annual / Various official sources)

Relevancy: Facilitates multi-agency collaboration for coordinated response. (DMC: Preparedness)

176-CORE: Percentage of community feedback incorporated into policy updates (Percentage / Various official sources)

Relevancy: Ensures community feedback influences disaster policies. (DMC: Preparedness)

184-CORE: Percentage of heritage professionals trained in crisis response (Percentage / Various official sources)

Relevancy: Improves heritage site protection in disasters. (DMC: Preparedness)

188-CORE: Percentage of emergency preparedness training programs involving multiple agencies (Percentage / Various official sources)

Relevancy: Ensures collaboration between agencies in preparedness training. (DMC: Preparedness)

189-CORE: Percentage of disaster management positions filled via merit-based recruitment (Percentage / Various official sources)

Relevancy: Ensures competency-based recruitment in disaster management. (DMC: Preparedness)

192-CORE: Total number of preventive disaster coordination measures established (Numerical quantity / Various official sources)

Relevancy: Measures effectiveness of coordinated preventive strategies. (DMC: Preparedness)

193-CORE: Number of policies strengthening organizational crisis response (Numerical quantity / Various official sources)

Relevancy: Strengthens organizational response policies. (DMC: Preparedness)

194-CORE: Number of participatory meetings involving private sector and citizens (Numerical quantity, annual / Various official sources)

Relevancy: Encourages private-sector involvement in disaster preparedness. (DMC: Preparedness)



195-CORE: Number of evaluations of effectiveness of structured crisis communication systems (Numerical quantity, annual / Various official sources)

Relevancy: Improves crisis communication effectiveness. (DMC: Preparedness)

197-CORE: Percentage of local/regional governments covered by crisis communication protocols (Percentage / Various official sources)

Relevancy: Ensures emergency communication reach across local governments. (DMC: Preparedness)

198-CORE: Integration of emergency communication roles in job descriptions (Y/N / Various official sources)

Relevancy: Integrates emergency roles into formal job responsibilities. (DMC: Preparedness)

199-CORE: Existence of Official Public Communication Campaigns Against Misinformation in Crisis Situations (Y/N / Government communication strategy reports)

Relevancy: Ensures accurate and timely information dissemination during crises. (DMC: Preparedness)

203-CORE: Number of internal crisis action plans developed and approved annually (Numerical quantity / Local government crisis action plan reports)

Relevancy: Tracks the progress of local crisis response planning. (DMC: Preparedness)

204-CORE: Number of public datasets available on refugee data and location (Numerical quantity / Public datasets on refugee statistics)

Relevancy: Improves access to vital refugee-related data for crisis response. (DMC: Preparedness)

206-CORE: Number of safety drills assessing preparedness and response resilience in public/private organisations (Numerical quantity, annual / Training and capacity-building evaluation reports)

Relevancy: Tracks improvements in training and preparedness activities. (DMC: Preparedness)

210-CORE: Frequency of enforcement checks in high-risk areas (Numerical quantity, annual / Various official sources)

Relevancy: Ensures enforcement of risk reduction policies. (DMC: Prevention)

213-CORE: Presence of an official disaster preservation plan (Y/N / Various official sources)

Relevancy: Preserves historical disaster knowledge for learning and resilience. (DMC: Prevention)

215-CORE: Existence of a national fire hazard prediction plan (daily/weekly) (Y/N / Various official sources)

Relevancy: Monitors early warning system for fire hazards. (DMC: Prevention)

217-CORE: Clear definition and implementation of river contracts and watercourse management (Y/N / Water resource and disaster resilience reports)

Relevancy: Enhances stakeholder collaboration in water management resilience. (DMC: Prevention)



225-CORE: Level of users satisfied with efficiency and fairness of bureaucratic processes (Likert scale / Various official sources)

Relevancy: Measures public satisfaction with disaster-related governance. (DMC: Recovery)

249-CORE: Number of ordinances related with disasters (Numerical quantity / Various official sources)

Relevancy: Supports governance of disaster management and policy enforcement. (DMC: Response)

312-CORE: Number of community networks strengthened for disaster response cooperation (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens local social support systems. (DMC: Response)

326-Proposal concept: Number of cross-service training between emergency services (Numerical quantity, annual / Various official sources)

Relevancy: Improves inter-agency emergency response cooperation. (DMC: Response)

327-Proposal concept: Number of real-time information sharing systems for crisis management (Numerical quantity / Various official sources)

Relevancy: Enhances real-time data sharing during crises. (DMC: Response)

Health and Wellbeing

27

10-CDRI: Number of hospitals (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare capacity and medical preparedness. (DMC: Response)

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare workforce availability in emergencies. (DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

44-RESILOC: Number of cooling centers identified for citizens (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides cooling relief for populations during heatwaves. (DMC: Preparedness)

47-RESILOC: Number of trained personnel conducting door-to-door emergency outreach (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands outreach efforts for early warnings and evacuation. (DMC: Response)

59-SHELTER: Percentage of population with access to occupational health services and emergency medical care (Percentage / Various official sources)

Relevancy: Ensures access to essential health services post-disaster. (DMC: All)



79-SHELTER: Community awareness and knowledge of resilience tools (Likert scale / Community disaster resilience surveys)

Relevancy: Encourages proactive community resilience measures.
(DMC: Mitigation)

173-CORE: Number of vulnerable population in disaster zones (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Identifies and tracks at-risk populations needing special assistance. (DMC: Preparedness)

179-CORE: Percentage of outreach campaigns designed for vulnerable groups (Percentage / Various official sources)

Relevancy: Enhances outreach to at-risk groups. (DMC: Preparedness)

205-CORE: Extent to which different authorities' roles are clearly operationalized (Likert scale / Municipal governance structure reviews)

Relevancy: Clarifies authorities' responsibilities in disaster scenarios.
(DMC: Preparedness)

212-CORE: Number of long-term health promotion programs accessible to the community (Percentage / Various official sources)

Relevancy: Promotes community health and resilience post-disaster.
(DMC: Prevention)

221-CORE: Number of support programs for emergency responders (psychological assistance, stress management) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides essential psychological support for emergency responders. (DMC: Recovery)

224-CORE: Total number of mental health support programs for crisis victims and professionals (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides mental health support during crisis recovery.
(DMC: Recovery)

228-CORE: Number of hospital beds (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects response capacity in medical emergencies. (DMC: Response)

229-CORE: Number of ambulances (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates medical transport availability in emergencies.
(DMC: Response)

230-CORE: Number of fire stations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures fire safety and emergency response reach.
(DMC: Response)

236-CORE: Amount of training (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness through training and education programs. (DMC: Response)

238-CORE: First aid knowledge (Numerical quantity / Local municipal statistics)

Relevancy: Measures individual emergency response knowledge.
(DMC: Response)



246-CORE: Vital products and medicines supply chains redundancy (n/a / Local municipal statistics)

Relevancy: Indicates redundancy of essential supply chains. (DMC: Response)

247-CORE: Shelter capacity (n/a / Local municipal statistics)

Relevancy: Reflects emergency shelter capacity. (DMC: Response)

248-CORE: Red Cross/Crest volunteers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures the availability of trained emergency volunteers. (DMC: Response)

260-CORE: Number of power cuts during summer and average duration (Numerical quantity, annual / Various official sources)

Relevancy: Monitors energy stability and vulnerability to power outages. (DMC: Response)

332-Proposal concept: Clarity of instructions provided in crisis situations / Number of updates to emergency ordinances (Percentage / Emergency directive dissemination surveys)

Relevancy: Ensures communities receive and understand emergency directives. (DMC: Response)

333-Proposal concept: Number of first aid courses (Numerical quantity / measurable through level or frequency of community first-aid training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

334-Proposal concept: Number of fire safety training (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

335-Proposal concept: Number of trainings on search and rescue techniques (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

336-Proposal concept: Number of downloads of mobile application providing instructions on how to prepare and behave in case of an emergency (Numerical quantity, per 100.000 / measurable through existence of mobile app)

Relevancy: Indicates a community's critical-infrastructure resilience; (DMC: Response)

Social interaction and inclusiveness

46

1-CDRI: Number of nonprofit organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports connectivity, social cohesion, and community response readiness. (DMC: All)

3-CDRI: Number of religious organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Offers crisis support services and emergency aid coordination. (DMC: All)



9-CDRI: Number of vacant housing units (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates demographic shifts affecting local resilience.
(DMC: All)

14-CDRI: Number of English speakers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates community's ability to communicate in disasters.
(DMC: Response)

15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)

Relevancy: Measures social support workforce capacity. (DMC: Recovery)

17-CDRI: Budget spent on infrastructure for vulnerable groups (Local currency, per 100.000 / Local municipal statistics)

Relevancy: Reflects depth of preparedness for at-risk groups. (DMC: All)

25-CDRI: Percentage of population below 65 years of age (m/w/d) (Percentage / Census data)

Relevancy: Reflects workforce availability for economic recovery.
(DMC: All)

26-CDRI: Percentage of population 17 years of age or younger (m/w/d) (Percentage / Census data)

Relevancy: Identifies young populations needing additional protections.
(DMC: All)

27-CDRI: Percentage population with physical or mental disabilities (m/w/d) (Percentage / Local health statistics)

Relevancy: Measures accessibility needs in disaster planning. (DMC: All)

28-CDRI: Percentage of women (Percentage / Census data)

Relevancy: Considers gender-inclusive disaster response strategies.
(DMC: All)

29-CDRI: Percentage of one-person household (m/w/d) (Percentage / Census and household data)

Relevancy: Reflects social isolation risks, affecting emergency support needs. (DMC: All)

34-CDRI: Mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans (Y/N / Preparedness policy documents)

Relevancy: Ensures disaster plans address the needs of vulnerable groups. (DMC: Preparedness)

38-CDRI: Percentage increase in public trust in official institutions (Percentage / Various official sources)

Relevancy: Reflects public confidence in emergency response institutions. (DMC: Mitigation)

39-CDRI: Number of community-wide drills and risk-preparedness activities (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves community preparedness through simulated disaster response. (DMC: Preparedness)

46-RESILOC: Number of information signs increasing local awareness (Numerical quantity, per 100.000 / Various official sources)



Relevancy: Improves public awareness and visibility of disaster risks.
(DMC: Preparedness)

48-RESILOC: Number of training sessions on risk disclosure for property sellers and landlords (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances transparency in risk communication for property stakeholders. (DMC: Preparedness)

50-RESILOC: Number of NGOs, sport teams, clubs (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Mobilizes community resources for disaster response.
(DMC: All)

52-RESILOC: Percentage of neighborhoods with an active neighborhood watch program (Percentage / Various official sources)

Relevancy: Enhances neighborhood-level security and resilience.
(DMC: All)

55-RESILOC: Percentage of municipalities with structured mechanisms for community dialogue (Percentage / Various official sources)

Relevancy: Encourages local community participation in risk management. (DMC: Mitigation)

56-RESILOC: Number of training sessions focused on self-assessment and crisis readiness (Numerical quantity / Various official sources)

Relevancy: Increases self-reliance in disaster preparedness. (DMC: Mitigation)

63-SHELTER: Percentage of government or NGO programs actively supporting elder engagement (Percentage / Various official sources)

Relevancy: Promotes elder engagement in disaster preparedness.
(DMC: All)

66-SHELTER: Percentage of women in leadership roles within disaster preparedness committees (Numerical quantity / Various official sources)

Relevancy: Ensures gender-inclusive leadership in disaster planning.
(DMC: All)

76-SHELTER: Number of languages in which disaster preparedness guidelines are provided (Numerical quantity / Various official sources)

Relevancy: Ensures multi-language accessibility in disaster guidelines.
(DMC: Preparedness)

138-CORE: Number of initiatives to raise awareness of women's contributions to local development and heritage (Numerical quantity, per 100.000 / Community development and heritage awareness initiatives)

Relevancy: Recognizes and promotes women's roles in community resilience and recovery. (DMC: Mitigation)

143-CORE: Number of campaigns framing women's roles in crisis situations (Numerical quantity, per 100.000 / Crisis management campaign evaluations)

Relevancy: Encourages gender-inclusive crisis response strategies.
(DMC: Mitigation)



144-CORE: Number of cultural events promoted with/by first responders (Numerical quantity / Disaster response and cultural event participation records)

Relevancy: Integrates cultural perspectives into emergency response efforts. (DMC: Mitigation)

147-CORE: Number of recreational centres (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides spaces for emergency shelter and post-disaster gathering. (DMC: Preparedness)

154-CORE: Social media indicators of interactions with risk information / Attendance of population to risk information events / (Numerical quantity / Social media analytics)

Relevancy: Measures public engagement in disaster preparedness and communication. (DMC: Preparedness)

161-CORE: Number of community events on DRR (Numerical quantity, per 100.000 / Community event records)

Relevancy: Indicates social cohesion through disaster-related community events. (DMC: Preparedness)

162-CORE: Number of school events on DRR / Number of DRR sessions in curriculum (Numerical quantity, per 100.000 / Education statistics)

Relevancy: Measures DRR education and preparedness training in schools. (DMC: Preparedness)

170-CORE: Number of experts involved in planning outside of civil services (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands multidisciplinary expertise in disaster risk reduction. (DMC: Preparedness)

180-CORE: Specific needs mapped of vulnerable groups & women (Numerical quantity / Various official sources)

Relevancy: Ensures inclusive communication for diverse populations. (DMC: Preparedness)

181-CORE: Number of multi-hazard training exercises conducted annually (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Evaluates the impact of digital response tools. (DMC: Preparedness)

186-CORE: Percentage of decision-making committees including diverse representatives (m/w/d) (Percentage / Various official sources)

Relevancy: Ensures diverse perspectives in disaster decision-making. (DMC: Preparedness)

190-CORE: Number of community-driven disaster resilience projects completed (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages local participation in disaster resilience projects. (DMC: Preparedness)

200-CORE: Proportion of the population covered by early warning systems (Percentage / National early warning system coverage data)

Relevancy: Ensures widespread access to early warning alerts. (DMC: Preparedness)

207-CORE: Percentage of locals digitally literate (m/w/d) (Percentage / National and regional digital literacy statistics)



Relevancy: Assesses digital literacy as a factor in accessing critical disaster information. (DMC: Preparedness)

216-CORE: Percentage of risk analyses incorporating qualitative social data (Percentage / Disaster risk assessment studies)

Relevancy: Improves understanding of social dimensions of disaster impact. (DMC: Prevention)

218-CORE: Number of temporary shelters (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides emergency accommodations for displaced individuals. (DMC: Recovery)

231-CORE: Number of special needs transportation services (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports transportation for disabled and vulnerable populations. (DMC: Response)

232-CORE: Number of community food service facilities (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Ensures food security and distribution during disasters. (DMC: Response)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

250-CORE: Number of channels in which there are warnings in different languages (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances risk communication accessibility for non-native speakers. (DMC: Response)

300-CORE: Percentage of agencies with approved and documented crisis coordination plans (Percentage / Various official sources)

Relevancy: Ensures formalized crisis coordination at institutional levels. (DMC: Response)

301-CORE: Percentage of households with at least one member trained in disaster preparedness (Percentage / Various official sources)

Relevancy: Encourages household-level preparedness training. (DMC: Response)

337-Proposal concept: Percentage of women among local first responders (FRs) and civil protection teams (Percentage / First responder workforce demographics)

Relevancy: Measures gender diversity in disaster response leadership and operations. (DMC: Response)

Socio-economic Resilience

24

4-CDRI: Local per capita income levels (Local currency / Local municipal statistics)

Relevancy: Indicates individual financial resilience for recovery efforts. (DMC: All)

5-CDRI: Local median household income levels (Local currency / Local municipal statistics)



Relevancy: Represents community-wide economic resilience. (DMC: All)

6-CDRI: Number of research and development establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents public sector innovation in disaster response. (DMC: All)

7-CDRI: Number of Colleges, Universities, and Professional Schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides education and workforce training crucial for recovery. (DMC: All)

8-CDRI: Number of housing units (compared to population) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects housing stability and household capacity. (DMC: All)

11-CDRI: Number of community housing (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents socio-economic support for at-risk populations. (DMC: All)

20-CDRI: Demographic characteristics (Numerical quantity / Local municipal statistics)

Relevancy: Identifies vulnerable populations needing targeted assistance. (DMC: All)

22-CDRI: Level of implementation of DRR policies (Likert scale / Local municipal statistics)

Relevancy: Measures implementation of policies in real-world response. (DMC: All)

30-CDRI: Percentage of population above poverty line (Percentage / Economic statistics)

Relevancy: Indicates economic stability and resilience to recover from disasters. (DMC: All)

37-CDRI: Percentage of budget dedicated to disaster preparedness, prevention, and response (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures sufficient financial investment in disaster preparedness and response. (DMC: All)

45-RESILOC: Number of households struggling with energy poverty (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Monitors energy insecurity affecting disaster resilience. (DMC: All)

82-RURITAGE: Local employment rate (m/w/d) (Percentage / Local municipal statistics)

Relevancy: Measures employment stability and economic recovery potential. (DMC: Mitigation)

84-RURITAGE: Number of business establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects private sector resilience and role in recovery. (DMC: Mitigation)

90-SLR: Number of contracts/agreements/LOIs between private actors and public agencies on CNHs (Numerical quantity, per 100.000 / Public-private agreements)



Relevancy: Reflects private-public collaboration in disaster resilience.
 (DMC: Mitigation)

148-CORE: Number of schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness levels through educational resilience. (DMC: Preparedness)

152-CORE: Average distance to supermarkets/groceries (Numerical quantity / GIS mapping and transportation data)

Relevancy: Measures accessibility to essential food supplies during disasters. (DMC: Preparedness)

208-CORE: Number of forecasts of impacts for different scenarios/hazards (Numerical quantity / Various official sources)

Relevancy: Improves predictive capacity and planning for diverse hazard scenarios. (DMC: Prevention)

211-CORE: Percentage increase in disaster mitigation best practices in moderate-risk areas (Percentage / Various official sources)

Relevancy: Expands adoption of best practices for disaster resilience. (DMC: Prevention)

234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals. (DMC: Response)

240-CORE: Transport means access (Numerical quantity / Local municipal statistics)

Relevancy: Measures accessibility of public transport in emergencies. (DMC: Response)

241-CORE: Internet connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates digital communication resilience. (DMC: Response)

243-CORE: Mobile connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures mobile communication access for coordination. (DMC: Response)

244-CORE: Radio communication (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects backup communication capacity for emergencies. (DMC: Response)

245-CORE: Early Warning Systems (EWS) access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures effectiveness of early warning systems. (DMC: Response)

Total	173
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4.2.3. Cultural dimension

The table in this section presents an extensive overview of indicators related to the cultural dimension of disaster resilience within the SyRI framework. The cultural dimension plays a pivotal role in shaping disaster risk perception, knowledge retention,



and community response. These indicators are categorized into Active Memory and Adaptive Governance, demonstrating the role of historical knowledge, cultural institutions, and governance mechanisms in DRR and resilience. These indicators span across all phases of the DMC.

Active Memory encompasses the preservation, documentation, and dissemination of historical knowledge, ensuring that past experiences inform future preparedness. Cultural institutions serve as resilience hubs, where museums, archives, and libraries act as centres for disaster education and awareness. Community-based knowledge sharing through local geographical knowledge and oral history records ensures that adaptation strategies are passed down. Media and public awareness are enhanced through television programs, books, documentaries, and social media platforms dedicated to disaster memory sharing, increasing risk awareness and preparedness. Cultural commemoration and learning are reinforced through events that honour past disasters and institutional strategies that preserve cultural memory. Memorial sites provide permanent spaces for communities to reflect on past disasters, strengthening collective resilience. Educational integration of disaster testimonies in school curricula and cultural institutions organizing risk-related events fosters intergenerational learning. Additionally, digital storytelling and recorded testimonies create an accessible archive of past experiences, aiding policymakers in the design of effective DRR strategies.

Adaptive Governance ensures that CNH and institutional memory are integrated into formal governance structures for effective disaster response and mitigation. Institutional coordination and policy integration are supported through civic and political organizations that advocate for disaster policies, along with coordination mechanisms that provide structured, knowledge-driven governance. Volunteerism and community participation reinforce local knowledge integration, with registered volunteers and stakeholder participation ensuring that cultural heritage considerations are included in governance. The protection of heritage in disaster planning is maintained through agencies dedicated to safeguarding cultural sites and traditions. Public trust and community engagement are fundamental to ensuring that disaster governance mechanisms remain inclusive, culturally sensitive, and widely accepted.

Beyond Active Memory and Adaptive Governance, the cultural dimension also influences Health and Wellbeing, Social interaction and Inclusiveness, and Socio-Economic Resilience. Cultural resilience centres contribute to mental health support programs during disaster recovery, while traditional healing practices and religious ceremonies support psychological resilience. Social interaction is reinforced through cultural organizations that ensure disaster education reaches marginalized groups, including through multi-language disaster preparedness guidelines and public heritage events that foster community bonds. The cultural dimension further supports socio-economic resilience by ensuring local employment in cultural sectors, sustaining economic recovery in post-disaster contexts. Cultural tourism serves as a tool for economic revitalization, leveraging heritage sites for resilience promotion, while investments in cultural events stimulate local economies and raise awareness of disaster risks.

The cultural dimension of disaster resilience within the SyRI framework ensures that historical knowledge, collective memory, and governance structures integrate heritage into resilience-building efforts. Active Memory indicators emphasize historical awareness and knowledge retention, while Adaptive Governance ensures institutional coordination



and policy-driven integration of cultural elements into DRM. Furthermore, the cultural dimension supports Health and Wellbeing, Social Interaction and Inclusiveness, and Socio-Economic Resilience, demonstrating its interdisciplinary significance in resilience-building efforts. By embedding cultural awareness in disaster preparedness strategies, communities can create long-lasting resilience mechanisms that leverage historical knowledge, cultural identity, and institutional memory to mitigate the impacts of future disasters.

Indicators related to the cultural dimension	Frequ.
Active Memory	21
0-CDRI: Number of cultural institutions (Numerical quantity, per 100.000 / Local municipal statistics)	
Relevancy: Serves as information hubs and cultural resilience centers. (DMC: All)	
183-CORE: Number of awareness initiatives led by community or spiritual leaders (Numerical quantity, per 100.000 / Various official sources)	
Relevancy: Integrates historical disaster narratives into education. (DMC: Preparedness)	
16-CDRI: Local geographical knowledge (Numerical quantity / Local municipal statistics)	
Relevancy: Represents local knowledge crucial for disaster resilience. (DMC: All)	
94-UN: Number of TV programs, documentaries, books on past disasters (Numerical quantity, per 100.000 / Media and publication archives)	
Relevancy: Indicates media engagement in historical disaster awareness. (DMC: Mitigation)	
100-CORE: Number of platforms dedicated to disaster victims' testimonies (Numerical quantity, per 100.000 / Various official sources)	
Relevancy: Captures and archives firsthand disaster experiences. (DMC: Mitigation)	
103-CORE: Total number of collected and archived disaster testimonies (Numerical quantity / Various official sources)	
Relevancy: Ensures cultural documentation of disaster experiences. (DMC: Mitigation)	
107-CORE: Number of oral history records documenting disaster experiences (Numerical quantity, per 100.000 / Various official sources)	
Relevancy: Promotes cultural engagement in disaster awareness. (DMC: Mitigation)	
108-CORE: Frequency of cultural events honoring past disasters (Numerical quantity, annual / Various official sources)	
Relevancy: Strengthens institutional responsibility for disaster memory. (DMC: Mitigation)	
111-CORE: Existence of an institutional strategy for cultural memory preservation (Y/N / Various official sources)	
Relevancy: Facilitates digital storytelling for resilience awareness. (DMC: Mitigation)	



112-CORE: Number of social media channels for sharing disaster-related memories (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures accessible and visible sites for disaster remembrance. (DMC: Mitigation)

113-CORE: Number of established disaster remembrance sites (Numerical quantity / Various official sources)

Relevancy: Encourages local leadership in resilience awareness. (DMC: Mitigation)

115-CORE: Percentage of schools incorporating disaster testimonies in curricula (Percentage / Various official sources)

Relevancy: Ensures disaster awareness is embedded in education. (DMC: Mitigation)

128-CORE: Number of events on risk-related matters organized by cultural institutions (Numerical quantity, per 100.000 / Cultural institution reports and event records)

Relevancy: Enhances community awareness and preparedness through cultural engagement. (DMC: Mitigation)

129-CORE: Number of informational materials/campaigns organized for cultural institution professionals (Numerical quantity, per 100.000 / Training and awareness campaign documentation)

Relevancy: Equips cultural professionals with knowledge on crisis response and risk management. (DMC: Mitigation)

136-CORE: Number of activities organized in schools to critically discuss local traditions (Numerical quantity, per 100.000 / School activity reports and curriculum records)

Relevancy: Encourages intergenerational learning and awareness of cultural resilience. (DMC: Mitigation)

151-CORE: Population awareness and skills (n/a / Local municipal statistics)

Relevancy: Measures general public awareness of disaster response. (DMC: Preparedness)

171-CORE: Awareness level about heatwaves (Likert scale / Various official sources)

Relevancy: Measures public awareness and readiness for extreme heat events. (DMC: Preparedness)

172-CORE: Number of neighborhood leaders attending emergency coordination activities (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens community-based leadership in disaster response. (DMC: Preparedness)

177-CORE: Number of local knowledge-sharing workshops on disaster risk management (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages knowledge sharing on risk preparedness. (DMC: Preparedness)

226-CORE: Knowledge and experiences of elders is documented and archived (Y/N / Various official sources)

Relevancy: Documents community knowledge and experiences of past disasters. (DMC: Recovery)



227-CORE: Presence of memorials built to remember past catastrophes and victims (m/w/d) (Y/N / Municipal records and historical preservation agencies)

Relevancy: Preserves historical memory, reinforcing community resilience and recovery. (DMC: Recovery)

Adaptive Governance

55

2-CDRI: Number of civic and political organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Strengthens systemic support networks for advocacy and recovery. (DMC: All)

21-CDRI: Coordination mechanisms (Y/N / Local municipal statistics)

Relevancy: Reflects coordination capacity in crisis situations. (DMC: Preparedness)

24-CDRI: Number of registered residents per square km (m/w/d) (Numerical quantity, per 100.000 / Census data)

Relevancy: Indicates population density, affecting evacuation and aid distribution. (DMC: All)

32-CDRI: Number of registered volunteers (m/w/d) (Numerical quantity, per 100.000 / Volunteer registration databases)

Relevancy: Reflects community engagement in volunteer response efforts. (DMC: All)

41-CDRI: Existence of a protocol that clarifies the end of the crisis/emergency status (Y/N / Various official sources)

Relevancy: Establishes clear transition from crisis response to recovery. (DMC: Response)

42-RESILOC: Number of large residential units with a manager (Numerical quantity / Various official sources)

Relevancy: Improves coordination and disaster readiness in residential complexes. (DMC: all)

43-RESILOC: Percentage of population demonstrating precautionary behaviors (Percentage / Various official sources)

Relevancy: Promotes individual responsibility in disaster preparedness. (DMC: Preparedness)

51-RESILOC: Percentage of stakeholders able to access interpreting services during crises (Percentage / Various official sources)

Relevancy: Facilitates structured emergency planning. (DMC: Response)

57-SHELTER: Percentage of affected individuals who believe recovery promises have been fulfilled (Percentage / Public surveys)

Relevancy: Measures perceived effectiveness of disaster recovery efforts. (DMC: Recovery)

60-SHELTER: Presence of a formalized government reform plan for bureaucratic efficiency (Y/N / Various official sources)

Relevancy: Improves efficiency in crisis-related bureaucratic processes. (DMC: All)

61-SHELTER: Percentage of municipalities with structured citizen participation mechanisms (Percentage / Various official sources)

Relevancy: Encourages inclusive community participation in disaster policies. (DMC: All)



62-SHELTER: Percentage of surveyed citizens who believe policies reflect local needs and realities (Percentage / Public surveys)

Relevancy: Measures alignment of disaster policies with public needs.
(DMC: Mitigation)

64-SHELTER: Number of available scientific infrastructure units for crisis monitoring (Numerical quantity / Various official sources)

Relevancy: Expands crisis monitoring through scientific infrastructure.
(DMC: Preparedness)

70-SHELTER: Number of coordination mechanisms between state and federal agencies (Numerical quantity / Various official sources)

Relevancy: Ensures structured coordination between government agencies. (DMC: All)

72-SHELTER: Existence and comprehensiveness of national risk assessment frameworks (Y/N / Various official sources)

Relevancy: Assesses comprehensiveness of national risk assessments.
(DMC: All)

74-SHELTER: Existence of a comprehensive national disaster risk management framework (Y/N / Various official sources)

Relevancy: Ensures national disaster policies cover all risk management aspects. (DMC: All)

75-SHELTER: Number of formally assigned stakeholders in national disaster management (Numerical quantity / Various official sources)

Relevancy: Tracks stakeholder engagement in disaster response systems. (DMC: All)

86-SLR: Number of professional and organisational DRR guidelines available on organisational level (Numerical quantity / Organizational policy documents)

Relevancy: Provides guidance on disaster risk reduction (DRR) best practices. (DMC: Mitigation)

89-SLR: Inclusion of risk indicators in urban planning policies; Mentioning of terms 'risk', 'uncertainty' in policies; Presence of elaborated risk metric (Likert scale / Urban planning policies)

Relevancy: Reflects disaster risk considerations in urban planning.
(DMC: Mitigation)

116-CORE: Number of evaluations in frontline responder organisations completed (Numerical quantity / Various official sources)

Relevancy: Measures improvement in first response capabilities. (DMC: Mitigation)

120-CORE: Number of leadership training programs fostering ethical decision-making (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures crisis leadership training includes ethical decision-making. (DMC: Mitigation)

127-CORE: Number of civil protection job descriptions with detailed role definitions and coordination protocols (Numerical quantity / Emergency services workforce guidelines)

Relevancy: Improves coordination and clarity in emergency response roles. (DMC: Mitigation)



146-CORE: Number of shared initiatives among local stakeholders for disaster risk management (Numerical quantity / Disaster risk management stakeholder collaboration reports)

Relevancy: Improves collaboration among stakeholders for coordinated disaster response. (DMC: Mitigation)

150-CORE: Level of trust in state institutions (Likert scale / Local municipal statistics)

Relevancy: Measures public trust in government response capacity. (DMC: Preparedness)

157-CORE: Number of information campaigns (Numerical quantity, annual / Public awareness campaign reports)

Relevancy: Measures the effectiveness of public risk awareness campaigns. (DMC: Preparedness)

159-CORE: Presence of dedicated CNH protection agency (Y/N / Heritage protection agency reports)

Relevancy: Measures institutional commitment to cultural heritage protection. (DMC: Preparedness)

160-CORE: Number of consultation meetings with citizens in DRR planning (Likert scale / Local authority records)

Relevancy: Indicates the level of community involvement in DRR (DMC: Preparedness)

164-CORE: Emergency plans publicly accessible (Y/N / Government transparency reports)

Relevancy: Ensures public access to emergency preparedness information. (DMC: Preparedness)

165-CORE: Number of emergency plans available to different stakeholders (Likert scale / Emergency response plans)

Relevancy: Indicates availability of disaster response plans for key stakeholders. (DMC: Preparedness)

169-CORE: Presence of safety & security memorandums in public and private organizations (Y/N / Various official sources)

Relevancy: Ensures structured safety protocols in major institutions. (DMC: Preparedness)

174-CORE: Percentage of coordination protocols updated for cascading disaster scenarios (Percentage / Various official sources)

Relevancy: Improves response strategies for multi-layered hazard events. (DMC: Preparedness)

175-CORE: Frequency of inter-agency coordination meetings held (Numerical quantity, annual / Various official sources)

Relevancy: Facilitates multi-agency collaboration for coordinated response. (DMC: Preparedness)

176-CORE: Percentage of community feedback incorporated into policy updates (Percentage / Various official sources)

Relevancy: Ensures community feedback influences disaster policies. (DMC: Preparedness)

184-CORE: Percentage of heritage professionals trained in crisis response (Percentage / Various official sources)

Relevancy: Improves heritage site protection in disasters. (DMC: Preparedness)



188-CORE: Percentage of emergency preparedness training programs involving multiple agencies (Percentage / Various official sources)

Relevancy: Ensures collaboration between agencies in preparedness training. (DMC: Preparedness)

189-CORE: Percentage of disaster management positions filled via merit-based recruitment (Percentage / Various official sources)

Relevancy: Ensures competency-based recruitment in disaster management. (DMC: Preparedness)

192-CORE: Total number of preventive disaster coordination measures established (Numerical quantity / Various official sources)

Relevancy: Measures effectiveness of coordinated preventive strategies. (DMC: Preparedness)

193-CORE: Number of policies strengthening organizational crisis response (Numerical quantity / Various official sources)

Relevancy: Strengthens organizational response policies. (DMC: Preparedness)

194-CORE: Number of participatory meetings involving private sector and citizens (Numerical quantity, annual / Various official sources)

Relevancy: Encourages private-sector involvement in disaster preparedness. (DMC: Preparedness)

195-CORE: Number of evaluations of effectiveness of structured crisis communication systems (Numerical quantity, annual / Various official sources)

Relevancy: Improves crisis communication effectiveness. (DMC: Preparedness)

197-CORE: Percentage of local/regional governments covered by crisis communication protocols (Percentage / Various official sources)

Relevancy: Ensures emergency communication reach across local governments. (DMC: Preparedness)

198-CORE: Integration of emergency communication roles in job descriptions (Y/N / Various official sources)

Relevancy: Integrates emergency roles into formal job responsibilities. (DMC: Preparedness)

199-CORE: Existence of Official Public Communication Campaigns Against Misinformation in Crisis Situations (Y/N / Government communication strategy reports)

Relevancy: Ensures accurate and timely information dissemination during crises. (DMC: Preparedness)

203-CORE: Number of internal crisis action plans developed and approved annually (Numerical quantity / Local government crisis action plan reports)

Relevancy: Tracks the progress of local crisis response planning. (DMC: Preparedness)

204-CORE: Number of public datasets available on refugee data and location (Numerical quantity / Public datasets on refugee statistics)

Relevancy: Improves access to vital refugee-related data for crisis response. (DMC: Preparedness)

206-CORE: Number of safety drills assessing preparedness and response resilience in public/private organisations (Numerical quantity, annual / Training and capacity-building evaluation reports)



Relevancy: Tracks improvements in training and preparedness activities.
(DMC: Preparedness)

**210-CORE: Frequency of enforcement checks in high-risk areas
(Numerical quantity, annual / Various official sources)**

Relevancy: Ensures enforcement of risk reduction policies. (DMC: Prevention)

213-CORE: Presence of an official disaster preservation plan (Y/N / Various official sources)

Relevancy: Preserves historical disaster knowledge for learning and resilience. (DMC: Prevention)

**215-CORE: Existence of a national fire hazard prediction plan
(daily/weekly) (Y/N / Various official sources)**

Relevancy: Monitors early warning system for fire hazards. (DMC: Prevention)

217-CORE: Clear definition and implementation of river contracts and watercourse management (Y/N / Water resource and disaster resilience reports)

Relevancy: Enhances stakeholder collaboration in water management resilience. (DMC: Prevention)

225-CORE: Level of users satisfied with efficiency and fairness of bureaucratic processes (Likert scale / Various official sources)

Relevancy: Measures public satisfaction with disaster-related governance. (DMC: Recovery)

249-CORE: Number of ordinances related with disasters (Numerical quantity / Various official sources)

Relevancy: Supports governance of disaster management and policy enforcement. (DMC: Response)

312-CORE: Number of community networks strengthened for disaster response cooperation (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens local social support systems. (DMC: Response)

326-Proposal concept: Number of cross-service training between emergency services (Numerical quantity, annual / Various official sources)

Relevancy: Improves inter-agency emergency response cooperation. (DMC: Response)

327-Proposal concept: Number of real-time information sharing systems for crisis management (Numerical quantity / Various official sources)

Relevancy: Enhances real-time data sharing during crises. (DMC: Response)

Health and Wellbeing

27

10-CDRI: Number of hospitals (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare capacity and medical preparedness. (DMC: Response)

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)



Relevancy: Measures healthcare workforce availability in emergencies.
(DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

44-RESILOC: Number of cooling centers identified for citizens (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides cooling relief for populations during heatwaves.
(DMC: Preparedness)

47-RESILOC: Number of trained personnel conducting door-to-door emergency outreach (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands outreach efforts for early warnings and evacuation.
(DMC: Response)

59-SHELTER: Percentage of population with access to occupational health services and emergency medical care (Percentage / Various official sources)

Relevancy: Ensures access to essential health services post-disaster.
(DMC: All)

79-SHELTER: Community awareness and knowledge of resilience tools (Likert scale / Community disaster resilience surveys)

Relevancy: Encourages proactive community resilience measures.
(DMC: Mitigation)

173-CORE: Number of vulnerable population in disaster zones (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Identifies and tracks at-risk populations needing special assistance. (DMC: Preparedness)

179-CORE: Percentage of outreach campaigns designed for vulnerable groups (Percentage / Various official sources)

Relevancy: Enhances outreach to at-risk groups. (DMC: Preparedness)

205-CORE: Extent to which different authorities' roles are clearly operationalized (Likert scale / Municipal governance structure reviews)

Relevancy: Clarifies authorities' responsibilities in disaster scenarios.
(DMC: Preparedness)

212-CORE: Number of long-term health promotion programs accessible to the community (Percentage / Various official sources)

Relevancy: Promotes community health and resilience post-disaster.
(DMC: Prevention)

221-CORE: Number of support programs for emergency responders (psychological assistance, stress management) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides essential psychological support for emergency responders. (DMC: Recovery)

224-CORE: Total number of mental health support programs for crisis victims and professionals (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides mental health support during crisis recovery. (DMC: Recovery)



228-CORE: Number of hospital beds (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects response capacity in medical emergencies. (DMC: Response)

229-CORE: Number of ambulances (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates medical transport availability in emergencies. (DMC: Response)

230-CORE: Number of fire stations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures fire safety and emergency response reach. (DMC: Response)

236-CORE: Amount of training (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness through training and education programs. (DMC: Response)

238-CORE: First aid knowledge (Numerical quantity / Local municipal statistics)

Relevancy: Measures individual emergency response knowledge. (DMC: Response)

246-CORE: Vital products and medicines supply chains redundancy (n/a / Local municipal statistics)

Relevancy: Indicates redundancy of essential supply chains. (DMC: Response)

247-CORE: Shelter capacity (n/a / Local municipal statistics)

Relevancy: Reflects emergency shelter capacity. (DMC: Response)

248-CORE: Red Cross/Crest volunteers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures the availability of trained emergency volunteers. (DMC: Response)

260-CORE: Number of power cuts during summer and average duration (Numerical quantity, annual / Various official sources)

Relevancy: Monitors energy stability and vulnerability to power outages. (DMC: Response)

332-Proposal concept: Clarity of instructions provided in crisis situations / Number of updates to emergency ordinances (Percentage / Emergency directive dissemination surveys)

Relevancy: Ensures communities receive and understand emergency directives. (DMC: Response)

333-Proposal concept: Number of first aid courses (Numerical quantity / measurable through level or frequency of community first-aid training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

334-Proposal concept: Number of fire safety training (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)



335-Proposal concept: Number of trainings on search and rescue techniques (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

336-Proposal concept: Number of downloads of mobile application providing instructions on how to prepare and behave in case of an emergency (Numerical quantity, per 100.000 / measurable through existence of mobile app)

Relevancy: Indicates a community's critical-infrastructure resilience; (DMC: Response)

Social interaction and inclusiveness

46

1-CDRI: Number of nonprofit organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports connectivity, social cohesion, and community response readiness. (DMC: All)

3-CDRI: Number of religious organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Offers crisis support services and emergency aid coordination. (DMC: All)

9-CDRI: Number of vacant housing units (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates demographic shifts affecting local resilience. (DMC: All)

14-CDRI: Number of English speakers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates community's ability to communicate in disasters. (DMC: Response)

15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)

Relevancy: Measures social support workforce capacity. (DMC: Recovery)

17-CDRI: Budget spent on infrastructure for vulnerable groups (Local currency, per 100.000 / Local municipal statistics)

Relevancy: Reflects depth of preparedness for at-risk groups. (DMC: All)

25-CDRI: Percentage of population below 65 years of age (m/w/d) (Percentage / Census data)

Relevancy: Reflects workforce availability for economic recovery. (DMC: All)

26-CDRI: Percentage of population 17 years of age or younger (m/w/d) (Percentage / Census data)

Relevancy: Identifies young populations needing additional protections. (DMC: All)

27-CDRI: Percentage population with physical or mental disabilities (m/w/d) (Percentage / Local health statistics)

Relevancy: Measures accessibility needs in disaster planning. (DMC: All)

28-CDRI: Percentage of women (Percentage / Census data)

Relevancy: Considers gender-inclusive disaster response strategies. (DMC: All)



29-CDRI: Percentage of one-person household (m/w/d) (Percentage / Census and household data)

Relevancy: Reflects social isolation risks, affecting emergency support needs. (DMC: All)

34-CDRI: Mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans (Y/N / Preparedness policy documents)

Relevancy: Ensures disaster plans address the needs of vulnerable groups. (DMC: Preparedness)

38-CDRI: Percentage increase in public trust in official institutions (Percentage / Various official sources)

Relevancy: Reflects public confidence in emergency response institutions. (DMC: Mitigation)

39-CDRI: Number of community-wide drills and risk-preparedness activities (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves community preparedness through simulated disaster response. (DMC: Preparedness)

46-RESILOC: Number of information signs increasing local awareness (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves public awareness and visibility of disaster risks. (DMC: Preparedness)

48-RESILOC: Number of training sessions on risk disclosure for property sellers and landlords (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances transparency in risk communication for property stakeholders. (DMC: Preparedness)

50-RESILOC: Number of NGOs, sport teams, clubs (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Mobilizes community resources for disaster response. (DMC: All)

52-RESILOC: Percentage of neighborhoods with an active neighborhood watch program (Percentage / Various official sources)

Relevancy: Enhances neighborhood-level security and resilience. (DMC: All)

55-RESILOC: Percentage of municipalities with structured mechanisms for community dialogue (Percentage / Various official sources)

Relevancy: Encourages local community participation in risk management. (DMC: Mitigation)

56-RESILOC: Number of training sessions focused on self-assessment and crisis readiness (Numerical quantity / Various official sources)

Relevancy: Increases self-reliance in disaster preparedness. (DMC: Mitigation)

63-SHELTER: Percentage of government or NGO programs actively supporting elder engagement (Percentage / Various official sources)

Relevancy: Promotes elder engagement in disaster preparedness. (DMC: All)

66-SHELTER: Percentage of women in leadership roles within disaster preparedness committees (Numerical quantity / Various official sources)



Relevancy: Ensures gender-inclusive leadership in disaster planning.
(DMC: All)

76-SHELTER: Number of languages in which disaster preparedness guidelines are provided (Numerical quantity / Various official sources)

Relevancy: Ensures multi-language accessibility in disaster guidelines.
(DMC: Preparedness)

138-CORE: Number of initiatives to raise awareness of women's contributions to local development and heritage (Numerical quantity, per 100.000 / Community development and heritage awareness initiatives)

Relevancy: Recognizes and promotes women's roles in community resilience and recovery. (DMC: Mitigation)

143-CORE: Number of campaigns framing women's roles in crisis situations (Numerical quantity, per 100.000 / Crisis management campaign evaluations)

Relevancy: Encourages gender-inclusive crisis response strategies.
(DMC: Mitigation)

144-CORE: Number of cultural events promoted with/by first responders (Numerical quantity / Disaster response and cultural event participation records)

Relevancy: Integrates cultural perspectives into emergency response efforts. (DMC: Mitigation)

147-CORE: Number of recreational centres (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides spaces for emergency shelter and post-disaster gathering. (DMC: Preparedness)

154-CORE: Social media indicators of interactions with risk information / Attendance of population to risk information events / (Numerical quantity / Social media analytics)

Relevancy: Measures public engagement in disaster preparedness and communication. (DMC: Preparedness)

161-CORE: Number of community events on DRR (Numerical quantity, per 100.000 / Community event records)

Relevancy: Indicates social cohesion through disaster-related community events. (DMC: Preparedness)

162-CORE: Number of school events on DRR / Number of DRR sessions in curriculum (Numerical quantity, per 100.000 / Education statistics)

Relevancy: Measures DRR education and preparedness training in schools. (DMC: Preparedness)

170-CORE: Number of experts involved in planning outside of civil services (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands multidisciplinary expertise in disaster risk reduction.
(DMC: Preparedness)

180-CORE: Specific needs mapped of vulnerable groups & women (Numerical quantity / Various official sources)

Relevancy: Ensures inclusive communication for diverse populations.
(DMC: Preparedness)



181-CORE: Number of multi-hazard training exercises conducted annually (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Evaluates the impact of digital response tools. (DMC: Preparedness)

186-CORE: Percentage of decision-making committees including diverse representatives (m/w/d) (Percentage / Various official sources)

Relevancy: Ensures diverse perspectives in disaster decision-making. (DMC: Preparedness)

190-CORE: Number of community-driven disaster resilience projects completed (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages local participation in disaster resilience projects. (DMC: Preparedness)

200-CORE: Proportion of the population covered by early warning systems (Percentage / National early warning system coverage data)

Relevancy: Ensures widespread access to early warning alerts. (DMC: Preparedness)

207-CORE: Percentage of locals digitally literate (m/w/d) (Percentage / National and regional digital literacy statistics)

Relevancy: Assesses digital literacy as a factor in accessing critical disaster information. (DMC: Preparedness)

216-CORE: Percentage of risk analyses incorporating qualitative social data (Percentage / Disaster risk assessment studies)

Relevancy: Improves understanding of social dimensions of disaster impact. (DMC: Prevention)

218-CORE: Number of temporary shelters (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides emergency accommodations for displaced individuals. (DMC: Recovery)

231-CORE: Number of special needs transportation services (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports transportation for disabled and vulnerable populations. (DMC: Response)

232-CORE: Number of community food service facilities (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Ensures food security and distribution during disasters. (DMC: Response)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

250-CORE: Number of channels in which there are warnings in different languages (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances risk communication accessibility for non-native speakers. (DMC: Response)

300-CORE: Percentage of agencies with approved and documented crisis coordination plans (Percentage / Various official sources)

Relevancy: Ensures formalized crisis coordination at institutional levels. (DMC: Response)



301-CORE: Percentage of households with at least one member trained in disaster preparedness (Percentage / Various official sources)

Relevancy: Encourages household-level preparedness training. (DMC: Response)

337-Proposal concept: Percentage of women among local first responders (FRs) and civil protection teams (Percentage / First responder workforce demographics)

Relevancy: Measures gender diversity in disaster response leadership and operations. (DMC: Response)

Socio-economic Resilience

24

4-CDRI: Local per capita income levels (Local currency / Local municipal statistics)

Relevancy: Indicates individual financial resilience for recovery efforts. (DMC: All)

5-CDRI: Local median household income levels (Local currency / Local municipal statistics)

Relevancy: Represents community-wide economic resilience. (DMC: All)

6-CDRI: Number of research and development establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents public sector innovation in disaster response. (DMC: All)

7-CDRI: Number of Colleges, Universities, and Professional Schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides education and workforce training crucial for recovery. (DMC: All)

8-CDRI: Number of housing units (compared to population) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects housing stability and household capacity. (DMC: All)

11-CDRI: Number of community housing (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents socio-economic support for at-risk populations. (DMC: All)

20-CDRI: Demographic characteristics (Numerical quantity / Local municipal statistics)

Relevancy: Identifies vulnerable populations needing targeted assistance. (DMC: All)

22-CDRI: Level of implementation of DRR policies (Likert scale / Local municipal statistics)

Relevancy: Measures implementation of policies in real-world response. (DMC: All)

30-CDRI: Percentage of population above poverty line (Percentage / Economic statistics)

Relevancy: Indicates economic stability and resilience to recover from disasters. (DMC: All)

37-CDRI: Percentage of budget dedicated to disaster preparedness, prevention, and response (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures sufficient financial investment in disaster preparedness and response. (DMC: All)



45-RESILOC: Number of households struggling with energy poverty (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Monitors energy insecurity affecting disaster resilience.
(DMC: All)

82-RURITAGE: Local employment rate (m/w/d) (Percentage / Local municipal statistics)

Relevancy: Measures employment stability and economic recovery potential. (DMC: Mitigation)

84-RURITAGE: Number of business establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects private sector resilience and role in recovery. (DMC: Mitigation)

90-SLR: Number of contracts/agreements/LOIs between private actors and public agencies on CNHs (Numerical quantity, per 100.000 / Public-private agreements)

Relevancy: Reflects private-public collaboration in disaster resilience.
(DMC: Mitigation)

148-CORE: Number of schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness levels through educational resilience.
(DMC: Preparedness)

152-CORE: Average distance to supermarkets/groceries (Numerical quantity / GIS mapping and transportation data)

Relevancy: Measures accessibility to essential food supplies during disasters. (DMC: Preparedness)

208-CORE: Number of forecasts of impacts for different scenarios/hazards (Numerical quantity / Various official sources)

Relevancy: Improves predictive capacity and planning for diverse hazard scenarios. (DMC: Prevention)

211-CORE: Percentage increase in disaster mitigation best practices in moderate-risk areas (Percentage / Various official sources)

Relevancy: Expands adoption of best practices for disaster resilience.
(DMC: Prevention)

234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals.
(DMC: Response)

240-CORE: Transport means access (Numerical quantity / Local municipal statistics)

Relevancy: Measures accessibility of public transport in emergencies.
(DMC: Response)

241-CORE: Internet connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates digital communication resilience. (DMC: Response)

243-CORE: Mobile connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures mobile communication access for coordination.
(DMC: Response)

244-CORE: Radio communication (Numerical quantity, per 100.000 / Local municipal statistics)



Relevancy: Reflects backup communication capacity for emergencies.
 (DMC: Response)

245-CORE: Early Warning Systems (EWS) access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures effectiveness of early warning systems. (DMC: Response)

Total	173
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4.2.4. Economic dimension

The economic dimension plays a crucial role in disaster resilience by ensuring financial stability, efficient resource allocation, and economic recovery after a crisis. Within the **Systemic Resilience Innovation (SyRI) framework**, economic resilience is interwoven with **Adaptive Governance, Health and Wellbeing, Social Interaction and Inclusiveness, and Socio-Economic Resilience**, each contributing to DRM. These indicators span across all phases of the **DMC**.

Economic resilience in **Adaptive Governance** is assessed through financial investments and regulatory mechanisms that support DRM. **Budget transparency for preparedness plans (SHELTER-77)** enhances public trust and accountability, ensuring that resources are appropriately allocated. **Budget allocation for risk management as a percentage of total public spending (SHELTER-71)** and **the budget of volunteer organizations (CDRI-31)** highlight the financial readiness of institutions involved in disaster response. **Compliance with international disaster standards for building regulations (RURITAGE-85)** and **informing landowners about zoning restrictions (CORE-187)** ensure that infrastructure resilience is strengthened to prevent economic losses from disasters. Additionally, **the presence of managers in large residential units (RESILOC-42)** improves disaster readiness in urban settings, reducing financial vulnerabilities in the housing sector.

The **Health and Wellbeing** component of economic resilience focuses on infrastructure and resource availability to ensure effective emergency response. **The number of hospitals (CDRI-10), physicians (CDRI-12), and healthcare support workers (CDRI-13)** directly impact disaster medical response capacity. Similarly, **the availability of hospital beds (CORE-228), ambulances (CORE-229), and fire stations (CORE-230)** determines the efficiency of emergency services. Economic resilience in the health sector also depends on **vital product supply chain redundancy (CORE-246)** to prevent shortages of essential medicines and supplies during crises. Additionally, **shelter capacity (CORE-247)** ensures that displaced populations have access to emergency housing, mitigating the financial burden of temporary accommodations.

In terms of **Social Interaction and Inclusiveness**, economic resilience is reflected in financial investments supporting vulnerable groups and community preparedness. **The budget spent on infrastructure for vulnerable populations (CDRI-17)** ensures that at-risk communities receive adequate support in disaster scenarios. **The number of vacant housing units (CDRI-9)** signals demographic shifts that can influence housing stability during crises. **Community and social workers (CDRI-15)** play an essential role in disaster recovery by assisting affected populations. Economic resilience also



encompasses **training sessions for property stakeholders on risk disclosure (RESILOC-48)** to promote informed decision-making. **Recreational centres (CORE-147)** provide safe spaces for shelter and post-disaster gatherings, while **community-driven disaster resilience projects (CORE-190)** encourage local participation in resilience planning. Furthermore, **temporary shelters (CORE-218)**, **special needs transportation services (CORE-231)**, and **community food service facilities (CORE-232)** ensure that social welfare systems remain functional in emergency scenarios, mitigating the financial strain on vulnerable populations.

The **Socio-Economic Resilience** component highlights the broader economic systems that contribute to disaster recovery and long-term financial sustainability. **Local per capita income levels (CDRI-4)**, **median household income levels (CDRI-5)**, and **employment rates (RURITAGE-82)** serve as indicators of financial stability and recovery potential. **Access to colleges, universities, and professional schools (CDRI-7)** provides workforce training crucial for rebuilding economies post-disaster. **The number of business establishments (RURITAGE-84)** and **contracts between private actors and public agencies (SLR-90)** indicate private sector resilience and collaboration in disaster management. **A percentage of the budget dedicated to disaster preparedness, prevention, and response (CDRI-37)** ensures that financial resources are continuously allocated to risk reduction efforts.

Sustainability and energy security also contribute to economic resilience. **The percentage decrease in fossil fuel-based energy generation (SHELTER-58)** reflects the shift towards long-term sustainable energy solutions, reducing economic dependencies on volatile resources. **Funding allocation efficiency for DRM (SHELTER-73)** and **forecasts of economic impacts for different hazard scenarios (CORE-208)** enhance predictive capacity for financial planning. Post-disaster recovery efforts include **funding for small business recovery (CORE-220)**, **financial support for affected businesses (CORE-222)**, and **disaster relief subsidies (CORE-223)** to prevent economic collapse in disaster-impacted areas. Lastly, **access to transport systems (CORE-240)**, **internet connectivity (CORE-241)**, **mobile networks (CORE-243)**, and **radio communication systems (CORE-244)** ensure that critical infrastructure remains operational during crises, supporting economic continuity.

The economic dimension within the **SyRI framework** ensures that disaster resilience is built through financial preparedness, sustainable infrastructure, and inclusive policies. Adaptive Governance indicators reinforce regulatory and financial accountability, while Health and Wellbeing indicators ensure economic resilience through medical infrastructure and supply chain stability. Social Interaction and inclusiveness strengthens disaster preparedness through equitable financial investments, and Socio-Economic Resilience safeguards economic stability through employment, business continuity, and long-term recovery strategies. A robust economic system enhances disaster resilience, ensuring that financial, social, and institutional mechanisms function effectively to mitigate losses and accelerate recovery in the face of crises.

Indicators related to the economic dimension	Frequ.
Adaptive Governance	6
31-CDRI: Budget of volunteer organizations (Local currency / Budget reports)	



Relevancy: Indicates financial resources available for emergency response. (DMC: All)

42-RESILOC: Number of large residential units with a manager (Numerical quantity / Various official sources)

Relevancy: Improves coordination and disaster readiness in residential complexes. (DMC: all)

71-SHELTER: Budget allocation for risk management as a Percentage of total public spending (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures consistent funding for disaster risk management. (DMC: Mitigation)

77-SHELTER: Transparency of budget allocations for preparedness plans (Y/N / Municipal and national budget transparency reports)

Relevancy: Enhances public accountability and trust in disaster preparedness. (DMC: Preparedness)

85-RURITAGE: Building regulations compliant to international disaster standards / Percentage of irregular buildings (Percentage / Building code compliance assessments)

Relevancy: Ensures building safety and structural resilience in disaster scenarios. (DMC: Mitigation)

187-CORE: Percentage of landowners informed about land use restrictions in vulnerable areas (Percentage / Public records)

Relevancy: Informs property owners about risks and zoning restrictions. (DMC: Preparedness)

Health and Wellbeing

8

10-CDRI: Number of hospitals (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare capacity and medical preparedness. (DMC: Response)

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare workforce availability in emergencies. (DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

228-CORE: Number of hospital beds (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects response capacity in medical emergencies. (DMC: Response)

229-CORE: Number of ambulances (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates medical transport availability in emergencies. (DMC: Response)

230-CORE: Number of fire stations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures fire safety and emergency response reach. (DMC: Response)



246-CORE: Vital products and medicines supply chains redundancy (n/a / Local municipal statistics)

Relevancy: Indicates redundancy of essential supply chains. (DMC: Response)

247-CORE: Shelter capacity (n/a / Local municipal statistics)

Relevancy: Reflects emergency shelter capacity. (DMC: Response)

Social interaction and inclusiveness

10

9-CDRI: Number of vacant housing units (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates demographic shifts affecting local resilience. (DMC: All)

15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)

Relevancy: Measures social support workforce capacity. (DMC: Recovery)

17-CDRI: Budget spent on infrastructure for vulnerable groups (Local currency, per 100.000 / Local municipal statistics)

Relevancy: Reflects depth of preparedness for at-risk groups. (DMC: All)

48-RESILOC: Number of training sessions on risk disclosure for property sellers and landlords (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances transparency in risk communication for property stakeholders. (DMC: Preparedness)

147-CORE: Number of recreational centres (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides spaces for emergency shelter and post-disaster gathering. (DMC: Preparedness)

190-CORE: Number of community-driven disaster resilience projects completed (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages local participation in disaster resilience projects. (DMC: Preparedness)

218-CORE: Number of temporary shelters (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides emergency accommodations for displaced individuals. (DMC: Recovery)

231-CORE: Number of special needs transportation services (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports transportation for disabled and vulnerable populations. (DMC: Response)

232-CORE: Number of community food service facilities (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Ensures food security and distribution during disasters. (DMC: Response)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

Socio-economic Resilience

27



4-CDRI: Local per capita income levels (Local currency / Local municipal statistics)

Relevancy: Indicates individual financial resilience for recovery efforts.
(DMC: All)

5-CDRI: Local median household income levels (Local currency / Local municipal statistics)

Relevancy: Represents community-wide economic resilience. (DMC: All)

7-CDRI: Number of Colleges, Universities, and Professional Schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides education and workforce training crucial for recovery. (DMC: All)

8-CDRI: Number of housing units (compared to population) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects housing stability and household capacity. (DMC: All)

11-CDRI: Number of community housing (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents socio-economic support for at-risk populations.
(DMC: All)

20-CDRI: Demographic characteristics (Numerical quantity / Local municipal statistics)

Relevancy: Identifies vulnerable populations needing targeted assistance. (DMC: All)

22-CDRI: Level of implementation of DRR policies (Likert scale / Local municipal statistics)

Relevancy: Measures implementation of policies in real-world response.
(DMC: All)

30-CDRI: Percentage of population above poverty line (Percentage / Economic statistics)

Relevancy: Indicates economic stability and resilience to recover from disasters. (DMC: All)

37-CDRI: Percentage of budget dedicated to disaster preparedness, prevention, and response (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures sufficient financial investment in disaster preparedness and response. (DMC: All)

45-RESILOC: Number of households struggling with energy poverty (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Monitors energy insecurity affecting disaster resilience.
(DMC: All)

58-SHELTER: Percentage decrease in fossil fuel-based energy generation over time (Percentage / Various official sources)

Relevancy: Encourages long-term sustainability in energy systems.
(DMC: Prevention)

73-SHELTER: Percentage of risk management funding sourced from national and regional levels (Local currency, per 100.000 / Various official sources)

Relevancy: Measures funding allocation efficiency for disaster risk management. (DMC: All)



82-RURITAGE: Local employment rate (m/w/d) (Percentage / Local municipal statistics)

Relevancy: Measures employment stability and economic recovery potential. (DMC: Mitigation)

84-RURITAGE: Number of business establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects private sector resilience and role in recovery. (DMC: Mitigation)

90-SLR: Number of contracts/agreements/LOIs between private actors and public agencies on CNHs (Numerical quantity, per 100.000 / Public-private agreements)

Relevancy: Reflects private-public collaboration in disaster resilience. (DMC: Mitigation)

148-CORE: Number of schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness levels through educational resilience. (DMC: Preparedness)

152-CORE: Average distance to supermarkets/groceries (Numerical quantity / GIS mapping and transportation data)

Relevancy: Measures accessibility to essential food supplies during disasters. (DMC: Preparedness)

158-CORE: Presence of shared ICT infrastructure (Y/N / ICT system reports)

Relevancy: Measures ICT readiness for emergency response and coordination. (DMC: Preparedness)

208-CORE: Number of forecasts of impacts for different scenarios/hazards (Numerical quantity / Various official sources)

Relevancy: Improves predictive capacity and planning for diverse hazard scenarios. (DMC: Prevention)

220-CORE: Total funding allocated for small business recovery (Local currency / Various official sources)

Relevancy: Strengthens economic recovery for small businesses. (DMC: Recovery)

222-CORE: Percentage of affected businesses receiving financial support (Percentage / Various official sources)

Relevancy: Supports economic recovery for disaster-impacted businesses. (DMC: Recovery)

223-CORE: Total amount of subsidies (Local currency / Various official sources)

Relevancy: Measures financial relief distribution effectiveness. (DMC: Recovery)

234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals. (DMC: Response)

240-CORE: Transport means access (Numerical quantity / Local municipal statistics)

Relevancy: Measures accessibility of public transport in emergencies. (DMC: Response)



241-CORE: Internet connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates digital communication resilience. (DMC: Response)

243-CORE: Mobile connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures mobile communication access for coordination. (DMC: Response)

244-CORE: Radio communication (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects backup communication capacity for emergencies. (DMC: Response)

Total	51
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4.2.5. Environmental dimension

The environmental dimension of disaster resilience is fundamental to mitigating, preparing for, responding to, and recovering from disasters. Within the **Systemic Resilience Innovation (SyRI) framework**, environmental resilience is closely connected to **Active Memory, Adaptive Governance, Health and Wellbeing, and Socio-Economic Resilience**, highlighting the critical role of environmental monitoring, infrastructure planning, climate adaptation, and disaster response systems. These indicators contribute to all stages of the **DMC**.

Environmental resilience within **Active Memory** ensures that cultural and natural heritage sites are preserved and monitored for threats. **The percentage of heritage sites monitored for environmental risks (CORE-185)** provides a crucial indicator of how well cultural and historical landmarks are protected from climate-induced hazards. This contributes to preparedness by ensuring historical knowledge remains intact and is integrated into risk assessments.

The **Adaptive Governance** aspect of environmental resilience involves policies, risk assessments, and regulatory measures aimed at mitigating environmental vulnerabilities. **The number of registered residents per square kilometre (CDRI-24)** provides insight into population density, which is essential for evacuation and aid distribution planning. **Building regulations compliant with international disaster standards (RURITAGE-85)** ensure structural resilience, reducing environmental risks in disaster-prone areas. **Regional risk assessments conducted annually (CORE-97)** and **updates to regional risk maps and flood zone maps (CORE-167, CORE-168)** contribute to an up-to-date understanding of environmental hazards.

Additionally, governance mechanisms must incorporate climate adaptation strategies to enhance environmental resilience. **The inclusion of climate change risk measures for cultural heritage sites (CORE-163)** and **the presence of a climate adaptation plan at various governmental levels (CORE-196)** reinforce structured planning for climate-induced disasters. **Historical temperature data incorporated into climate risk assessments (CORE-214)** further improves predictive capabilities. **The implementation of river contracts and watercourse management plans (CORE-217)** enhances stakeholder collaboration in sustainable water resource management. **Emergency backup systems in place (CORE-263)** ensure continued



functionality of critical infrastructure during environmental crises. **Municipal emergency plans that integrate environmental protection strategies (Proposal Concept-328)** strengthen disaster planning by prioritizing ecological sustainability in response mechanisms.

The **Health and Wellbeing** dimension of environmental resilience focuses on environmental monitoring and risk mapping for public safety. **Cascading risks triggered by temperature increases (UN-96)** are mapped to enhance awareness of climate-driven disaster scenarios. **Water quality indicators (CORE-153)** assess the impact of contamination on public health and water supply resilience, while **the operationalization of authority roles in environmental DRM (CORE-205)** ensures clear governance structures for effective response.

Socio-Economic Resilience plays a significant role in reducing environmental vulnerabilities by investing in sustainable infrastructure and environmental policies. **The percentage of permeable surfaces in urban areas (CDRI-40)** helps mitigate flooding risks by improving water retention and drainage systems. **Decreasing reliance on fossil fuel-based energy (SHELTER-58)** promotes long-term sustainability in DRR. **Environmental considerations in disaster mitigation actions (CORE-98)** emphasize the integration of ecological preservation strategies in resilience planning. **Annual structural inspections for vulnerabilities (CORE-209)** ensure that buildings remain compliant with environmental and safety regulations, while **the number of building enterprises and stock of construction materials (CORE-219)** reflects local capacity for post-disaster reconstruction.

Infrastructure resilience is further supported by **the number of building inspectors (CORE-233)** and **building managers (CORE-237)** who oversee post-disaster safety and recovery efforts. Transport resilience is crucial for evacuation and aid distribution, reflected in **transport route redundancy (CORE-239)** and **public transport accessibility (CORE-240)** in disaster scenarios. Digital communication infrastructure, including **internet access (CORE-241)**, **mobile connectivity (CORE-243)**, and **radio communication systems (CORE-244)**, ensures reliable coordination during environmental crises.

The environmental dimension within the **SyRI framework** integrates climate adaptation, infrastructure sustainability, and governance mechanisms to enhance disaster resilience. **Active Memory indicators** ensure the preservation of heritage and environmental knowledge, while **Adaptive Governance** facilitates structured risk assessments and regulatory compliance. **Health and Wellbeing** indicators monitor environmental risks affecting public safety, and **Socio-Economic Resilience** promotes sustainable infrastructure, resource management, and emergency response capabilities. By embedding environmental resilience in DRR strategies, communities can mitigate climate-induced hazards, protect ecological resources, and strengthen systemic resilience against future disasters.

Indicators related to the environmental dimension	Frequ.
Active Memory	1
185-CORE: Percentage of heritage sites monitored for threats (Percentage / Various official sources)	



Relevancy: Tracks threats to cultural and historical landmarks. (DMC: Preparedness)

Adaptive Governance

14

24-CDRI: Number of registered residents per square km (m/w/d) (Numerical quantity, per 100.000 / Census data)

Relevancy: Indicates population density, affecting evacuation and aid distribution. (DMC: All)

85-RURITAGE: Building regulations compliant to international disaster standards / Percentage of irregular buildings (Percentage / Building code compliance assessments)

Relevancy: Ensures building safety and structural resilience in disaster scenarios. (DMC: Mitigation)

97-CORE: Number of regional risk assessments conducted for mitigation and recovery (Numerical quantity, annual / Various official sources)

Relevancy: Enhances regional ability to prepare and adapt to disaster risks. (DMC: Mitigation)

163-CORE: Inclusion of climate change risk measures for CNH sites (Y/N / Climate adaptation policies)

Relevancy: Reflects climate adaptation measures in cultural heritage protection. (DMC: Preparedness)

167-CORE: Number of updates made to regional risk maps annually (Numerical quantity, annual / Various official sources)

Relevancy: Ensures up-to-date risk information for better decision-making. (DMC: Preparedness)

168-CORE: Frequency of updates to the flood zone map (Numerical quantity, annual / Various official sources)

Relevancy: Ensures flood risks are assessed and updated regularly. (DMC: Preparedness)

174-CORE: Percentage of coordination protocols updated for cascading disaster scenarios (Percentage / Various official sources)

Relevancy: Improves response strategies for multi-layered hazard events. (DMC: Preparedness)

182-CORE: Effectiveness of digital mapping tools for disaster response (Likert scale / Various official sources)

Relevancy: Preserves memory of past disasters for learning and awareness. (DMC: Preparedness)

187-CORE: Percentage of landowners informed about land use restrictions in vulnerable areas (Percentage / Public records)

Relevancy: Informs property owners about risks and zoning restrictions. (DMC: Preparedness)

196-CORE: Presence of a climate adaptation plan at national/regional/local levels (Y/N / Various official sources)

Relevancy: Ensures structured climate adaptation planning. (DMC: Preparedness)

214-CORE: Incorporation of historical temperature data in climate risk assessments (Y/N / Various official sources)

Relevancy: Incorporates historical data into climate risk analysis. (DMC: Prevention)



217-CORE: Clear definition and implementation of river contracts and watercourse management (Y/N / Water resource and disaster resilience reports)

Relevancy: Enhances stakeholder collaboration in water management resilience. (DMC: Prevention)

263-CORE: Number of backup systems in place for emergencies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures functional backup infrastructure in emergencies. (DMC: Response)

328-Proposal concept: Extent to which municipal emergency plans include environmental protection strategies (Y/N / Environmental risk management plans)

Relevancy: Mitigates environmental vulnerabilities through disaster planning. (DMC: Response)

Health and Wellbeing

3

96-UN: Percentage of geographic areas where cascading risks due to temperature increases have been mapped (Percentage / Local authority records)

Relevancy: Reflects awareness and preparedness on cascading crisis effects (DMC: Mitigation)

153-CORE: Water quality indicators (DO, pH, TDS, Nutrients, Metals, Hydrocarbons, Industrial Chemicals) (Numerical quantity / Environmental monitoring systems)

Relevancy: Assesses water contamination risks and supply resilience. (DMC: Preparedness)

205-CORE: Extent to which different authorities' roles are clearly operationalized (Likert scale / Municipal governance structure reviews)

Relevancy: Clarifies authorities' responsibilities in disaster scenarios. (DMC: Preparedness)

Socio-economic Resilience

13

40-CDRI: Amount of area covered with permeable surfaces (Percentage of total area) (Percentage / Various official sources)

Relevancy: Mitigates flooding and water retention risks in urban areas. (DMC: Mitigation)

58-SHELTER: Percentage decrease in fossil fuel-based energy generation over time (Percentage / Various official sources)

Relevancy: Encourages long-term sustainability in energy systems. (DMC: Prevention)

98-CORE: Number of disaster mitigation actions incorporating environmental considerations (Numerical quantity / Various official sources)

Relevancy: Encourages environmentally sustainable disaster prevention. (DMC: Mitigation)

152-CORE: Average distance to supermarkets/groceries (Numerical quantity / GIS mapping and transportation data)

Relevancy: Measures accessibility to essential food supplies during disasters. (DMC: Preparedness)

209-CORE: Percentage of buildings inspected for structural vulnerabilities annually (Percentage / Various official sources)



Relevancy: Ensures structural integrity of buildings before disasters strike. (DMC: Prevention)

219-CORE: Number of building enterprises / Stock of construction materials (Numerical quantity, per 100.000 / Business and economic statistics)

Relevancy: Represents local capacity for post-disaster reconstruction. (DMC: Recovery)

233-CORE: Number of building inspectors (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects post-disaster safety and recovery efforts. (DMC: Response)

237-CORE: Number of building managers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates availability of infrastructure management expertise. (DMC: Response)

239-CORE: Transport routes redundancy (n/a / Local municipal statistics)

Relevancy: Reflects transport network resilience for evacuation and aid. (DMC: Response)

240-CORE: Transport means access (Numerical quantity / Local municipal statistics)

Relevancy: Measures accessibility of public transport in emergencies. (DMC: Response)

241-CORE: Internet connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates digital communication resilience. (DMC: Response)

243-CORE: Mobile connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures mobile communication access for coordination. (DMC: Response)

244-CORE: Radio communication (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects backup communication capacity for emergencies. (DMC: Response)

Total	31
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4.2.6. Historical dimension

The **historical dimension** of disaster resilience within the **Systemic Resilience Innovation (SyRI) framework** plays a crucial role in preserving past knowledge, cultural heritage, and institutional memory to enhance disaster preparedness, mitigation, and recovery. Historical records and heritage sites serve as critical resources for understanding past crises, improving risk perception, and reinforcing community resilience. The **historical dimension** integrates **Active Memory**, **Adaptive Governance**, **Social Interaction**, and **Socio-Economic Resilience**, contributing to all stages of the **DMC**.

Active Memory and the Preservation of Historical Knowledge



The **Active Memory** component of the historical dimension emphasizes the importance of documenting, archiving, and disseminating past disaster experiences to inform future preparedness. **Knowledge about past crises (CDRI-23)** ensures that lessons from historical disasters are incorporated into contemporary risk management practices. **The number of platforms dedicated to disaster victims' testimonies (CORE-100)** and **the total number of archived disaster testimonies (CORE-103)** enable the retention and sharing of firsthand experiences, fostering collective learning. Similarly, **oral history records documenting disaster experiences (CORE-107)** and **digital datasets preserving cultural assets (CORE-117)** facilitate long-term accessibility of historical disaster information.

Cultural heritage sites and commemorative events also play a significant role in maintaining historical awareness. **The presence of historical monuments and churches under formal protection (CORE-191)** and **the number of disaster remembrance sites (CORE-113)** demonstrate efforts to safeguard locations of historical significance. **Cultural events honoring past disasters (CORE-108)** and **memorials built to remember past catastrophes (CORE-227)** contribute to reinforcing institutional responsibility for disaster memory. These initiatives ensure that historical events remain ingrained in public consciousness and are leveraged for resilience-building.

Education is a key channel for integrating historical disaster knowledge into society. **The percentage of schools incorporating disaster testimonies in curricula (CORE-115)** and **the number of school-organized activities discussing local traditions and resilience (CORE-136)** promote intergenerational learning, ensuring that younger generations are equipped with historical knowledge that informs disaster preparedness strategies. Additionally, **updates to crisis coordination plans based on past reports (CORE-178)** demonstrate how iterative learning from historical experiences strengthens contemporary risk governance.

Adaptive Governance and Institutional Coordination

Historical disaster resilience is also reinforced through **Adaptive Governance**, which ensures that past experiences are systematically incorporated into policy and crisis management structures. **The presence of coordination mechanisms (CDRI-21)** reflects the ability of institutions to integrate historical insights into disaster response planning. By learning from past crises, governance structures can develop more robust crisis response frameworks that anticipate cascading disaster scenarios and ensure proactive mitigation strategies.

Social Interaction and the Role of Community Engagement

The **Social Interaction and Inclusiveness** component of historical resilience emphasizes community engagement and social cohesion in disaster preparedness and response. **The number of NGOs, sports teams, and clubs involved in disaster response (RESILOC-50)** illustrates the role of community organizations in preserving local heritage and facilitating knowledge-sharing. **Active neighborhood watch programs (RESILOC-52)** enhance localized security and resilience efforts, ensuring that communities are proactive in crisis situations. Furthermore, **initiatives that raise awareness of women's contributions to local development and heritage (CORE-138)** highlight the importance of inclusive participation in historical documentation and resilience-building.



Socio-Economic Resilience and Cultural Heritage Protection

The **Socio-Economic Resilience** dimension of historical disaster preparedness focuses on safeguarding cultural heritage as an economic and social asset. **The number of UNESCO-protected intangible cultural and natural heritage (CNH) sites (CORE-156)** assesses the extent to which cultural and historical assets are formally recognized and protected from disaster-related risks. Such measures ensure that cultural landmarks and traditional knowledge systems remain integral to resilience strategies, contributing to both economic sustainability and long-term preparedness efforts.

The historical dimension of disaster resilience, as structured within the **SyRI framework**, ensures that past experiences, cultural heritage, and institutional memory are integrated into DRR strategies. **Active Memory** indicators safeguard historical knowledge through archiving, education, and commemoration, while **Adaptive Governance** ensures that past lessons are embedded in policy frameworks. **Social Interaction and inclusiveness** promotes community-driven resilience efforts, and **Socio-Economic Resilience** highlights the importance of protecting cultural heritage as a long-term investment in disaster preparedness. By incorporating historical awareness into disaster planning, communities can develop sustainable resilience strategies that leverage historical knowledge for improved crisis response and recovery.

Indicators related to the historical dimension	Frequ.
Active Memory	16
23-CDRI: Knowledge about past crises (n/a / Local municipal statistics) Relevancy: Reflects preparedness through historical disaster awareness. (DMC: All)	
92-SLR: Number (and date of establishment) of monuments in CORE lab region (Numerical quantity, per 100.000 / Historical preservation records) Relevancy: Indicates community efforts to preserve historical resilience. (DMC: Mitigation)	
100-CORE: Number of platforms dedicated to disaster victims' testimonies (Numerical quantity, per 100.000 / Various official sources) Relevancy: Captures and archives firsthand disaster experiences. (DMC: Mitigation)	
103-CORE: Total number of collected and archived disaster testimonies (Numerical quantity / Various official sources) Relevancy: Ensures cultural documentation of disaster experiences. (DMC: Mitigation)	
107-CORE: Number of oral history records documenting disaster experiences (Numerical quantity, per 100.000 / Various official sources) Relevancy: Promotes cultural engagement in disaster awareness. (DMC: Mitigation)	
108-CORE: Frequency of cultural events honoring past disasters (Numerical quantity, annual / Various official sources) Relevancy: Strengthens institutional responsibility for disaster memory. (DMC: Mitigation)	
111-CORE: Existence of an institutional strategy for cultural memory preservation (Y/N / Various official sources)	



Relevancy: Facilitates digital storytelling for resilience awareness. (DMC: Mitigation)

112-CORE: Number of social media channels for sharing disaster-related memories (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures accessible and visible sites for disaster remembrance. (DMC: Mitigation)

113-CORE: Number of established disaster remembrance sites (Numerical quantity / Various official sources)

Relevancy: Encourages local leadership in resilience awareness. (DMC: Mitigation)

115-CORE: Percentage of schools incorporating disaster testimonies in curricula (Percentage / Various official sources)

Relevancy: Ensures disaster awareness is embedded in education. (DMC: Mitigation)

117-CORE: Number of digital datasets preserving historical and cultural assets (Numerical quantity / Various official sources)

Relevancy: Ensures historical data preservation for future preparedness. (DMC: Mitigation)

136-CORE: Number of activities organized in schools to critically discuss local traditions (Numerical quantity, per 100.000 / School activity reports and curriculum records)

Relevancy: Encourages intergenerational learning and awareness of cultural resilience. (DMC: Mitigation)

178-CORE: Percentage of crisis coordination plans updated based on past reports (Percentage / Various official sources)

Relevancy: Improves iterative learning from past disasters. (DMC: Preparedness)

191-CORE: Number of historic monuments and churches under formal protection (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Protects heritage sites from disaster-related threats. (DMC: Preparedness)

226-CORE: Knowledge and experiences of elders is documented and archived (Y/N / Various official sources)

Relevancy: Documents community knowledge and experiences of past disasters. (DMC: Recovery)

227-CORE: Presence of memorials built to remember past catastrophes and victims (m/w/d) (Y/N / Municipal records and historical preservation agencies)

Relevancy: Preserves historical memory, reinforcing community resilience and recovery. (DMC: Recovery)

Adaptive Governance

1

21-CDRI: Coordination mechanisms (Y/N / Local municipal statistics)

Relevancy: Reflects coordination capacity in crisis situations. (DMC: Preparedness)

Social interaction and inclusiveness

3

50-RESILOC: Number of NGOs, sport teams, clubs (Numerical quantity, per 100.000 / Various official sources)



Relevancy: Mobilizes community resources for disaster response. (DMC: All)

52-RESILOC: Percentage of neighborhoods with an active neighborhood watch program (Percentage / Various official sources)

Relevancy: Enhances neighborhood-level security and resilience. (DMC: All)

138-CORE: Number of initiatives to raise awareness of women's contributions to local development and heritage (Numerical quantity, per 100.000 / Community development and heritage awareness initiatives)

Relevancy: Recognizes and promotes women's roles in community resilience and recovery. (DMC: Mitigation)

Socio-economic Resilience	1
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156-CORE: Number of UNESCO protected/recognised intangible CNH (Numerical quantity, per 100.000 / UNESCO databases)

Relevancy: Assesses the protection of cultural and historical assets. (DMC: Preparedness)

Total	21
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4.2.7. Technological dimension

The **technological dimension** plays a crucial role in disaster resilience by integrating knowledge management, adaptive governance, emergency response coordination, and technological advancements. Within the **SyRI framework**, these indicators focus on ensuring the effectiveness of disaster preparedness, mitigation, response, and recovery processes. The technological dimension is structured into four primary areas: **Active Memory, Adaptive Governance, Health and Wellbeing, Social Interaction and inclusiveness, and Socio-Economic Resilience**.

Active Memory and Technical Knowledge Management

The **Active Memory** component encompasses knowledge-sharing mechanisms and data-driven decision-making in DRR. Localized disaster risk workshops (**CORE-177**) facilitate the dissemination of scientific and community-based knowledge, while crisis coordination plans (**CORE-178**) ensure that iterative learning from past experiences strengthens future preparedness. Additionally, monitoring threats to heritage sites (**CORE-185**) plays a role in preserving cultural landmarks at risk from disasters. Mechanisms integrating local and scientific risk knowledge (**CORE-251**) enhance decision-making by bridging traditional and modern risk assessment methodologies.

Adaptive Governance and Emergency Coordination

A robust governance structure is essential for effective disaster management, and the **Adaptive Governance** indicators address institutional preparedness and inter-agency collaboration. The presence and quality of DRR policies (**CDRI-18**), awareness campaigns (**CDRI-19**), and crisis coordination mechanisms (**CDRI-21**) ensure a systematic approach to emergency planning. The inclusion of Geographic Information Systems (GIS) in municipal emergency plans (**SHELTER-78**) enhances risk mapping and response strategies. The availability of digital tools for crisis management (**RURITAGE-80**) improves early warning and real-time decision-making. Furthermore, the quality of forecasting systems and risk maps (**CORE-149**) supports accurate risk analysis.



Ensuring transparency and accountability in disaster governance, emergency plans are made publicly accessible (**CORE-164**), while inter-agency coordination meetings (**CORE-175**) enhance preparedness at multiple levels. Structured emergency communication (**CORE-198**) and the integration of risk indicators into urban planning (**SLR-89**) strengthen long-term resilience.

Health and Wellbeing through Technical Preparedness

Technical resilience extends to healthcare infrastructure, ensuring readiness in disaster scenarios. The number of hospitals (**CDRI-10**), physicians (**CDRI-12**), and healthcare support workers (**CDRI-13**) provides an overview of medical response capacity. Other key indicators include ambulance availability (**CORE-229**), emergency shelters (**CORE-247**), and Red Cross/Crest volunteer deployment (**CORE-248**). Digital innovations, such as mobile applications for emergency preparedness (**Proposal-336**), expand public awareness and response capabilities.

Social Interaction and inclusiveness and Community Engagement in Technological Systems

The integration of social and technical dimensions is evident in initiatives that promote disaster awareness, accessibility, and inclusion. Community-based drills (**CDRI-39**) ensure preparedness at the grassroots level, while training on risk disclosure for property owners (**RESILOC-48**) enhances transparency in disaster-prone areas. Inclusive preparedness plans that consider vulnerable groups (**CDRI-34**) ensure equity in DRR strategies. Furthermore, technical access to early warning systems (**CORE-200**) and multi-hazard training exercises (**CORE-181**) facilitate community-wide participation.

Socio-Economic Resilience and Infrastructure Readiness

The **Socio-Economic Resilience** component of the technical dimension ensures the stability of critical infrastructure and economic systems. Indicators such as the number of emergency power generators (**CORE-155**) and structural inspections of buildings (**CORE-209**) help assess technical readiness. Additionally, the percentage of risk analyses incorporating environmental considerations (**CORE-98**) supports sustainable mitigation strategies. The availability of emergency transportation (**CORE-231**) and communication networks (**CORE-241**, **CORE-243**, **CORE-244**) enhances coordinated responses in crises.

The **technical dimension** within the **SyRI framework** is essential for establishing resilient systems that support all aspects of DRM. From **data-driven preparedness** and **institutional coordination** to **community engagement** and **infrastructure resilience**, these indicators ensure that technological advancements are effectively leveraged to enhance disaster response and recovery. By integrating **scientific, local, and digital knowledge**, the technical dimension strengthens adaptive capacity, ensuring sustainable and inclusive resilience-building efforts.

Indicators related to the technological dimension

Frequ.

Active Memory

4



177-CORE: Number of local knowledge-sharing workshops on disaster risk management (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages knowledge sharing on risk preparedness. (DMC: Preparedness)

178-CORE: Percentage of crisis coordination plans updated based on past reports (Percentage / Various official sources)

Relevancy: Improves iterative learning from past disasters. (DMC: Preparedness)

185-CORE: Percentage of heritage sites monitored for threats (Percentage / Various official sources)

Relevancy: Tracks threats to cultural and historical landmarks. (DMC: Preparedness)

251-CORE: Existence of mechanisms for integrating local and scientific risk knowledge (Y/N / Various official sources)

Relevancy: Strengthens integration of local and scientific knowledge in risk management. (DMC: Response)

Adaptive Governance

49

18-CDRI: Existence and quality of DRR policies (Y/N; Likert scale / Local municipal statistics)

Relevancy: Indicates effectiveness of disaster risk reduction (DRR) policies. (DMC: All)

19-CDRI: Existence and quality of awareness campaigns (Y/N; Likert scale / Local municipal statistics)

Relevancy: Reflects awareness-building efforts in disaster prevention. (DMC: Preparedness)

21-CDRI: Coordination mechanisms (Y/N / Local municipal statistics)

Relevancy: Reflects coordination capacity in crisis situations. (DMC: Preparedness)

32-CDRI: Number of registered volunteers (m/w/d) (Numerical quantity, per 100.000 / Volunteer registration databases)

Relevancy: Reflects community engagement in volunteer response efforts. (DMC: All)

36-CDRI: Percentage of protocols to help understand responsibilities and roles (Percentage / Disaster response protocols)

Relevancy: Clarifies roles and responsibilities in emergency situations. (DMC: Preparedness)

41-CDRI: Existence of a protocol that clarifies the end of the crisis/emergency status (Y/N / Various official sources)

Relevancy: Establishes clear transition from crisis response to recovery. (DMC: Response)

42-RESILOC: Number of large residential units with a manager (Numerical quantity / Various official sources)

Relevancy: Improves coordination and disaster readiness in residential complexes. (DMC: all)

51-RESILOC: Percentage of stakeholders able to access interpreting services during crises (Percentage / Various official sources)

Relevancy: Facilitates structured emergency planning. (DMC: Response)



61-SHELTER: Percentage of municipalities with structured citizen participation mechanisms (Percentage / Various official sources)

Relevancy: Encourages inclusive community participation in disaster policies. (DMC: All)

74-SHELTER: Existence of a comprehensive national disaster risk management framework (Y/N / Various official sources)

Relevancy: Ensures national disaster policies cover all risk management aspects. (DMC: All)

78-SHELTER: Integration of GIS-based studies and mapping in municipal emergency plans (Y/N / GIS mapping and urban planning reports)

Relevancy: Enhances data-driven decision-making in disaster risk management. (DMC: Preparedness)

80-RURITAGE: Availability of digital tools for crisis preparedness and response (Y/N / Tech adoption studies in disaster preparedness)

Relevancy: Expands digital solutions for crisis preparedness. (DMC: All)

86-SLR: Number of professional and organisational DRR guidelines available on organisational level (Numerical quantity / Organizational policy documents)

Relevancy: Provides guidance on disaster risk reduction (DRR) best practices. (DMC: Mitigation)

89-SLR: Inclusion of risk indicators in urban planning policies; Mentioning of terms 'risk', 'uncertainty' in policies; Presence of elaborated risk metric (Likert scale / Urban planning policies)

Relevancy: Reflects disaster risk considerations in urban planning. (DMC: Mitigation)

97-CORE: Number of regional risk assessments conducted for mitigation and recovery (Numerical quantity, annual / Various official sources)

Relevancy: Enhances regional ability to prepare and adapt to disaster risks. (DMC: Mitigation)

99-CORE: Percentage of planned policy actions successfully implemented (Percentage / Various official sources)

Relevancy: Tracks policy effectiveness in reducing disaster impacts. (DMC: Mitigation)

116-CORE: Number of evaluations in frontline responder organisations completed (Numerical quantity / Various official sources)

Relevancy: Measures improvement in first response capabilities. (DMC: Mitigation)

122-CORE: Number of emergency plans that integrate cultural heritage considerations (Percentage / Disaster response planning documents)

Relevancy: Protects cultural heritage in disaster response strategies. (DMC: Mitigation)

127-CORE: Number of civil protection job descriptions with detailed role definitions and coordination protocols (Numerical quantity / Emergency services workforce guidelines)

Relevancy: Improves coordination and clarity in emergency response roles. (DMC: Mitigation)



149-CORE: Existence and quality of forecasting systems and risk maps (Y/N; Likert scale / Local municipal statistics)

Relevancy: Measures forecasting and disaster mapping accuracy. (DMC: Preparedness)

164-CORE: Emergency plans publicly accessible (Y/N / Government transparency reports)

Relevancy: Ensures public access to emergency preparedness information. (DMC: Preparedness)

165-CORE: Number of emergency plans available to different stakeholders (Likert scale / Emergency response plans)

Relevancy: Indicates availability of disaster response plans for key stakeholders. (DMC: Preparedness)

166-CORE: Number of organisational checklists and protocols (Y/N / Organizational records)

Relevancy: Measures organizational preparedness for disaster response. (DMC: Preparedness)

167-CORE: Number of updates made to regional risk maps annually (Numerical quantity, annual / Various official sources)

Relevancy: Ensures up-to-date risk information for better decision-making. (DMC: Preparedness)

169-CORE: Presence of safety & security memorandums in public and private organizations (Y/N / Various official sources)

Relevancy: Ensures structured safety protocols in major institutions. (DMC: Preparedness)

174-CORE: Percentage of coordination protocols updated for cascading disaster scenarios (Percentage / Various official sources)

Relevancy: Improves response strategies for multi-layered hazard events. (DMC: Preparedness)

175-CORE: Frequency of inter-agency coordination meetings held (Numerical quantity, annual / Various official sources)

Relevancy: Facilitates multi-agency collaboration for coordinated response. (DMC: Preparedness)

182-CORE: Effectiveness of digital mapping tools for disaster response (Likert scale / Various official sources)

Relevancy: Preserves memory of past disasters for learning and awareness. (DMC: Preparedness)

195-CORE: Number of evaluations of effectiveness of structured crisis communication systems (Numerical quantity, annual / Various official sources)

Relevancy: Improves crisis communication effectiveness. (DMC: Preparedness)

198-CORE: Integration of emergency communication roles in job descriptions (Y/N / Various official sources)

Relevancy: Integrates emergency roles into formal job responsibilities. (DMC: Preparedness)

201-CORE: Percentage of preparedness plans with clearly defined responsible bodies (Percentage / Emergency preparedness and response plans)

Relevancy: Improves clarity in emergency response coordination. (DMC: Preparedness)



202-CORE: Evaluation of alignment between provincial and municipal flood risk plans (Likert scale / Policy alignment studies)

Relevancy: Aligns local and regional flood preparedness strategies.
(DMC: Preparedness)

203-CORE: Number of internal crisis action plans developed and approved annually (Numerical quantity / Local government crisis action plan reports)

Relevancy: Tracks the progress of local crisis response planning. (DMC: Preparedness)

204-CORE: Number of public datasets available on refugee data and location (Numerical quantity / Public datasets on refugee statistics)

Relevancy: Improves access to vital refugee-related data for crisis response. (DMC: Preparedness)

206-CORE: Number of safety drills assessing preparedness and response resilience in public/private organisations (Numerical quantity, annual / Training and capacity-building evaluation reports)

Relevancy: Tracks improvements in training and preparedness activities. (DMC: Preparedness)

210-CORE: Frequency of enforcement checks in high-risk areas (Numerical quantity, annual / Various official sources)

Relevancy: Ensures enforcement of risk reduction policies. (DMC: Prevention)

213-CORE: Presence of an official disaster preservation plan (Y/N / Various official sources)

Relevancy: Preserves historical disaster knowledge for learning and resilience. (DMC: Prevention)

249-CORE: Number of ordinances related with disasters (Numerical quantity / Various official sources)

Relevancy: Supports governance of disaster management and policy enforcement. (DMC: Response)

252-CORE: Number of targeted protection measures implemented for identified vulnerable groups & women (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides targeted interventions for vulnerable and high-risk groups. (DMC: Response)

254-CORE: Average response time for activating emergency administrative units (Numerical quantity / Various official sources)

Relevancy: Measures efficiency of emergency response activation. (DMC: Response)

258-CORE: Number of violations of public emergency/risk ordinances (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages compliance with risk reduction policies. (DMC: Response)

263-CORE: Number of backup systems in place for emergencies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures functional backup infrastructure in emergencies. (DMC: Response)

299-CORE: Percentage of FLRs equipped with synchronized radio communication systems (Percentage / Various official sources)



Relevancy: Enhances radio-based emergency communication capacity.
(DMC: Response)

325-Proposal concept: Number of evacuation and emergency response plans developed (Numerical quantity / Various official sources)

Relevancy: Improves readiness for multiple hazard scenarios. (DMC: Response)

326-Proposal concept: Number of cross-service training between emergency services (Numerical quantity, annual / Various official sources)

Relevancy: Improves inter-agency emergency response cooperation. (DMC: Response)

328-Proposal concept: Extent to which municipal emergency plans include environmental protection strategies (Y/N / Environmental risk management plans)

Relevancy: Mitigates environmental vulnerabilities through disaster planning. (DMC: Response)

329-Proposal concept: Number of crisis notification and communication systems established (Numerical quantity / Crisis communication infrastructure audits)

Relevancy: Strengthens crisis communication infrastructure. (DMC: Response)

330-Proposal concept: Operational effectiveness of crisis response systems (Likert scale / Crisis management performance evaluations)

Relevancy: Evaluates response systems' efficiency in crisis scenarios. (DMC: Response)

331-Proposal concept: Percentage of emergency communications successfully disseminated (Percentage / Emergency communication system effectiveness reports)

Relevancy: Ensures timely and effective delivery of emergency alerts. (DMC: Response)

Health and Wellbeing

17

10-CDRI: Number of hospitals (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare capacity and medical preparedness. (DMC: Response)

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare workforce availability in emergencies. (DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

44-RESILOC: Number of cooling centers identified for citizens (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides cooling relief for populations during heatwaves. (DMC: Preparedness)



47-RESILOC: Number of trained personnel conducting door-to-door emergency outreach (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands outreach efforts for early warnings and evacuation.
(DMC: Response)

228-CORE: Number of hospital beds (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects response capacity in medical emergencies. (DMC: Response)

229-CORE: Number of ambulances (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates medical transport availability in emergencies.
(DMC: Response)

230-CORE: Number of fire stations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures fire safety and emergency response reach. (DMC: Response)

236-CORE: Amount of training (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness through training and education programs. (DMC: Response)

246-CORE: Vital products and medicines supply chains redundancy (n/a / Local municipal statistics)

Relevancy: Indicates redundancy of essential supply chains. (DMC: Response)

248-CORE: Red Cross/Crest volunteers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures the availability of trained emergency volunteers.
(DMC: Response)

260-CORE: Number of power cuts during summer and average duration (Numerical quantity, annual / Various official sources)

Relevancy: Monitors energy stability and vulnerability to power outages.
(DMC: Response)

332-Proposal concept: Clarity of instructions provided in crisis situations / Number of updates to emergency ordinances (Percentage / Emergency directive dissemination surveys)

Relevancy: Ensures communities receive and understand emergency directives. (DMC: Response)

333-Proposal concept: Number of first aid courses (Numerical quantity / measurable through level or frequency of community first-aid training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

334-Proposal concept: Number of fire safety training (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)



335-Proposal concept: Number of trainings on search and rescue techniques (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

336-Proposal concept: Number of downloads of mobile application providing instructions on how to prepare and behave in case of an emergency (Numerical quantity, per 100.000 / measurable through existence of mobile app)

Relevancy: Indicates a community's critical-infrastructure resilience; (DMC: Response)

Social interaction and inclusiveness

19

15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)

Relevancy: Measures social support workforce capacity. (DMC: Recovery)

34-CDRI: Mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans (Y/N / Preparedness policy documents)

Relevancy: Ensures disaster plans address the needs of vulnerable groups. (DMC: Preparedness)

39-CDRI: Number of community-wide drills and risk-preparedness activities (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves community preparedness through simulated disaster response. (DMC: Preparedness)

46-RESILOC: Number of information signs increasing local awareness (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves public awareness and visibility of disaster risks. (DMC: Preparedness)

48-RESILOC: Number of training sessions on risk disclosure for property sellers and landlords (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances transparency in risk communication for property stakeholders. (DMC: Preparedness)

56-RESILOC: Number of training sessions focused on self-assessment and crisis readiness (Numerical quantity / Various official sources)

Relevancy: Increases self-reliance in disaster preparedness. (DMC: Mitigation)

162-CORE: Number of school events on DRR / Number of DRR sessions in curriculum (Numerical quantity, per 100.000 / Education statistics)

Relevancy: Measures DRR education and preparedness training in schools. (DMC: Preparedness)

170-CORE: Number of experts involved in planning outside of civil services (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands multidisciplinary expertise in disaster risk reduction. (DMC: Preparedness)

181-CORE: Number of multi-hazard training exercises conducted annually (Numerical quantity, per 100.000 / Various official sources)



Relevancy: Evaluates the impact of digital response tools. (DMC: Preparedness)

190-CORE: Number of community-driven disaster resilience projects completed (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages local participation in disaster resilience projects. (DMC: Preparedness)

200-CORE: Proportion of the population covered by early warning systems (Percentage / National early warning system coverage data)

Relevancy: Ensures widespread access to early warning alerts. (DMC: Preparedness)

207-CORE: Percentage of locals digitally literate (m/w/d) (Percentage / National and regional digital literacy statistics)

Relevancy: Assesses digital literacy as a factor in accessing critical disaster information. (DMC: Preparedness)

216-CORE: Percentage of risk analyses incorporating qualitative social data (Percentage / Disaster risk assessment studies)

Relevancy: Improves understanding of social dimensions of disaster impact. (DMC: Prevention)

218-CORE: Number of temporary shelters (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides emergency accommodations for displaced individuals. (DMC: Recovery)

231-CORE: Number of special needs transportation services (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports transportation for disabled and vulnerable populations. (DMC: Response)

232-CORE: Number of community food service facilities (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Ensures food security and distribution during disasters. (DMC: Response)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

250-CORE: Number of channels in which there are warnings in different languages (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances risk communication accessibility for non-native speakers. (DMC: Response)

300-CORE: Percentage of agencies with approved and documented crisis coordination plans (Percentage / Various official sources)

Relevancy: Ensures formalized crisis coordination at institutional levels. (DMC: Response)

Socio-economic Resilience

17

7-CDRI: Number of Colleges, Universities, and Professional Schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides education and workforce training crucial for recovery. (DMC: All)



**8-CDRI: Number of housing units (compared to population)
(Numerical quantity, per 100.000 / Local municipal statistics)**

Relevancy: Reflects housing stability and household capacity. (DMC: All)

11-CDRI: Number of community housing (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents socio-economic support for at-risk populations. (DMC: All)

22-CDRI: Level of implementation of DRR policies (Likert scale / Local municipal statistics)

Relevancy: Measures implementation of policies in real-world response. (DMC: All)

**33-CDRI: Number of critical infrastructure units and personnel
(Numerical quantity, per 100.000 / Local municipal statistics)**

Relevancy: Indicates resilience of critical infrastructure and essential services. (DMC: All)

37-CDRI: Percentage of budget dedicated to disaster preparedness, prevention, and response (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures sufficient financial investment in disaster preparedness and response. (DMC: All)

98-CORE: Number of disaster mitigation actions incorporating environmental considerations (Numerical quantity / Various official sources)

Relevancy: Encourages environmentally sustainable disaster prevention. (DMC: Mitigation)

148-CORE: Number of schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness levels through educational resilience. (DMC: Preparedness)

155-CORE: Number of Emergency generators (Numerical quantity, per 100.000 / Emergency management records)

Relevancy: Measures emergency equipment readiness for disaster scenarios. (DMC: Preparedness)

158-CORE: Presence of shared ICT infrastructure (Y/N / ICT system reports)

Relevancy: Measures ICT readiness for emergency response and coordination. (DMC: Preparedness)

209-CORE: Percentage of buildings inspected for structural vulnerabilities annually (Percentage / Various official sources)

Relevancy: Ensures structural integrity of buildings before disasters strike. (DMC: Prevention)

211-CORE: Percentage increase in disaster mitigation best practices in moderate-risk areas (Percentage / Various official sources)

Relevancy: Expands adoption of best practices for disaster resilience. (DMC: Prevention)

219-CORE: Number of building enterprises / Stock of construction materials (Numerical quantity, per 100.000 / Business and economic statistics)

Relevancy: Represents local capacity for post-disaster reconstruction. (DMC: Recovery)



233-CORE: Number of building inspectors (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects post-disaster safety and recovery efforts. (DMC: Response)

234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals. (DMC: Response)

237-CORE: Number of building managers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates availability of infrastructure management expertise. (DMC: Response)

245-CORE: Early Warning Systems (EWS) access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures effectiveness of early warning systems. (DMC: Response)

Total	106
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4.2.8. Gender dimension

The **gender dimension** in disaster resilience is a critical aspect of equitable DRR and response. It ensures that disaster preparedness, mitigation, response, and recovery efforts are inclusive, acknowledging the unique vulnerabilities and contributions of different gender groups. The **SyRI framework** integrates **gender-sensitive indicators** across multiple dimensions, including **Adaptive Governance, Health and Wellbeing, Social Interaction and inclusiveness, and Socio-Economic Resilience**. These indicators highlight the role of gender in shaping disaster response strategies, resource allocation, leadership participation, and accessibility to emergency services.

Adaptive Governance

Adaptive governance mechanisms are essential for ensuring **gender-sensitive policies and interventions**. Indicators such as the **number of targeted protection measures implemented for vulnerable groups and women (CORE-252)** assess the extent to which policies prioritize gender-specific risks and needs. Similarly, the **number of registered volunteers (CDRI-32)** provides insights into the level of **gender-inclusive community engagement** in emergency response. Recognizing population density (**CDRI-24**) also aids in designing evacuation and aid distribution strategies that address gender disparities in accessibility and mobility.

Health and Wellbeing

A gender-sensitive health infrastructure is vital for emergency response. The **number of physicians (CDRI-12)** and **healthcare support workers (CDRI-13)** ensures that the **availability of medical personnel is gender-balanced** and can address specific health concerns related to disasters. The **number of vulnerable populations in disaster zones (CORE-173)** helps in identifying **at-risk women and marginalized gender groups** who may require targeted assistance during emergencies. Additionally, the **availability of trained emergency volunteers (CORE-248)** reflects the **capacity of gender-sensitive first-response teams**, which is crucial in disaster situations.



Social Interaction and Inclusiveness

The Social interaction component emphasizes the importance of **representation, communication, and accessibility** for gender-diverse populations. The **percentage of women in disaster preparedness leadership roles (SHELTER-66)** ensures that **women's perspectives shape DRR strategies**, while the **number of campaigns promoting women's roles in crisis situations (CORE-143)** fosters awareness and empowerment in disaster response efforts. The **mentioning of gender and vulnerable groups in preparedness plans (CDRI-34)** is a crucial indicator for institutional commitment to **gender-inclusive policies**.

The **percentage of diverse representatives in decision-making committees (CORE-186)** and the **mapping of specific needs of vulnerable groups and women (CORE-180)** guarantee that **disaster policies incorporate intersectional perspectives**, addressing multiple layers of vulnerability. Furthermore, the **percentage of women among first responders (Proposal-337)** highlights gender participation in **civil protection and emergency response teams**, promoting **diversity and effectiveness in crisis management**.

Socio-Economic Resilience

Economic resilience is closely linked to gender equality, particularly in post-disaster recovery and employment stability. The **local employment rate (RURITAGE-82)** serves as an indicator of gendered economic resilience. The **number of building inspectors, firefighters, and emergency personnel (CORE-233, CORE-234, CORE-237)** provides insights into the **gender composition of essential disaster response professionals**, ensuring that recovery strategies **account for workforce diversity**.

The integration of **gender-sensitive indicators** into the **SyRI framework** ensures that disaster resilience strategies promote **equity, inclusivity, and targeted interventions** for at-risk populations. By addressing **gender disparities in governance, healthcare, social representation, and economic resilience**, disaster preparedness and response mechanisms become **more effective and comprehensive**. The findings emphasize the need for **continuous policy evaluation, gender-disaggregated data collection, and increased female participation in DRM** to enhance **systemic resilience and adaptive capacity**.

Indicators related to the gender dimension	Frequ.
Adaptive Governance	3
24-CDRI: Number of registered residents per square km (m/w/d) (Numerical quantity, per 100.000 / Census data)	
Relevancy: Indicates population density, affecting evacuation and aid distribution. (DMC: All)	
32-CDRI: Number of registered volunteers (m/w/d) (Numerical quantity, per 100.000 / Volunteer registration databases)	
Relevancy: Reflects community engagement in volunteer response efforts. (DMC: All)	
252-CORE: Number of targeted protection measures implemented for identified vulnerable groups & women (Numerical quantity, per 100.000 / Various official sources)	



Relevancy: Provides targeted interventions for vulnerable and high-risk groups. (DMC: Response)

Health and Wellbeing 4

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare workforce availability in emergencies. (DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

173-CORE: Number of vulnerable population in disaster zones (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Identifies and tracks at-risk populations needing special assistance. (DMC: Preparedness)

248-CORE: Number of Red Cross/Crest volunteers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures the availability of trained emergency volunteers. (DMC: Response)

Social interaction and inclusiveness 16

14-CDRI: Number of English speakers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates community's ability to communicate in disasters. (DMC: Response)

15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)

Relevancy: Measures social support workforce capacity. (DMC: Recovery)

25-CDRI: Percentage of population below 65 years of age (m/w/d) (Percentage / Census data)

Relevancy: Reflects workforce availability for economic recovery. (DMC: All)

26-CDRI: Percentage of population 17 years of age or younger (m/w/d) (Percentage / Census data)

Relevancy: Identifies young populations needing additional protections. (DMC: All)

27-CDRI: Percentage population with physical or mental disabilities (m/w/d) (Percentage / Local health statistics)

Relevancy: Measures accessibility needs in disaster planning. (DMC: All)

28-CDRI: Percentage of women (Percentage / Census data)

Relevancy: Considers gender-inclusive disaster response strategies. (DMC: All)

29-CDRI: Percentage of one-person household (m/w/d) (Percentage / Census and household data)

Relevancy: Reflects social isolation risks, affecting emergency support needs. (DMC: All)

34-CDRI: Count of mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans (Y/N / Preparedness policy documents)



Relevancy: Ensures disaster plans address the needs of vulnerable groups. (DMC: Preparedness)

66-SHELTER: Percentage of women in leadership roles within disaster preparedness committees (Numerical quantity / Various official sources)

Relevancy: Ensures gender-inclusive leadership in disaster planning. (DMC: All)

143-CORE: Number of campaigns framing women's roles in crisis situations (Numerical quantity, per 100.000 / Crisis management campaign evaluations)

Relevancy: Encourages gender-inclusive crisis response strategies. (DMC: Mitigation)

170-CORE: Number of experts involved in planning outside of civil services (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands multidisciplinary expertise in disaster risk reduction. (DMC: Preparedness)

180-CORE: Number of policy documents that mapped specific needs of vulnerable groups & women (Numerical quantity / Various official sources)

Relevancy: Ensures inclusive communication for diverse populations. (DMC: Preparedness)

186-CORE: Percentage of decision-making committees including diverse representatives (m/w/d) (Percentage / Various official sources)

Relevancy: Ensures diverse perspectives in disaster decision-making. (DMC: Preparedness)

207-CORE: Percentage of locals digitally literate (m/w/d) (Percentage / National and regional digital literacy statistics)

Relevancy: Assesses digital literacy as a factor in accessing critical disaster information. (DMC: Preparedness)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

337-Proposal concept: Percentage of women among local first responders (FRs) and civil protection teams (Percentage / First responder workforce demographics)

Relevancy: Measures gender diversity in disaster response leadership and operations. (DMC: Response)

Socio-economic Resilience

4

82-RURITAGE: Local employment rate (m/w/d) (Percentage / Local municipal statistics)

Relevancy: Measures employment stability and economic recovery potential. (DMC: Mitigation)

233-CORE: Number of building inspectors (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects post-disaster safety and recovery efforts. (DMC: Response)



234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals.
 (DMC: Response)

237-CORE: Number of building managers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates availability of infrastructure management expertise.
 (DMC: Response)

Grand Total	27
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4.2.9. CNH dimension

CNH is often perceived as vulnerable to disasters, yet it also functions as a powerful resource for resilience and DRM. CNH encompasses tangible elements such as **monuments, heritage sites, and cultural institutions**, as well as intangible components like **local knowledge, traditions, and storytelling**, which collectively strengthen community identity, foster social cohesion, and enhance disaster preparedness. The **Systemic Resilience Innovation (SyRI) framework** highlights various indicators demonstrating CNH's role in **Active Memory, Adaptive Governance, Social Interaction and inclusiveness, and Socio-Economic Resilience** within the **DMC**.

Active Memory and Cultural Awareness

CNH plays a vital role in **preserving historical disaster knowledge**, ensuring that past experiences inform future preparedness. **Cultural institutions (CDRI-0)** serve as information hubs, while **community-led awareness initiatives (CORE-183)** integrate historical disaster narratives into education. The **documentation of past crises (CDRI-23)**, **disaster testimonies (CORE-100, 103)**, and **oral history records (CORE-107)** ensure that valuable knowledge is retained for intergenerational learning. Events such as **commemorative ceremonies (CORE-108)** and **cultural traditions (SLR-87)** reinforce community cohesion and institutional responsibility for disaster memory, promoting social resilience.

Media also plays a crucial role, with **documentaries, books, and TV programs (UN-94)** spreading awareness of past disasters. Moreover, **social media platforms (CORE-112)** and **digital datasets preserving cultural assets (CORE-117)** provide modern tools to facilitate widespread knowledge sharing and engagement in risk preparedness.

Cultural and Natural Heritage as a Governance Tool

The **integration of CNH into governance structures** enhances DRR efforts. **Community-based activities (CORE-135, 136)** encourage participation in local resilience strategies, while **heritage enhancement initiatives (CORE-145)** ensure the preservation of cultural identity. Moreover, **religious organizations (CDRI-3, CORE-35)** and **spiritual leaders (CORE-183)** play crucial roles in **community mobilization**, providing crisis support services and strengthening local networks in times of disaster.

Additionally, institutional frameworks such as the **presence of CNH protection agencies (CORE-159)** and **building regulations aligned with disaster standards (RURITAGE-85)** ensure structural resilience. Policies incorporating **climate adaptation**



measures for CNH sites (CORE-163) and formal protection of historic monuments and churches (CORE-191) safeguard cultural assets while reinforcing disaster preparedness at local, national, and international levels.

Social interaction and Community Engagement

Cultural events and traditions act as **bridges between diverse community groups**, fostering inclusion and collective action. CNH provides **spaces for dialogue, knowledge-sharing, and participatory disaster preparedness** through initiatives such as **community engagement events (CORE-132, 161)** and **cultural events promoted alongside first responders (CORE-144)**. These platforms not only promote disaster awareness but also strengthen **public trust in institutions (CDRI-38, CORE-150)**, ensuring effective risk communication and response strategies.

Furthermore, CNH supports **gender-sensitive disaster preparedness** by **highlighting women's contributions to local development and resilience (CORE-138)** and encouraging **gender-inclusive leadership in disaster response (SHELTER-66)**. This reinforces the role of **inclusive governance structures** in building adaptive capacity within vulnerable populations.

CNH as a Driver for Socio-Economic Resilience

Beyond its cultural and social significance, CNH contributes to economic stability in disaster-affected regions. **UNESCO-protected heritage sites (CORE-156)** serve as economic assets by **attracting tourism and investment**, which, in turn, facilitates disaster recovery. Furthermore, **cultural institutions and local traditions (CDRI-0, SLR-87)** help preserve **livelihoods linked to heritage-based economies**, ensuring that communities recover while maintaining their historical identity.

CNH is not just a **passive element at risk in disasters**; it is an **active contributor to community resilience and DRM**. By **preserving historical knowledge, strengthening social networks, integrating into governance structures, and fostering economic recovery**, CNH becomes a **critical asset in mitigating disaster risks and enhancing resilience**. Policymakers, urban planners, and DRM professionals must recognize CNH's potential and integrate it into **comprehensive DRR strategies**, ensuring that heritage preservation goes hand in hand with resilience-building efforts. This perspective shifts the narrative from **protecting heritage from disasters to leveraging heritage for disaster resilience**, ensuring sustainable, culturally aware, and community-driven approaches to DRM.

Indicators related to the CNH dimension	Frequ.
Active Memory	28
0-CDRI: Number of cultural institutions (Numerical quantity, per 100.000 / Local municipal statistics)	
Relevancy: Serves as information hubs and cultural resilience centers. (DMC: All)	
183-CORE: Number of awareness initiatives led by community or spiritual leaders (Numerical quantity, per 100.000 / Various official sources)	
Relevancy: Integrates historical disaster narratives into education. (DMC: Preparedness)	



16-CDRI: Local specificity of preparedness plans making reference to geographical make up (Likert scale / Preparedness plans)

Relevancy: Represents local knowledge crucial for disaster resilience.

(DMC: All)

23-CDRI: Availability of publicly accessible databases or reports documenting past crises (Y/N / Local municipal statistics)

Relevancy: Reflects preparedness through historical disaster awareness.

(DMC: All)

87-SLR: Number of cultural traditions/events (Numerical quantity, per 100.000 / Cultural event records)

Relevancy: Indicates cultural resilience and community engagement.

(DMC: Mitigation)

92-SLR: Number (and date of establishment) of monuments in CORE lab region (Numerical quantity, per 100.000 / Historical preservation records)

Relevancy: Indicates community efforts to preserve historical resilience.

(DMC: Mitigation)

94-UN: Number of TV programs, documentaries, books on past disasters (Numerical quantity, per 100.000 / Media and publication archives)

Relevancy: Indicates media engagement in historical disaster awareness. (DMC: Mitigation)

100-CORE: Number of platforms dedicated to disaster victims' testimonies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Captures and archives firsthand disaster experiences. (DMC: Mitigation)

103-CORE: Total number of collected and archived disaster testimonies (Numerical quantity / Various official sources)

Relevancy: Ensures cultural documentation of disaster experiences.

(DMC: Mitigation)

107-CORE: Number of oral history records documenting disaster experiences (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Promotes cultural engagement in disaster awareness. (DMC: Mitigation)

108-CORE: Frequency of cultural events honoring past disasters (Numerical quantity, annual / Various official sources)

Relevancy: Strengthens institutional responsibility for disaster memory.

(DMC: Mitigation)

111-CORE: Existence of an institutional strategy for cultural memory preservation (Y/N / Various official sources)

Relevancy: Facilitates digital storytelling for resilience awareness. (DMC: Mitigation)

112-CORE: Number of social media channels for sharing disaster-related memories (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures accessible and visible sites for disaster remembrance. (DMC: Mitigation)

113-CORE: Number of established disaster remembrance sites (Numerical quantity / Various official sources)



Relevancy: Encourages local leadership in resilience awareness. (DMC: Mitigation)

115-CORE: Percentage of schools incorporating disaster testimonies in curricula (Percentage / Various official sources)

Relevancy: Ensures disaster awareness is embedded in education. (DMC: Mitigation)

117-CORE: Number of digital datasets preserving historical and cultural assets (Numerical quantity / Various official sources)

Relevancy: Ensures historical data preservation for future preparedness. (DMC: Mitigation)

128-CORE: Number of events on risk-related matters organized by cultural institutions (Numerical quantity, per 100.000 / Cultural institution reports and event records)

Relevancy: Enhances community awareness and preparedness through cultural engagement. (DMC: Mitigation)

129-CORE: Number of informational materials/campaigns organized for cultural institution professionals (Numerical quantity, per 100.000 / Training and awareness campaign documentation)

Relevancy: Equips cultural professionals with knowledge on crisis response and risk management. (DMC: Mitigation)

132-CORE: Number of local heritage events actively engaging the locals (Numerical quantity, per 100.000 / Community engagement reports and surveys)

Relevancy: Strengthens local identity and resilience through heritage-focused community events. (DMC: Mitigation)

135-CORE: Number of community-based activities for cultural and natural heritage awareness (Numerical quantity, per 100.000 / Local government and cultural department reports)

Relevancy: Promotes local knowledge and heritage preservation as part of disaster resilience. (DMC: Mitigation)

136-CORE: Number of activities organized in schools to critically discuss local traditions (Numerical quantity, per 100.000 / School activity reports and curriculum records)

Relevancy: Encourages intergenerational learning and awareness of cultural resilience. (DMC: Mitigation)

145-CORE: Number of local cultural and natural heritage enhancement initiatives organized by local authorities (Numerical quantity / Local authority records on cultural heritage projects)

Relevancy: Supports local engagement in preserving heritage amid disasters. (DMC: Mitigation)

177-CORE: Number of local knowledge-sharing workshops on disaster risk management (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages knowledge sharing on risk preparedness. (DMC: Preparedness)

185-CORE: Percentage of heritage sites monitored for threats (Percentage / Various official sources)

Relevancy: Tracks threats to cultural and historical landmarks. (DMC: Preparedness)



191-CORE: Number of historic monuments and churches under formal protection (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Protects heritage sites from disaster-related threats. (DMC: Preparedness)

226-CORE: Knowledge and experiences of elders is documented and archived (Y/N / Various official sources)

Relevancy: Documents community knowledge and experiences of past disasters. (DMC: Recovery)

227-CORE: Presence of memorials built to remember past catastrophes and victims (m/w/d) (Y/N / Municipal records and historical preservation agencies)

Relevancy: Preserves historical memory, reinforcing community resilience and recovery. (DMC: Recovery)

251-CORE: Existence of mechanisms for integrating local and scientific risk knowledge (Y/N / Various official sources)

Relevancy: Strengthens integration of local and scientific knowledge in risk management. (DMC: Response)

Adaptive Governance

6

35-CDRI: Number of religious events related to DRR (Numerical quantity, per 100.000 / Religious organization reports)

Relevancy: Reflects religious community involvement in disaster preparedness. (DMC: Preparedness)

85-RURITAGE: Building regulations compliant to international disaster standards / Percentage of irregular buildings (Percentage / Building code compliance assessments)

Relevancy: Ensures building safety and structural resilience in disaster scenarios. (DMC: Mitigation)

150-CORE: Level of trust in state institutions (Likert scale / Local municipal statistics)

Relevancy: Measures public trust in government response capacity. (DMC: Preparedness)

159-CORE: Presence of dedicated CNH protection agency (Y/N / Heritage protection agency reports)

Relevancy: Measures institutional commitment to cultural heritage protection. (DMC: Preparedness)

163-CORE: Inclusion of climate change risk measures for CNH sites (Y/N / Climate adaptation policies)

Relevancy: Reflects climate adaptation measures in cultural heritage protection. (DMC: Preparedness)

184-CORE: Percentage of heritage professionals trained in crisis response (Percentage / Various official sources)

Relevancy: Improves heritage site protection in disasters. (DMC: Preparedness)

Social interaction and inclusiveness

5

3-CDRI: Number of religious organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Offers crisis support services and emergency aid coordination. (DMC: All)



38-CDRI: Percentage increase in public trust in official institutions (Percentage / Various official sources)

Relevancy: Reflects public confidence in emergency response institutions. (DMC: Mitigation)

138-CORE: Number of initiatives to raise awareness of women's contributions to local development and heritage (Numerical quantity, per 100.000 / Community development and heritage awareness initiatives)

Relevancy: Recognizes and promotes women's roles in community resilience and recovery. (DMC: Mitigation)

144-CORE: Number of cultural events promoted with/by first responders (Numerical quantity / Disaster response and cultural event participation records)

Relevancy: Integrates cultural perspectives into emergency response efforts. (DMC: Mitigation)

161-CORE: Number of community events on DRR (Numerical quantity, per 100.000 / Community event records)

Relevancy: Indicates social cohesion through disaster-related community events. (DMC: Preparedness)

Socio-economic Resilience	1
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156-CORE: Number of UNESCO protected/recognised intangible CNH (Numerical quantity, per 100.000 / UNESCO databases)

Relevancy: Assesses the protection of cultural and historical assets. (DMC: Preparedness)

Total	40
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5. Outlook

In this task, the contributors invested significant resources in aggregating, sorting, and analysing the available data collected in all previous tasks of WP1 and WP2 identifying the relevant aspects for modelling indicators to measure, assess, and monitor “Systemic Community Resilience”.

This process of coding relevant aspects of crisis management, of our extensive multi-disciplinary qualitative CORE lab field studies (conducted in T2.2 and T4.1) , through identifying existing gaps, lessons learned, best practices, local needs, was an extensive endeavour involving the task leaders engaged in the field studies. Through that the integration of existing validated knowledge, and new localised insights was attempted. This two-pronged approach was designed to triangulate the indicator identification, minimise methodological pitfalls (see Limitations), and introduce RESILIAGE’s novel concept as CNH as driver of community resilience in the face of crises and disasters.

Following the methodological examples found in previous attempts to conceptualise Community Resilience (in some related way), was intended to keep the approach and collection as close to validated practice as possible, while the intent in the context of RESILIAGE was not to create a scientific index aggregated by a multidimensional set of indicators, but to have these indicators individually represented and accessible for a broad user base within the CORE labs, including policy makers, frontline responders, and citizens alike.

The collection and systematisation of the indicators identified allow partners in subsequent WPs to access, validate, refine, and prioritise the suggested metrics. The inclusion of indicators in further tools is therein defined by available local data sets, technical requirements and aim of the tools and prioritisation of user needs as well as focus on the respective aspect of the SyRI framework.

It was expected that with all such dimensions and aspects considered, the ensuing results could thus more clearly and successfully be represented in the tools developed in WP3, – accessible to first responders and citizens alike – such as the ATLAS tool and the Multi_Dashboard created by the RESILIAGE Resource Ecosystem for Community Resilience (RECORE). In the end, such integration would ensure that indicators could be more effectively employed for upcoming development of activities, strategies, and final project outcomes, the policy guidelines and preparedness plans of WP6, and not least, the validation of all project tools and resources in the context of WP5.



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7. Annex

7.1. List of fully classified indicators

Num.	Unique ID	Indicator	Unit of measure	Relevancy to CR in DRM	Measurement source	Capital dimension	SyRI	DMC	Crisis/Hazard	Derived from (SOURCE)
1	0-CDRI	Number of cultural institutions	Numerical quantity, per 100.000	Serves as information hubs and cultural resilience centers.	Local municipal statistics	psycho-social, social, cultural, CNH	Active Memory	All	All	CDRI
2	1-CDRI	Number of nonprofit organisations	Numerical quantity, per 100.000	Supports connectivity, social cohesion, and community response readiness.	Local municipal statistics	social, cultural	Social interaction and inclusiveness	All	All	CDRI
3	2-CDRI	Number of civic and political organisations	Numerical quantity, per 100.000	Strengthens systemic support networks for advocacy and recovery.	Local municipal statistics	social, cultural	Adaptive Governance	All	All	CDRI
4	3-CDRI	Number of religious organisations	Numerical quantity, per 100.000	Offers crisis support services and emergency aid coordination.	Local municipal statistics	psycho-social, social, cultural, CNH	Social interaction and inclusiveness	All	All	CDRI
5	4-CDRI	Local per capita income levels	Local currency	Indicates individual financial	Local municipal statistics	social, economic	Socio-economic Resilience	All	All	CDRI



6	5-CDRI	Local median household income levels	Local currency	resilience for recovery efforts. Represents community-wide economic resilience.	Local municipal statistics	social, economic	Socio-economic Resilience	All	All	CDRI
7	6-CDRI	Number of research and development establishments	Numeric al quantity, per 100.000	Represents public sector innovation in disaster response.	Local municipal statistics	social, cultural	Socio-economic Resilience	All	All	CDRI
8	7-CDRI	Number of Colleges, Universities, and Professional Schools	Numeric al quantity, per 100.000	Provides education and workforce training crucial for recovery.	Local municipal statistics	social, technical, economic	Socio-economic Resilience	All	All	CDRI
9	8-CDRI	Number of housing units (compared to population)	Numeric al quantity, per 100.000	Reflects housing stability and household capacity.	Local municipal statistics	social, economic, technical	Socio-economic Resilience	All	All	CDRI
10	9-CDRI	Number of vacant housing units	Numeric al quantity, per 100.000	Indicates demographic shifts affecting local resilience.	Local municipal statistics	social, economic	Social interaction and inclusiveness	All	All	CDRI
11	10-CDRI	Number of hospitals	Numeric al quantity, per 100.000	Measures healthcare capacity and medical preparedness.	Local municipal statistics	social, economic, technical	Health and Wellbeing	Response	All	CDRI
12	11-CDRI	Number of community housing	Numeric al quantity, per 100.000	Represents socio-economic support for at-risk populations.	Local municipal statistics	social, economic, technical	Socio-economic Resilience	All	All	CDRI



13	12-CDRI	Number of physicians (m/w/d)	Numeric al quantity, per 100.000	Measures healthcare workforce availability in emergencies.	Local municipal statistics	social, economic, technical, gender	Health and Wellbeing	Response	All	CDRI
14	13-CDRI	Number of health care support workers (m/w/d)	Numeric al quantity, per 100.000	Supports medical care workforce resilience.	Local municipal statistics	social, economic, technical, gender	Health and Wellbeing	Response	All	CDRI
15	14-CDRI	Number of English speakers (m/w/d)	Numeric al quantity, per 100.000	Indicates community's ability to communicate in disasters.	Local municipal statistics	social, cultural, gender	Social interaction and inclusiveness	Response	All	CDRI
16	15-CDRI	Number of community and social workers (m/w/d)	Numeric al quantity	Measures social support workforce capacity.	Local municipal statistics	social, economic, technical, gender	Social interaction and inclusiveness	Recovery	All	CDRI
17	16-CDRI	Local geographical knowledge	Numeric al quantity	Represents local knowledge crucial for disaster resilience.	Local municipal statistics	psycho-social, social, cultural, CNH	Active Memory	All	All	CDRI
18	17-CDRI	Budget spent on infrastructure for vulnerable groups	Local currency, per 100.000	Reflects depth of preparedness for at-risk groups.	Local municipal statistics	psycho-social, social, economic	Social interaction and inclusiveness	All	All	CDRI
19	18-CDRI	Existence and quality of DRR policies	Y/N; Likert scale	Indicates effectiveness of disaster risk reduction (DRR) policies.	Local municipal statistics	technical	Adaptive Governance	All	All	CDRI



20	19-CDRI	Existence and quality of awareness campaigns	Y/N; Likert scale	Reflects awareness-building efforts in disaster prevention. Identifies vulnerable populations needing targeted assistance.	Local municipal statistics	technical	Adaptive Governance	Preparedness	All	CDRI
21	20-CDRI	Demographic characteristics	Numerical quantity	Reflects coordination capacity in crisis situations. Measures implementation of policies in real-world response.	Local municipal statistics	social, economic	Socio-economic Resilience	All	All	CDRI
22	21-CDRI	Coordination mechanisms	Y/N	Reflects preparedness through historical disaster awareness. Indicates population density, affecting evacuation and aid distribution.	Local municipal statistics	technical, historical, social	Adaptive Governance	Preparedness	All	CDRI
23	22-CDRI	Level of implementation of DRR policies	Likert scale	Reflects workforce availability for	Local municipal statistics	technical, social, economic	Socio-economic Resilience	All	All	CDRI
24	23-CDRI	Knowledge about past crises	n/a		Local municipal statistics	historical, cultural, psycho-social, CNH	Active Memory	All	All	CDRI
25	24-CDRI	Number of registered residents per square km (m/w/d)	Numerical quantity, per 100.000		Census data	social, environmental, gender	Adaptive Governance	All	All	SHELTER
26	25-CDRI	Percentage of population below 65 years of age (m/w/d)	Percentage		Census data	social, gender	Social interaction and	All	All	SHELTER



27	26-CDRI	Percentage of population 17 years of age or younger (m/w/d)	Percentage	economic recovery. Identifies young populations needing additional protections.	Census data	social, gender	inclusiveness Social interaction and inclusiveness	All	All	SHELTER
28	27-CDRI	Percentage population with physical or mental disabilities (m/w/d)	Percentage	Measures accessibility needs in disaster planning. Considers	Local health statistics	psycho-social, social, gender	Social interaction and inclusiveness	All	All	SHELTER
29	28-CDRI	Percentage of women	Percentage	gender-inclusive disaster response strategies. Reflects social isolation risks, affecting emergency support needs. Indicates	Census data	social, gender	Social interaction and inclusiveness	All	All	SHELTER
30	29-CDRI	Percentage of one-person household (m/w/d)	Percentage	economic stability and resilience to recover from disasters. Indicates financial resources available for emergency response.	Census and household data	social, gender	Social interaction and inclusiveness	All	All	SHELTER
31	30-CDRI	Percentage of population above poverty line	Percentage		Economic statistics	social, economic	Socio-economic Resilience	All	All	SHELTER
32	31-CDRI	Budget of volunteer organizations	Local currency		Budget reports	economic, cultural	Adaptive Governance	All	All	SHELTER



33	32-CDRI	Number of registered volunteers (m/w/d)	Numeric al quantity, per 100.000	Reflects community engagement in volunteer response efforts. Indicates resilience of critical infrastructure and essential services.	Volunteer registration databases	social, technical, gender	Adaptive Governanc e	All	All	SHELTE R
34	33-CDRI	Number of critical infrastructure units and personnel	Numeric al quantity, per 100.000	Ensures disaster plans address the needs of vulnerable groups. Reflects religious community involvement in disaster preparedness.	Local municipal statistics	technical	Socio- economic Resilience	All	All	SHELTE R
35	34-CDRI	Mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans	Y/N	Clarifies roles and responsibilities in emergency situations. Ensures sufficient financial investment in disaster preparedness and response.	Preparedne ss policy documents	social, technical, gender	Social interaction and inclusiven ess	Preparedn ess	All	RURITA GE
36	35-CDRI	Number of religious events related to DRR	Numeric al quantity, per 100.000		Religious organization reports	psycho- social, cultural, CNH	Adaptive Governanc e	Preparedn ess	All	SLR
37	36-CDRI	Percentage of protocols to help understand responsibilities and roles	Percenta ge		Disaster response protocols	technical, cultural	Adaptive Governanc e	Preparedn ess	All	CORE
38	37-CDRI	Percentage of budget dedicated to disaster preparedness, prevention, and response	Local currency, per 100.000		Various official sources	social, economic, technical	Socio- economic Resilience	All	All	CORE



39	38-CDRI	Percentage increase in public trust in official institutions	Percentage	Reflects public confidence in emergency response institutions. Improves community preparedness through simulated disaster response.	Various official sources	social, cultural, CNH	Social interaction and inclusiveness	Mitigation	All	CORE
40	39-CDRI	Number of community-wide drills and risk-preparedness activities	Numerical quantity, per 100.000	Mitigates flooding and water retention risks in urban areas. Establishes clear transition from crisis response to recovery. Improves coordination and disaster readiness in residential complexes.	Various official sources	social, cultural, technical	Social interaction and inclusiveness	Preparedness	All	CORE
41	40-CDRI	Amount of area covered with permeable surfaces (Percentage of total area)	Percentage	Establishes clear transition from crisis response to recovery. Improves coordination and disaster readiness in residential complexes.	Various official sources	environmental	Socio-economic Resilience	Mitigation	All	CORE
42	41-CDRI	Existence of a protocol that clarifies the end of the crisis/emergency status	Y/N	Promotes individual responsibility in disaster preparedness. Provides cooling relief for populations	Various official sources	social, technical	Adaptive Governance	Response	All	CORE
43	42-RESILO C	Number of large residential units with a manager	Numerical quantity		Various official sources	social, cultural, technical, economic	adaptive governance	all	all	CORE
44	43-RESILO C	Percentage of population demonstrating precautionary behaviors	Percentage		Various official sources	psycho-social, social, cultural	Adaptive Governance	Preparedness	All	CORE
45	44-RESILO C	Number of cooling centers identified for citizens	Numerical quantity,		Various official sources	social, technical	Health and Wellbeing	Preparedness	All	CORE



46	45-RESILO C	Number of households struggling with energy poverty	per 100.000 Numerical quantity, per 100.000	during heatwaves. Monitors energy insecurity affecting disaster resilience.	Various official sources	social, economic	Socio-economic Resilience	All	Heatwaves	CORE
47	46-RESILO C	Number of information signs increasing local awareness	Numerical quantity, per 100.000	Improves public awareness and visibility of disaster risks.	Various official sources	technical, social	Social interaction and inclusiveness	Preparedness	All	CORE
48	47-RESILO C	Number of trained personnel conducting door-to-door emergency outreach	Numerical quantity, per 100.000	Expands outreach efforts for early warnings and evacuation.	Various official sources	technical, social	Health and Wellbeing	Response	All	CORE
49	48-RESILO C	Number of training sessions on risk disclosure for property sellers and landlords	Numerical quantity, per 100.000	Enhances transparency in risk communication for property stakeholders.	Various official sources	social, technical, economic	Social interaction and inclusiveness	Preparedness	All	CORE
50	49-RESILO C	Number of physical information dissemination points in the community	Numerical quantity, per 100.000	Improves public access to disaster-related information.	Various official sources	psycho-social	Social interaction and inclusiveness	Response	All	CORE
51	50-RESILO C	Number of NGOs, sport teams, clubs	Numerical quantity, per 100.000	Mobilizes community resources for disaster response.	Various official sources	social, cultural, historical	Social interaction and inclusiveness	All	All	CORE
52	51-RESILO C	Percentage of stakeholders able to	Percentage	Facilitates structured	Various official sources	social, technical, cultural	Adaptive Governance	Response	All	CORE



53	52- RESILO C	access interpreting services during crises Percentage of neighborhoods with an active neighborhood watch program	Percenta ge	emergency planning. Enhances neighborhood- level security and resilience.	Various official sources	cultural, historical, social	Social interaction and inclusiven ess	All	All	CORE
54	55- RESILO C	Percentage of municipalities with structured mechanisms for community dialogue	Percenta ge	Encourages local community participation in risk management.	Various official sources	social, cultural	Social interaction and inclusiven ess	Mitigation	All	CORE
55	56- RESILO C	Number of training sessions focused on self-assessment and crisis readiness	Numeric al quantity	Increases self- reliance in disaster preparedness.	Various official sources	social, technical	Social interaction and inclusiven ess	Mitigation	All	CORE
56	57- SHELTE R	Percentage of affected individuals who believe recovery promises have been fulfilled	Percenta ge	Measures perceived effectiveness of disaster recovery efforts.	Public surveys	social	Adaptive Governanc e	Recovery	All	CORE
57	58- SHELTE R	Percentage decrease in fossil fuel-based energy generation over time Percentage of population with access to occupational health services and emergency medical care	Percenta ge	Encourages long-term sustainability in energy systems.	Various official sources	economic, environmen tal	Socio- economic Resilience	Prevention	All	CORE
58	59- SHELTE R	Percentage of population with access to occupational health services and emergency medical care	Percenta ge	Ensures access to essential health services post-disaster.	Various official sources	social	Health and Wellbeing	All	All	CORE
59	60- SHELTE R	Presence of a formalized government reform	Y/N	Improves efficiency in crisis-related	Various official sources	social	Adaptive Governanc e	All	All	CORE



60	61-SHELTER	plan for bureaucratic efficiency Percentage of municipalities with structured citizen participation mechanisms	Percentage	bureaucratic processes. Encourages inclusive community participation in disaster policies.	Various official sources	social, technical	Adaptive Governance	All	All	CORE
61	62-SHELTER	Percentage of surveyed citizens who believe policies reflect local needs and realities	Percentage	Measures alignment of disaster policies with public needs.	Public surveys	social	Adaptive Governance	Mitigation	All	CORE
62	63-SHELTER	Percentage of government or NGO programs actively supporting elder engagement	Percentage	Promotes elder engagement in disaster preparedness.	Various official sources	psycho-social, social	Social interaction and inclusiveness	All	All	CORE
63	64-SHELTER	Number of available scientific infrastructure units for crisis monitoring	Numerical quantity	Expands crisis monitoring through scientific infrastructure.	Various official sources	social, cultural	Adaptive Governance	Preparedness	All	CORE
64	66-SHELTER	Percentage of women in leadership roles within disaster preparedness committees	Numerical quantity	Ensures gender-inclusive leadership in disaster planning.	Various official sources	social, gender	Social interaction and inclusiveness	All	All	CORE
65	70-SHELTER	Number of coordination mechanisms between state and federal agencies	Numerical quantity	Ensures structured coordination between government agencies.	Various official sources	cultural, social	Adaptive Governance	All	All	CORE



66	71-SHELTER	Budget allocation for risk management as a Percentage of total public spending	Local currency, per 100.000	Ensures consistent funding for disaster risk management.	Various official sources	economic	Adaptive Governance	Mitigation	All	CORE
67	72-SHELTER	Existence and comprehensiveness of national risk assessment frameworks	Y/N	Assesses comprehensiveness of national risk assessments. Measures funding allocation efficiency for disaster risk management.	Various official sources	cultural, social	Adaptive Governance	All	All	CORE
68	73-SHELTER	Percentage of risk management funding sourced from national and regional levels	Local currency, per 100.000	Ensures national disaster policies cover all risk management aspects. Tracks stakeholder engagement in disaster response systems.	Various official sources	economic	Socio-economic Resilience	All	All	CORE
69	74-SHELTER	Existence of a comprehensive national disaster risk management framework	Y/N	Ensures multi-language accessibility in disaster guidelines. Enhances public accountability and trust in	Various official sources	technical, social	Adaptive Governance	All	All	CORE
70	75-SHELTER	Number of formally assigned stakeholders in national disaster management	Numerical quantity		Various official sources	social	Adaptive Governance	All	All	CORE
71	76-SHELTER	Number of languages in which disaster preparedness guidelines are provided	Numerical quantity		Various official sources	cultural, social	Social interaction and inclusiveness	Preparedness	All	CORE
72	77-SHELTER	Transparency of budget allocations for preparedness plans	Y/N		Municipal and national budget	economic	Adaptive Governance	Preparedness	All	CORE



73	78-SHELTER	Integration of GIS-based studies and mapping in municipal emergency plans	Y/N	disaster preparedness. Enhances data-driven decision-making in disaster risk management.	transparency reports GIS mapping and urban planning reports	technical	Adaptive Governance	Preparedness	All	CORE
74	79-SHELTER	Community awareness and knowledge of resilience tools	Likert scale	Encourages proactive community resilience measures.	Community disaster resilience surveys	psycho-social, social	Health and Wellbeing	Mitigation	All	CORE
75	80-RURITAGE	Availability of digital tools for crisis preparedness and response	Y/N	Expands digital solutions for crisis preparedness.	Tech adoption studies in disaster preparedness	technical	Adaptive Governance	All	All	CORE
76	82-RURITAGE	Local employment rate (m/w/d)	Percentage	Measures employment stability and economic recovery potential.	Local municipal statistics	social, economic, gender	Socio-economic Resilience	Mitigation	All	CDRI
77	84-RURITAGE	Number of business establishments	Numerical quantity, per 100.000	Reflects private sector resilience and role in recovery.	Local municipal statistics	social, economic	Socio-economic Resilience	Mitigation	All	CDRI
78	85-RURITAGE	Building regulations compliant to international disaster standards / Percentage of irregular buildings	Percentage	Ensures building safety and structural resilience in disaster scenarios.	Building code compliance assessments	environmental, economic, CNH	Adaptive Governance	Mitigation	All	RESILOC



79	86-SLR	Number of professional and organisational DRR guidelines available on organisational level	Numeric al quantity	Provides guidance on disaster risk reduction (DRR) best practices.	Organizational policy documents	social, technical	Adaptive Governance	Mitigation	All	RESILO C
80	87-SLR	Number of cultural traditions/events	Numeric al quantity, per 100.000	Indicates cultural resilience and community engagement.	Cultural event records	cultural, CNH	Active Memory	Mitigation	All	SHELTE R
81	89-SLR	Inclusion of risk indicators in urban planning policies; Mentioning of terms 'risk', 'uncertainty' in policies; Presence of elaborated risk metric	Likert scale	Reflects disaster risk considerations in urban planning.	Urban planning policies	social, technical	Adaptive Governance	Mitigation	All	SHELTE R
82	90-SLR	Number of contracts/agreements/ LOIs between private actors and public agencies on CNHs	Numeric al quantity, per 100.000	Reflects private-public collaboration in disaster resilience.	Public-private agreements	social, economic	Socio-economic Resilience	Mitigation	All	RURITA GE
83	92-SLR	Number (and date of establishment) of monuments in CORE lab region	Numeric al quantity, per 100.000	Indicates community efforts to preserve historical resilience.	Historical preservation records	historical, cultural, CNH	Active Memory	Mitigation	All	RURITA GE
84	94-UN	Number of TV programs, documentaries, books on past disasters	Numeric al quantity, per 100.000	Indicates media engagement in historical disaster awareness.	Media and publication archives	social, cultural, CNH	Active Memory	Mitigation	All	SLR



85	96-UN	Mapping of cascading risks triggered by temperature increases	Likert scale	Reflects awareness and preparedness on cascading crisis effects	Local authority records	environmental	Health and Wellbeing	Mitigation	Heatwaves	UN
86	97-CORE	Number of regional risk assessments conducted for mitigation and recovery	Numerical quantity, annual	Enhances regional ability to prepare and adapt to disaster risks.	Various official sources	environmental, technical	Adaptive Governance	Mitigation	All	CORE
87	98-CORE	Number of disaster mitigation actions incorporating environmental considerations	Numerical quantity	Encourages environmentally sustainable disaster prevention.	Various official sources	environmental, technical	Socio-economic Resilience	Mitigation	All	CORE
88	99-CORE	Percentage of planned policy actions successfully implemented	Percentage	Tracks policy effectiveness in reducing disaster impacts.	Various official sources	technical	Adaptive Governance	Mitigation	All	CORE
89	100-CORE	Number of platforms dedicated to disaster victims' testimonies	Numerical quantity, per 100.000	Captures and archives firsthand disaster experiences.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
90	103-CORE	Total number of collected and archived disaster testimonies	Numerical quantity	Ensures cultural documentation of disaster experiences.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
91	107-CORE	Number of oral history records documenting disaster experiences	Numerical quantity, per 100.000	Promotes cultural engagement in disaster awareness.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE



92	108-CORE	Frequency of cultural events honoring past disasters	Numerical quantity, annual	Strengthens institutional responsibility for disaster memory.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
93	111-CORE	Existence of an institutional strategy for cultural memory preservation	Y/N	Facilitates digital storytelling for resilience awareness.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
94	112-CORE	Number of social media channels for sharing disaster-related memories	Numerical quantity, per 100.000	Ensures accessible and visible sites for disaster remembrance.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
95	113-CORE	Number of established disaster remembrance sites	Numerical quantity	Encourages local leadership in resilience awareness.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
96	115-CORE	Percentage of schools incorporating disaster testimonies in curricula	Percentage	Ensures disaster awareness is embedded in education.	Various official sources	cultural, historical, social, CNH	Active Memory	Mitigation	All	CORE
97	116-CORE	Number of evaluations in frontline responder organisations completed	Numerical quantity	Measures improvement in first response capabilities.	Various official sources	technical, social	Adaptive Governance	Mitigation	All	CORE
98	117-CORE	Number of digital datasets preserving historical and cultural assets	Numerical quantity	Ensures historical data preservation for future preparedness.	Various official sources	cultural, historical, CNH	Active Memory	Mitigation	All	CORE



99	120-CORE	Number of leadership training programs fostering ethical decision-making	Numerical quantity, per 100.000	Ensures crisis leadership training includes ethical decision-making.	Various official sources	cultural, social	Adaptive Governance	Mitigation	All	CORE
100	122-CORE	Number of emergency plans that integrate cultural heritage considerations	Percentage	Protects cultural heritage in disaster response strategies.	Disaster response planning documents	technical, cultural	Adaptive Governance	Mitigation	All	CORE
101	127-CORE	Number of civil protection job descriptions with detailed role definitions and coordination protocols	Numerical quantity	Improves coordination and clarity in emergency response roles.	Emergency services workforce guidelines	technical, social	Adaptive Governance	Mitigation	All	CORE
102	128-CORE	Number of events on risk-related matters organized by cultural institutions	Numerical quantity, per 100.000	Enhances community awareness and preparedness through cultural engagement.	Cultural institution reports and event records	social, cultural, CNH	Active Memory	Mitigation	All	Proposal concept
103	129-CORE	Number of informational materials/campaigns organized for cultural institution professionals	Numerical quantity, per 100.000	Equips cultural professionals with knowledge on crisis response and risk management.	Training and awareness campaign documentation	social, cultural, CNH	Active Memory	Mitigation	All	Proposal concept
104	132-CORE	Number of local heritage events actively engaging the locals	Numerical quantity, per 100.000	Strengthens local identity and resilience through heritage-focused	Community engagement reports and surveys	cultural, CNH	Active Memory	Mitigation	All	Proposal concept



105	135-CORE	Number of community-based activities for cultural and natural heritage awareness	Numerical quantity, per 100.000	community events. Promotes local knowledge and heritage preservation as part of disaster resilience.	Local government and cultural department reports	cultural, CNH	Active Memory	Mitigation	All	Proposal concept
106	136-CORE	Number of activities organized in schools to critically discuss local traditions	Numerical quantity, per 100.000	Encourages intergenerational learning and awareness of cultural resilience.	School activity reports and curriculum records	social, cultural, historical, CNH	Active Memory	Mitigation	All	Proposal concept
107	138-CORE	Number of initiatives to raise awareness of women's contributions to local development and heritage	Numerical quantity, per 100.000	Recognizes and promotes women's roles in community resilience and recovery.	Community development and heritage awareness initiatives	social, cultural, historical, gender, CNH	Social interaction and inclusiveness	Mitigation	All	Proposal concept
108	143-CORE	Number of campaigns framing women's roles in crisis situations	Numerical quantity, per 100.000	Encourages gender-inclusive crisis response strategies.	Crisis management campaign evaluations	social, cultural, gender	Social interaction and inclusiveness	Mitigation	All	Proposal concept
109	144-CORE	Number of cultural events promoted with/by first responders	Numerical quantity	Integrates cultural perspectives into emergency response efforts.	Disaster response and cultural event participation records	social, cultural, CNH	Social interaction and inclusiveness	Mitigation	All	Proposal concept
110	145-CORE	Number of local cultural and natural heritage enhancement	Numerical quantity	Supports local engagement in preserving heritage amid disasters.	Local authority records on cultural	cultural, CNH	Active Memory	Mitigation	All	Proposal concept



		initiatives organized by local authorities			heritage projects					
111	146-CORE	Number of shared initiatives among local stakeholders for disaster risk management	Numerical quantity	Improves collaboration among stakeholders for coordinated disaster response.	Disaster risk management stakeholder collaboration reports	social	Adaptive Governance	Mitigation	All	Proposal concept
112	147-CORE	Number of recreational centres	Numerical quantity, per 100.000	Provides spaces for emergency shelter and post-disaster gathering. Indicates preparedness levels through educational resilience.	Local municipal statistics	social, economic	Social interaction and inclusiveness	Preparedness	All	CDRI
113	148-CORE	Number of schools	Numerical quantity, per 100.000	Indicates preparedness levels through educational resilience.	Local municipal statistics	social, economic, technical	Socio-economic Resilience	Preparedness	All	CDRI
114	149-CORE	Existence and quality of forecasting systems and risk maps	Y/N; Likert scale	Measures forecasting and disaster mapping accuracy.	Local municipal statistics	technical	Adaptive Governance	Preparedness	All	CDRI
115	150-CORE	Level of trust in state institutions	Likert scale	Measures public trust in government response capacity.	Local municipal statistics	psycho-social, social, cultural, CNH	Adaptive Governance	Preparedness	All	CDRI
116	151-CORE	Population awareness and skills	n/a	Measures general public awareness of disaster response.	Local municipal statistics	social, cultural	Active Memory	Preparedness	All	RESILO C



117	152-CORE	Average distance to supermarkets/groceries	Numerical quantity	Measures accessibility to essential food supplies during disasters.	GIS mapping and transportation data	social, economic, environmental	Socio-economic Resilience	Preparedness	All	RESILIENCE
118	153-CORE	Water quality indicators (DO, pH, TDS, Nutrients, Metals, Hydrocarbons, Industrial Chemicals)	Numerical quantity	Assesses water contamination risks and supply resilience.	Environmental monitoring systems	environmental	Health and Wellbeing	Preparedness	All	RESILIENCE
119	154-CORE	Social media indicators of interactions with risk information / Attendance of population to risk information events /	Numerical quantity	Measures public engagement in disaster preparedness and communication.	Social media analytics	social, cultural	Social in interaction and inclusiveness	Preparedness	All	SHELTER
120	155-CORE	Number of Emergency generators	Numerical quantity, per 100.000	Measures emergency equipment readiness for disaster scenarios.	Emergency management records	technical	Socio-economic Resilience	Preparedness	All	SHELTER
121	156-CORE	Number of UNESCO protected/recognised intangible CNH	Numerical quantity, per 100.000	Assesses the protection of cultural and historical assets.	UNESCO databases	cultural, historical, CNH	Socio-economic Resilience	Preparedness	All	SHELTER
122	157-CORE	Number of information campaigns	Numerical quantity, annual	Measures the effectiveness of public risk awareness campaigns.	Public awareness campaign reports	psycho-social, social	Adaptive Governance	Preparedness	All	SHELTER



123	158-CORE	Presence of shared ICT infrastructure	Y/N	Measures ICT readiness for emergency response and coordination.	ICT system reports	technical, economic	Socio-economic Resilience	Preparedness	All	SHELTER
124	159-CORE	Presence of dedicated CNH protection agency	Y/N	Measures institutional commitment to cultural heritage protection.	Heritage protection agency reports	social, cultural, CNH	Adaptive Governance	Preparedness	All	RURITAGE
125	160-CORE	Number of consultation meetings with citizens in DRR planning	Likert scale	Indicates the level of community involvement in DRR	Local authority records	social, cultural	Adaptive Governance	Preparedness	All	SLR
126	161-CORE	Number of community events on DRR	Numerical quantity, per 100.000	Indicates social cohesion through disaster-related community events.	Community event records	social, cultural, CNH	Social interaction and inclusiveness	Preparedness	All	SLR
127	162-CORE	Number of school events on DRR / Number of DRR sessions in curriculum	Numerical quantity, per 100.000	Measures DRR education and preparedness training in schools.	Education statistics	social, technical	Social interaction and inclusiveness	Preparedness	All	SLR
128	163-CORE	Inclusion of climate change risk measures for CNH sites	Y/N	Reflects climate adaptation measures in cultural heritage protection.	Climate adaptation policies	cultural, environmental, CNH	Adaptive Governance	Preparedness	All	UN
129	164-CORE	Emergency plans publicly accessible	Y/N	Ensures public access to emergency preparedness information.	Government transparency reports	social, technical	Adaptive Governance	Preparedness	All	CORE



130	165-CORE	Number of emergency plans available to different stakeholders	Likert scale	Indicates availability of disaster response plans for key stakeholders.	Emergency response plans	technical, social	Adaptive Governance	Preparedness	All	CORE
131	166-CORE	Number of organisational checklists and protocols	Y/N	Measures organizational preparedness for disaster response.	Organizational records	technical	Adaptive Governance	Preparedness	All	CORE
132	167-CORE	Number of updates made to regional risk maps annually	Numerical quantity, annual	Ensures up-to-date risk information for better decision-making.	Various official sources	environmental, technical	Adaptive Governance	Preparedness	All	CORE
133	168-CORE	Frequency of updates to the flood zone map	Numerical quantity, annual	Ensures flood risks are assessed and updated regularly.	Various official sources	environmental	Adaptive Governance	Preparedness	All	CORE
134	169-CORE	Presence of safety & security memorandums in public and private organizations	Y/N	Ensures structured safety protocols in major institutions.	Various official sources	social, cultural, technical	Adaptive Governance	Preparedness	All	CORE
135	170-CORE	Number of experts involved in planning outside of civil services (m/w/d)	Numerical quantity, per 100.000	Expands multidisciplinary expertise in disaster risk reduction.	Various official sources	technical, social, gender	Social interaction and inclusiveness	Preparedness	All	CORE
136	171-CORE	Awareness level about heatwaves	Likert scale	Measures public awareness and readiness for extreme heat events.	Various official sources	psycho-social, social, cultural	Active Memory	Preparedness	Heatwaves	CORE



137	172-CORE	Number of neighborhood leaders attending emergency coordination activities (m/w/d)	Numeric al quantity, per 100.000	Strengthens community-based leadership in disaster response.	Various official sources	social, cultural	Active Memory	Preparedness	All	CORE
138	173-CORE	Number of vulnerable population in disaster zones (m/w/d)	Numeric al quantity, per 100.000	Identifies and tracks at-risk populations needing special assistance.	Various official sources	psycho-social, social, gender	Health and Wellbeing	Preparedness	All	CORE
139	174-CORE	Percentage of coordination protocols updated for cascading disaster scenarios	Percentage	Improves response strategies for multi-layered hazard events.	Various official sources	social, technical, environmental	Adaptive Governance	Preparedness	All	CORE
140	175-CORE	Frequency of inter-agency coordination meetings held	Numeric al quantity, annual	Facilitates multi-agency collaboration for coordinated response.	Various official sources	technical, social	Adaptive Governance	Preparedness	All	CORE
141	176-CORE	Percentage of community feedback incorporated into policy updates	Percentage	Ensures community feedback influences disaster policies.	Various official sources	social, cultural	Adaptive Governance	Preparedness	All	CORE
142	177-CORE	Number of local knowledge-sharing workshops on disaster risk management	Numeric al quantity, per 100.000	Encourages knowledge sharing on risk preparedness.	Various official sources	technical, social, cultural, CNH	Active Memory	Preparedness	All	CORE
143	178-CORE	Percentage of crisis coordination plans updated based on past reports	Percentage	Improves iterative learning from past disasters.	Various official sources	technical, historical	Active Memory	Preparedness	All	CORE



144	179-CORE	Percentage of outreach campaigns designed for vulnerable groups	Percentage	Enhances outreach to at-risk groups.	Various official sources	psycho-social, social	Health and Wellbeing	Preparedness	All	CORE
145	180-CORE	Specific needs mapped of vulnerable groups & women	Numerical quantity	Ensures inclusive communication for diverse populations.	Various official sources	psycho-social, social, gender	Social interaction and inclusiveness	Preparedness	All	CORE
146	181-CORE	Number of multi-hazard training exercises conducted annually	Numerical quantity, per 100.000	Evaluates the impact of digital response tools.	Various official sources	technical, social	Social interaction and inclusiveness	Preparedness	All	CORE
147	182-CORE	Effectiveness of digital mapping tools for disaster response	Likert scale	Preserves memory of past disasters for learning and awareness.	Various official sources	environmental, technical	Adaptive Governance	Preparedness	All	CORE
148	183-CORE	Number of awareness initiatives led by community or spiritual leaders	Numerical quantity, per 100.000	Integrates historical disaster narratives into education.	Various official sources	cultural, social, CNH	Active Memory	Preparedness	All	CORE
149	184-CORE	Percentage of heritage professionals trained in crisis response	Percentage	Improves heritage site protection in disasters.	Various official sources	cultural, social, CNH	Adaptive Governance	Preparedness	All	CORE
150	185-CORE	Percentage of heritage sites monitored for threats	Percentage	Tracks threats to cultural and historical landmarks.	Various official sources	cultural, technical, environmental, CNH	Active Memory	Preparedness	All	CORE
151	186-CORE	Percentage of decision-making committees including diverse	Percentage	Ensures diverse perspectives in disaster	Various official sources	cultural, social, gender	Social interaction and	Preparedness	All	CORE



152	187-CORE	representatives (m/w/d) Percentage of landowners informed about land use restrictions in vulnerable areas	Percentage	decision-making. Informs property owners about risks and zoning restrictions.	Public records	economic, environmental	inclusiveness Adaptive Governance	Preparedness	All	CORE
153	188-CORE	Percentage of emergency preparedness training programs involving multiple agencies	Percentage	Ensures collaboration between agencies in preparedness training.	Various official sources	social	Adaptive Governance	Preparedness	All	CORE
154	189-CORE	Percentage of disaster management positions filled via merit-based recruitment	Percentage	Ensures competency-based recruitment in disaster management.	Various official sources	social, cultural	Adaptive Governance	Preparedness	All	CORE
155	190-CORE	Number of community-driven disaster resilience projects completed	Numerical quantity, per 100.000	Encourages local participation in disaster resilience projects.	Various official sources	social, technical, economic	Social interaction and inclusiveness	Preparedness		CORE
156	191-CORE	Number of historic monuments and churches under formal protection	Numerical quantity, per 100.000	Protects heritage sites from disaster-related threats.	Various official sources	cultural, historical, CNH	Active Memory	Preparedness	All	CORE
157	192-CORE	Total number of preventive disaster coordination measures established	Numerical quantity	Measures effectiveness of coordinated preventive strategies.	Various official sources	social, cultural	Adaptive Governance	Preparedness	All	CORE



158	193-CORE	Number of policies strengthening organizational crisis response	Numerical quantity	Strengthens organizational response policies.	Various official sources	social, cultural	Adaptive Governance	Preparedness	All	CORE
159	194-CORE	Number of participatory meetings involving private sector and citizens	Numerical quantity, annual	Encourages private-sector involvement in disaster preparedness.	Various official sources	cultural, social	Adaptive Governance	Preparedness	All	CORE
160	195-CORE	Number of evaluations of effectiveness of structured crisis communication systems	Numerical quantity, annual	Improves crisis communication effectiveness.	Various official sources	social, technical	Adaptive Governance	Preparedness	All	CORE
161	196-CORE	Presence of a climate adaptation plan at national/regional/local levels	Y/N	Ensures structured climate adaptation planning.	Various official sources	environmental	Adaptive Governance	Preparedness	All	CORE
162	197-CORE	Percentage of local/regional governments covered by crisis communication protocols	Percentage	Ensures emergency communication reach across local governments.	Various official sources	social	Adaptive Governance	Preparedness	All	CORE
163	198-CORE	Integration of emergency communication roles in job descriptions	Y/N	Integrates emergency roles into formal job responsibilities.	Various official sources	social, technical	Adaptive Governance	Preparedness	All	CORE
164	199-CORE	Existence of Official Public Communication Campaigns Against	Y/N	Ensures accurate and timely information	Government communication strategy reports	cultural, social	Adaptive Governance	Preparedness	All	CORE



		Misinformation in Crisis Situations		dissemination during crises.						
165	200-CORE	Proportion of the population covered by early warning systems	Percentage	Ensures widespread access to early warning alerts.	National early warning system coverage data	social, technical	Social interaction and inclusiveness	Preparedness	All	CORE
166	201-CORE	Percentage of preparedness plans with clearly defined responsible bodies	Percentage	Improves clarity in emergency response coordination.	Emergency preparedness and response plans	technical	Adaptive Governance	Preparedness	All	CORE
167	202-CORE	Evaluation of alignment between provincial and municipal flood risk plans	Likert scale	Aligns local and regional flood preparedness strategies.	Policy alignment studies	technical	Adaptive Governance	Preparedness	Floods	CORE
168	203-CORE	Number of internal crisis action plans developed and approved annually	Numerical quantity	Tracks the progress of local crisis response planning.	Local government crisis action plan reports	technical, social	Adaptive Governance	Preparedness	All	CORE
169	204-CORE	Number of public datasets available on refugee data and location	Numerical quantity	Improves access to vital refugee-related data for crisis response.	Public datasets on refugee statistics	social, technical	Adaptive Governance	Preparedness	All	CORE
170	205-CORE	Extent to which different authorities' roles are clearly operationalized	Likert scale	Clarifies authorities' responsibilities in disaster scenarios.	Municipal governance structure reviews	environmental, social	Health and Wellbeing	Preparedness	All	CORE
171	206-CORE	Number of safety drills assessing preparedness and response resilience in	Numerical quantity, annual	Tracks improvements in training and	Training and capacity-building	technical, social	Adaptive Governance	Preparedness	All	CORE



		public/private organisations		preparedness activities. Assesses digital literacy as a factor in accessing critical disaster information. Improves predictive capacity and planning for diverse hazard scenarios.	evaluation reports					
172	207-CORE	Percentage of locals digitally literate (m/w/d)	Percentage		National and regional digital literacy statistics	social, technical, gender	Social interaction and inclusiveness	Preparedness	All	Proposal concept
173	208-CORE	Number of forecasts of impacts for different scenarios/hazards	Numerical quantity		Various official sources	social, economic	Socio-economic Resilience	Prevention	All	CORE
174	209-CORE	Percentage of buildings inspected for structural vulnerabilities annually	Percentage		Various official sources	environmental, technical	Socio-economic Resilience	Prevention	All	CORE
175	210-CORE	Frequency of enforcement checks in high-risk areas	Numerical quantity, annual		Various official sources	technical, social	Adaptive Governance	Prevention	All	CORE
176	211-CORE	Percentage increase in disaster mitigation best practices in moderate-risk areas	Percentage		Various official sources	technical, social	Socio-economic Resilience	Prevention	All	CORE
177	212-CORE	Number of long-term health promotion programs accessible to the community	Percentage		Various official sources	social, cultural	Health and Wellbeing	Prevention	All	CORE
178	213-CORE	Presence of an official disaster preservation plan	Y/N		Various official sources	technical, social	Adaptive Governance	Prevention	All	CORE



179	214-CORE	Incorporation of historical temperature data in climate risk assessments	Y/N	knowledge for learning and resilience. Incorporates historical data into climate risk analysis.	Various official sources	environmental	Adaptive Governance	Prevention	All	CORE
180	215-CORE	Existence of a national fire hazard prediction plan (daily/weekly)	Y/N	Monitors early warning system for fire hazards.	Various official sources	social	Adaptive Governance	Prevention	All	CORE
181	216-CORE	Percentage of risk analyses incorporating qualitative social data	Percentage	Improves understanding of social dimensions of disaster impact.	Disaster risk assessment studies	technical, social	Social interaction and inclusiveness	Prevention	All	CORE
182	217-CORE	Clear definition and implementation of river contracts and watercourse management	Y/N	Enhances stakeholder collaboration in water management resilience.	Water resource and disaster resilience reports	environmental, social	Adaptive Governance	Prevention	Floods	CORE
183	218-CORE	Number of temporary shelters	Numerical quantity, per 100.000	Provides emergency accommodations for displaced individuals.	Local municipal statistics	social, economic, technical	Social interaction and inclusiveness	Recovery	All	CDRI
184	219-CORE	Number of building enterprises / Stock of construction materials	Numerical quantity, per 100.000	Represents local capacity for post-disaster reconstruction.	Business and economic statistics	environmental, technical	Socio-economic Resilience	Recovery	All	SHELTER
185	220-CORE	Total funding allocated for small business recovery	Local currency	Strengthens economic recovery for	Various official sources	economic	Socio-economic Resilience	Recovery	All	CORE



186	221-CORE	Number of support programs for emergency responders (psychological assistance, stress management)	Numerical quantity, per 100.000	Provides essential psychological support for emergency responders.	Various official sources	social, cultural	Health and Wellbeing	Recovery	All	CORE
187	222-CORE	Percentage of affected businesses receiving financial support	Percentage	Supports economic recovery for disaster-impacted businesses.	Various official sources	economic	Socio-economic Resilience	Recovery	All	CORE
188	223-CORE	Total amount of subsidies	Local currency	Measures financial relief distribution effectiveness.	Various official sources	economic	Socio-economic Resilience	Recovery	All	CORE
189	224-CORE	Total number of mental health support programs for crisis victims and professionals	Numerical quantity, per 100.000	Provides mental health support during crisis recovery.	Various official sources	psycho-social, social	Health and Wellbeing	Recovery	All	CORE
190	225-CORE	Level of users satisfied with efficiency and fairness of bureaucratic processes	Likert scale	Measures public satisfaction with disaster-related governance.	Various official sources	psycho-social, social	Adaptive Governance	Recovery	All	CORE
191	226-CORE	Knowledge and experiences of elders is documented and archived	Y/N	Documents community knowledge and experiences of past disasters.	Various official sources	cultural, historical, social, CNH	Active Memory	Recovery	All	CORE
192	227-CORE	Presence of memorials built to	Y/N	Preserves historical	Municipal records and	social, cultural,	Active Memory	Recovery	All	Proposal concept



		remember past catastrophes and victims (m/w/d)		memory, reinforcing community resilience and recovery. Reflects response capacity in medical emergencies. Indicates medical transport availability in emergencies.	historical preservation agencies	historical, gender, CNH					
193	228-CORE	Number of hospital beds	Numeric al quantity, per 100.000	Reflects response capacity in medical emergencies.	Local municipal statistics	social, economic, technical	Health and Wellbeing	Response	All	CDRI	
194	229-CORE	Number of ambulances	Numeric al quantity, per 100.000	Indicates medical transport availability in emergencies.	Local municipal statistics	social, economic, technical	Health and Wellbeing	Response	All	CDRI	
195	230-CORE	Number of fire stations	Numeric al quantity, per 100.000	Measures fire safety and emergency response reach.	Local municipal statistics	social, economic, technical	Health and Wellbeing	Response	All	CDRI	
196	231-CORE	Number of special needs transportation services	Numeric al quantity, per 100.000	Supports transportation for disabled and vulnerable populations.	Local municipal statistics	social, economic, technical	Social interaction and inclusiveness	Response	All	CDRI	
197	232-CORE	Number of community food service facilities	Numeric al quantity, per 100.000	Ensures food security and distribution during disasters.	Local municipal statistics	social, economic, technical	Social interaction and inclusiveness	Response	All	CDRI	
198	233-CORE	Number of building inspectors (m/w/d)	Numeric al quantity, per 100.000	Reflects post-disaster safety and recovery efforts.	Local municipal statistics	environmen tal, technical, gender	Socio-economic Resilience	Response	All	CDRI	



199	234-CORE	Number of fire fighters, prevention, and LEA workers (m/w/d)	Numeric al quantity, per 100.000	Measures availability of emergency response professionals.	Local municipal statistics	social, economic, technical, gender	Socio-economic Resilience	Response	All	CDRI
200	235-CORE	Population employed in special needs transportation services (m/w/d)	Numeric al quantity, per 100.000	Reflects workforce capacity for special needs assistance.	Local municipal statistics	social, economic, technical, gender	Social interaction and inclusiveness	Response	All	CDRI
201	236-CORE	Amount of training	Numeric al quantity, per 100.000	Indicates preparedness through training and education programs.	Local municipal statistics	social, technical	Health and Wellbeing	Response	All	CDRI
202	237-CORE	Number of building managers (m/w/d)	Numeric al quantity, per 100.000	Indicates availability of infrastructure management expertise.	Local municipal statistics	environmen tal, technical, gender	Socio-economic Resilience	Response	All	CDRI
203	238-CORE	First aid knowledge	Numeric al quantity	Measures individual emergency response knowledge.	Local municipal statistics	psycho-social, social	Health and Wellbeing	Response	All	CDRI
204	239-CORE	Transport routes redundancy	n/a	Reflects transport network resilience for evacuation and aid.	Local municipal statistics	environmen tal	Socio-economic Resilience	Response	All	RESILO C
205	240-CORE	Transport means access	Numeric al quantity	Measures accessibility of public transport in emergencies.	Local municipal statistics	social, environmen tal, economic	Socio-economic Resilience	Response	All	RESILO C



206	241-CORE	Internet connection access	Numeric al quantity, per 100.000	Indicates digital communication resilience.	Local municipal statistics	social, environmental, economic	Socio-economic Resilience	Response	All	RESILOC
207	243-CORE	Mobile connection access	Numeric al quantity, per 100.000	Measures mobile communication access for coordination.	Local municipal statistics	social, environmental, economic	Socio-economic Resilience	Response	All	RESILOC
208	244-CORE	Radio communication	Numeric al quantity, per 100.000	Reflects backup communication capacity for emergencies.	Local municipal statistics	social, environmental, economic	Socio-economic Resilience	Response	All	RESILOC
209	245-CORE	Early Warning Systems (EWS) access	Numeric al quantity, per 100.000	Measures effectiveness of early warning systems.	Local municipal statistics	social, technical	Socio-economic Resilience	Response	All	RESILOC
210	246-CORE	Vital products and medicines supply chains redundancy	n/a	Indicates redundancy of essential supply chains.	Local municipal statistics	social, technical, economic	Health and Wellbeing	Response	All	RESILOC
211	247-CORE	Shelter capacity	n/a	Reflects emergency shelter capacity.	Local municipal statistics	social, economic	Health and Wellbeing	Response	All	RESILOC
212	248-CORE	Red Cross/Crest volunteers (m/w/d)	Numeric al quantity, per 100.000	Measures the availability of trained emergency volunteers.	Local municipal statistics	social, technical, gender	Health and Wellbeing	Response	All	SHELTER
213	249-CORE	Number of ordinances related with disasters	Numeric al quantity	Supports governance of disaster management	Various official sources	technical, social	Adaptive Governance	Response	All	CORE



214	250-CORE	Number of channels in which there are warnings in different languages	Numerical quantity, per 100.000	and policy enforcement. Enhances risk communication accessibility for non-native speakers. Strengthens integration of local and scientific knowledge in risk management.	Various official sources	social, technical	Social interaction and inclusiveness	Response	All	CORE
215	251-CORE	Existence of mechanisms for integrating local and scientific risk knowledge	Y/N	Provides targeted interventions for vulnerable and high-risk groups. Measures efficiency of emergency response activation.	Various official sources	technical, cultural, CNH	Active Memory	Response	All	CORE
216	252-CORE	Number of targeted protection measures implemented for identified vulnerable groups & women	Numerical quantity, per 100.000	Encourages compliance with risk reduction policies.	Various official sources	psycho-social, technical, gender	Adaptive Governance	Response	All	CORE
217	254-CORE	Average response time for activating emergency administrative units	Numerical quantity	Monitors energy stability and vulnerability to power outages.	Various official sources	technical	Adaptive Governance	Response	All	CORE
218	258-CORE	Number of violations of public emergency/risk ordinances	Numerical quantity, per 100.000		Various official sources	technical, cultural	Adaptive Governance	Response	All	CORE
219	260-CORE	Number of power cuts during summer and average duration	Numerical quantity, annual		Various official sources	social, technical	Health and Wellbeing	Response	Heatwaves	CORE



220	263-CORE	Number of backup systems in place for emergencies	Numerical quantity, per 100.000	Ensures functional backup infrastructure in emergencies.	Various official sources	environmental, technical	Adaptive Governance	Response	All	CORE
221	299-CORE	Percentage of FLRs equipped with synchronized radio communication systems	Percentage	Enhances radio-based emergency communication capacity.	Various official sources	technical	Adaptive Governance	Response	All	CORE
222	300-CORE	Percentage of agencies with approved and documented crisis coordination plans	Percentage	Ensures formalized crisis coordination at institutional levels.	Various official sources	technical, social	Social interaction and inclusiveness	Response	All	CORE
223	301-CORE	Percentage of households with at least one member trained in disaster preparedness	Percentage	Encourages household-level preparedness training.	Various official sources	social, cultural	Social interaction and inclusiveness	Response	All	CORE
224	312-CORE	Number of community networks strengthened for disaster response cooperation	Numerical quantity, per 100.000	Strengthens local social support systems.	Various official sources	social	Adaptive Governance	Response	All	CORE
225	325-Proposal concept	Number of evacuation and emergency response plans developed	Numerical quantity	Improves readiness for multiple hazard scenarios.	Various official sources	technical	Adaptive Governance	Response	All	CORE
226	326-Proposal concept	Number of cross-service training between emergency services	Numerical quantity, annual	Improves inter-agency emergency response cooperation.	Various official sources	technical, social	Adaptive Governance	Response	All	CORE



227	327-Proposal concept	Number of real-time information sharing systems for crisis management	Numerical quantity	Enhances real-time data sharing during crises.	Various official sources	cultural, social	Adaptive Governance	Response	All	CORE
228	328-Proposal concept	Extent to which municipal emergency plans include environmental protection strategies	Y/N	Mitigates environmental vulnerabilities through disaster planning.	Environmental risk management plans	cultural, environmental, technical	Adaptive Governance	Response	All	CORE
229	329-Proposal concept	Number of crisis notification and communication systems established	Numerical quantity	Strengthens crisis communication infrastructure.	Crisis communication infrastructure audits	technical	Adaptive Governance	Response	All	CORE
230	330-Proposal concept	Operational effectiveness of crisis response systems	Likert scale	Evaluates response systems' efficiency in crisis scenarios.	Crisis management performance evaluations	technical	Adaptive Governance	Response	All	CORE
231	331-Proposal concept	Percentage of emergency communications successfully disseminated	Percentage	Ensures timely and effective delivery of emergency alerts.	Emergency communication system effectiveness reports	technical	Adaptive Governance	Response	All	CORE
232	332-Proposal concept	Clarity of instructions provided in crisis situations / Number of updates to emergency ordinances	Percentage	Ensures communities receive and understand emergency directives.	Emergency directive dissemination surveys	social, technical	Health and Wellbeing	Response	All	CORE
233	333-Proposal concept	Number of first aid courses	Numerical quantity	Indicates a community's response resilience, on individual level;	measurable through level or frequency of community	social, technical	Health and Wellbeing	Response	All	CORE



234	334- Proposal concept	Number of fire safety training	Numeric al quantity	Indicates a community's response resilience, on individual level;	first-aid training measurable through level or frequency of community fire safety training	social, technical	Health and Wellbeing	Response	Wildfires	CORE
235	335- Proposal concept	Number of trainings on search and rescue techniques	Numeric al quantity	Indicates a community's response resilience, on individual level;	first-aid training measurable through level or frequency of community fire safety training	social, technical	Health and Wellbeing	Response	All	CORE
236	336- Proposal concept	Number of downloads of mobile application providing instructions on how to prepare and behave in case of an emergency	Numeric al quantity, per 100.000	Indicates a community's critical-infrastructure resilience;	measurable through existence of mobile app	social, technical	Health and Wellbeing	Response	All	CORE
237	337- Proposal concept	Percentage of women among local first responders (FRs) and civil protection teams	Percenta ge	Measures gender diversity in disaster response leadership and operations.	First responder workforce demographics	social, cultural, gender	Social interaction and inclusiveness	Response	All	Proposal concept



7.2. List of indicators grouped by SyRI framework

Active Memory

0-CDRI: Number of cultural institutions (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Serves as information hubs and cultural resilience centers. (DMC: All)

183-CORE: Number of awareness initiatives led by community or spiritual leaders (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Integrates historical disaster narratives into education. (DMC: Preparedness)

16-CDRI: Local geographical knowledge (Numerical quantity / Local municipal statistics)

Relevancy: Represents local knowledge crucial for disaster resilience. (DMC: All)

23-CDRI: Knowledge about past crises (n/a / Local municipal statistics)

Relevancy: Reflects preparedness through historical disaster awareness. (DMC: All)

87-SLR: Number of cultural traditions/events (Numerical quantity, per 100.000 / Cultural event records)

Relevancy: Indicates cultural resilience and community engagement. (DMC: Mitigation)

92-SLR: Number (and date of establishment) of monuments in CORE lab region (Numerical quantity, per 100.000 / Historical preservation records)

Relevancy: Indicates community efforts to preserve historical resilience. (DMC: Mitigation)

94-UN: Number of TV programs, documentaries, books on past disasters (Numerical quantity, per 100.000 / Media and publication archives)

Relevancy: Indicates media engagement in historical disaster awareness. (DMC: Mitigation)

100-CORE: Number of platforms dedicated to disaster victims' testimonies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Captures and archives firsthand disaster experiences. (DMC: Mitigation)

103-CORE: Total number of collected and archived disaster testimonies (Numerical quantity / Various official sources)

Relevancy: Ensures cultural documentation of disaster experiences. (DMC: Mitigation)

107-CORE: Number of oral history records documenting disaster experiences (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Promotes cultural engagement in disaster awareness. (DMC: Mitigation)

108-CORE: Frequency of cultural events honoring past disasters (Numerical quantity, annual / Various official sources)



Relevancy: Strengthens institutional responsibility for disaster memory. (DMC: Mitigation)

111-CORE: Existence of an institutional strategy for cultural memory preservation (Y/N / Various official sources)

Relevancy: Facilitates digital storytelling for resilience awareness. (DMC: Mitigation)

112-CORE: Number of social media channels for sharing disaster-related memories (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures accessible and visible sites for disaster remembrance. (DMC: Mitigation)

113-CORE: Number of established disaster remembrance sites (Numerical quantity / Various official sources)

Relevancy: Encourages local leadership in resilience awareness. (DMC: Mitigation)

115-CORE: Percentage of schools incorporating disaster testimonies in curricula (Percentage / Various official sources)

Relevancy: Ensures disaster awareness is embedded in education. (DMC: Mitigation)

117-CORE: Number of digital datasets preserving historical and cultural assets (Numerical quantity / Various official sources)

Relevancy: Ensures historical data preservation for future preparedness. (DMC: Mitigation)

128-CORE: Number of events on risk-related matters organized by cultural institutions (Numerical quantity, per 100.000 / Cultural institution reports and event records)

Relevancy: Enhances community awareness and preparedness through cultural engagement. (DMC: Mitigation)

129-CORE: Number of informational materials/campaigns organized for cultural institution professionals (Numerical quantity, per 100.000 / Training and awareness campaign documentation)

Relevancy: Equips cultural professionals with knowledge on crisis response and risk management. (DMC: Mitigation)

132-CORE: Number of local heritage events actively engaging the locals (Numerical quantity, per 100.000 / Community engagement reports and surveys)

Relevancy: Strengthens local identity and resilience through heritage-focused community events. (DMC: Mitigation)

135-CORE: Number of community-based activities for cultural and natural heritage awareness (Numerical quantity, per 100.000 / Local government and cultural department reports)

Relevancy: Promotes local knowledge and heritage preservation as part of disaster resilience. (DMC: Mitigation)

136-CORE: Number of activities organized in schools to critically discuss local traditions (Numerical quantity, per 100.000 / School activity reports and curriculum records)

Relevancy: Encourages intergenerational learning and awareness of cultural resilience. (DMC: Mitigation)

145-CORE: Number of local cultural and natural heritage enhancement initiatives organized by local authorities (Numerical quantity / Local authority records on cultural heritage projects)

Relevancy: Supports local engagement in preserving heritage amid disasters. (DMC: Mitigation)



151-CORE: Population awareness and skills (n/a / Local municipal statistics)

Relevancy: Measures general public awareness of disaster response. (DMC: Preparedness)

171-CORE: Awareness level about heatwaves (Likert scale / Various official sources)

Relevancy: Measures public awareness and readiness for extreme heat events. (DMC: Preparedness)

172-CORE: Number of neighborhood leaders attending emergency coordination activities (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens community-based leadership in disaster response. (DMC: Preparedness)

177-CORE: Number of local knowledge-sharing workshops on disaster risk management (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages knowledge sharing on risk preparedness. (DMC: Preparedness)

178-CORE: Percentage of crisis coordination plans updated based on past reports (Percentage / Various official sources)

Relevancy: Improves iterative learning from past disasters. (DMC: Preparedness)

185-CORE: Percentage of heritage sites monitored for threats (Percentage / Various official sources)

Relevancy: Tracks threats to cultural and historical landmarks. (DMC: Preparedness)

191-CORE: Number of historic monuments and churches under formal protection (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Protects heritage sites from disaster-related threats. (DMC: Preparedness)

226-CORE: Knowledge and experiences of elders is documented and archived (Y/N / Various official sources)

Relevancy: Documents community knowledge and experiences of past disasters. (DMC: Recovery)

227-CORE: Presence of memorials built to remember past catastrophes and victims (m/w/d) (Y/N / Municipal records and historical preservation agencies)

Relevancy: Preserves historical memory, reinforcing community resilience and recovery. (DMC: Recovery)

251-CORE: Existence of mechanisms for integrating local and scientific risk knowledge (Y/N / Various official sources)

Relevancy: Strengthens integration of local and scientific knowledge in risk management. (DMC: Response)

Adaptive Governance

2-CDRI: Number of civic and political organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Strengthens systemic support networks for advocacy and recovery. (DMC: All)

18-CDRI: Existence and quality of DRR policies (Y/N; Likert scale / Local municipal statistics)

Relevancy: Indicates effectiveness of disaster risk reduction (DRR) policies. (DMC: All)



- 19-CDRI: Existence and quality of awareness campaigns (Y/N; Likert scale / Local municipal statistics)**
Relevancy: Reflects awareness-building efforts in disaster prevention. (DMC: Preparedness)
- 21-CDRI: Coordination mechanisms (Y/N / Local municipal statistics)**
Relevancy: Reflects coordination capacity in crisis situations. (DMC: Preparedness)
- 24-CDRI: Number of registered residents per square km (m/w/d) (Numerical quantity, per 100.000 / Census data)**
Relevancy: Indicates population density, affecting evacuation and aid distribution. (DMC: All)
- 31-CDRI: Budget of volunteer organizations (Local currency / Budget reports)**
Relevancy: Indicates financial resources available for emergency response. (DMC: All)
- 32-CDRI: Number of registered volunteers (m/w/d) (Numerical quantity, per 100.000 / Volunteer registration databases)**
Relevancy: Reflects community engagement in volunteer response efforts. (DMC: All)
- 35-CDRI: Number of religious events related to DRR (Numerical quantity, per 100.000 / Religious organization reports)**
Relevancy: Reflects religious community involvement in disaster preparedness. (DMC: Preparedness)
- 36-CDRI: Percentage of protocols to help understand responsibilities and roles (Percentage / Disaster response protocols)**
Relevancy: Clarifies roles and responsibilities in emergency situations. (DMC: Preparedness)
- 41-CDRI: Existence of a protocol that clarifies the end of the crisis/emergency status (Y/N / Various official sources)**
Relevancy: Establishes clear transition from crisis response to recovery. (DMC: Response)
- 42-RESILOC: Number of large residential units with a manager (Numerical quantity / Various official sources)**
Relevancy: Improves coordination and disaster readiness in residential complexes. (DMC: all)
- 43-RESILOC: Percentage of population demonstrating precautionary behaviors (Percentage / Various official sources)**
Relevancy: Promotes individual responsibility in disaster preparedness. (DMC: Preparedness)
- 51-RESILOC: Percentage of stakeholders able to access interpreting services during crises (Percentage / Various official sources)**
Relevancy: Facilitates structured emergency planning. (DMC: Response)
- 57-SHELTER: Percentage of affected individuals who believe recovery promises have been fulfilled (Percentage / Public surveys)**
Relevancy: Measures perceived effectiveness of disaster recovery efforts. (DMC: Recovery)
- 60-SHELTER: Presence of a formalized government reform plan for bureaucratic efficiency (Y/N / Various official sources)**
Relevancy: Improves efficiency in crisis-related bureaucratic processes. (DMC: All)



61-SHELTER: Percentage of municipalities with structured citizen participation mechanisms (Percentage / Various official sources)

Relevancy: Encourages inclusive community participation in disaster policies. (DMC: All)

62-SHELTER: Percentage of surveyed citizens who believe policies reflect local needs and realities (Percentage / Public surveys)

Relevancy: Measures alignment of disaster policies with public needs. (DMC: Mitigation)

64-SHELTER: Number of available scientific infrastructure units for crisis monitoring (Numerical quantity / Various official sources)

Relevancy: Expands crisis monitoring through scientific infrastructure. (DMC: Preparedness)

70-SHELTER: Number of coordination mechanisms between state and federal agencies (Numerical quantity / Various official sources)

Relevancy: Ensures structured coordination between government agencies. (DMC: All)

71-SHELTER: Budget allocation for risk management as a Percentage of total public spending (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures consistent funding for disaster risk management. (DMC: Mitigation)

72-SHELTER: Existence and comprehensiveness of national risk assessment frameworks (Y/N / Various official sources)

Relevancy: Assesses comprehensiveness of national risk assessments. (DMC: All)

74-SHELTER: Existence of a comprehensive national disaster risk management framework (Y/N / Various official sources)

Relevancy: Ensures national disaster policies cover all risk management aspects. (DMC: All)

75-SHELTER: Number of formally assigned stakeholders in national disaster management (Numerical quantity / Various official sources)

Relevancy: Tracks stakeholder engagement in disaster response systems. (DMC: All)

77-SHELTER: Transparency of budget allocations for preparedness plans (Y/N / Municipal and national budget transparency reports)

Relevancy: Enhances public accountability and trust in disaster preparedness. (DMC: Preparedness)

78-SHELTER: Integration of GIS-based studies and mapping in municipal emergency plans (Y/N / GIS mapping and urban planning reports)

Relevancy: Enhances data-driven decision-making in disaster risk management. (DMC: Preparedness)

80-RURITAGE: Availability of digital tools for crisis preparedness and response (Y/N / Tech adoption studies in disaster preparedness)

Relevancy: Expands digital solutions for crisis preparedness. (DMC: All)



85-RURITAGE: Building regulations compliant to international disaster standards / Percentage of irregular buildings (Percentage / Building code compliance assessments)

Relevancy: Ensures building safety and structural resilience in disaster scenarios. (DMC: Mitigation)

86-SLR: Number of professional and organisational DRR guidelines available on organisational level (Numerical quantity / Organizational policy documents)

Relevancy: Provides guidance on disaster risk reduction (DRR) best practices. (DMC: Mitigation)

89-SLR: Inclusion of risk indicators in urban planning policies; Mentioning of terms 'risk', 'uncertainty' in policies; Presence of elaborated risk metric (Likert scale / Urban planning policies)

Relevancy: Reflects disaster risk considerations in urban planning. (DMC: Mitigation)

97-CORE: Number of regional risk assessments conducted for mitigation and recovery (Numerical quantity, annual / Various official sources)

Relevancy: Enhances regional ability to prepare and adapt to disaster risks. (DMC: Mitigation)

99-CORE: Percentage of planned policy actions successfully implemented (Percentage / Various official sources)

Relevancy: Tracks policy effectiveness in reducing disaster impacts. (DMC: Mitigation)

116-CORE: Number of evaluations in frontline responder organisations completed (Numerical quantity / Various official sources)

Relevancy: Measures improvement in first response capabilities. (DMC: Mitigation)

120-CORE: Number of leadership training programs fostering ethical decision-making (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures crisis leadership training includes ethical decision-making. (DMC: Mitigation)

122-CORE: Number of emergency plans that integrate cultural heritage considerations (Percentage / Disaster response planning documents)

Relevancy: Protects cultural heritage in disaster response strategies. (DMC: Mitigation)

127-CORE: Number of civil protection job descriptions with detailed role definitions and coordination protocols (Numerical quantity / Emergency services workforce guidelines)

Relevancy: Improves coordination and clarity in emergency response roles. (DMC: Mitigation)

146-CORE: Number of shared initiatives among local stakeholders for disaster risk management (Numerical quantity / Disaster risk management stakeholder collaboration reports)

Relevancy: Improves collaboration among stakeholders for coordinated disaster response. (DMC: Mitigation)

149-CORE: Existence and quality of forecasting systems and risk maps (Y/N; Likert scale / Local municipal statistics)

Relevancy: Measures forecasting and disaster mapping accuracy. (DMC: Preparedness)



- 150-CORE: Level of trust in state institutions (Likert scale / Local municipal statistics)**
Relevancy: Measures public trust in government response capacity. (DMC: Preparedness)
- 157-CORE: Number of information campaigns (Numerical quantity, annual / Public awareness campaign reports)**
Relevancy: Measures the effectiveness of public risk awareness campaigns. (DMC: Preparedness)
- 159-CORE: Presence of dedicated CNH protection agency (Y/N / Heritage protection agency reports)**
Relevancy: Measures institutional commitment to cultural heritage protection. (DMC: Preparedness)
- 160-CORE: Number of consultation meetings with citizens in DRR planning (Likert scale / Local authority records)**
Relevancy: Indicates the level of community involvement in DRR (DMC: Preparedness)
- 163-CORE: Inclusion of climate change risk measures for CNH sites (Y/N / Climate adaptation policies)**
Relevancy: Reflects climate adaptation measures in cultural heritage protection. (DMC: Preparedness)
- 164-CORE: Emergency plans publicly accessible (Y/N / Government transparency reports)**
Relevancy: Ensures public access to emergency preparedness information. (DMC: Preparedness)
- 165-CORE: Number of emergency plans available to different stakeholders (Likert scale / Emergency response plans)**
Relevancy: Indicates availability of disaster response plans for key stakeholders. (DMC: Preparedness)
- 166-CORE: Number of organisational checklists and protocols (Y/N / Organizational records)**
Relevancy: Measures organizational preparedness for disaster response. (DMC: Preparedness)
- 167-CORE: Number of updates made to regional risk maps annually (Numerical quantity, annual / Various official sources)**
Relevancy: Ensures up-to-date risk information for better decision-making. (DMC: Preparedness)
- 168-CORE: Frequency of updates to the flood zone map (Numerical quantity, annual / Various official sources)**
Relevancy: Ensures flood risks are assessed and updated regularly. (DMC: Preparedness)
- 169-CORE: Presence of safety & security memorandums in public and private organizations (Y/N / Various official sources)**
Relevancy: Ensures structured safety protocols in major institutions. (DMC: Preparedness)
- 174-CORE: Percentage of coordination protocols updated for cascading disaster scenarios (Percentage / Various official sources)**
Relevancy: Improves response strategies for multi-layered hazard events. (DMC: Preparedness)
- 175-CORE: Frequency of inter-agency coordination meetings held (Numerical quantity, annual / Various official sources)**
Relevancy: Facilitates multi-agency collaboration for coordinated response. (DMC: Preparedness)
- 176-CORE: Percentage of community feedback incorporated into policy updates (Percentage / Various official sources)**



Relevancy: Ensures community feedback influences disaster policies. (DMC: Preparedness)

182-CORE: Effectiveness of digital mapping tools for disaster response (Likert scale / Various official sources)

Relevancy: Preserves memory of past disasters for learning and awareness. (DMC: Preparedness)

184-CORE: Percentage of heritage professionals trained in crisis response (Percentage / Various official sources)

Relevancy: Improves heritage site protection in disasters. (DMC: Preparedness)

187-CORE: Percentage of landowners informed about land use restrictions in vulnerable areas (Percentage / Public records)

Relevancy: Informs property owners about risks and zoning restrictions. (DMC: Preparedness)

188-CORE: Percentage of emergency preparedness training programs involving multiple agencies (Percentage / Various official sources)

Relevancy: Ensures collaboration between agencies in preparedness training. (DMC: Preparedness)

189-CORE: Percentage of disaster management positions filled via merit-based recruitment (Percentage / Various official sources)

Relevancy: Ensures competency-based recruitment in disaster management. (DMC: Preparedness)

192-CORE: Total number of preventive disaster coordination measures established (Numerical quantity / Various official sources)

Relevancy: Measures effectiveness of coordinated preventive strategies. (DMC: Preparedness)

193-CORE: Number of policies strengthening organizational crisis response (Numerical quantity / Various official sources)

Relevancy: Strengthens organizational response policies. (DMC: Preparedness)

194-CORE: Number of participatory meetings involving private sector and citizens (Numerical quantity, annual / Various official sources)

Relevancy: Encourages private-sector involvement in disaster preparedness. (DMC: Preparedness)

195-CORE: Number of evaluations of effectiveness of structured crisis communication systems (Numerical quantity, annual / Various official sources)

Relevancy: Improves crisis communication effectiveness. (DMC: Preparedness)

196-CORE: Presence of a climate adaptation plan at national/regional/local levels (Y/N / Various official sources)

Relevancy: Ensures structured climate adaptation planning. (DMC: Preparedness)

197-CORE: Percentage of local/regional governments covered by crisis communication protocols (Percentage / Various official sources)

Relevancy: Ensures emergency communication reach across local governments. (DMC: Preparedness)

198-CORE: Integration of emergency communication roles in job descriptions (Y/N / Various official sources)



Relevancy: Integrates emergency roles into formal job responsibilities. (DMC: Preparedness)

199-CORE: Existence of Official Public Communication Campaigns Against Misinformation in Crisis Situations (Y/N / Government communication strategy reports)

Relevancy: Ensures accurate and timely information dissemination during crises. (DMC: Preparedness)

201-CORE: Percentage of preparedness plans with clearly defined responsible bodies (Percentage / Emergency preparedness and response plans)

Relevancy: Improves clarity in emergency response coordination. (DMC: Preparedness)

202-CORE: Evaluation of alignment between provincial and municipal flood risk plans (Likert scale / Policy alignment studies)

Relevancy: Aligns local and regional flood preparedness strategies. (DMC: Preparedness)

203-CORE: Number of internal crisis action plans developed and approved annually (Numerical quantity / Local government crisis action plan reports)

Relevancy: Tracks the progress of local crisis response planning. (DMC: Preparedness)

204-CORE: Number of public datasets available on refugee data and location (Numerical quantity / Public datasets on refugee statistics)

Relevancy: Improves access to vital refugee-related data for crisis response. (DMC: Preparedness)

206-CORE: Number of safety drills assessing preparedness and response resilience in public/private organisations (Numerical quantity, annual / Training and capacity-building evaluation reports)

Relevancy: Tracks improvements in training and preparedness activities. (DMC: Preparedness)

210-CORE: Frequency of enforcement checks in high-risk areas (Numerical quantity, annual / Various official sources)

Relevancy: Ensures enforcement of risk reduction policies. (DMC: Prevention)

213-CORE: Presence of an official disaster preservation plan (Y/N / Various official sources)

Relevancy: Preserves historical disaster knowledge for learning and resilience. (DMC: Prevention)

214-CORE: Incorporation of historical temperature data in climate risk assessments (Y/N / Various official sources)

Relevancy: Incorporates historical data into climate risk analysis. (DMC: Prevention)

215-CORE: Existence of a national fire hazard prediction plan (daily/weekly) (Y/N / Various official sources)

Relevancy: Monitors early warning system for fire hazards. (DMC: Prevention)

217-CORE: Clear definition and implementation of river contracts and watercourse management (Y/N / Water resource and disaster resilience reports)

Relevancy: Enhances stakeholder collaboration in water management resilience. (DMC: Prevention)



225-CORE: Level of users satisfied with efficiency and fairness of bureaucratic processes (Likert scale / Various official sources)

Relevancy: Measures public satisfaction with disaster-related governance. (DMC: Recovery)

249-CORE: Number of ordinances related with disasters (Numerical quantity / Various official sources)

Relevancy: Supports governance of disaster management and policy enforcement. (DMC: Response)

252-CORE: Number of targeted protection measures implemented for identified vulnerable groups & women (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides targeted interventions for vulnerable and high-risk groups. (DMC: Response)

254-CORE: Average response time for activating emergency administrative units (Numerical quantity / Various official sources)

Relevancy: Measures efficiency of emergency response activation. (DMC: Response)

258-CORE: Number of violations of public emergency/risk ordinances (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages compliance with risk reduction policies. (DMC: Response)

263-CORE: Number of backup systems in place for emergencies (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Ensures functional backup infrastructure in emergencies. (DMC: Response)

299-CORE: Percentage of FLRs equipped with synchronized radio communication systems (Percentage / Various official sources)

Relevancy: Enhances radio-based emergency communication capacity. (DMC: Response)

312-CORE: Number of community networks strengthened for disaster response cooperation (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Strengthens local social support systems. (DMC: Response)

325-Proposal concept: Number of evacuation and emergency response plans developed (Numerical quantity / Various official sources)

Relevancy: Improves readiness for multiple hazard scenarios. (DMC: Response)

326-Proposal concept: Number of cross-service training between emergency services (Numerical quantity, annual / Various official sources)

Relevancy: Improves inter-agency emergency response cooperation. (DMC: Response)

327-Proposal concept: Number of real-time information sharing systems for crisis management (Numerical quantity / Various official sources)

Relevancy: Enhances real-time data sharing during crises. (DMC: Response)



328-Proposal concept: Extent to which municipal emergency plans include environmental protection strategies (Y/N / Environmental risk management plans)

Relevancy: Mitigates environmental vulnerabilities through disaster planning. (DMC: Response)

329-Proposal concept: Number of crisis notification and communication systems established (Numerical quantity / Crisis communication infrastructure audits)

Relevancy: Strengthens crisis communication infrastructure. (DMC: Response)

330-Proposal concept: Operational effectiveness of crisis response systems (Likert scale / Crisis management performance evaluations)

Relevancy: Evaluates response systems' efficiency in crisis scenarios. (DMC: Response)

331-Proposal concept: Percentage of emergency communications successfully disseminated (Percentage / Emergency communication system effectiveness reports)

Relevancy: Ensures timely and effective delivery of emergency alerts. (DMC: Response)

Health and Wellbeing

96-UN: Mapping of cascading risks triggered by temperature increases (Likert scale / Local authority records)

Relevancy: Reflects awareness and preparedness on cascading crisis effects (DMC: Mitigation)

10-CDRI: Number of hospitals (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare capacity and medical preparedness. (DMC: Response)

12-CDRI: Number of physicians (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures healthcare workforce availability in emergencies. (DMC: Response)

13-CDRI: Number of health care support workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports medical care workforce resilience. (DMC: Response)

44-RESILOC: Number of cooling centers identified for citizens (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides cooling relief for populations during heatwaves. (DMC: Preparedness)

47-RESILOC: Number of trained personnel conducting door-to-door emergency outreach (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands outreach efforts for early warnings and evacuation. (DMC: Response)

59-SHELTER: Percentage of population with access to occupational health services and emergency medical care (Percentage / Various official sources)

Relevancy: Ensures access to essential health services post-disaster. (DMC: All)

79-SHELTER: Community awareness and knowledge of resilience tools (Likert scale / Community disaster resilience surveys)



Relevancy: Encourages proactive community resilience measures. (DMC: Mitigation)

153-CORE: Water quality indicators (DO, pH, TDS, Nutrients, Metals, Hydrocarbons, Industrial Chemicals) (Numerical quantity / Environmental monitoring systems)

Relevancy: Assesses water contamination risks and supply resilience. (DMC: Preparedness)

173-CORE: Number of vulnerable population in disaster zones (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Identifies and tracks at-risk populations needing special assistance. (DMC: Preparedness)

179-CORE: Percentage of outreach campaigns designed for vulnerable groups (Percentage / Various official sources)

Relevancy: Enhances outreach to at-risk groups. (DMC: Preparedness)

205-CORE: Extent to which different authorities' roles are clearly operationalized (Likert scale / Municipal governance structure reviews)

Relevancy: Clarifies authorities' responsibilities in disaster scenarios. (DMC: Preparedness)

212-CORE: Number of long-term health promotion programs accessible to the community (Percentage / Various official sources)

Relevancy: Promotes community health and resilience post-disaster. (DMC: Prevention)

221-CORE: Number of support programs for emergency responders (psychological assistance, stress management) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides essential psychological support for emergency responders. (DMC: Recovery)

224-CORE: Total number of mental health support programs for crisis victims and professionals (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Provides mental health support during crisis recovery. (DMC: Recovery)

228-CORE: Number of hospital beds (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects response capacity in medical emergencies. (DMC: Response)

229-CORE: Number of ambulances (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates medical transport availability in emergencies. (DMC: Response)

230-CORE: Number of fire stations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures fire safety and emergency response reach. (DMC: Response)

236-CORE: Amount of training (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness through training and education programs. (DMC: Response)

238-CORE: First aid knowledge (Numerical quantity / Local municipal statistics)



Relevancy: Measures individual emergency response knowledge. (DMC: Response)

246-CORE: Vital products and medicines supply chains redundancy (n/a / Local municipal statistics)

Relevancy: Indicates redundancy of essential supply chains. (DMC: Response)

247-CORE: Shelter capacity (n/a / Local municipal statistics)

Relevancy: Reflects emergency shelter capacity. (DMC: Response)

248-CORE: Red Cross/Crest volunteers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures the availability of trained emergency volunteers. (DMC: Response)

260-CORE: Number of power cuts during summer and average duration (Numerical quantity, annual / Various official sources)

Relevancy: Monitors energy stability and vulnerability to power outages. (DMC: Response)

332-Proposal concept: Clarity of instructions provided in crisis situations / Number of updates to emergency ordinances (Percentage / Emergency directive dissemination surveys)

Relevancy: Ensures communities receive and understand emergency directives. (DMC: Response)

333-Proposal concept: Number of first aid courses (Numerical quantity / measurable through level or frequency of community first-aid training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

334-Proposal concept: Number of fire safety training (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

335-Proposal concept: Number of trainings on search and rescue techniques (Numerical quantity / measurable through level or frequency of community fire safety training)

Relevancy: Indicates a community's response resilience, on individual level; (DMC: Response)

336-Proposal concept: Number of downloads of mobile application providing instructions on how to prepare and behave in case of an emergency (Numerical quantity, per 100.000 / measurable through existence of mobile app)

Relevancy: Indicates a community's critical-infrastructure resilience; (DMC: Response)

Social inclusivity and inclusiveness

1-CDRI: Number of nonprofit organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports connectivity, social cohesion, and community response readiness. (DMC: All)

3-CDRI: Number of religious organisations (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Offers crisis support services and emergency aid coordination. (DMC: All)



- 9-CDRI: Number of vacant housing units (Numerical quantity, per 100.000 / Local municipal statistics)**
Relevancy: Indicates demographic shifts affecting local resilience. (DMC: All)
- 14-CDRI: Number of English speakers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)**
Relevancy: Indicates community's ability to communicate in disasters. (DMC: Response)
- 15-CDRI: Number of community and social workers (m/w/d) (Numerical quantity / Local municipal statistics)**
Relevancy: Measures social support workforce capacity. (DMC: Recovery)
- 17-CDRI: Budget spent on infrastructure for vulnerable groups (Local currency, per 100.000 / Local municipal statistics)**
Relevancy: Reflects depth of preparedness for at-risk groups. (DMC: All)
- 25-CDRI: Percentage of population below 65 years of age (m/w/d) (Percentage / Census data)**
Relevancy: Reflects workforce availability for economic recovery. (DMC: All)
- 26-CDRI: Percentage of population 17 years of age or younger (m/w/d) (Percentage / Census data)**
Relevancy: Identifies young populations needing additional protections. (DMC: All)
- 27-CDRI: Percentage population with physical or mental disabilities (m/w/d) (Percentage / Local health statistics)**
Relevancy: Measures accessibility needs in disaster planning. (DMC: All)
- 28-CDRI: Percentage of women (Percentage / Census data)**
Relevancy: Considers gender-inclusive disaster response strategies. (DMC: All)
- 29-CDRI: Percentage of one-person household (m/w/d) (Percentage / Census and household data)**
Relevancy: Reflects social isolation risks, affecting emergency support needs. (DMC: All)
- 34-CDRI: Mentioning of 'disability' 'vulnerable groups' 'gender' 'women' in preparedness plans (Y/N / Preparedness policy documents)**
Relevancy: Ensures disaster plans address the needs of vulnerable groups. (DMC: Preparedness)
- 38-CDRI: Percentage increase in public trust in official institutions (Percentage / Various official sources)**
Relevancy: Reflects public confidence in emergency response institutions. (DMC: Mitigation)
- 39-CDRI: Number of community-wide drills and risk-preparedness activities (Numerical quantity, per 100.000 / Various official sources)**
Relevancy: Improves community preparedness through simulated disaster response. (DMC: Preparedness)
- 46-RESILOC: Number of information signs increasing local awareness (Numerical quantity, per 100.000 / Various official sources)**
Relevancy: Improves public awareness and visibility of disaster risks. (DMC: Preparedness)



48-RESILOC: Number of training sessions on risk disclosure for property sellers and landlords (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances transparency in risk communication for property stakeholders. (DMC: Preparedness)

49-RESILOC: Number of physical information dissemination points in the community (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Improves public access to disaster-related information. (DMC: Response)

50-RESILOC: Number of NGOs, sport teams, clubs (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Mobilizes community resources for disaster response. (DMC: All)

52-RESILOC: Percentage of neighborhoods with an active neighborhood watch program (Percentage / Various official sources)

Relevancy: Enhances neighborhood-level security and resilience. (DMC: All)

55-RESILOC: Percentage of municipalities with structured mechanisms for community dialogue (Percentage / Various official sources)

Relevancy: Encourages local community participation in risk management. (DMC: Mitigation)

56-RESILOC: Number of training sessions focused on self-assessment and crisis readiness (Numerical quantity / Various official sources)

Relevancy: Increases self-reliance in disaster preparedness. (DMC: Mitigation)

63-SHELTER: Percentage of government or NGO programs actively supporting elder engagement (Percentage / Various official sources)

Relevancy: Promotes elder engagement in disaster preparedness. (DMC: All)

66-SHELTER: Percentage of women in leadership roles within disaster preparedness committees (Numerical quantity / Various official sources)

Relevancy: Ensures gender-inclusive leadership in disaster planning. (DMC: All)

76-SHELTER: Number of languages in which disaster preparedness guidelines are provided (Numerical quantity / Various official sources)

Relevancy: Ensures multi-language accessibility in disaster guidelines. (DMC: Preparedness)

138-CORE: Number of initiatives to raise awareness of women's contributions to local development and heritage (Numerical quantity, per 100.000 / Community development and heritage awareness initiatives)

Relevancy: Recognizes and promotes women's roles in community resilience and recovery. (DMC: Mitigation)

143-CORE: Number of campaigns framing women's roles in crisis situations (Numerical quantity, per 100.000 / Crisis management campaign evaluations)



Relevancy: Encourages gender-inclusive crisis response strategies. (DMC: Mitigation)

144-CORE: Number of cultural events promoted with/by first responders (Numerical quantity / Disaster response and cultural event participation records)

Relevancy: Integrates cultural perspectives into emergency response efforts. (DMC: Mitigation)

147-CORE: Number of recreational centres (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides spaces for emergency shelter and post-disaster gathering. (DMC: Preparedness)

154-CORE: Social media indicators of interactions with risk information / Attendance of population to risk information events / (Numerical quantity / Social media analytics)

Relevancy: Measures public engagement in disaster preparedness and communication. (DMC: Preparedness)

161-CORE: Number of community events on DRR (Numerical quantity, per 100.000 / Community event records)

Relevancy: Indicates social cohesion through disaster-related community events. (DMC: Preparedness)

162-CORE: Number of school events on DRR / Number of DRR sessions in curriculum (Numerical quantity, per 100.000 / Education statistics)

Relevancy: Measures DRR education and preparedness training in schools. (DMC: Preparedness)

170-CORE: Number of experts involved in planning outside of civil services (m/w/d) (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Expands multidisciplinary expertise in disaster risk reduction. (DMC: Preparedness)

180-CORE: Specific needs mapped of vulnerable groups & women (Numerical quantity / Various official sources)

Relevancy: Ensures inclusive communication for diverse populations. (DMC: Preparedness)

181-CORE: Number of multi-hazard training exercises conducted annually (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Evaluates the impact of digital response tools. (DMC: Preparedness)

186-CORE: Percentage of decision-making committees including diverse representatives (m/w/d) (Percentage / Various official sources)

Relevancy: Ensures diverse perspectives in disaster decision-making. (DMC: Preparedness)

190-CORE: Number of community-driven disaster resilience projects completed (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Encourages local participation in disaster resilience projects. (DMC: Preparedness)

200-CORE: Proportion of the population covered by early warning systems (Percentage / National early warning system coverage data)



Relevancy: Ensures widespread access to early warning alerts. (DMC: Preparedness)

207-CORE: Percentage of locals digitally literate (m/w/d) (Percentage / National and regional digital literacy statistics)

Relevancy: Assesses digital literacy as a factor in accessing critical disaster information. (DMC: Preparedness)

216-CORE: Percentage of risk analyses incorporating qualitative social data (Percentage / Disaster risk assessment studies)

Relevancy: Improves understanding of social dimensions of disaster impact. (DMC: Prevention)

218-CORE: Number of temporary shelters (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides emergency accommodations for displaced individuals. (DMC: Recovery)

231-CORE: Number of special needs transportation services (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Supports transportation for disabled and vulnerable populations. (DMC: Response)

232-CORE: Number of community food service facilities (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Ensures food security and distribution during disasters. (DMC: Response)

235-CORE: Population employed in special needs transportation services (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects workforce capacity for special needs assistance. (DMC: Response)

250-CORE: Number of channels in which there are warnings in different languages (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Enhances risk communication accessibility for non-native speakers. (DMC: Response)

300-CORE: Percentage of agencies with approved and documented crisis coordination plans (Percentage / Various official sources)

Relevancy: Ensures formalized crisis coordination at institutional levels. (DMC: Response)

301-CORE: Percentage of households with at least one member trained in disaster preparedness (Percentage / Various official sources)

Relevancy: Encourages household-level preparedness training. (DMC: Response)

337-Proposal concept: Percentage of women among local first responders (FRs) and civil protection teams (Percentage / First responder workforce demographics)

Relevancy: Measures gender diversity in disaster response leadership and operations. (DMC: Response)

Socio-economic Resilience

4-CDRI: Local per capita income levels (Local currency / Local municipal statistics)

Relevancy: Indicates individual financial resilience for recovery efforts. (DMC: All)



5-CDRI: Local median household income levels (Local currency / Local municipal statistics)

Relevancy: Represents community-wide economic resilience. (DMC: All)

6-CDRI: Number of research and development establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents public sector innovation in disaster response. (DMC: All)

7-CDRI: Number of Colleges, Universities, and Professional Schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Provides education and workforce training crucial for recovery. (DMC: All)

8-CDRI: Number of housing units (compared to population) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects housing stability and household capacity. (DMC: All)

11-CDRI: Number of community housing (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Represents socio-economic support for at-risk populations. (DMC: All)

20-CDRI: Demographic characteristics (Numerical quantity / Local municipal statistics)

Relevancy: Identifies vulnerable populations needing targeted assistance. (DMC: All)

22-CDRI: Level of implementation of DRR policies (Likert scale / Local municipal statistics)

Relevancy: Measures implementation of policies in real-world response. (DMC: All)

30-CDRI: Percentage of population above poverty line (Percentage / Economic statistics)

Relevancy: Indicates economic stability and resilience to recover from disasters. (DMC: All)

33-CDRI: Number of critical infrastructure units and personnel (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates resilience of critical infrastructure and essential services. (DMC: All)

37-CDRI: Percentage of budget dedicated to disaster preparedness, prevention, and response (Local currency, per 100.000 / Various official sources)

Relevancy: Ensures sufficient financial investment in disaster preparedness and response. (DMC: All)

40-CDRI: Amount of area covered with permeable surfaces (Percentage of total area) (Percentage / Various official sources)

Relevancy: Mitigates flooding and water retention risks in urban areas. (DMC: Mitigation)

45-RESILOC: Number of households struggling with energy poverty (Numerical quantity, per 100.000 / Various official sources)

Relevancy: Monitors energy insecurity affecting disaster resilience. (DMC: All)

58-SHELTER: Percentage decrease in fossil fuel-based energy generation over time (Percentage / Various official sources)

Relevancy: Encourages long-term sustainability in energy systems. (DMC: Prevention)



73-SHELTER: Percentage of risk management funding sourced from national and regional levels (Local currency, per 100.000 / Various official sources)

Relevancy: Measures funding allocation efficiency for disaster risk management. (DMC: All)

82-RURITAGE: Local employment rate (m/w/d) (Percentage / Local municipal statistics)

Relevancy: Measures employment stability and economic recovery potential. (DMC: Mitigation)

84-RURITAGE: Number of business establishments (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects private sector resilience and role in recovery. (DMC: Mitigation)

90-SLR: Number of contracts/agreements/LOIs between private actors and public agencies on CNHs (Numerical quantity, per 100.000 / Public-private agreements)

Relevancy: Reflects private-public collaboration in disaster resilience. (DMC: Mitigation)

98-CORE: Number of disaster mitigation actions incorporating environmental considerations (Numerical quantity / Various official sources)

Relevancy: Encourages environmentally sustainable disaster prevention. (DMC: Mitigation)

148-CORE: Number of schools (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates preparedness levels through educational resilience. (DMC: Preparedness)

152-CORE: Average distance to supermarkets/groceries (Numerical quantity / GIS mapping and transportation data)

Relevancy: Measures accessibility to essential food supplies during disasters. (DMC: Preparedness)

155-CORE: Number of Emergency generators (Numerical quantity, per 100.000 / Emergency management records)

Relevancy: Measures emergency equipment readiness for disaster scenarios. (DMC: Preparedness)

156-CORE: Number of UNESCO protected/recognised intangible CNH (Numerical quantity, per 100.000 / UNESCO databases)

Relevancy: Assesses the protection of cultural and historical assets. (DMC: Preparedness)

158-CORE: Presence of shared ICT infrastructure (Y/N / ICT system reports)

Relevancy: Measures ICT readiness for emergency response and coordination. (DMC: Preparedness)

208-CORE: Number of forecasts of impacts for different scenarios/hazards (Numerical quantity / Various official sources)

Relevancy: Improves predictive capacity and planning for diverse hazard scenarios. (DMC: Prevention)

209-CORE: Percentage of buildings inspected for structural vulnerabilities annually (Percentage / Various official sources)

Relevancy: Ensures structural integrity of buildings before disasters strike. (DMC: Prevention)

211-CORE: Percentage increase in disaster mitigation best practices in moderate-risk areas (Percentage / Various official sources)



Relevancy: Expands adoption of best practices for disaster resilience. (DMC: Prevention)

219-CORE: Number of building enterprises / Stock of construction materials (Numerical quantity, per 100.000 / Business and economic statistics)

Relevancy: Represents local capacity for post-disaster reconstruction. (DMC: Recovery)

220-CORE: Total funding allocated for small business recovery (Local currency / Various official sources)

Relevancy: Strengthens economic recovery for small businesses. (DMC: Recovery)

222-CORE: Percentage of affected businesses receiving financial support (Percentage / Various official sources)

Relevancy: Supports economic recovery for disaster-impacted businesses. (DMC: Recovery)

223-CORE: Total amount of subsidies (Local currency / Various official sources)

Relevancy: Measures financial relief distribution effectiveness. (DMC: Recovery)

233-CORE: Number of building inspectors (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects post-disaster safety and recovery efforts. (DMC: Response)

234-CORE: Number of fire fighters, prevention, and LEA workers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures availability of emergency response professionals. (DMC: Response)

237-CORE: Number of building managers (m/w/d) (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates availability of infrastructure management expertise. (DMC: Response)

239-CORE: Transport routes redundancy (n/a / Local municipal statistics)

Relevancy: Reflects transport network resilience for evacuation and aid. (DMC: Response)

240-CORE: Transport means access (Numerical quantity / Local municipal statistics)

Relevancy: Measures accessibility of public transport in emergencies. (DMC: Response)

241-CORE: Internet connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Indicates digital communication resilience. (DMC: Response)

243-CORE: Mobile connection access (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Measures mobile communication access for coordination. (DMC: Response)

244-CORE: Radio communication (Numerical quantity, per 100.000 / Local municipal statistics)

Relevancy: Reflects backup communication capacity for emergencies. (DMC: Response)

245-CORE: Early Warning Systems (EWS) access (Numerical quantity, per 100.000 / Local municipal statistics)



Relevancy: Measures effectiveness of early warning systems. (DMC: Response)

OUR CONSORTIUM

