RESILIAGE
Revolutionising community resilience

D1.1

Repository of International Standards & Inventory of Lessons Learned of Disaster Management Preparedness

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Table of Abbreviations and Acronyms

Abbreviation	Meaning
CC	Climate change
CH	Cultural heritage
CIVMIL	Civilian-military
CORE	Community Resilience
CRED	Centre for Research on the Epidemiology of Disasters
CSO	Civil Society Organization
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EC	European Commission
EFFIS	European Forest Fire Information System
EM-DAT	Emergency Events Database
EU	European Union
FMA	Foreign Military Assets
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICOMOS	International Council on Monuments and Sites
ICRC	International Committee of the Red Cross
IFLA	International Federation of Landscape Architects
IPCC	Intergovernmental Panel on Climate Change
OpenDRI	Open Data for Resilience Initiative
OSCE	Organization for Security and Cooperation in Europe
OSM	Open Street Map

SD	Sustainable development
SDGs	Sustainable Development Goals
SyRI	Systemic Resilience Information frameworks
UN	United Nations
UNDP	United Nations Developmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-OCHA	United Nations Office for the Coordination of Humanitarian Affairs
WP	Work Package

1. Executive Summary

The deliverable **D1.1, Repository of International Standards & Inventory of Lessons Learned of Disaster Management Preparedness**, is the result of a six-month long task (**T1.1, Identifying international standards in crisis preparedness and climate change policy**), the results of which constitute one of the cornerstones of **WP1, Building a Knowledge Baseline**. WP1 aims at building a knowledge baseline of current international policies and standards (T1.1) as well as of the present state of research within scientific literature (T1.2), all pertaining to crisis preparedness planning, disaster risk management, climate change, and heritage.

D1.1 forms the sum of T1.1's variegated results. The task as a whole focussed in on the current state of the international policy field, identifying and presenting relevant policies and standards issued by various international organisations (UN, EU, ICRC, etc.) on the interrelated topics of disaster management, resilience, and heritage. This was in pursuit of establishing a knowledge baseline on these topics for the remainder of the RESILIAGE project. Another aim of T1.1 has been to understand the current international state of the art pertaining to best practices within this field. For this second aim, T1.1 research partners gathered information on all relevant former international EU-funded projects that dealt with problems and subjects that were deemed as approximating the research interests of RESILIAGE. Separately, information was gathered through RESILIAGE-affiliated international partners on recent or current best and innovative practices in various countries (including extra-EU contexts), pertaining especially to crisis and disaster management and heritage.

A final aspect of T1.1 was to present detailed descriptions of each CORE lab, including its human factors, meaning geographical, historical, social, and cultural context. These textual passages also detail the history and procedure of the CORE labs' chief and secondary crises, as well as the existing sets of tools and instruments available to fend off crises at the CORE sites. This was done through desk-research and in consultation with on-site CORE lab partners, and each crisis description includes also section on what the CORE lab partners may wish or expect from the ongoing and upcoming work and results of RESILIAGE.

It is hoped that these resultant repositories (international policies; past EU projects; selected innovative practices) – especially when read and treated in comparison and juxtaposition with the produced CORE lab crisis descriptions – will constitute a useful and useable baseline of knowledge for the remainder of the RESILIAGE project as well as a continual point of reference for the work of future WPs.

This document constitutes the reported portion of the deliverable D1.1. It aims to expound on the aims of RESILIAGE's WP1 and T1.1, its methodology, constituent parts,

and results, including contextual reporting on the various repositories. Throughout and where applicable, references to the results' usefulness for future WPs will be highlighted. The data accrued by T1.1, and presented here, will be collected and systematically organised in the data lake produced by T1.3/D1.3.

The report is divided into the following chapters:

- Section 1 – Executive Summary: describes the main objectives of this deliverable.
- Section 2 – Introduction: introduces the purposes and results of the task at greater length, including a contextualisation of the project-specific relevancies of the international policy field as well as providing working definitions of certain key concepts.
- Section 3 – Methodology: offers a procedural description of how the task's assignments were delegated and executed, including especially the criteria that were employed to narrow down the results of the desk research.
- Section 4 – Knowledge Base Repositories: presents each resultant knowledge repository, at length – including the results of the research on International policies and standards (4.1); of Past EU projects (4.2); and of innovative practices and initiatives (4.3).
- Section 5 – CORE Crisis Scenarios: presents each CORE lab in detail (5.1. Belgium, 5.2. Norway, 5.3. Greece, 5.4. Portugal, 5.5. Türkiye), including historical and cultural context, descriptions of crises, stakeholders, existing tools, and future desiderata.
- Section 6 – Conclusion: presents a summary of findings and hones in on how the results presented in this report may feed into future WPs and task-specific aims.
- Section 7 – Appendix: includes the annexes of the deliverable.

2. Introduction

Assuming 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 and levels of resilience and improved disaster risk management (DRM) plans, and to ensure more equitable and attainable future sustainable development (SD).

In pursuit of these aims, RESILIAGE aspires to create novel critical thinking around community resilience based on collected data – based in large part on knowledge gathered on-site – and to create and contribute to innovative digital tools, awareness campaigns, and policy trajectories. It is hoped that these contributions can all help activate cultural heritage (CH) as a powerful driver of community resilience.

In order to abet the project's successful pursuit of these research aims, it is necessary to, from the outset, have established a foundational and common baseline of knowledge involving project-pertinent themes and on-the-ground facts.

The purpose of **WP1, Building a Knowledge Baseline** speaks to this latter desideratum. It is assumed that a firm grasp of the current field of CC-, CH-, DRM-, and SD-related international policies and standards – as well as a firm grasp of the present state of academic and scientific research of the same issues – is vital for the success of the RESILIAGE project's further investigations and undertakings.

To this end, the task which constituted and preceded the present deliverable, **T1.1, Identifying international standards in crisis preparedness and climate change policy**, has set out to systemically and comprehensively collect up-to-date information and knowledge about international standards and BPs regarding CC, CH, DRM, and SD. It has sought to encapsulate and consider policies and standards for the whole disaster risk management cycle (DRM: preparedness, response, recovery, mitigation, and prevention). Furthermore, it has sought to encompass policies, standards, and BPs that may help advance knowledge about the five RESILIAGE-relevant Systemic Resilience Innovation frameworks (SyRI: Active Memory; Adaptive Governance; Health and Wellbeing; Social interaction and inclusiveness; Socio-economic resilience).[1]

[1] The closely related and synchronous task **T1.2, Scoping review of crisis behaviour literature** and its adjoining deliverable **D1.2, Scoping review of socio-behavioural factors in crises and disasters**, has sought to establish a baseline of up-to-date academic and scientific publications surrounding project-relevant themes, including DRM, human behaviour during crises and disasters (including individual psychological aspects), and CH.

To help establish the desired knowledge baseline as presented above, the chief pursuits of the task can be summarised in the following three-pronged manner:

- to aggregate and delineate existing standards within international CC/CH/DRM/SD policies
- to generate an understanding of existing tools and practices generated by recent international projects
- to collect information on current international BPs, including innovative practices across Europe and beyond

To achieve the first aim, desk research was undertaken to identify any and all relevant standards within the current international policy landscape. The ensuing dataset was collected in a repository, the latter of which consisted of a template divvied up into categories that were deemed highly relevant to the future work of RESILIAGE. In a second step, close analyses were undertaken of a selection of those data points deemed most relevant to action-oriented knowledge-building.

To achieve the second aim, exhaustive desk research was undertaken in order to identify all past EU-sponsored projects that had clear topical affiliations to RESILIAGE. These projects were accumulated and, in a second step, were filtered through a data grid. This multi-stage filtering step was undertaken in order to better extract those data points that were deemed most relevant to RESILIAGE. This relevancy was determined through consultation with all WP1 research partners. The resultant repository includes past EU projects that are highly pertinent to the coming work of RESILIAGE, and it includes references to deliverables and other output produced by these projects that may be of value to RESILIAGE.

To achieve the third aim, T1.1 research leaders issued a call for contributions to all RESILIAGE-associated partners. This call asked addressees to consider and list any and all past projects or initiatives that they had been involved in, or were directly or tangentially aware of, that could be of interest to RESILIAGE – bearing in especial mind projects that may help shed light on the current international state of the art pertaining to innovative practices revolving around CC, CH, DRM, or SD.

Finally and crucially, because the above-mentioned task results – including collected policies and standards, past project results, and BPs – were deemed to contain immanent and especial relevance to RESILIAGE-affiliated CORE lab sites, another parallel aim of the task entailed studying and textually summarising the cultural, geographical, and socio-historical context of each CORE lab represented in the project, including a close description of the primary and secondary crises facing the site, the local stakeholders that are involved, the tools that are available when responding to crises, and the desired outcomes that local actors may wish to draw out from their participation

in the RESILIAGE project. All data presented here will be accessible through the data lake resulting from T1.3/D1.3.

This report presents and summarises the T1.1 results in the following ways:

- Section 3 – Methodology: This methodological chapter details the procedural history of the diverse task assignments, including how certain analytical distinctions, deemed necessary for conducting the research, were arrived at. The methodological process for each of the task assignments is then touched upon in detail, including a step-by-step explanation of data gathering and processing.

- Section 4 – Knowledge Base Repositories: This section consists of a presentation of research findings, in the form of textual descriptions and commented repositories for each part-assignment, namely:
- Sub-section 4.1 – International policies and standards: This sub-section presents the repository of international policies and standards. It features a large dataset of a variety of policies and international frameworks that were deemed relevant to the doings of RESILIAGE (Sub-section 4.1.1. – Database of the international policy framework). It also features the findings and conclusions of an investigation into a narrower set of international policies and standards deemed particularly practice-oriented and therefore especially useful for RESILIAGE (Sub-section 4.1.2. – Selection & in-depth analysis of key policy provisions).

- Subsection 4.2 – Past EU projects: This sub-section presents the repository of past projects funded by the European Union and dealing with topics and problems adjudged highly adjacent to the research concerns of RESILIAGE. In a second step, Sub-section 4.2.2. presents the selection and identification of the most relevant resources filtered out of this repository.

- Section 5 – CORE Crisis Scenarios: This chapter will closely describe the geographical, social, and historical setting of each CORE lab (Belgium: F-A UGGp; Greece: UoC-NHMC; Norway: TRC; Portugal: Naturtejo; Türkiye: KARBEL). Particular attention is subsequently paid to the history and possible sequence of the CORE-specific hazards, as well as the stakeholders involved, existing resources, and the potentialities imminent to RESILIAGE for each CORE lab.

- Section 6 – Conclusion: This chapter offers a summary of the task's chief findings and focusses in particular on how the results presented in this report may feed into future WPs and task-specific aims.

- The report concludes with an appendix (Section 7 – Appendix). This latter includes annexes of the deliverable, containing relevant aggregated data.

3. Methodology

This section delineates the work procedures employed in conducting and completing T1.1. It does so by describing in detail the methodology and discrete work steps undertaken by the various part-assignments (four in number).

Immediately with the commencement of T1.1, in M1, it was adjudged – through multiple multilateral exchanges with research partners – that separate methodological steps would be necessary to properly achieve each of the goals of T1.1. As a consequence, these goals were split up into different action items, here referred to as "part-assignments". That is, while the findings of T1.1 as a whole would be produced – in a general way – through desk research, the particular methods of such research were deemed as needing to vary based on the topical scope of each part-assignment. What follows in the below is a step-by-step rundown of how each part-assignment was treated in terms of its methodology.

The first segment charts how the knowledge-gathering work surrounding **international policies and standards** was conducted. The second segment describes the same for **past EU projects**. The third segment lays out how this was achieved with respect to **innovative practices**. Finally, the fourth segment presents the desk research methodology employed in producing the CORE lab **crisis descriptions**.

3.1. Methodological overview 1: International policies and standards

This first part-assignment of T1.1 aimed at attaining a knowledge baseline surrounding international standards of CC, CH, DRM, and SD. The end aspiration was to have produced a collection of current international standards pertaining to said issues and to feed this into a repository, enabling the processing of data points through RESILIAGE-relevant categories and filters. As a second step, the necessity of more closely engaging with and scrutinising a selection of these international standards was recognised.

Step 1: Wide Collection

To this end, the first operational step of establishing this knowledge baseline constituted in assigning research partners the work of surveying the current international policy field. This was done through:

- Consulting online resources and databases – e.g. the online presence of international institutions and organisations (e.g. UN, European Union, OSCE, Red Cross, etc.)

- Seeking information from journalistic and scholarly articles and surveys on the manifold topics
- Exploiting the pre-existing expertise of T1.1 research partners (especially regarding CC: DEM; CH: POLITO, UNESCO; DRM: POLITO, VIC; SD: DEM, POLITO)
- Continual multilateral calls and email exchanges, with joint progress updates from partner institutions

Having thus set out to scan the state of the international policy field, the results were fed into a repository template on MS Excel, in which each policy (or data point) was processed according to an agreed-upon categorisation system, deemed relevant to the upcoming work of RESILIAGE. For further information on this categorisation system, see Section 4.1.1.) That is, each data point was presented and categorised along the following lines:

- Name (the title by which it is referred), the Authority (the issuing body of the data point)
- Chief policy relevancy (the principal policy field which the data point contributes to)
- Chief DRM stage/s (the principal DRM stages covered by the data point)
- Level (the international-system level at which the data point operates)
- Type (the specific characteristics of the data point)
- Binding status (whether the data point is legally enforceable)
- Chief audience/s (to which groups the data point is directed)
- Link/s (URLs linking to the data point)

The search resulted in 104 data points, covering all targetted fields (CC, CH, DRM, SD). In all, the data points amounted to the current state of affairs in the international policy field. Excluded from the final repository were data points that were deemed to be two things:

- Out-of-date or dormant (e.g. the Hyogo Framework for Action 2005-2015, which was superseded by the Sendai Framework for Disaster Risk Reduction in 2015).
- Incomplete (i.e. any document in the drafting phase during T1.1 desk research, e.g. action statements issued by COP28).

Step 2: Analytical Selection

As a next step, research partners agreed that, to draw full advantage from the gathered data, RESILIAGE would profit from a closer and more specific understanding of the most actionable pieces of policy – *viz*. those policies that may be deemed to matter most on the ground level before and during disasters. Following joint consultations, it was agreed

that this knowledge would best be drawn through clustering analytical efforts around those data points that had been labelled as “Guidelines or Best Practices” within the repository’s “Type” category. This is because those data points were assumed to carry the most instruction- and advice-based information.

Data points labelled as “Guidelines or Best Practices” were 30 in number, and were distributed for processing amongst research partners. Each research partner agreed to peruse each data point, and to feed the information contained in the data point into a customised analytical grid (see image reproduction of a blank template sheet below).

D1.1 Data point grid

Title: *Here, name the title of the document*	Type summary: *Here, provide a brief note of what kind of document is being discussed*	Content summary: *Here, provide a very short breakdown of what the document covers*	SyRI-relevancies: *Here, list the document's most applicable SyRI relevancies*	DMC references: *Here, list any and all DMC stages the document mentions*	Explicit crisis scenarios mentioned: *Here, list any RESILIAGE-relevant crisis scenarios the document mentions*	CORE/s mentioned: *Here, list any COREs the document mentions*			
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communicati on**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management									
Culture and Heritage									

Figure 1. Policy Analysis Grid

This analytical grid served the purpose of further filtering information about current international policies and standards into categories deemed useful and usable for the RESILIAGE project. Information contained within the data point were classified along the following three subjects:

- Sustainability and Climate Change
- Disaster and Risk Management
- Culture and Heritage

This information would then be placed in a specific location within the grid, in order for it to be back-checked with any information contained in the data point on the following nine RESILIAGE-related subjects:

- Societal resilience
- Community
- Science and policy
- Population management

- Vulnerable-group engagement
- Crisis communication
- Cultural resilience
- Cooperation
- Heritage as a driver

In sum, aside from providing the most essential data-point information (Title, Type summary, Content summary, SyRI relevancies,), this grid could allow for close textual scrutiny of each data point.

Step 3: Summaries

To further increase the usability of these findings, research partners were – in a final methodological step – tasked to briefly summarise the central RESILIAGE-specific significance of each data point, with the explicit instructions to make findings: "comprehensible for all partners, [with] each policy's potential usefulness for future WPs […] explicated".

These steps were successfully undertaken by all partners, and each of the three major results of this desk research – namely, the repository of international policies and standards, the selection of 30 operative policies, fed through analytical grid, and the summaries of aforementioned 30 policies – are to be found in Section 4.1.

3.2. Methodological overview 2: Past EU projects

While both the Repository of EU projects and the Repository of literature reviewed are important resources framing the Knowledge Base of RESILIAGE's project, the two differ in their scope, and the methodological approach adopted to frame a selected list of key projects. The data collection methods of the two can overlap in some areas, but also retain significant differences based on their distinct purposes and focus.

Step 1: State-of-the-Art (SoA)

As a first step Deep Blue (DBL) applied a set of specific filters in the European Commission Database CORDIS (https://cordis.europa.eu/search) to refine the research and identify all the projects starting from 2010 onwards that had specific characteristics. In the following, we list the filters that were applied to the filtering mechanism in the database (see Figure 1.).

- **Collection**: Projects, project deliverables, project publications
- **Field of science:** social sciences, educational sciences, law, media communications, other social sciences, psychology, sociology
- **Framework programme:** Horizon Europe, Horizon 2020
- **Language:** English

- **Start date:** 01/01/2010

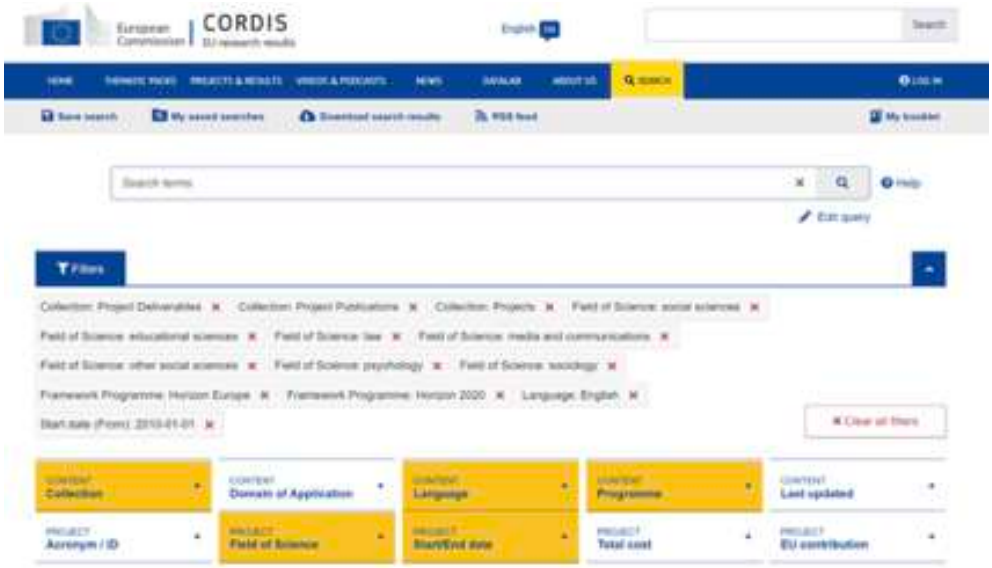


Figure 2. Filter definition of extracted EU projects from CORDIS database

A further selection of key words defined by VICESSE, UNIMES and POLITO was used as a criterion to filter out the pertinence of the identified projects in the list, according to the topic and specificities of RESILIAGE's Project.

The key words selected by the partners were:

- Crisis management
- Disaster management
- Resilience
- Risk awareness
- Risk preparedness
- Cultural heritage

A wide number of projects emerged from the filtering procedure. However, the filtering process included all sorts of projects with related words or characteristics identified through the filtering. Hence, these projects were not all relevant to the specificities faced in RESILIAGE.

Step 2: Refinement of filtered projects

Having filtered out the projects in the CORDIS database according to the filters selected, an excel sheet was created to start creating RESILIAGE's database of related EU projects.

For each project selected from the filtered list, the team detailed some basic information as a reference, such as:

- Project Acronym
- Project's name
- CORDIS Link to the project
- Project's own website (if available)
- Keywords
- Short description
- Project's Duration
- Partners Involved (to identify whether any partner was previously involved in relevant projects).

Through a first read of the projects' title and description, DBL team arbitrarily selected a total number of 124 projects from the filtered list that were considered of actual interest and pertinent to RESILIAGE extent and topics. The pertinence of the selected projects to RESILIAGE was determined based on the project's goals, objectives, and the interests of key stakeholders in the different WPs. In addition, future sister projects were identified and marked for further networking purposes related to WP7.

Step 3: Consensus Exercise

To further analyse the deliverables and outcomes of past projects that could have been of interest in the different WPs and for the overall goals of the project, DBL organised a consensus-building exercise involving all RESILIAGE WP leaders. DBL added a few columns to the excel sheet with the selected list of 124 projects, asking the partners VICESSE, POLITO, UNIMES, to rate each project with how relevant they found the project to be for RESILIAGE purposes.
The scale provided the means to rate the projects being: Highly relevant / Relevant / Less relevant (see Figure 2.).
Moreover, while rating the projects, the partners were asked to choose 5 projects of high interest for them, and to detail in a column named "useful for WP", each project's connection to the specific WP they had in mind.

Figure 3. Ranking procedure of CORDIS projects for relevance to RESILIAGE

In summary, while dimensions extracted from the SoA might seem essential, their relative importance depends on the specific project and RESILIAGE's WP leaders' expectations and needs.

Step 4: Calculating the mean

By using the suggested scale, participants were asked to rate the projects as Highly relevant / Relevant / Less relevant corresponded to a certain rating number, namely:

- "3" for Highly relevant
- "2" for Relevant
- "1" for Less Relevant

After the consensus exercise, DBL created a mean value for each project rated by the project's partners. From these, 56 projects had a mean >=2. Hence, only these 56 projects were collectively considered from relevant to highly relevant to RESILIAGE and were considered interesting to analyse in more detail to provide a useful knowledge base of EU projects.

3.3. Methodological overview 3: Innovative practices

Rationale

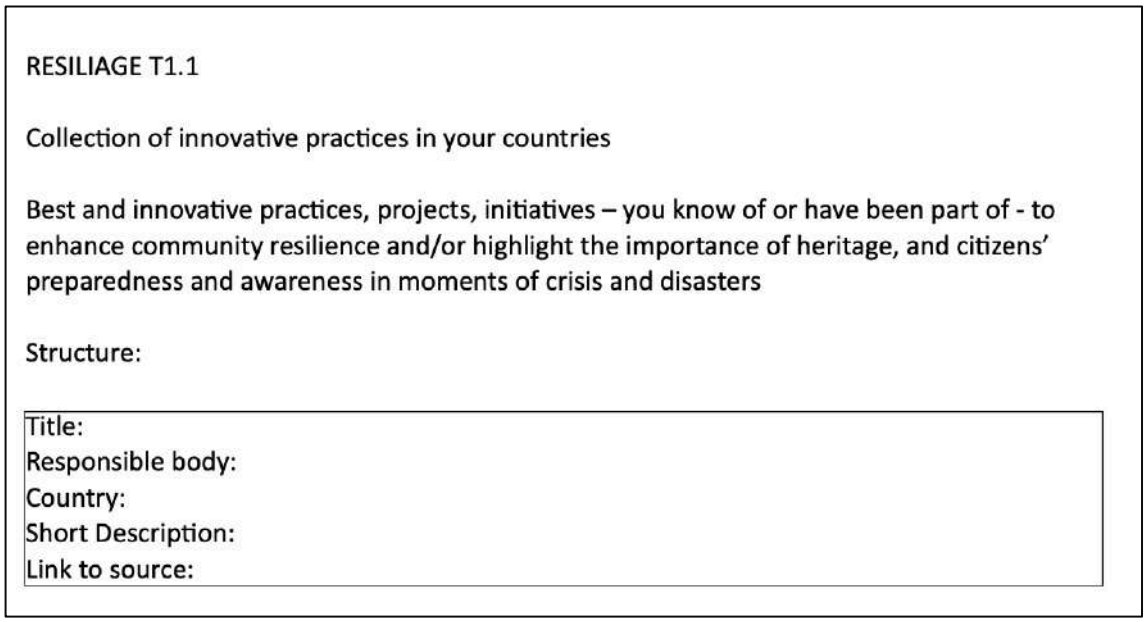
Following consultation between task researchers, it was agreed that – in pursuit of T1.1's aims of achieving a comprehensive knowledge baseline of current international best practices – all consortium partners should be asked to contribute possible examples from their respective fields of expertise. This would avert any possible knowledge gaps established from time-constrained desk research, and would usefully rally partners' full and diverse skill-sets for the extraction of knowledge on the project's issues.

Methods

In pursuit of the objectives mentioned above, a survey document was circulated amongst consortium members, requesting the submission of any information on innovative and good examples of crisis management and of employing heritage as driver of community resilience that might be instructive and useful for the project.

In this request, it was emphasised that any example of a past or present policy, project, or initiative fulfilling these criteria should be considered and fed into the survey document – including instances from contexts outside CORE lab countries and outside the European Union. The ensuing collection is a starting point and will be continued beyond D1.1.

A fragment of the blank survey document is reproduced in the below:



RESILIAGE T1.1

Collection of innovative practices in your countries

Best and innovative practices, projects, initiatives – you know of or have been part of - to enhance community resilience and/or highlight the importance of heritage, and citizens' preparedness and awareness in moments of crisis and disasters

Structure:

Title: Responsible body: Country: Short Description: Link to source:

Figure 4. Template for collecting innovative practices

3.4. Methodological overview 4: Crisis descriptions

Rationale

In order to be able to offer the RESILIAGE project a knowledge baseline of the manifold circumstances surrounding and impacting the CORE labs, it was deemed imperative that T1.1 also conduct close research into the specific contexts and crises of the CORE sites facing study.

Methods

This was done in a four-step procedure: first, data and information was gathered through the textual and oral input of CORE lab representatives. This was complemented with a desk-research step, in which the case descriptions were corroborated with publicly-available information gathered through online resources (e.g. media reports, organisation websites, etc.,). As a third step, the knowledge accumulated from this gathering of information was fed into a generic textual template, consisting of four sections deemed relevant to the further study of RESILIAGE:

- Background (entailing geographical, historical, social, and cultural context regarding the CORE lab site)
- Crisis (entailing a close description of the crisis or crises facing the CORE lab site)

- Stakeholders (entailing information on the key actors involved in responding to a crisis event)
- Existing resources (entailing information on the on-site tools that already exist to respond to a crisis event)
- CORE interests (the outcomes a CORE lab may wish to see from the work of the RESILIAGE project)

In a final step, this textual representation of the site and crisis was circulated for commentary with CORE lab representatives, where facts were double-checked and further information was welcomed for addition.

4. Knowledge Base Repositories

This section showcases each repository that has been produced by T1.1. Each sub-section includes descriptions of their respective contents.

4.1. International policies and standards

This section includes the repository of international policies and standards gathered through desk research in T1.1.[2] [**The full repository is included in the Appendix 7.1.**]

4.1.1. Database of the international policy framework

The following repository is the complete collection of current international policies and standards, and it includes a total of 104 data entries. They are categorised along the following lines – and the Excel document which the repository forms can be filtered according to these categories:

- Name (the title by which it is referred), the Authority (the issuing body of the data point)
- Chief policy relevancy (the principal policy field which the data point contributes to)
- Chief DRM stage/s (the principal DRM stages covered by the data point)
- Level (the international-system level at which the data point operates)
- Type (the specific characteristics of the data point)
- Binding status (whether the data point is legally enforceable)
- Chief audience/s (to which groups the data point is directed)
- Link/s (URLs linking to the data point)

These categories are defined in the repository legend as follows:

[2] For information on how the data points reproduced in the below were gathered, consult Section **3, Methodology**.

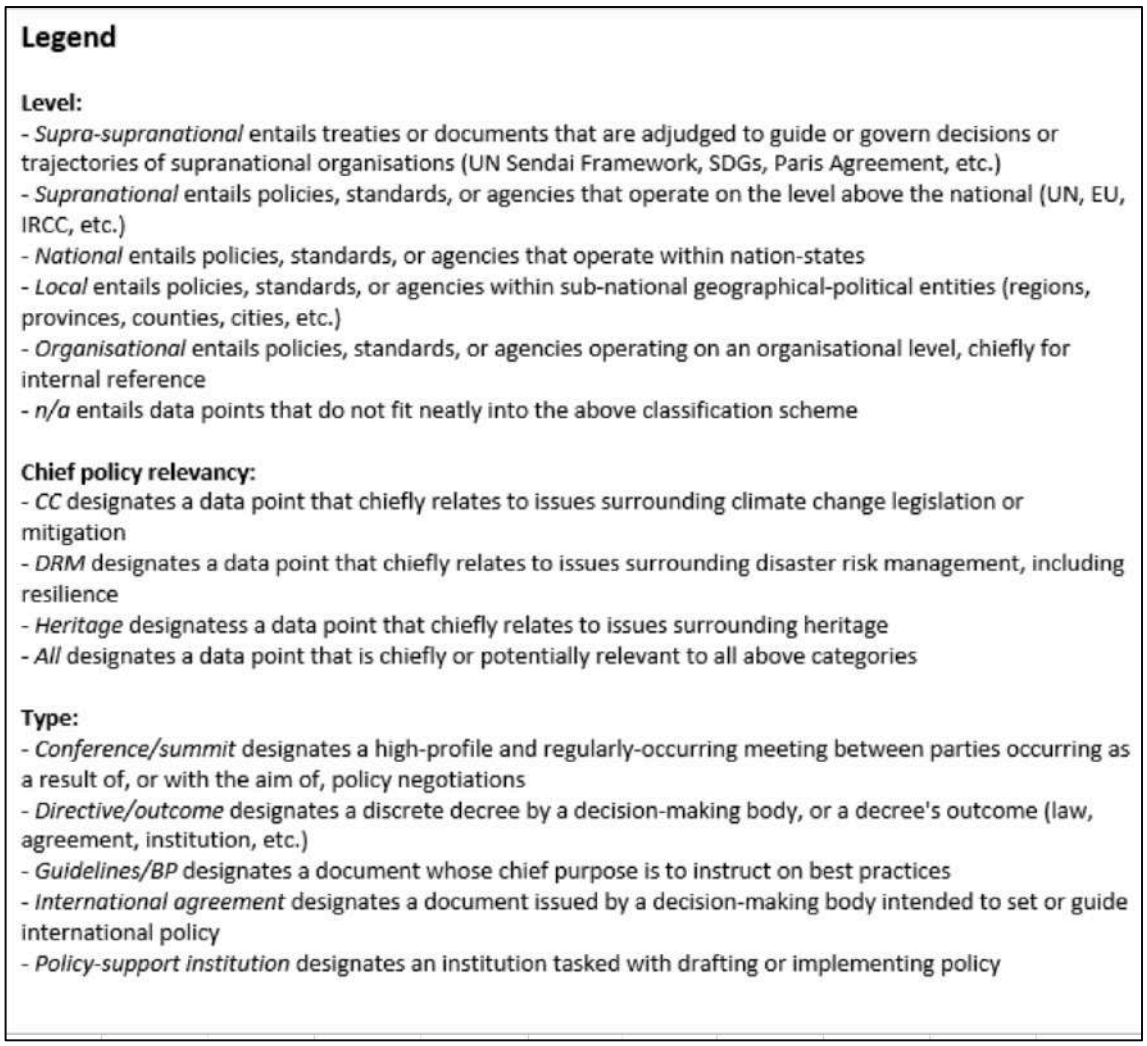


Figure 5. Policy analysis grid (Legend)

4.1.2. Selection and analysis of key policy provisions

What follows below is a reproduction of all data points deemed especially operative and hands-on, and thus relevant for the work of RESILIAGE. They consist of the data points that were classified in the repository as “Guidelines/BP”. In all, they are 30 in number.

Each entry below is briefly summarised. This summary includes references to the data point’s relevance to future tasks and WPs. This is followed by an analysis of each data point through a grid-based template (see blank example below). Each of the latter will include a brief description of the policy in question, including its particular pertinence to the RESILIAGE project and future WPs.

D1.1 Data point grid									
Title: *Here, name the title of the document*	Type summary: *Here, provide a brief note of what kind of document is being discussed*	Content summary: *Here, provide a very short breakdown of what the document covers*	SyRI-relevancies: *Here, list the document's most applicable SyRI relevancies*	DMC references: *Here, list any and all DMC stages the document mentions*	Explicit crisis scenarios mentioned: *Here, list any RESILIAGE-relevant crisis scenarios the document mentions*	CORE/s mentioned: *Here, list any COREs the document mentions*			
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management									
Culture and Heritage									

The policies and standards selected for closer scrutiny represent the current state of the international policy field, and together produce highly operative and instructional information about current best practices and recommendations pertaining to CC, CH, DRM, and SD. All but three were produced in the 2010s (one from 1998, two from 2007) and a large majority were produced after the 2015 launch of the Sendai Framework, the UN-issued worldwide guiding standard for DRM and resilience-strengthening. No data point has been superseded by a more current standard. Three data points were published in 2023, the year of the commencement of RESILIAGE and of T1.1's data-gathering activities.

1. Decisions Adopted at the 31st Session of the World Heritage Committee: WHC-07/31.COM/7.1 and WHC-07/31.COM/7.2

"Decisions Adopted at the 31st Session of the World Heritage Committee: WHC-07/31.COM/7.1 and WHC-07/31.COM/7.2" focusses on the document that discusses the management and mitigation of these impacts. The document discusses strategies and policies to manage and mitigate these impacts, emphasising the need for heritage sites to adapt and protect in the face of changing environmental conditions. This includes considering legal, scientific and policy-based responses to the challenges posed by climate change to these important cultural and natural heritage sites linked to SyRI's "adaptive governance".

The document's focus on climate change adaptation standards, best practices, communication, and public awareness makes it relevant to WP2. The publication uses digital techniques to monitor and manage climate change impacts on heritage assets, making it relevant to WP3. Moreover, WP6 is relevant to policy formation, methodology, and heritage protection under changing climates.

Title: *Decisions Adopted at the 31st Session of the World Heritage Committee: WHC-07/31.COM/7.1 and WHC*	Type summary: *BP-Consideration of issues and policy papers by the Conference*	Content summary: *Climate Change Impacts on World Heritage*	SyRI-relevancies: *Adaptive Governance,*	DMC references: *All*	Explicit crisis scenarios mentioned: *Fire; Flood*	CORE/s mentioned: *None*	Date of issue/launch: *2007*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	raise awareness among the public which, in turn, may help build public and political support.-6	To identify the most effective means to build connectivity between properties and surrounding landscapes (for example through habitat corridors and buffer zones) to promote resilience of species and communities-14	Options for the creation of a clearing-house mechanism of best-practice case studies on climate change, either separately or linked to similar mechanisms, such as those under the UNFCCC, CBD, UNCCD, or CMS will be investigated-7 establish an informal list or index of those properties specifically identified by the States Parties as being threatened by climate change.-10			The World Heritage Committee will influence and inform international research programmes of the information needs of World Heritage properties.-7		Actions by the World Heritage Centre and the Advisory Bodies related to climate change will seek to take advantage of synergies to better coordinate-4 States Parties will work with the climate change policy and decision-makers within their own countries as the primary response to the challenges that climate change poses for World Heritage.-5 to the utmost of its own resources and, where appropriate, with any international assistance and co-operation-8	
Disaster and Risk Management	To identify the most effective means to build connectivity between properties and surrounding landscapes (for example through habitat corridors and buffer zones) to promote resilience of species and communities-14		Concern for heritage, both tangible and intangible, should be incorporated into disaster risk reduction strategies and plans, which are strengthened through attention to cultural attributes and traditional knowledge" 5 . This constitutes the first reference, within a global policy document on disaster reduction, to the importance of the heritage in the context of disaster risk reduction-23			The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.-11 The key to an effective reduction of risks from disasters is advance planning and the building of a culture of prevention; -20 Identify, assess and monitor disaster risks at World Heritage properties-21		Support risk identification and assessment activities at World Heritage properties, including consideration of climate change impacts on heritage, consideration of underlying risk factors, all necessary expertise and the involvement of relevant stakeholders as appropriate-22 Develop a World Heritage Risk Map at the global level or at regional levels to assist States Parties and the Committee to develop better responses.-22	To identify Natural World Heritage properties most at risk-13
Culture and Heritage		It is useful to encourage the public to consider the value of cultural and natural properties at the same time, as integral to each other and to the quality of life.-15	To strengthen the protection of World Heritage and contribute to sustainable development by assisting States Parties to the Convention to integrate heritage concerns into national disaster reduction policies and to incorporate concern for disaster reduction within management plans and systems for World Heritage properties in their territories;-19		consideration of heritage as a resource to mitigate physical and psychological damage of vulnerable populations, particularly children, during and in the aftermath of disasters.-22	the inclusion of risk preparedness as an element in World Heritage properties management plans and training strategies.-10		…the States Parties to this Convention recognize that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate-8 the World Heritage community will work in cooperation with other partners that also have responsibility, resources and expertise related to this challenge.-11	World Heritage to act as a catalyst in the international debate and obtain support for policies-11

Figure 6. Policy analysis: Decisions Adopted at the 31st Session of the World Heritage Committee: WHC-07/31.COM/7.1 and WHC-07/31.COM/7.2

2.
EC INFORM

“EC INFORM”, a disaster risk management forum sponsored by the European Commission, produced a climate change report in 2023. The report highlights especially the reigning scientific consensus, that economic development must be aimed at reducing emissions and achieving sustainability, as well as warning that all of Europe will be increasingly impacted by climate change in coming years. Such scientific dissemination may prove a useful reference for future WPs and deliverables.

Its explicit mention of floods as a most perilous and costly crisis scenario in future lends it relevance to the investigation into SyRI aspect “Socio-economic resilience” and the CORE lab study of Belgium.

Title: *EC INFORM*	Type summary: *Multi-stakeholder research forum*	Content summary: *Reports and factsheets summarise the forum's findings*	SyRI-relevancies: *Socioeconomic resilience*	DMC references: *All*	Explicit crisis scenarios mentioned: *Earthquakes; Floods; Heatwaves;*	CORE/s mentioned: *All (countries)*	Date of issue/launch: *2022*		Quotes derive from *INFORM CLIMATE CHANGE* report brochure, October 2022
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change			INFORM results confirm that policy must be directed to "[reducing] emissions, adaptation and sustainable development." (p. 3)						
Disaster and Risk Management			INFORM results stipulate that much of Europe (excepting Norway) will see continued or worsened CC-related risk in coming decades (p. 8 ff.)						
Culture and Heritage			Adaptation and mitigation should be the primary policy responses to the globally most damaging crises of future decades – droughts and floods (p. 13).						

Figure 7. Policy analysis: EC INFORM

3.
European Commission Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030 – A Disaster Risk-Informed Approach for all EU Policies

This document outlines comprehensive strategies for disaster risk management, emphasizing anticipation, cross-sectoral collaboration, evidence-based approaches, inclusivity, and sustainability. It underscores the importance of civic engagement, risk awareness, and partnership-building to enhance resilience against disasters, particularly among vulnerable groups. The goals aim to foster a culture of risk prevention, build confidence in civil protection authorities, and ensure adaptation measures address the needs of all segments of society, including the preservation of cultural heritage.

This document is primarily relevant to SyRI's "Adaptive Governance" and "Social Interaction and Inclusiveness" aspects, as it advocates for collaborative governance, stakeholder engagement, and inclusive approaches to disaster risk management. It aligns with SyRI's objectives of fostering resilience behavior through cooperative processes and promoting social cohesion and inclusiveness in disaster preparedness and response efforts.

In terms of work packages, the document provides guidance for WP1 by emphasizing evidence-based decision-making and aligns with the objectives of WP6 by promoting policy frameworks that strengthen disaster resilience and cross-sectoral synergies.

Title: *European Commission Action Plan on the*	Type summary: *EU Commission recommendations*	Content summary: *EU regulation on security measures*	SyRI-relevancies: *Adaptive governance; Social Interaction and*	DMC references: *All*	Explicit crisis scenarios mentioned: *Fire, flood*	CORE/s mentioned: *None*			
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management	- Comprehensive and integrated approaches to disaster risk management are key to strengthening resilience - Strengthening disaster resilience should encompass principles such as being anticipatory, cross-sectoral, knowledge and evidence-based, inclusive, and sustainable.	Promote civic engagement and volunteer-based initiatives for disaster prevention and preparedness Increase the overall level of risk awareness among the population through risk awareness raising strategies and actions		- Increase the awareness and adoption of risk prevention and preparedness measures among the population, including vulnerable groups, to better prepare for disasters	- Ensure that the population, including vulnerable groups and persons with disabilities, become better aware of risk prevention measures - Improve public access to disaster risk information, considering the needs of vulnerable groups	- Ensure that communication and information management systems and procedures support coherent risk, emergency, and crisis communication among relevant authorities and with relevant external partners.	- Enhance the culture of risk prevention amongst the population, promoting knowledge on risk prevention and confidence in competent civil protection authorities	- Foster partnerships with partners such as the private sector, civil society organizations, volunteers, and academia, as appropriate, in a cross-border context. - Enhance the interoperability of systems and procedures to support the civil protection response and the coordination of response measures across relevant authorities and partners	
Culture and Heritage		- Enhance the culture of risk prevention amongst the population, fostering trust and			- Ensure adaptation, prevention, and preparedness while considering the				

Figure 8. Policy analysis: European Commission Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030 – A Disaster Risk-Informed Approach for all EU Policies

4.
European Union Concept on Effective CIVMIL Coordination in Support of Humanitarian Assistance and Disaster Relief

The “EU Concept on Effective CIVMIL Coordination” is of particular relevance to the SyRI aspect “Adaptive Governance”, “Health and Wellbeing”, and “Social interaction and inclusiveness”. It therefore carries especial relevance for the investigation of the CORE labs in Türkiye, Norway, and Portugal. The reasons for this relevance include the policy’s continuously outlining the importance of inter-agency collaboration, planning, and sensitivity to actors' diversity of needs.

Its emphasis on training and crisis preparedness makes the policy particularly relevant to work within WP2 (modelling behaviours). Moreover, as the policy represents current civilian-military standards within the EU setting, it will prove a good reference for WP6 (policy recommendations).

Title: *European Union Concept on Effective CIVMIL Coordination*	Type summary: *Policy action plan*	Content summary: *Direct guidelines pertaining to EU's crisis response*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Social interaction and inclusiveness*	DMC references: *All*	Explicit crisis scenarios mentioned: *Fire; Flood;, Earthquake; Landslide; Heatwave ["extreme temperatures"]*	CORE/s mentioned: *None*	Date of issue/launch: *2019*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management		Effective delivery of "aid is based on the acceptance of humanitarian actors by the affected population"; hence, a positive perception of aid workers must be fostered (p. 12) Civil-military cooperation can create a space in which local actors gain expertise in humanitarian operations or law (p. 32)			"The principle of humanity means that human suffering must be addressed wherever it is found, with particular attention to the most vulnerable" (p. 12) "Gender and age need to be considered in humanitarian responses to ensure that assistance addresses the specific needs of different groups" (cf. p. 23 ff.)	"[E]xercises raise awareness about humanitarian and military working methods"; "Simulated scenario-based training" offers a platform for inter-actor knowledge-sharing; "Information sharing […] is of crucial importance in the context of complex emergencies" (cf. instructions, p. 19) Early information sharing imperative (p. 30) "EU civil-military organisations should ensure effective dissemination of guidelines so as to ensure that personnel understand their	Civilian and military aid workers must bear in mind "cultural differences regarding communicating, deciding, managing time, trusting, disagreeing and providing feedback" (p. 40)	Effective disaster management must entail alignment of "actor response frameworks and policies with key civilian-military coordination principles and concepts" Civil-military interaction should take place at planning stages (p. 30) Direct and real-time inter-agency communication essential for effective disaster response (p. 31)	
Culture and Heritage								Training and cooperation can facilitate improved inter-actor understanding of differences in professional cultures (p. 32)	

Figure 9. Policy analysis: European Union Concept on Effective CIVMIL Coordination in Support of Humanitarian Assistance and Disaster Relief

5.
European Union Disaster Resilience Goals 2023

The "EU Disaster Resilience Goals" represents the latest aims of the European Union in its strategy towards greater societal resilience. It is of particular relevance to the SyRI aspect "Adaptive Governance" and therefore carries especial relevance for the investigation of the CORE lab in Türkiye. The reasons for this relevance include the policy's outlining the importance of multi-actor cooperation within emergency situations, the significance of preparation training, as well as the priority of "building back better" following a disaster.

Its emphasis on resilience preparedness and cross-sector communication makes the policy particularly relevant to work within WP4 (protocols and communication strategies). Moreover, as the policy outlines EU-issued ideal-type preparedness practices, it will prove of relevance in WP6 (T6.2) and its pursuit of further policy development.

Title: *European Union Disaster Resilience Goals 2023*	Type summary: *Outline of practical standards*	Content summary: *EU-wide plan for enhancing resilience*	SyRI-relevancies: *Adaptive governance*	DMC references: *Preparedness*	Explicit crisis scenarios mentioned: *Fire; Flood*	CORE/s mentioned: *None*	Date of issue/launch: *2023*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	Resilience must be coupled with sustainability principles at its core	Building-back better, i.e. employing "greening and other sustainable development principles"	Disaster resilience goals must always incorporate "the effects of climate change on disaster risks, data on past events and cross-sectoral impact analysis"; resilience is to support EU's green transition	Detection and forecasting systems should integrate climate change and environmental degradation considerations where relevant	Resilience policies must take into account the "specific needs and drivers" of group vulnerability, including impacts of climate change	"The timely release of data in an accessible, interoperable and reusable way will facilitate the cross-sectoral and cross-border cooperation"		Member states must ensure and increase knowledge sharing, including good practice, research, and evaluation results	
Disaster and Risk Management	Union and members should engage in stress test scenarios to test business continuity		Policy is to be followed by latest scholarship: comprehensive, anticipatory, cross-sectoral and transboundary, knowledge and evidence-based, inclusive, sustainable	"A risk-aware and prepared population is a crucial component of disaster resilience because individuals and communities are often the first affected and the first to respond to disasters"	"Particular attention was paid to the specific needs of vulnerable groups in the establishment of the Union disaster resilience goals. Their needs should be taken into account in the implementation and review of the Union disaster resilience goals"	Policies must be guided by 5 communicative actions: Anticipate, prepare, alert, respond, secure; "Member States should enhance their public warning systems to allow better risk, emergency and crisis communication"	"Public awareness of risks and sufficient knowledge of how to prevent, prepare for and respond to disasters greatly reduce the negative consequences of disasters"	Cooperation must encompass national, sub-national, cross-border, and cross-sectoral levels	Recommendation: Disaster risk planning should incorporate all potential "nature-based solutions"
Culture and Heritage							Disaster resilience policies must strive to "foster a culture of risk prevention"	Resilience-preparedness work must henceforth include "experts on cultural heritage"	

Figure 10. Policy analysis: European Union Disaster Resilience Goals 2023

6.
European Union Peer Review Programme

The "European Union Peer Review Programme" is a framework for rigorously assessing current DRM practices and the state of crisis preparedness across the EU. The programme has produced relevant reports on Portugal and Türkiye (where two CORE labs are situated) as well as a report on the global state of wildfires. These reports are especially relevant to the SyRI frameworks "Active memory", "Adaptive governance", "Health and Wellbeing", and "Socioeconomic resilience" and to all CORE labs. The reports highlight, for instance, the importance of Portugal's rich cultural heritage, and the imperative of harnessing the potentialities of traditional practices in mitigating climate change and disasters.

The reports variously discuss and cover aspects of disaster planning, communication strategies, and research results, and as such will prove interesting to WPs 2, 3, 4, and 6.

Title: *European Union Peer Review Programme*	Type summary: *Peer-Review Programme*	Content summary: *Documents review crisis plans of EU countries and assorted risk scenarios*	SyRI-relevancies: *Active memory; Adaptive governance; Health and wellbeing; Socioeconomic resilience*	DMC references: *All*	Explicit crisis scenarios mentioned: *Wildfires (specific report, 2023)*	CORE/s mentioned: *Portugal (country report, 2019); Turkey/Türkiye (country report, 2015)*	Date of issue/launch: *2015*		Quotes from: *PT report 2019; TR report 2015; Wildfires report 2022*
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	"The community should understand the concept and the importance of fuel management and should be actively engaged in reducing fuel load." (Wildfires report, p. 45)	"Nature Based Solutions, such as traditional grazing, forestry practices and crop mosaic should be encouraged." (Wildfires report, p. 44)	National and sub-national policies should establish "holistic and cross-sectoral governance frameworks" and ensure a "whole-society approach" (Wildfires report, p. 26)		Crisis-pertinent policies and standards must be improved with future scenarios in mind, e.g. improved woodland-urban interface management, improved socioeconomic conditions, etc. (Wildfires report, p. 26)		"The 'train the trainer' principle helps to spread a culture of resilience", i.e. experts training community leaders (teachers, religious leaders, police, etc.). (TR report, p. 14)	"Public-private partnerships should be established in the field of wildfire risk management and reduction." (Wildfires report, p. 28)	In successful DRM, "[t]raditional and local knowledge complements scientific knowledge in the development and implementation of policies, plans and programs." (TR report, p. 64)
Disaster and Risk Management	A "holistic, multi-risk, cross-sectoral approach" is crucial to systemic resilience, e.g. one identifying linkages between key sectors and industries.	Rigorous research on local human-environmental linkages is requred to prevent wildfires; such research should entail "[c]lose cooperation between scientists, policymakers, local authorities, first responders, and civil society." (Wildfires report, p. 26)	Fighting wildfires, must entail the "systematic alignment of [DRR], [CC] adaptation [SDGs] efforts." (Wildfires report, p. 26)	"Special attention must be given to vulnerable groups" in DRM planning, especially focussing on "women, children, the elderly, the disabled, the low-income population, and tourists/migrants/non-local people unaware of risk and not linguistically proficient." (Wildfires report, pp. 32-33)	"Awareness campaigns should be tailored to different target audiences (e.g. citizens, tourists, the disabled)." (Wildfires report, p. 46)	"Wildfire risk scenarios and maps should be publicly accessible and reusable in new studies. Risk assessment outcomes and information should be comprehensive and ready to use for operational purposes (such as land use, urban planning and contingency planning). […] The results should be communicated in an understandable way to each target audience" (Wildfires report, p. 34)	"A process of co-creating wildfire risk knowledge with the population should be promoted. Action should be taken against misinformation." (Wildfires report, p. 47)	Successful DRM must entail "horizontal and vertical cooperation and coordination among stakeholders" and must consider "environmental, cultural, socio-economic, and political interactions." (Wildfires report, p. 26)	"A new culture related to wildfires should be promoted in local communities, linked to such cultures of the past, aimed at heightening awareness of fire regimes." (Wildfires report, p. 47)
Culture and Heritage	Special attention should be paid, in Portugal, to the "rich cultural heritage of the country." (PT report, p. 68)		"The inclusion of traditional fire knowledge in prevention activities is highly recommended for effective risk reduction that protects landscapes and cultural values." (Wildfires report, p. 44)						"Local knowledge should be considered while drafting [DRM] plans." (Wildfires report, p. 39)

Figure 11. Policy analysis: European Union Peer Review Programme

7.
European Union - Protecting the Cultural Heritage from Natural Disasters

The document "Protecting the Cultural Heritage from Natural Disasters" aligns with the SyRI aspects "Active Memory", "Social Interaction and Inclusiveness", and "Socio-Economic Resilience". It underscores community engagement, inclusivity, economic value of heritage assets, cooperation, education, and crisis communication, integral for cultural resilience. This is relevant for the investigation of CORE labs in Portugal, Greece, and Belgium. It also connects with Work Package 2 (Modelling behaviours), focusing on managing community behaviours in crises, especially Task 3.1 and 3.2 of WP3, emphasizing crisis communication. The importance of community-based approaches links it the WP4. The emphasis on building awareness and resilience also aligns it with WP6.

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

8.
Global Facility for Disaster Reduction and Recovery Guide to Developing Disaster Recovery Frameworks

The “Guide to Developing Disaster Recovery Frameworks” offers important information to support policymakers and other stakeholders in developing a comprehensive framework for medium- to long-term post-disaster recovery. This framework serves as a valuable resource for shaping the recovery vision, outlining the recovery strategy, prioritising actions, refining planning, and offering guidance on financing, implementation, and monitoring throughout the recovery process.

The guide can be associated with CoreLabs in Türkiye (Izmir-Karsiyaka) and Greece (Crete) as it focusses on adaptive governance, particularly in the context of post-disaster recovery, specifically earthquakes and floods. Given its emphasis on socio-economic resilience for post-disaster processes, it is also linked to the SYRI framework within this concept.

In the scope of recommendations focussing on crisis preparedness and the development of the institutional framework for recovery, it is directly related to WP2. The suggestions it provides for managing the post-disaster process are also compatible with WP4. Additionally, the proposals for developing strengthening systems at the national and local levels for recovery processes, as well as recommendations for policymaking and strategy determination for recovery, will support WP6.

Title: *Global Facility for Disaster Reduction and Recovery Guide to Developing Disaster Recovery*	Type summary: *Disaster Recovery Framework; Defining the recovery framework for post-disaster recovery*	Content summary: *Complements PDNAs or similar assessments as a tool to program and plan the recovery.*	SyRI-relevancies: *Adaptive Governance, Socio-economic Resilience*	DMC references: *Recovery*	Explicit crisis scenarios mentioned: *Flood; Earthquake*	CORE/s mentioned: *None*	Date of issue/launch: *2015*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	To inform the development of sectoral recovery programs and projects, the following survey/assessment may be carried out:Social Risks and Vulnerability Survey/Assessment. That assists in identifying vulnerable disasteraffected persons.(page 19)	Economic and Livelihood Survey can be carried out in order to Assists in the adequate resumption of economic activities and livelihoods for beneficiaries of the land use and physical plans. (page 19)	The recovery framework should be backed by the country's highest political and policy-making levels as well as by its planning and financial institutions. The framework requires high-level consensus building around the key cross-cutting operating principles and program-level performance benchmarks of multisectoral recovery.(page 18)		Recovery plans should include Potential for direct and widest humanitarian impact and Pro-poor, pro-vulnerable, and gender-sensitive agendas. Many disaster recovery programs include the provision of direct livelihood support, income generation opportunities, improved access to finance and microcredit, and new skills training. Governments also subsidiz or facilitate the reconstruction of private assets, such as housing and local business enterprises. ... governments cannot substitute for private insurance				
Disaster and Risk Management						For the internal partnes: Examples are a dedicated internal information-sharing website that includes access to the M& E database, peer dialogues among government agencies, focus group discussions with communities, or policy dialogues with donors. Such information-sharing can contribute to the transparency of recovery, build credibility and consensus on recovery goals, and identify coverage gaps and project overlaps. (page:55)		Recovery process's needs Assessment of Human Resource Capacity and Specialist Skills Required before disaster happens	
Culture and Heritage									Community defines as a " social group of any size whose members reside in a specific locality, share government, and often have a common cultural and historical heritage." in report. (page 80)

Figure 12. Policy analysis: Global Facility for Disaster Reduction and Recovery Guide to Developing Disaster Recovery Frameworks

9.
ICCROM Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis

The ICCROM-issued document “Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis” highlights three SyRIs:

The first is Adaptive Governance, which is supported by the document's emphasis on integrating cultural heritage into emergency response systems and the creation of inclusive policy frameworks. This aligns with tasks from various work packages, including

WP1: Building a Knowledge Baseline, WP2: Modelling behaviours, WP4: Community-based approaches, and specifically WP4.1: Identification of citizens, first responders, local authorities' expectations and needs

The second is Active Memory, drawn from the document's focus on the role of cultural traditions in building resilience. Tasks related to this concept can be found in WP2: Modelling behaviours and WP4: Community-based approaches, particularly WP4.2: Engaging citizens in civic resilience commitment.

Finally, the third is Social Interaction and Inclusiveness, which is evident in the document's strong advocacy for inclusivity and community engagement in preserving cultural heritage. Tasks that most closely align with this SyRI are within WP4: Community-based approaches, specifically WP4.3, and WP5: Validation of RESILIAGE digital tools and soft-solutions, which includes tasks WP5.1, WP5.2, and WP5.3.

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

10.
ICCROM-UNESCO - Managing Disaster Risks for World Heritage

This guide is concerned not only with protecting the property from major hazards but also with reducing underlying vulnerability factors, such as lack of maintenance, inadequate management, progressive deterioration, or ecosystem buffering that may cause hazards eventually to become disasters. It aims to help the managers and management authorities of cultural and natural World Heritage properties to reduce the risks to these properties from natural and human-made disasters, illustrate the main principles of Disaster Risk Management (DRM) for heritage and a methodology to identify, assess and mitigate disaster risks. It offers a framework on how to prepare a DRM plan to protect World Heritages.

It covers all the phases of DRM (prevention, preparedness, response, recovery, mitigation) for heritage sites as well as all hazard types including human induced (armed conflict, etc.), biological, astrophysical besides climate change, meteorological or geological ones. The case studies in the document are also pretty diverse covering, earthquakes, volcano eruptions, oil spills, floods, etc.

Specific emphasis on heritage and a holistic plan from preparedness to mitigation makes the document an important source for Task 6.1 Preparedness planning and Task 6.2 policy recommendations on Heritage.

The case studies in the guideline can be searched and used for the preparedness plan or other tasks

Title: *ICCROM-UNESCO - Managing Disaster Risks for World Heritage*	Type summary: *Building capacity for disaster preparation for heritage*	Content summary: *DRM plans, what are the risks of world heritage may face, identifying*	SyRI-relevancies: *Adaptive governance*	DMC references: *Preparedness; Response; Recovery; Mitigation*	Explicit crisis scenarios mentioned: *All climate related risks and*	CORE/s mentioned: *None*	Date of issue/launch: *2010*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management			Disaster Risk Management Cycle and characterisitcs of a DRM plan explained.					the DRM plan for the heritage property should be integrated with the existing plan and procedures for site management. Local, national, internaitonal level stakeholders need to be involved	
Culture and Heritage		Local communities of the heriatege sites are important stakeholders within the DRM Plans	Important points are emphasized like; the plan for the heritage site would establish a system for coordinating the individual plans for each property, envisaging common activities and procedures for all the properties.			The prevention and mitigation measures require coordination among various staff members and departments responsible for managing the property as well as contact with outside agencies and experts in relevant fields.			

Figure 13. Policy analysis: ICCROM-UNESCO - Managing Disaster Risks for World Heritage

11.
ICCROM-UNESCO - Risk Preparedness: A Management Manual for World Cultural Heritage

The manual is about the risk preparedness for Heritage Sites. There are specific sections for what can be done at site level and national level. There are also specific sections for fire, earthquakes, flooding, armed conflict and other hazards. In that sense the document is relevant for all the CORE labs except Karsiyaka.

Each hazard section has suggestions for preparedness strategies, response and recovery. The document offers indicative matrixes to preparedness, response and recovery faces for site, municipal, regional and national levels. Although the hazards covered does not match with Karsiyaka the document can feed the adaptive governance related with Karsiyaka case.

Title: *ICCROM-UNESCO - Risk Preparedness: A Management Manual for World Cultural Heritage*	Type summary: *Guideline*	Content summary: *Document is intended for property managers to develop a property risk-preparedness plan for various hazards and for different*	SyRI-relevancies: *Adaptive governance*	DMC references: *Emphasis on preparedness but also mentions response and recovery*	Explicit crisis scenarios mentioned: Floods, Earthquakes, Fire	CORE/s mentioned: *Here, list any COREs the document mentions*	Date of issue/launch: *1998*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management									
Culture and Heritage						Communication with occupants, local officials (depending on the hazard) emphasized for each hazard.	Chapters starting from 5 has specific hazards starting with fire, earthquakes, flood, armed conflict and others. For each hazard guidelines given for prevention strategy, response plan,		

Figure 14. Policy analysis: ICCROM-UNESCO - Risk Preparedness: A Management Manual for World Cultural Heritage

12.
ICOMOS - Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors

The document “Heritage and the SDGs - Policy Guidance for Heritage and Development Actors” discusses how cultural, natural, tangible, and intangible heritage might help achieve the UN Sustainable Development Goals. This is particularly relevant with the SyRI labels of ‘Adaptive Governance’ and ‘Social Inclusiveness and Interaction’ because the documents emphasise that heritage contributes to social cohesion, socio-economic regeneration, poverty reduction, region attractiveness and creativity, and long-term tourism benefits.

Heritage advocacy and awareness in sustainable development align with WP4, emphasising using heritage to promote social cohesion and discourse, heritage education and training for sustainable development. As a thorough framework for heritage integration into sustainable development policies and best practices, the publication is pertinent to WP6’s methodologies and best practices for policy creation and evaluation.

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

13.
ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage

The “ICOMOS-IFLA PRINCIPLES-CONCERNING RURAL LANDSCAPES AS HERITAGE” stresses rural landscapes as part of humanity's history. Landscapes are dynamic living systems that include agriculture, culture, and human-nature interaction. This publication is relevant to SyRI aspect “Adaptive Governance” since it stresses rural

landscapes' multi-functionality, which can benefit the economy, society, culture, and environment. It emphasises the role of heritage in recognising, maintaining, and promoting rural landscapes, supporting sustainable management and conservation measures that balance economic, social, and environmental factors.

The function of rural landscapes in safeguarding community identity and cultural heritage makes this document relevant to WP2's 'Social Support and Community Restoration' section. These principles recognise and preserve rural landscapes' uniqueness and cultural significance and encourage rural support. Moreover, the document's ideas for protecting and maintaining rural landscapes can be used to develop and evaluate applicable policies that meet WP6's best practices and policy assessment goals.

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

14.
Intergovernmental Panel on Climate Change Special Report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

The "IPCC Special Report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" is the IPCC's flagship report on the state of practice and state of research pertaining to disaster management. It is of particular relevance to the SyRI aspects "Adaptive Governance" and "Socio-economic resilience". It is therefore of particular relevance for the investigation of the CORE labs in Türkiye and Belgium. The reasons for this relevance include the document's consistent emphasis on the significance of learning from and adapting to crisis scenarios and disaster events, as well as the imperative of designing and planning DRM strategies with economic development, sustainability, and inclusivity in mind.

The report's recommendations on improving resilience strategies and integrating socioeconomic aspects into DRM planning makes the policy particularly relevant to work within WP4 (Community-based approaches).

Title: *Intergovernmental Panel on Climate Change Special Report: Managing the Risks of Extreme Events*	Type summary: *Report*	Content summary: *State of the art summary of DRM*	SyRI-relevancies: *Adaptive governance; Socio-economic resilience*	DMC references: *All*	Explicit crisis scenarios mentioned: *All*	CORE/s mentioned: *All*	Date of issue/launch: *2014*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change		The "balance of argument calls for […] emphasis to be placed on the inclusion of local and lay voices and of diverse stakeholders in shaping agendas for resilience through adaptation and adaptive management." (p. 453)	"Learning processes are central in shaping the capacities and outcomes of resilience in disaster risk management, climate change adaptation, and sustainable development." Should include processes of "monitoring, research, evaluation, learning, and innovation." (p. 439)		LL: Successful sustainability policy and "development visions" must be integarated with plans to improve "livelihoods and well-being in poor and marginalized communities." (p. 439)	"A lesson identified by many case studies was that effective DRR education contributes to reduce risks and losses." (p. 529)	"Post-disaster recovery and reconstruction provide an opportunity for reducing weather- and climate-related disaster risk and for improving adaptive capacity. […] An emphasis on rapidly rebuilding houses, reconstructing infrastructure, and rehabilitating livelihoods often leads to recovering in ways that recreate or even increase existing vulnerabilities, and that preclude longer-term planning and policy changes for enhancing resilience and sustainable development." (p. 10)	CC and DRM planning must include actors' "capacity to reconcile short- and long-term goals", cooperative "flexibility, innovation, and learning, locally and across sectors" and a "long-term commitment to managing risk and uncertainty and promoting risk-based thinking." (p. 469)	"Values and perceptions are important in influencing action on climate change" (p. 446); "value frameworks can significantly influence the types of responses to climate and weather extremes." (p. 447)
Disaster and Risk Management	"The most effective adaptation and disaster risk reduction actions are those that offer development benefits in the relative near term, as well as reductions in vulnerability over the longer term." (p. 439)	LL: "Data on disasters and disaster risk reduction are lacking at the local level, which can constrain improvements in local vulnerability reduction" (p. 10)	"Closer integration of disaster risk management and climate change adaptation, along with the incorporation of both into local, sub-national, national, and international development policies and practices, could provide benefits at all scales." (p. 11)	"Inequalities influence local coping and adaptive capacity, and pose disaster risk management and adaptation challenges from the local to national levels." (p. 10)	LL: Vulnerabilities are "generally the outcome of skewed development processes such as those associated with environmental degradation, rapid and unplanned urbanization in hazardous areas, failures of governance, and the scarcity of livelihood options for the poor. […] Countries more effectively manage disaster risk […] [by] targeting vulnerable areas and groups." (p. 10)	"Technologies only matter if they are both appropriate and accessible." (p. 448)	"Risk sharing and transfer mechanisms at local, national, regional, and global scales can increase resilience to climate extremes." (p. 10)	Good DRM requires "Innovative, reflexive, and transformative leadership" and "Adaptive, responsive, and accountable governance." (p. 469)	The "balance of argument calls for […] emphasis to be placed on the inclusion of local and lay voices and of diverse stakeholders in shaping agendas for resilience through adaptation and adaptive management." (p. 453)
Culture and Heritage			"Building a strong foundation for integrating disaster risk management and adaptation to climate change includes making transparent the values and interests that underpin development, including who wins and loses from current policies and practices, and the implications for human security." (p. 440)		"A prerequisite for sustainability is addressing the underlying causes of vulnerability, including the structural inequalities that create and sustain poverty and constrain access to resources." (p. 440)	General LL from IPCC case studies: importance of sharing "knowledge and information, including observational and monitoring systems." (p. 489)		LL: Risk information must be shared and analysed before disaster occurs – and early warnings must be developed (p. 489)	

Figure 15. Policy analysis: Intergovernmental Panel on Climate Change Special Report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

15.
OpenDRI – Open Data for Resilience Initiative

This guide covers topics such as the data required for the transition to OSM (open street map), how to manage the process, data collection processes, digital mapping, and issues to be considered. Four case studies summarise what has been lessons learned. One of the case studies is related to an earthquake (Haiti), while the other focusses on

a flood (Sri Lanka), both have similar disaster risks with RESILIAGE CORE labs in Türkiye (Karsiyaka) and Greece (Crete).

This guide offers a comprehensive understanding of the design and implementation of an Open Cities mapping project – for both practitioners in the field and those interested in a higher-level understanding of the process.

It comprehensively addresses the establishment of mapping systems that could be beneficial for disaster risk reduction and post-disaster recovery processes, focussing on the detailed infrastructure for data collection and management. In this regard, it is associated with WP1 and WP2.

In the document, several platforms and projects are referenced that contribute to the strengthening of technical and scientific capacity, as well as the development or improvement of disaster preparedness policies. This section will provide support to WP6.

Improving data management, creating disaster risk models, and mitigating disaster risks are related to adaptive governance and health and well-being within the SyRI Framework.

Title: *OpenDRI – Open Data for Resilience Initiative*	Type summary: *This guide covers topics such as the data required for the transition to OSM (open street map), how to*	Content summary: *This guide offers a comprehensive understanding of the design and implementation of an Open Cities*	SyRI-relevancies: *Adaptive governance*	DMC references: *Disaster Reduction and Recovery*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2014*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	As urban populations and vulnerability grow, managing urban growth in a way that fosters cities' resilience to natural hazards and the impacts of climate change becomes an ever-greater challenge that requires detailed, up-to-date geographic data of the built environment. To meet this challenge requires innovative, affordable, precise, open, and dynamic data collection and mapping processes that support management of urban growth and disaster risk. (page 12)	Anyone who actively contributes to OpenStreetMap in a given country or region is part of that community. In active communities, mappers communicate with each other often, plan mapping events, and collaborate on OSM development. In quieter communities, mappers communicate less but contribute for their own personal reasons. Active, vibrant communities are the most productive and sustainable, but no matter what the local OSM user base looks like, there are always possibilities to engage.						Designing and executing Open Cities projects is a complex task that involves a great deal of coordination with partners, technical and scientific work, team and volunteer coordination and management, and logistical work.	
Disaster and Risk Management									
Culture and Heritage									The processing of cultural heritage items on digital maps is important for preparedness plans. Local NGO in DHAKA open street map project focused on heritage preservation. (page 27)

Figure 16. Policy analysis: OpenDRI – Open Data for Resilience Initiative

16.
Red Cross Approach to Resilience

The “Red Cross Approach to Resilience” forms the institutional baseline around which the International Committee of the Red Cross – the world’s premier humanitarian organisation – conceptualises resilience on local, national, and international level. The approach continuously underlines the importance of accounting for local context, of prioritising the needs of vulnerable persons and groups, and of cross-actor and cross-sector cooperation.

Despite its brevity, the document may prove an interesting reference point when considering the SyRI framework “Health and Wellbeing”, and when considering the CORE lab of Norway (not least on account of the latter seeing local representation by the Trondheim Red Cross chapter).

Title: *The Red Cross Approach to Resilience*	Type summary: *Guideline*	Content summary: *Summary of the institutional approach to resilience as adopted by the Red Cross*	SyRI-relevancies: *Health and Wellbeing*	DMC references: *All*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2014*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	Effective resilience plans must recognise "interconnectedness between preparedness, relief, and recovery to build longer-term, sustainable outcomes. It is therefore a multi-sectoral process that involves multiple actors requiring strong coordination."	Resilience plans must "respect local ownership" and maintain ong-term planning perspectives.						Cross-sector cooperation must be encouraged in resilience planning. "Community safety and resilience cannot be achieved by a single actor".	
Disaster and Risk Management		Features of resilient communities include: 1. knowledgeable and healthy population; 2. organised groups; 3. connected populations; 4. working infrastructure and services; 5. sustainable livelihoods; 6. effective natural-asset management.		A primary credo of resilience planning should be: "Put people first".	The most vulnerable must always be prioritised in resilience planning.				
Culture and Heritage		The Red Cross pledges to organise resilience activities at community level, national level, and in fragile societal contexts.							

Figure 17. Policy analysis: Red Cross Approach to Resilience

17.
Red Cross Minimum Standards for Local Climate-Smart Disaster Risk Reduction

The “Red Cross Minimum Standards for Local Climate-Smart Disaster Risk Reduction” is a guideline especially concerned with climate-related risks and resilience of communities. It is of particular relevance to the SyRI aspect “Adaptive Governance”, “Active Memory” and “Social interaction and inclusiveness” with emphasis on local communities and recommended cooperation with civil society organisations/local governments. The document takes into account all different climate patterns that differ from previous years norm.

The Minimum Standards for local climate-smart disaster risk reduction were developed as a practical checklist to help local community leaders and DRR practitioners ensure their risk reduction efforts are climate-smart and contribute to climate change adaptation, meaning that these efforts consider the future risk patterns induced by a changing climate, often including rising uncertainties. The Minimum Standards are not idealised solutions but rather practical approaches to implement DRR activities in a way that is achievable by communities with relatively limited external support.

There are two tables; first, one emphasising climate smart DRR activities at community level while the other for national and provincial civil society organisations or relevant local government authorities. The reference document addressed in the paper is not valid but the report can be found at the link here: https://www.ifrc.org/sites/default/files/MinimumStandardsforlocalclimate-smart-drr.pdf.

For communities, it is emphasised to have a cooperation with a trustworthy knowledge institution to be informed about recent forecasts to be able to activate contingency plans on time. It is important for the community to develops a longer term risk reduction plan to address key risks, including potential long-term adaptation needs to gradual, certain changes.

Its emphasis on coordination between CSO's, knowledge institutions and communities makes the policy particularly relevant to work within WP2 (risk awareness, community risk assessment, co-mapping community resilience). Additionally the policy is related within WP4 (community resilience). Moreover, practices from different countries in are mentioned and referenced throughout the document, which means it will support WP6 preparedness plan tasks with recommendations and applications (T6.1).

Title: *Red Cross Minimum Standards for Local Climate-Smart Disaster Risk*	Type summary: *Checklist for local community leaders and DRR practitioners*	Content summary: *Ensurance that DRR activities comply with adaptation efforts*	SyRI-relevancies: *Adaptive governance; social inclusion*	DMC references: *Preparedness; Response*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *Climate-related risks*	Date of issue/launch: *2013*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	Community needs to be aware of changes in weather patterns, and recognizes the risks in the future; understand locally available wheather info and knows appropriate actions, have connections with a relevant CSOs. Resilience must be coupled with sustainability principles at its core.	CSOs need to understand the information regarding projections and close relationship with the	Local community as a whole is in the centre of the guideline.	CSOs establish collaboration with knowledge institutions and organizations to ensure adaptation support to vulnerable groups	CSO's are active in realizing the communication with producers of forecasts and communities.		Active relation with CSOs and communities are essential for the community to understand the scientific background of the projection		
Disaster and Risk Management	Union and members should engage in stress test scenarios to test business continuity								
Culture and Heritage									

Figure 18. Policy analysis: Red Cross Minimum Standards for Local Climate-Smart Disaster Risk Reduction

18.
UNDP Post-Disaster Needs Assessment

This guide, issued by the United Nations in collaboration with the European Union and the World Bank, offers a practical, action-oriented, and user-friendly approach specifically designed to enhance post-disaster processes, with a particular focus on

critical areas. It presents common minimum standards regarding quality, reliability and inclusiveness; facilitates quick decision-making and action by stakeholders; provides a predictable and coherent approach to assessment and planning; contributes towards producing an objective and comprehensive estimate of recovery needs; contributes towards an efficient professional response by the international community; contributes to a more cost-effective approach by working towards coordination, reducing overlaps; improves the credibility of assessments and recovery strategies; improves financing opportunities for recovery and reconstruction.

Within this context:

- It contributes to a more cost-effective approach by actively working on coordination to reduce overlaps (WP2-WP4);
- It facilitates swift decision-making and action by stakeholders (WP2-WP4);
- It ensures a predictable and consistent approach to assessment and planning, thereby increasing the reliability of improvement strategies (WP6).

In line with these objectives, the guide will support to WP2-WP4 and WP6, aligning it with adaptive governance in the SyRI Framework. The improvement strategies outlined for flood and earthquake disasters within it will contribute to the decision support systems developed for CORE labs in Türkiye (Karsiyaka) and Greece (Crete).

Title: *UNDP Post-Disaster Needs Assessment*	Type summary: *Guidelines*	Content summary: *At its core, the PDNA consists of four main elements: 1) PRE-DISASTER CONTEXT*	SyRI-relevancies: *Adaptive governance*	DMC references: *Recovery*	Explicit crisis scenarios mentioned: *Flood, earthquake*	CORE/s mentioned: *None*	Date of issue/launch: *2013*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	A people-centered approach to post-disaster assessment and recovery focuses on the following elements: - The human development impact of disasters. - The distinct needs and priorities of women, girls, boys and men of all ages and sub-groups of the affected populations through stakeholder engagement. - The participation of affected stakeholders in their own recovery process. - The recognition and support to the spontaneous recovery efforts of the affected population. - The consideration of social-cultural aspects of disaster recovery in addition to economic imperatives. - The measures to build resilient communities and societies. (page 19)	The recommendation is "the improvement of societal capacities to mitigate and adapt the effects of climate change, to reduce vulnerability that disasters pose to socioeconomic development" (page 37)						The Guide will be accompanied by protocols of cooperation for effective coordination between the United Nations, the World Bank and the EU in support of nationally-owned recovery needs assessment and planning processes. (page 118)	
Disaster and Risk Management			Governance and decision making processes: assessment of the disaster effects on social and decision making processes including people's ability to exercise their citizenship and priority development policy objectives. (page 20)		- Focus on the most vulnerable and most affected. - Restore capacities and capabilities. - Rebuilding people's livelihoods. - Supporting spontaneous recovery processes. (page 37)				
Culture and Heritage									

Figure 19. Policy analysis: UNDP Post-Disaster Needs Assessment

19.
UN Habitat III Issue Paper 4 – Urban Culture and Heritage

The “Habitat III Issue Paper 4 - Urban Culture and Heritage” discusses the integration of culture into urban development, the impact of cultural and creative industries on urban economies, urban heritage conservation challenges and opportunities, and growing threats to urban cultural heritage. This document is relevant to SyRI’s “Economic Resilience” and “Adaptive Governance” because it explores the impact of cultural and creative industries on the urban economy, urban heritage preservation difficulties and opportunities, and mounting threats to urban culture and heritage.

Title: *UN Habitat III Issue Paper 4 – Urban Culture and Heritage*	Type summary: *BP-Research Documents*	Content summary: *Research of culture and heritage*	SyRI-relevancies: *Active memory; Adaptive governance; Social inclusiveness and interaction*	DMC references: *All*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2015*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	The development of sustainable cultural tourism can also be a catalyst for revenue generation to upgrade urban infrastructure, especially in developing countries.(P5)								Culture is now recognized as a key resource and asset for sustainable urban development.(P2)
Disaster and Risk Management									
Culture and Heritage	Protecting this heritage is therefore a key security issue and heritage recovery, in postconflict situations, becomes an essential source of resilience for local communities.(P4)	Heritage conservation processes can serve as vectors for dialogue and inclusion, for different urban communities or social groups to build a consensus on the value of their common heritage and create a sense of belonging in the respect of their diversity.(P5)	The conservation of urban heritage is promoted as a key strategy for cities.(P6)		Gentrification processes in historic areas can also lead to exclusion of the vulnerable communities who are the historic dwellers of these areas and the repositories of their memory.(P4) Social inclusion of disadvantaged groups, particularly in the redevelopment of urban areas and cultural spaces, can be facilitated through wider recognition of their cultural identity. Vocational training programmes for artists and cultural practitioners are developed for vulnerable populations, particularly women and youth working in the cultural and creative industries, in order to upgrade traditional skills and facilitate access to world markets.(P6)		Protecting this heritage is therefore a key security issue and heritage recovery, in postconflict situations, becomes an essential source of resilience for local communities.(P4)		Urban heritage comprises urban elements (urban morphology and built form, open and green spaces, urban infrastructure), architectural elements (monuments, buildings) and intangible elements.(P1.5)

Figure 20. Policy analysis: UN Habitat III Issue Paper 4 – Urban Culture and Heritage

20.
UN Habitat III Issue Paper 15 – On Urban Resilience

The issue paper published for Habitat III on urban resilience aims to contribute to the goals of the New Urban Agenda by improving understanding of the drivers of urban resilience, enable a city system to withstand and recover quickly from multiple and varied shocks and stresses, and improve its performance over time. The “Urban Resilience” is particularly relevant for “Adaptive Governance” framework that is very much related with CORE lab in Türkiye.

The paper emphasises the cooperation of different sectors/areas to have related policies, plans, programs, processes and investments in urban resilience. Disaster loss data, risk assessments and climate change projections are fundamental tools for guiding plans and investments and identifying opportunities for transformative action. The document has references to many platforms and projects that help strengthen technical and

scientific capacity as well as developing or improving policies which can be used within the context of WP6 capacity building, policy recommendations and preparedness planning guideline tasks.

It also emphasises the role of new technologies and digital tools in preserving urban heritage and promoting cultural industries, particularly the use of digital platforms for community participation and cultural expression in urban development, making it relevant to WP3. The publication also provides best practices and recommendations for culture-based urban regeneration, including mixed urban development and heritage preservation, making it relevant to WP6.

Title: *UN Habitat III Issue Paper 15 – On Urban Resilience*	Type summary: *Checklist for local community leaders and DRR practitioners*	Content summary: *Trying to make sure DRR activities comply with adaptation efforts*	SyRI-relevancies: *Adaptive governance; Social inclusion*	DMC references: *Preparedness; Response*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *Climate related risks (all RESILIAGE risks except earthquakes)*	Date of issue/launch: *2015*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change		Leveraging city planning instruments to reduce existing risk and prevent creation of new risks and at the same time prepare for climate and disaster risk (increase technical, scientific capacity to increase knowledge as well as government officials							
Disaster and Risk Management	Urban resilience encourages attention to a wider range of shocks and stresses and seeks to understand how these affect urban systems. It also seeks to leverage knowledge of risk, exposure and vulnerability in order to identify opportunities for transformational development.		Resilience concept in the field of DRR effectively expanded focus from preparing for a disaster event to a wider perspective that considers how development decisions can affect exposure and vulnerability to multiple hazards over time through improved policies that are implemented and followed.		The impacts of disasters often exacerbate existing socioeconomic and environmental weaknesses in the urban system. The combination of shocks and recurrent or protracted stresses can push vulnerable populations into poverty keep them there	Disaster loss data, risk assessments and climate change projections, for instance, are fundamental tools for guiding plans and investments and identifying opportunities for transformative action.		promote coherence across systems, sectors and organizations Cooperation is crucial to have related policies, plans, programs, processes and investments in urban resilience is key for different sectors/areas	
Culture and Heritage									

Figure 21. Policy analysis: UN Habitat III Issue Paper 15 – On Urban Resilience

21.
UNESCO “Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention”

The "Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention" aims to align World Heritage practices with sustainable development principles, intertwining conservation efforts with socio-economic considerations for heritage sites. It underscores resilience to disasters and climate change through environmental sustainability and inclusive partnerships.

Strategies involve developing risk preparedness plans, integrating disaster risk management into reporting mechanisms, and offering capacity-building assistance. By prioritizing early warning systems and collaborating with stakeholders, the policy enhances disaster resilience. It highlights the potential of heritage sites, advocating for community-led initiatives and the preservation of cultural traditions. Education plays a crucial role in empowering communities, while partnerships between heritage institutions and disaster agencies leverage cultural resources to bolster resilience.

This policy is particularly relevant to the "Adaptive Governance" aspect of the SYRI framework. It emphasizes collaborative processes involving diverse stakeholders in disaster risk management, aligning with the framework's focus on inclusive decision-making. Through advocating for community involvement in all phases of disaster risk management and fostering dialogue among stakeholders and citizens, the policy empowers them as capable partners, promoting collective decision-making and inclusive planning processes. Ultimately, it strengthens community resilience by facilitating collaborative and innovative governance strategies, in line with the goals of the SYRI framework.

Within WP3, this policy provides valuable insights into leveraging cultural heritage for disaster resilience. It suggests incorporating heritage conservation efforts into disaster risk management plans, which aligns with the project's objective of integrating diverse sources of knowledge and solutions. In WP4, which aims to design community-centred solutions for disaster management and citizen engagement, this policy underscores the importance of community-led initiatives and the preservation of cultural traditions in enhancing resilience.

Title: *UNESCO "Policy for the Integration of a Sustainable*	Type summary: *Policy guideline*	Content summary: *The policy aligns World Heritage processes with*	SyRI-relevancies: *Adaptive Governance*	DMC references: *Response; Preparedness*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2015*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	- Enhancing social and economic resilience of local communities to disasters and climate change. - Promote environmental sustainability and responsible interaction with the environment to strengthen resilience to disasters and climate change	-Sustainable development initiatives should involve communities to ensure local benefits and long-term support for conservation efforts	- Community participation should be encouraged in decision-making processes related to World Heritage properties					- Inclusive partnerships with communities ensure conservation aligns with sustainable development goals	- Recognize the potential of World Heritage properties for reducing disaster risks and adapting to climate change through ecosystem services and traditional knowledge
Disaster and Risk Management	Enhancing social and economic resilience of local communities to disasters and climate change	- Develop and implement risk preparedness plans for World Heritage properties, integrating local communities and stakeholders.	- Include disaster risk management considerations in the periodic reporting process for World Heritage properties			- Provide capacity-building support to local communities and authorities for disaster risk reduction and response - Promote the use of early warning systems and emergency response mechanisms for World Heritage properties		- Establish partnerships with relevant stakeholders and organizations to enhance disaster resilience for World Heritage properties - Foster partnerships between cultural heritage institutions and disaster management agencies to enhance resilience	Recognize the potential of World Heritage properties for reducing disaster risks and adapting to climate change through ecosystem services and traditional knowledge -
Culture and Heritage	- Facilitate community-led initiatives to safeguard and revitalize cultural traditions, promoting social cohesion and resilience	- Community involvement is vital for effective conservation and management of heritage sites - Local communities contribute traditional knowledge and practices to conservation efforts - Education and awareness programs should empower communities to take an active role in preserving their cultural and natural heritage						- Foster partnerships between cultural heritage institutions and disaster management agencies to enhance resilience	- Encourage the use of cultural heritage resources for education and awareness-raising on disaster risk reduction - Support the documentation and preservation of intangible cultural heritage as a means to strengthen community resilience

Figure 22. Policy analysis: UNESCO "Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention"

22.
UNESCO Thematic Indicators for Culture in the 2030 Agenda for Sustainable Development

The "UNESCO Thematic Indicators for Culture in the 2030 Agenda for Sustainable Development" is relevant to multiple SyRI aspects. For "Adaptive Governance", it emphasizes the importance of engaging diverse stakeholders, developing inclusive policies, and promoting cooperation in cultural heritage management, aligning with the objectives of WP4 and directly relevant to WP6. It also supports the "Health and Wellbeing" SyRI aspect by emphasizing how cultural heritage can foster social cohesion, community empowerment, and well-being, making it relevant to tasks in WP4 and WP6, and aligning with task 2.5 in WP2. For the SyRI aspect "Social interaction and inclusiveness", the document's emphasis on social inclusion and the involvement of vulnerable groups aligns closely, making it particularly relevant for work within WP4 and

WP6, which focuses on developing policy recommendations that prioritize the needs and rights of vulnerable groups.

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

23.
United Nations Common Guidance on Helping Build Resilient Societies

The “UN Common Guidance on Helping Build Resilient Societies” represents the United Nations-issued guidelines for societal resilience-building. It is of particular relevance to the SyRI aspect “Adaptive Governance”, “Health and Wellbeing”, and “Social interaction and inclusiveness”. It therefore carries especial relevance for the investigation of the CORE labs in Türkiye, Norway, and Portugal. The reasons for this relevance include the policy’s continuously outlining the importance of harnessing existing local networks and solutions, engaging with and empowering vulnerable groups, and sensitivity to context-specific societal and cultural differences.

Its emphasis on planning and crisis preparedness makes the policy particularly relevant to work within WP2 (modelling behaviours). Because the policy represents current UN standards on resilience, it will prove a good reference for WP4 (improving training materials) and WP6 (policy recommendations).

Title: *United Nations Common Guidance on Helping Build Resilient Societies*	Type summary: *Guidelines*	Content summary: *The document seeks to synchronise resilience approaches across UN agencies and*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Social interaction and inclusiveness;*	DMC references: *All*	Explicit crisis scenarios mentioned: *Floods; Earthquakes*	CORE/s mentioned: *None*	Date of issue/launch: *2021*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	To ensure that climate- and risk data successfully supports societal resilience-building, said data "must be [analysed] in an inclusive and highly participatory, gender-sensitive manner that engages all key stakeholders […] to ensure that a full range of perspectives is considered and can inform the analysis." (p. 45)		"Resilience-building requires a multi-year approach that addresses immediate needs and at the same time the root causes of risk, poverty, vulnerability and human suffering. Resilience approaches must be flexible and sustained through well-calibrated and sequenced short-, medium- and long-term actions so that measures can be adjusted as new risks and hazards emerge and their impacts occur." (p. 38)	Resilience plans should encourage "resilient and sustainable livelihoods and 'climate-smart' practices, particularly for rural populations who largely depend on agriculture" (p. 27)	"Be accountable for pursing inclusive partnerships. […] It is crucial that all stakeholders be engaged to discharge their individual responsibility and jointly explore and reconcile a broad range of perspectives so that the resilience of the most vulnerable individuals and systems can be strengthened." (p. 37)			"Resilience must be built on active, free and meaningful participation form all stakeholders; comply with international and legal human rights norms and standards; be transparent; and promote equality and non-discrimination." (p. 37)	
Disaster and Risk Management		"Do no harm. […] Resilience-building is politically, socially, environmentally and culturally sensitive. Therefore, development, humanitarian and peace and security actors must minimize the harm that they may inadvertently do by being present and providing assistance. This includes ensuring that assistance does not increase risk, vulnerability and exposure and that building resilience in one community, system or country does not compromise resilience in another." (p. 37)		Societies should institute "build back better" plans to ensure future population protection; too, resilience strategies should include methods of "preventing, protecting against and controlling disease outbreaks, epidemics and pandemics through public health responses." (p. 27)	"Leave no one behind and reach those most in need and at risk in a gender-responsive manner." (p. 37)	Good resilience planning should include "strengthening risk monitoring, early warning and preparedness capacities to ensure that exposed populations are kept out of harm's way" (p. 27)	"Build on local and national capacities for ownership and leadership. […] Resilience is primarily about the capacity and agency of the people, communities, institutions and systems that are at risk. The success and sustainability of resilience-promoting support depends on the degree of ownership and leadership roles that the affected people, local and national governments and institutions, or systems assume." (p. 38)	"Act early to prevent. […] Emphasis on prevention includes sharing risk analyses and acting before events materialize as well as looking beyond quick-fix solutions to address the root causes of people's vulnerability and poverty and reducing their risks." (p. 38)	
Culture and Heritage	"Pursue context-specific and tailor-made approaches. […] Resilience-building will need to start from a broad and contextualized analysis of whole-of-society capacities, vulnerabilities and risks to anticipate how a system will respond when it comes under pressure." (p. 38)	Organisations should account for local context by establishing partnerships with local communities, including with "Government authorities", "People and communities", "Local and traditional leaders", "Women, girls and youth", "Regional entities", "Private sector", "International financial institutions and donors", "Academia, research institutes and think tanks", "Multi-actor initiatives, partnerships and alliances"			An "understanding of the political economy and underlying power relations that determine who and why some groups are more at risk, vulnerable and exposed to threats than others, as well as an accurate assessment of the cost of hidden contingent liabilities related to disaster risk, […] require[s] […] attention." (p. 46)		"Build on local and national capacities for ownership and leadership." (p. 13)		

Figure 23. Policy analysis: United Nations Common Guidance on Helping Build Resilient Societies

United Nations - Culture for the 2030 Agenda

"Culture for the 2030 Agenda" aligns with the "Health and Wellbeing" and "Active Memory" SyRIs.

The "Health and Wellbeing" SyRI emphasizes the importance of maintaining and promoting health in the face of cultural and societal challenges, making it highly relevant for the Trondheim CORE lab. The document's emphasis on the role of cultural heritage in promoting social cohesion, community resilience and peace-building aligns perfectly with this SyRI. This aspect is relevant to work within WP4, which focuses on community-based approaches for improving disaster management. Moreover, its emphasis on health as a key factor in resilience building makes it crucial for WP2 (Task 2.3) which investigates risk adaptation in pre-post crisis scenarios.

The "Active Memory" SyRI focuses on the preservation and revitalization of cultural heritage, making it highly relevant for the Naturtejo Geopark, Portugal CORE lab. The document's emphasis on the significance of cultural heritage as a source of identity, resilience, and social cohesion aligns perfectly with this SyRI. This aspect is particularly relevant to work within WP3. Moreover, as the preservation of cultural heritage is a key factor in sustaining the 'active memory' of a community, it is also relevant for WP5 (Task 5.3).

For enhanced readability, the policy analysis grid can be found in Annex 7.1.2.

25.
United Nations Global Assessment Report on Disaster Risk Reduction

The “UN Global Assessment Report on Disaster Risk Reduction” presents the current state of the art pertaining to disaster risk reduction. It is especially relevant to the SyRI frameworks “Adaptive governance”, “Health and Wellbeing”, and “Socioeconomic resilience” and therefore to the CORE labs in Türkiye, Norway, and Belgium. It stresses the imperative of integrating adaptive-management approaches and an attitude of learning while designing DRM plans, as well as the importance of flexibility and cooperation throughout all planning stages.

Its discussion of digital tools and their potential utility in disaster communication may be of interest to WPs 3, 4, 5, and 6.

Title: *United Nations Global Assessment Report on Disaster Risk Reduction*	Type summary: *Report*	Content summary: *Document outlines of resilience-building, delineates global deficits*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Socioeconomic resilience*	DMC references: *All*	Explicit crisis scenarios mentioned: *Earthquakes; Floods; Heatwaves; Wildfires*	CORE/s mentioned: *Greece*	Date of issue/launch: *2023*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	"Identifying resilience deficits […] helps policymakers move beyond using only economic growth as the primary indicator of progress." (p. 81)		SDG "indicators can […] be utilized as a tool to identify and quantify resilience deficits and the counterposed accelerator action that can build resilient sustainable development despite the complex future." (p. 81)		A key component of resilience includes the improvement of socioeconomic opportunities, to reduce underlying vulnerability. (p. 13)	Digital tools can be highly effective in communicating scale of social, economic, or ecological risk (p. 24).		"Improving the accessibility and quality of hazard and SDG-progress data can make a cost-effective contribution to improved risk management and climate change adaptation decision-making." (p. 81)	
Disaster and Risk Management	"Understanding risk is the bedrock priority of the Sendai Framework, from which other actions stem." (p. 77)		"Investing earlier in resilience and adaptation can avoid costs of hazard impacts, and save lives and money. Replacing destroyed crops, infrastructure and electricity transmission networks costs more than preventing disasters in the first place." (p. 81)	"The capacity of people and systems to withstand and adapt to shocks can be improved if the following three methods are pursued in parallel: facilitating learning and experimentation, building diversity and redundancy so several actors can perform the same or similar functions, and ensuring all actors are working collaboratively to address a common set of challenges." (p. 78)		"Adaptive management and learning are vital to maintaining the versatility needed to navigate through volatile, uncertain and changing circumstances. Optimizing performance requires continual testing and adapting of approaches based on impact and experience." (p. 78)		"Foster flexible and connected 'polycentric' governance: Polycentric governance occurs when several actors operate together to address a common set of problems." (p. 78) "Including multiple stakeholders increases resilience as it allows more people to participate, thus mobilizing society to take collective action to protect itself from common risks. Broadening participation requires more time and resources, but the intervention that is decided upon will have greater buy-in and the chances of it being sustainable will have improved." (p. 78)	
Culture and Heritage							Using climate data predictions, Greek policymakers included predictions in DRM planning; as such, investing in related infrastructure improvements has radically increased the resilience of Greek heritage sites.		Case study: a driver of Yemen's rising resilience include initiatives to restore traditional farming practices that do not exhaust the soil (p. 40).

Figure 24. Policy analysis: United Nations Global Assessment Report on Disaster Risk Reduction

26.
United Nations Guidelines on Defining Rural Areas and Compiling Indicators for Development Policy

In support of rural development initiatives, the “Guidelines on Defining Rural Areas and Compiling Indicators for Development Policy” describe rural socio-economic and environmental indicators. It promotes sparse settlement, land cover and use, and distance from metropolitan areas to fulfil rural policy objectives and assist sustainable development, making it relevant to SyRI’s “Health and well-being” and “Socio-economic resilience” aspects.

The guidelines also support the United Nations’ reliance on geospatial and statistical information for policy, programme creation, and evaluation. Thus, they are pertinent to

WP4 (Agreements and Communication Strategies). Besides, the guidelines also help build rural area development and policy best practices. These correspond with WP6's focus on guidelines, evaluation, and methodological development by providing a structured way to evaluate rural circumstances, allowing policymakers to devise successful solutions for specific rural situations.

Title: *United Nations Guidelines on Defining Rural Areas and Compiling Indicators for Development Policy*	Type summary: *BP-research and guideline*	Content summary: *Guidelines for the development of rural areas*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Social inclusiveness and interaction; Socio-economic resilience*	DMC references: *All*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2018*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change			The elements of national rural development policies are aligned with the SDG orientation to eradicating poverty and hunger as primary aims.(P31) The role of a sustainable agriculture, which still represents the main source of livelihoods and food security for most rural people, is largely the province of agricultural development policy.(P33) How the land is used determines its sustainability and productivity.(P44) Rural development policy with a territorial perspective would encompass initiatives to create employment in non-farm activities (such as food processing) and to invest in health and education services that augment an individual's ability to contribute to the household.(34)	Ending poverty and hunger, ensuring healthy lives, and providing education are among their principle aims.(p9) the harmonized urban and rural definition is to be proposed to the United Nations Statistical Commission (UNSC) for use in compiling population and other global statistics, including the SDGs. (P13) geo-referenced data collection is becoming more widespread and is expected to emerge as the global standard for survey design and census taking.(P30)	the centrality of agriculture in promoting development and alleviating rural poverty.(P16)	These data sets are each constructed with methods that are the same for every country, thus facilitating cross-country comparisons.(P29)		In developing the conceptual and empirical basis for the harmonized urban/rural definition, FAO and the GSARS joined and collaborated with the Voluntary Commitment Group (VCG), which includes EC, OECD, WB, UN-HABITAT, and the Statistical Office of the European Union (EUROSTAT).(P26) resort can be made to the common, shared goals within and across countries.(38)	
Disaster and Risk Management	Within each "setting," more and less favored areas for agricultural development were identified with respect to access to markets and to agro-climatic potential.(P17) The social dimension covers the need to reduce risk and vulnerability, including food security and issues related to gender.(43)		With inclusive rural transformation...leads to a marked improvement in the economic position and quality of life for small farmers, land poor and landless workers, women and youth, marginalized ethnic and racial groups, and victims of disaster and conflict.(P70)	The social dimension covers the need to reduce risk and vulnerability, including food security and issues related to gender.(P43) Percentage of households in which people evaluate whether they live under risk.(P50)					
Culture and Heritage									

Figure 25. Policy analysis: United Nations Guidelines on Defining Rural Areas and Compiling Indicators for Development Policy

27.
United Nations OCHA Civil-Military Coordination Recommended Practices

The “UN OCHA Recommended Practices for Effective Humanitarian Civil-Military Coordination of Foreign Military Assets (FMA) in Natural and Man-Made Disasters" is of particular relevance to the SyRI aspect “Adaptive Governance”, "Health and Wellbeing", and "Social interaction and inclusiveness”. It therefore carries especial relevance for the investigation of the CORE labs in Türkiye, Norway, and Portugal. The reasons for this relevance include the policy’s outlining how humanitarian crisis responses should be coordinated, including the taking-into-account of diversities of stakeholders, interests, and expectations. Too, it emphasises the imperative of remaining sensitive to vulnerable groups and of including site- and context-specific concerns.

Its emphasis on pre-disaster planning and crisis preparedness makes the policy particularly relevant to work within WP2 (modelling behaviours). It explicitly brings up the potentialities and dangers of (mis-)information, social media use, and rumours, which makes it pertinent to all CORE labs and to WPs 2, 3, 4, and 6.

Title: *United Nations OCHA Recommended Practices for Effective Humanitarian Civil-Military Coordination of Foreign Military*	Type summary: *Policy action plan*	Content summary: *Guidelines pertaining to military-civilian crisis response*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Social interaction and inclusiveness*	DMC references: *All*	Explicit crisis scenarios mentioned: *All*	CORE/s mentioned: *None*	Date of issue/launch: *2018*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management		Social media use amongst affected groups means that militaries and humanitarian actors should consider local community and culture when communicating digitally. Aid workers posing with military actors may raise suspicion in some local contexts (p. 20).	BP - Crisis response plans must be developed in "timely manner, through a consultative process" – ideally, before a crisis occurs (p. 9). This should be accompanied by "regular training" by all stakeholders. (p. 11)	As part of contingency planning, stakeholders should "identify known and existing vulnerabilities and hazards" and assign "roles and responsibilities of humanitarian, military […] and other governmental actors" (p. 13)	During crisis, stakeholders should share information about "differing humanitarian needs (such as the needs of women, men, children, the disabled and the elderly), location of affected people, material and logistical gaps, security, protection and access issues, and instances of actual or threatened sexual exploitation and abuse" – unless such information-sharing risks further threatening vulnerable groups. (p. 26)	During crisis, affected States "should widely communicate the known humanitarian gaps emerging from initial needs assessments." (p. 16) "[M]aintaining a clear and visible distinction between humanitarian actors and the military"is crucial to success of crisis response (p. 19).		BP - "humanitarian organizations, military organizations, donors, and other governmental actors" should "understand, observe, and promote" local crisis guidelines, "referencing them in national/organizational policy, emergency response frameworks, and military doctrine." (p. 10) States should share information about potential military aid capacities (p. 11). In crisis, military actors must respect the "humanity, neutrality, impartiality, and independence of the humanitarian relief operation." (p. 18)	
Culture and Heritage			LL - Following crisis, stakeholders should conduct "after-action reviews" to account for successes, failures and lessons for future events – including local innovations. (p. 33)						

Figure 26. Policy analysis: United Nations OCHA Civil-Military Coordination Recommended Practices

United Nations Operational Guidelines for the Implementation of the World Heritage Convention

“Operational Guidelines for the Implementation of the World Heritage Convention” lays out a plan for how properties can be added to the World Heritage List, how they can be protected and conserved, how they can receive international aid through the World Heritage Fund, and how they can rally support for the Convention. Sustainable development, cultural and natural heritage, and the necessity of coordinated strategies to preserve and manage heritage are all highlighted in the document. The document is particularly relevant to SYRI’s “Active Memory” and “Social interaction and inclusiveness”, whereby, on the one hand, the preservation of heritage is a model for preserving memory. On the other hand, the document focusses on an inclusive and participatory approach to managing World Heritage properties, involving various stakeholders, as an expression of social inclusion.

The document’s emphasis on adopting properties for UNESCO’s World Heritage List through broad international cooperation is closely linked to WP4 (institutional and social trust). Moreover, it is also closely related to WP4 (communication, education, and awareness) in its emphasis on using educational and information programmes to raise awareness and appreciation of cultural and natural heritage.

Title: *United Nations Operational Guidelines for the Implementation of the World Heritage Convention*	Type summary: *BP-Implementation and guidance documents*	Content summary: *the Implementation of the World Heritage Convention" is a comprehensive guide*	SyRI-relevancies: *Adaptive Governance, Social Inclusiveness and Interaction, Socio Economic Resilience*	DMC references: *None*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2023*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change									
Disaster and Risk Management									
Culture and Heritage		111. a)a thorough shared understanding of the property, its universal, national and local values and its socio-ecological context by all stakeholders, including local communities and indigenous peoples;-35 119. support the wider conservation of natural and cultural heritage, and promote and encourage the effective, inclusive and equitable participation of the communities, indigenous peoples and other stakeholders concerned with the property as necessary conditions to its sustainable protection, conservation, management and presentation.-36	97.All properties inscribed on the World Heritage List must have adequate long-term legislative, regulatory, institutional and/or traditional protection and management to ensure their safeguarding.-33 119. Legislation, policies and strategies affecting World Heritage properties should ensure the protection of the Outstanding Universal Value,-36		111. b)a respect for diversity, equity, gender equality and human rights and the use of inclusive and participatory planning and stakeholder consultation processes;-35	28.(f)coordination and conduct of Reactive Monitoring, including Reactive Monitoring missions , as well coordination of and participation in Advisory missions , as appropriate;-15 118. The Committee recommends that States Parties include disaster, climate change and other risk preparedness as an element in their World Heritage site management plans and training strategies.-35 169.Reactive Monitoring is the reporting by the Secretariat, other sectors of UNESCO and the Advisory Bodies to the Committee on the state of conservation of specific World Heritage properties that are under threat. To this end, the States Parties shall submit specific reports and impact studies each time exceptional circumstances occur or work is undertaken which may have an impact on the Outstanding Universal Value of the property or its state of conservation.-56 Periodic reporting: a)to provide an assessment of the application of the World Heritage Convention by the State Party;-63		36. IUCN s mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.-19 191.On the basis of these regular reviews, the Committee shall decide, in consultation with the State Party-62 236. international assistance.-69	

Figure 27. Policy analysis: United Nations Operational Guidelines for the Implementation of the World Heritage Convention

29.
United Nations Plan of Action on Disaster Risk Reduction for Resilience

The “United Nations Plan of Action on Disaster Risk Reduction for Resilience” summarises state-of-the-art DRM plans and forms the UN's general pledge to support global resilience building. As such, it may be an interesting reference point for several future WPs (e.g. WP2, 4, etc.) and for upcoming deliverables.

Title: *United Nations Plan of Action on Disaster Risk Reduction for Resilience*	Type summary: *Action plan*	Content summary: *Action statement on UN's plans for aupporting global resilience efforts*	SyRI-relevancies: *All*	DMC references: *None*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2016*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change						To increase resilience, UN must issue progress reports on global resilience.		Through cooperation with national databases, the UN will develop and update information on disaster loss.	
Disaster and Risk Management								The UN vows to advocate for the adoption of the Sendai framework amongst member countries.	
Culture and Heritage									

Figure 28. Policy analysis: United Nations Plan of Action on Disaster Risk Reduction for Resilience

30.
United Nations - Urban-Rural Linkages: Guiding Principles and Framework for Action to Advance Integrated Territorial Development

The document “Urban-Rural Linkages: Guiding Principles and Framework for Action to Advance Integrated Territorial Development” emphasises increasing rural-urban links. This document focusses on several themes: participatory engagement, integrated governance, environmentally sensitive approaches and financial inclusion strategies. It aims to provide guidance and practical recommendations for governments, civil society and other stakeholders to develop coherent urban-rural policies and actions. This model is particularly relevant to SyRI’s “Adaptive Governance” as it focusses on participatory governance, involving stakeholders in the decision-making process, thus promoting a flexible, inclusive, collaborative governance model. In addition, the paper’s reference to the interconnectedness and interdependence of the economies of urban and rural areas has some relevance to “socio-economic resilience”.

The document aligns with WP4 (Communication, Education) in its emphasis on raising knowledge and teaching about the value of urban-rural links. It highlights the importance of educational initiatives and communication tactics to encourage integrated territorial development. Moreover, WP6 (Guidelines, Best practices) efforts are relevant to the policy direction and methods for urban-rural integration provided by the framework for action and guidelines for achieving the integrated development of the Territory.

Title: *United Nations - Urban-Rural Linkages: Guiding Principles. Framework for Action to Advance Integrated Territorial Development*	Type summary: *BP-policy and planning guide*	Content summary: *Emphasises inclusive approaches and enhanced synergies between urban and rural communities and spaces*	SyRI-relevancies: *Adaptive governance, Social inclusiveness and interaction*	DMC references: *None*	Explicit crisis scenarios mentioned: *Flood*	CORE/s mentioned: *None*	Date of issue/launch: *2019*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change		emphasizes the participation of civil society and specific attention should be given to marginalized groups in both local and national planning and management.18 Empower people and communities-22	National and subnational commitments should have policy coherence and integrated actions across the territory.-8 Develop criteria and approaches for land-use planning, management and regulation.-19 Policies and practices should ensure that food systems provide nutritious-33		Marginalized groups such as women, smallholders and Indigenous Peoples often have an important role as stewards of ecosystems and agents of change.-3 Build capacity to empower vulnerable groups10 and for the active engagement of urban, peri-urban and rural communities in integrated territorial governance.-12 Include vulnerable and marginalized people in the planning, decision-making and design of governance platforms and programmes to promote holistic understanding of issues.-16 Vulnerable populations also referred to as including at-risk or marginalized groups are population groups with a high vulnerability. Vulnerability is defined as "the degree to which a population, individual or organization is unable to anticipate, cope with, resist and recover from the impacts of disasters".-46			Strengthen governance mechanisms by incorporating urban-rural linkages into multisectoral, multi-level and multi-stakeholder governance.-8 Foster partnerships, alliances and networks that link urban and rural actors and different sectors.-10 Also requests the Executive Director, in cooperation with appropriate partners, to disseminate and share good practices and policies relating to the impact of urban-rural linkages that could be replicated in other countries;-42	
Disaster and Risk Management	Institute pre-disaster and post-disaster/conflict mitigation efforts to improve resilience of transport, energy, information, health, education, food and water systems.-38	Enable communities, especially women's groups, to be cooperative agents of recovery and rehabilitation and better equipped to face protracted crises-38				Conduct risk assessments of displacement, conflict, natural disasters, economic shocks, environmental disasters and communicable disease outbreaks, which can have an immediate impact on specific territories and their urban and rural populations (particularly those related to climate change)-38 Develop multi-sectoral early warning systems-38			
Culture and Heritage									

Figure 29. Policy analysis: United Nations - Urban-Rural Linkages: Guiding Principles and Framework for Action to Advance Integrated Territorial Development

4.2. Previous EU projects: Resources, Good Practice, and Lessons Learned

4.2.1. Overview & Limitations

DBL used the key words defined in the SoA to further analyse the deliverables and outputs of the 56 projects that were collectively considered as important to RESILIAGE. DBL made sure to analyse the top 5 prioritised projects for each partner as well. Such projects might have reached a mean average lower than the rating 2 considered (i.e., the “relevant” criteria) as they might have been considered “highly relevant” by solely one partner among the four judges. Nonetheless, DBL decided to include these 5 top priorities for each partner so as not to lose important knowledge baseline data that could have informed the development and future research of a specific WP. DBL went through each deliverable and output of the selected projects and identified the specific deliverables interesting and related to the previously defined keywords. As a result, relevant deliverables were grouped into one (or more) of the following categories, reflecting on the field of knowledge they offer important insight on:

- Human factors response / psychological aspects
- Crisis management, crisis communication
- Legal frameworks, policies
- Tech projects & digital solutions
- Policy recommendations, communication guidelines
- Soft solutions
- Links to heritage
- Links to climate change
- Methodologies

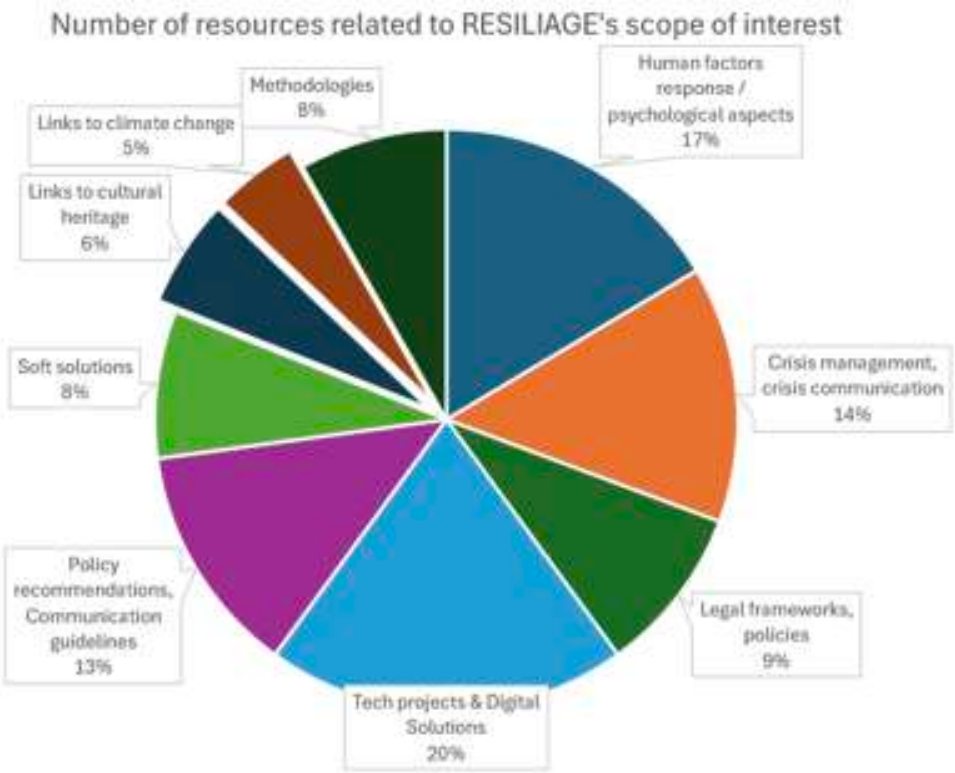


Figure 30. Resources of previous EU projects related to RESILIAGE

Altogether, 280 resources (deliverables, publications, handbooks, etc.) have been found to offer relevant insights related to the focus of RESILIAGE project. By analysing the ratio of resources per category, it can be concluded that “Links to cultural heritage” and “Links to climate change” are the categories that are the least represented within the selected projects (see Figure 3.). We see this preliminary finding as a justification of the importance of RESILIAGE project in filling an important research gap related to the role that cultural heritage plays in disaster management and community resilience building.

Limitations

Unfortunately, EU projects results were not always available especially concerning the following types of projects:

- Recently started projects had no resources available yet;
- Older projects that lost their website’s domains and were therefore not displaying anymore the set of deliverables published (nor there neither on the CORDIS portal);
- Projects with deliverables not uploaded to their own website or to CORDIS
- Deliverables that were not public (PU)

This limitation restricted the overall analysis of the listed and prioritised projects from 56 to 36.

Another important limitation to mention is related to the match between the abstracts and the real content of the deliverables. As mentioned previously, consensus exercise (Step 3) was performed on the basis of the short description that was uploaded to CORDIS about each project. Although unlikely, there is still a minor chance that some projects were ruled out from the initial shortlisting because certain keywords -important to the goals of RESILIAGE- were not highlighted or explicitly articulated in the description, although the project would have provided some useful insights or ideas on some aspects of RESILIAGE (e.g. approach on research design and methodology).

4.2.1. Table of project resources

The following table shows and links the identified relevant resources per project and RESILIAGE relevant category which is also associated with one or more WPs and tasks. It will serve together with the other resources of this deliverable and D1.2 as repository for preparing the field investigation in WP2, for the modelling of indicators for “community resilience” and feed directly into the tools to be developed in WP3. Furthermore, WPs 4 dedicated to soft solutions and trainings as well as WP6 developing policy recommendations, will draw heavily on the identified existing examples of good practice and lessons learned.

The full list of previous EU projects identified and ranked by relevancy to RESILIAGE can be found in the Appendix 7.2.1 and 7.2.2. respectively.

Table 1. (Linked) Resources of previous EU projects related to RESILIAGE per category

	Human factors	Crisis management & communication	Legal & policy framework	Technological & digital solutions	Policy recommendations & Communication guidelines	Soft solutions	Links to cultural heritage	Links to climate change	Methodologies	other	Recommendations (LL & BP)
3											
RESILOC	D2.8		D2.6		D5.2	D5.1, D5.2, D5.3, D5.4, D5.5			D2.6	D3.1, D3.2 (Indicators), D1.2 (Vulnerable groups: pp. 148-178)	
KULTURISK						*No resources are available.*					
MEDiate						*No resources are available yet.*					
RescueME						*No resources are available yet.*					
2,75											

DARWIN	D3.1	D3.2				D3.3, D3.5				D4.3, D3.5 (Training & tutorials)	
DRIVER +	D932.11, D913.41	D911.91, D922.11		D933.11, D933.21	OTH (Policy Brief)				D922.21, D922.41 (Trial Guidance Methodology Handbook)	D913.51, D913.52 (Training)	D911.91 (Lessons Learned), D955.11 (Standards)
TACTIC	D2.2	D1.1	OTH (Climate Risk Policies)					OTH (Climate Risk Policies)			
CARISMAND	D3.1, D4.1, D4.2, D7.3, D5.3, D5.4	D7.3, D2.1, D2.2, D5.3, D5.4, D8.1, D8.2	D2.3, D2.4, D6.2		D8.1, D8.2, D7.1, D2.1 (Disaster Management Actors)	D9.1	D3.1			D8.1, D8.2 (Best practices on disaster communication)	
A4A		OTH (New media in crisis communication)		OTH (Communication technologies used for warning)	OTH (Best practices communication)						
SOTERIA	D2.4 (Citizens' needs assessment)				D8.4 (Sec. 3)	D2.4 (citizens needs assessment)			D2.7, D2.4	D3.1, D3.4 (Ethics)	

PEP		OTH (Lit review crisis management approaches, Technologic acceptance (crisis communication))	OTH (Policy Roadmap)	OTH (Technologic acceptance)	OTH (Communication resources, Social media use, Communication (use cases), Communication during disasters)					OTH (Best practices on public empowerement, Vulnerable groups)	
ENGAGE	D1.2, D1.4, D2.1, D2.2	D2.1			D1.3 (crisis communication matrix)	D2.2 (pp. 31,33,35, 38,39,41, 43,79-114)	D1.2, D1.3		D1.2		
FIRE-RES		D1.13, D1.12, D1.11	D3.1	D5.1				D1.5	D1.3		D1.1 (Lessons learned in wildfires)
FIRELOGUE	D2.1, D2.2, D2.3			D1.1, D1.2, D1.3		D2.3			D3.4		
FirEUrisk	D5.4			D5.4		D5.4					
REGILIENCE	D1.1			D2.1	D2.4,D1.1	D1.1		D2.4			D2.4 (Lessons learned, climate resilience)
2,5											

SMR	D2.5, D5.9	D1.3	D1.1, D 1.3, D1.2, D3.5	D4.1, D4.2	D4.2, D3.4 (Resilience Building Policies tool), D2.6 (Resilience Maturity Model)	D3.3 (Risk Systematicity Tool)		D1.2, D1.3, D2.2		D1.1 (Best practices in Resilience), D1.3 (Best practices related to resilence policies), D6.1 (Standards)	
POP-ALERT	OTH (Online learning for crisis awareness)									OTH (Training)	
FASTER						*Available resources do not match the profile of RESILIAGE.*					
OPSIC	OTH (post-disaster support)	*No resources available.*									
EDUCEN	D1.6	D1.6: Ch.5.1, Ch. 5.2	D1.6: Ch. 4.3.1		D1.6: Ch. 4, Ch. 5.3, Ch. 6		D1.6: Ch. 1; Ch. 2		D1.6: Ch. 5.2.2, Ch. 6		
CORE	D2.1, D2.2, D3.1, D4.1, D4.2, D5.1		D4.3		D7.1 (communication patterns)	D5.1 (toolkit)					
RiskPACC	D1.1, D2.1, D2.2, D2.3,	D2.2, D2.3, D1.3	D1.3 (section 3.4)	D1.3 (Sec. 3.6)	D2.1				D4.1 (Sec. 3), D3.4		

	D1.3, D4.1	(Sec. 3.2), D4.1									
SYNERGIES						Official website not available yet					
ARCH (LC)	D5.1, D3.5, D7.3	D7.3	D7.2	D3.4, D5.4, D7.4, D7.5		D7.4, D3.4 (requirements)	D7.1, D7.2, D5.2 (Sec. 6: vulnerability of intangible values)	D5.1, D7.1	D3.1, D3.5	D2.4 (standardisation)	
HERITACT						No resources are available.					
2,25											
SHELTER		D7.6., D4.2., D3.3	D4.4.	D2.3, D7.6, D1.4, D1.3, D6.2	D7.6, D4.2, D6.2		D2.3, D7.6, D6.4, D4.3, D2.1	D4.4	D6.5, D2.2, D2.5, D2.7		D7.6
LANDSCAPEforCHANGE						*No resources are available yet.*					
LINKS	D2.2	D3.1		D2.1, D4.1	D2.1, D3.1 (Communicating Risk, Crisis communication, Communication Guidelines)	OTH (Including Citizens Handbook), OTH (Resilience wheel)			D2.7	OTH (online resources)	
TREEADS						*Available resources do not match the profile of RESILIAGE*					
PANTHEON						*No resources are available yet.*					
2											

HERACLES	D1.2			D1.4, D2.3			D1.1, D1.2, D1.3	D1.1, D1.3	D1.3, D10.1		
I-REACT				D6.3; D2.5.							
CUIDAR	OTH (Dialogues with children)	OTH (Scoping review)			OTH (vulnerable groups children)						
STAIR4SECURITY						*No resources available.*					
BRIDGE		OTH (social media use), OTH (Info propagation in social networks during crises), OTH (Mobile work in crisis), OTH (Social media for crisis management)		OTH (Data in crisis), OTH (Technological opportunities to improve risk awareness)							
IMPACT		D4.1			D4.3, D6.2	D5.3, D5.2			D3.1		

BuildERS	D4.5, D1.2	D2.2, D5.3	D5.2 (Guidelines on ethics assurance), OTH (Training course for law enforcement agencies officers))	OTH (evaluation of tech opportunities to improve risk awareness and resilience), D4.3, D5.2, D2.4, OTH (Mobile positioning tools)	D2.2, D4.5, D6.3, D5.3, D5.2, D1.4	D5.2 (vulnerability assessment tool; crisis communication canvas; board game)			D6.2 (tabletop exercises for stakeholders on crisis communication) D6.3. (tabletop exercises for gathering insights on communication during crisis, pg 34-37)	OTH (Handbook to improve societal disaster resilience), OTH (Guidelines for collaborating with social media influencers)	
PEP		OTH (Literature review crisis management approaches), OTH (Technologic acceptance, crisis communication)	OTH (Policy Roadmap)	OTH (Technologic acceptance)	OTH (Communication resources, Social media use, Communication (use cases), Communication during disasters)					OTH (Best practices on public empowerement, Vulnerable groups)	

CRISMA				OTH (Report on CCIM model)							
HEIMDALL				D2.11, D2.12, D4.12, D4.14, D4.8, D4.5, D4.17, D5.1, D5.2, D5.7, D6.1, D6.11, D6.5							
OPTI-ALERT				OTH (A simulation tool for alert message propagation), OTH (A multi-channel disaster alert system)							

ICRED				OTH (Analytical quantification of disaster resilience), OTH (Performance-based metamodel for healthcare facilities)							
RURITAGE	D3.1, D3.6			D2.5, D5.3, D5.4	D7.4, D3.6	D3.1, D3.7	D2.1		D1.2	D1.1 (Best Practices on resilience), D1.2 (Lessons learned), D1.4 (Indicators)	
EVACUATION		OTH (A glossary for research on human crowd dynamics), OTH (The future of evacuation drills)									

C2IMPRESS						*No resources are available yet.*					
DIRECTED						*No resources are available yet.*					
DIREKTION						*No resources are available yet.*					
FUTURESILIENCE						*No resources are available yet.*					
STRATEGY			D1.1, D1.2, D8.4 (standardization), D1.4, D1.6, D8.3 (ethics), OTH (conference proceedings: pp. 175-178, 183-185)								
THE HuT		D4.1, D2.1, D1.4						D4.1, D2.1			
FiBeGa						*No resources are available yet.*					
SPATIAL						*No resources are available yet.*					
FosResil						*No resources are available: project terminated.*					
ResAlliance					OTH (LandLab standardised manual and programme)						
INT-ACT						*No resources are available yet.*					

4.3. Innovative Practices & Initiatives

This section alphabetically lists all the extant innovative projects that have been identified and collected by partner institutions as being highly relevant for the workings of RESILIAGE. Each entry includes the initiative's title, responsible body, country, a short description, and a link to the source.

The list thus far consists of 17 examples, although the labour of collecting further relevant instances is expected to span beyond the duration of T1.1. The list of innovative projects and initiatives will be features within the toolset of WP3.

Title: 69 Flood and Flood Warning Systems Are Being Installed In The Western Black Sea Region
Responsible body: DSİ (General Directorate of State Hydraulic Works)
Country: Türkiye
Short Description: As a result of the assessments, 69 points were identified for the establishment of an early warning system in the provinces of Bartın, Karabük, Kastamonu and Zonguldak. It is planned to establish 15 of 69 stations in Zonguldak, 13 in Bartın, 12 in Karabük and 29 in Kastamonu. As of 2022, the installation of 42 stations has been completed and the work continues. Flood Early Warning System is to instantly monitor the water level in the detected stream or stream and warn our operators at critical levels, preventing loss of life and property by ensuring that citizens in settlements move away from stream beds.
Link to source: https://dsi.gov.tr/Haber/Detay/8082

Title: Automatic detection of urban fires
Responsible body: Trondheim Municipality
Country: Norway
Short Description: Deployed cameras automatically monitoring critical areas of historical significance or high fire risk.
Link to source: Detec Next Fire – Detec AS - A Safe Choice
Kamera varsler om brann – NRK Viten – Nyheter innen vitenskap og forskning
Datablad_-_Detec_Next_Fire_for_Bydelsovervakning.pdf (shopify.com)

Title: Carta del Rischio
Responsible body: Istituto Centrale per il Resauro
Country: Italy
Short description: The Risk Map is a Geographical Information System (GIS) providing scientific and administrative support to state and territorial authorities responsible for the protection of cultural heritage.
Link to source: http://www.icr.beniculturali.it/pagina.cfm?usz=1&uid=16

Title: Creation of a local risk observatory

Responsible body: Observatoire Régional des Risques Côtiers (OR2C) – Nantes Université
Country: France
Short Description: Creation of a coastal risks observatory aiming to collect information and data on the risk of erosion and submersion, to disseminate this data, to design digital tools to support managers in their missions, to create links between actors and to offer its expertise to communities in the context of adaptation to climate change.
Link to source: https://or2c.univ-nantes.fr/

Title: Earthquake simulator
Responsible body: The Crete Natural History Museum
Country: Greece
Short description: The NHM has an Earthquake simulator which has been also utilized to facilitate first responder trainings.
Link to source: https://www.nhmc.uoc.gr/en/

Title: Emergency Izmir “I'm Under Debris” Application
Responsible body: İzmir Metropolitan Municipality
Country: Türkiye
Short Description: The Emergency Izmir mobile application aims to facilitate coordinated access for emergency response teams (firefighters) to users in disaster and emergency situations (earthquake, fire, search and rescue, trapped accidents, flood). Outside of disasters and emergencies, the application provides modules through which citizens can access necessary information. Until rescue is accomplished during disasters such as earthquakes, technology tools are used to maintain constant communication with individuals, attempting to minimize panic and fear during the incident. In the event of being under the debris, pressing the button sends an emergency notification with location and personal information to the Izmir Metropolitan Municipality Fire Department Directorate. When individuals are in a situation where they are close to their phones but unable to reach them, they can use the voice assistant feature by giving the command 'Find Me' and make a 'I am Under the Debris' notification, sending their location. The teams accessing the location information can quickly reach the incident site.
Link to source: https://www.izmir.bel.tr/tr/Projeler/acil-izmir/2630/4#:~:text=Enkaz%20Alt%C4%B1nday%C4%B1m%3A&text=Ki%C5%9Filer%20telefonlar%C4%B1na%20yak%C4%B1n%20ama%20eri%C5%9Femeyecek,yerine%20h%C4%B1zl%C4%B1%20bir%20%C5%9Fekilde%20ula%C5%9F%C4%B1r

Title: EVANDE distant learning platform
Responsible body: Natural History Museum Univ. Of Crete (NHMC)
Country: Greece
Short Description: Under EVANDE (EU Civil Protection Mechanism funded project) the NHMC developed with four other EU partners a distant learning platform addressed to

civil protection staff, civil servants and volunteers to better understand certain hazards such as Earthquakes, floods, and wild fires, study innovative preparedness, prevention and resilience practices and improve their capacities and skills in crisis management. The platform if for free and operates in five languages. All educational material is provided through project's webpage.
Link to source: https://civil-protection-humanitarian-aid.ec.europa.eu/funding-evaluations/financing-civil-protection/prevention-and-preparedness-projects-civil-protection/overview-past-track-i-and-track-ii-projects/enhancing-volunteer-awareness-and-education-against-natural-disasters-through-e-learning-evande_en

Title: FEB Monitoring app
Responsible body: National Emergency and Civil Protection Authority
Country: Portugal
Short Description: FEB Monitoring is a web-based operational wildfire monitoring and decision-support tool that allows Civil Protection and Firefighters to carry out the analysis and operational decision support in wildfires management.
Link to source: https://www.youtube.com/watch?v=BIigLpX4CoE
Poster: https://eposters.site/2023_iwfc/2023/07/12/0183/

Title: Floods and droughts
Responsible body: Ourthe River Contract
Short Description: On 2 April, the Ourthe River Contract organised a training course on floods and droughts at the Lesse River Contract, EXACT LAB! This training course combines games and scientific rigour to help us improve the resilience of our region in the face of these extreme climatic events! It will also enable us to develop a truly cross-disciplinary approach to water management. For this course, they are using an innovative, technological and interactive tool: a 3D augmented reality sandbox! Model the relief of an area in the sand and then, with a wave of your hand, make it rain with virtual water and observe the run-off on the ground, simulated by the sandbox technology. Project a range of thematic maps, analyse the situation and test the impact of measures or developments live! These training course is also at disposal of the municipalities.
Link to source: no link

Title: Flood markers
Responsible body: Contrat de Rivière de la Lesse – Contrat de rivière de l'Ourthe
Country: Belgium
Short Description: Flood markers have been placed in 2022 and 2023, in partnership with the municipalities affected, at appropriate locations to keep a record of the risk on public buildings and on private buildings if the owners so wish. Other markers will be placed in 2024.
Link to source: no link

Title: Floods memories
Responsible body: Rochefort cultural center
Short Description: The commune of Rochefort has been violently affected by flooding. The consequences were brutal, both for those directly or indirectly affected (materially, psychologically and emotionally) and for the environment. Three years on, traces, images, words, testimonies, solidarity and after-effects of that summer remain. Very quickly, several associations (CIDJ, Gamedella, the Rochefort youth centre and the cultural centre) joined forces to set up a project to collect words, testimonies, reflections and creations with various publics. This work will continue in 2024 with citizens' meetings, as well as various water-related events. All these initiatives, words, reflections and images will be brought together in a publication to be released in 2024.
Link to source: https://www.facebook.com/profile.php?id=61554681546589&locale=fr_FR

Title: Flood risk culture and implementation of projects
Responsible body: Wallonia Public Service – River Contract Lesse – River Contract Ourthe
Country: Belgium
Short Description: A cooperation agreement was signed at the end of 2023 between the Service public de Wallonie (SPW) and Wallonia's 14 river contracts, with the aim of encouraging the development of a flood risk culture and the implementation of projects to improve the area's resilience to flooding.
Link to source: La Wallonie consolide sa résilience face aux risques d'inondation grâce à une coopération renforcée avec les Contrats de Rivière - Céline TELLIER

Title: Heat Waves Campaign
Responsible body: The Green Thought Association
Country: Türkiye
Short Description: As part of the Green Thought Association and GEF partnership, one of the activities within the Hope Spot Green Cities Project includes providing information on heatwaves related to climate change in Turkey through digital platforms as of July 2021.
Link to source: https://www.yesildusunce.org/en/kampanyalar/the-heat-waves-campaign-begins/

Title: Hydrometry in Wallonia
Responsible body: Wallonia Public Service
Short Description: Online monitoring of water levels in all Wallonia
Link to source: https://hydrometrie.wallonie.be/home.html

Title: Imece Houses
Responsible body: Netherlands - Gelderland County Council and Aid Foundation for Türkiye

Country: Türkiye & Netherlands
Short Description: Due to the earthquake that occurred in the city of Düzce, Turkey, in 1999, a total of 845 people lost their lives, 2678 people were injured, and thousands of people were left homeless. A post-earthquake recovery project using the "community (imece) effort" method was implemented for 4 villages that were destroyed. The community project began in collaboration with the Netherlands - Gelderland Provincial Assembly and the Turkey Aid Foundation, formed by Turks living in the mentioned province, who actively participated in the region's efforts from the first day of the August 17, 1999 earthquake. According to the agreement reached, the goal was set to reconstruct all the houses destroyed in the mentioned villages in a earthquake-resistant and community effort manner. Under the established joint management model, the "Help to Build Your House" credit provided by the Republic of Turkey government to the villagers whose houses were destroyed was also included in the project. It was decided that the residents of the villages whose houses were to be built would actively participate in the construction activities for 50 working days.
Link to source: Imece Evleri: a post-disaster housing recovery project in Duzce-Turkey (nomadit.co.uk)

Title: Improvement of coastal risk maps using eye tracking
Responsible body: Observatoire Régional des Risques Côtiers (OR2C) – Nantes Université
Country: France
Short Description: Experimentation with citizens aimed at determining the characteristics of a risk map facilitating its reading, understanding and memorization, thanks to the joint use of questionnaire and eye-tracking measurements. This experiment made it possible to formulate recommendations for the French State to improve coastal risk maps.
Link to source: https://or2c.univ-nantes.fr/projet-perception-ameliorer-la-cartographie-des-risques-cotiers-grace-a-letude-de-sa-perception-par-les-individus

Title: Minimum invasive fire detection for protection of heritage.
Responsible body: The Directorate for Cultural Heritage
Country: Norway
Short Description: Fire loss to Historic buildings
Link to source: Riksantikvarens vitenarkiv: Minimum invasive fire detection for protection of heritage. Research report. COST - Action 17 Built Heritage: Fire Loss to Historic Buildings (Contents and executive summary only) (unit.no)

Title: MOVING (MOuntain Valorization throughINterconnectedness and Green growth) is a Horizon 2020 project (2020-2024)
Responsible body: University of Crete
Country: Greece

Short Description: The MOVING project constructed capacities and co-developed policy frameworks across Europe for the establishment of new or upgraded and upscaled Value Chains (VCs), contributing to resilience and sustainability of mountain areas, valorising local assets, and delivering private and public goods. MOVING provided new collaborative tools for the definition of policies in mountain regions as well as guidelines for renewed policy options with a view to enhancing the connectivity, sustainability, and resilience of these areas. A bottom-up participatory process with VC actors, regional and European stakeholders, and policymakers was applied. A Community of Practice was developed and Multi-Actor Platforms were established. Foresight analysis methodology was also used in developing coproduced policy briefs.
Link to source: University of Crete - MOVING

Title: National Disaster Management Mechanism, Law4662/2020
Responsible body: General Secretary of Civil Protection
Country: Greece
Short Description: The General Secretary of Civil Projection issued the current Law N.4662 in Jan 2020. With the above Law the National Disaster Management Mechanism has been funded, dealing with all the issues concerned with planning, preparation, immediate response and short term rehabilitation against natural and technological disasters.
The contents of the document are divided into the following chapters:

- General principles definitions and guidelines
- forces and resources to implement the plan
- observation, notification and alarm
- activation of forces and assets,
- protection and disaster relief tasks,
- Civil Protection voluntary system
- Partners involved in the implementation of the plan and their obligation (from Central Government to Local Administration and Municipalities)
- Coordination, communications , logistics of immediate response against natural disasters
- planning, readiness, immediate response and short-term rehabilitation

Link to source: https://www.e-nomothesia.gr/kat-politike-prostasia-psea-pallaike-amyna/nomos-4662-2020-phek-27a-7-2-2020-1.html

Title: Participatory workshops for co-construction of adaptation scenarios to coastal risks
Responsible body: Observatoire Régional des Risques Côtiers (OR2C) – Nantes Université
Country: France
Short Description: Conducting participatory workshops with residents aimed at the co-construction of adaptation scenarios for a subdivision subject to coastal risks
Link to source: https://or2c.univ-nantes.fr/nos-actions

Title: Personal preparedness
Responsible body: The Directorate for Civil Protection and Emergency Planning
Country: Norway
Short Description: Website that contains how to prepare for all types of crises.
Link to source: egenberedskap | Direktoratet for samfunnssikkerhet og beredskap (dsb.no) and Sikker hverdag | Sikkerhverdag

Title: RACCE Educational tool
Responsible body: Natural History Museum Univ. Of Crete (NHMC)
Country: Greece
Short Description: Under RACCE (EU Civil Protection Mechanism funded project) the NHMC developed with four other EU partners a toll kit to support children cope with the burden of an earthquake and volcanic eruption crisis. It produced a museum kit with all the necessary theoretical background for teachers and parents, activities books and hands-ons, games and models to be used within school classrooms or families. All products exist digital in five languages
Link to source: https://racce.nhmc.uoc.gr/en

Title: Regional Climate Adaptation Action
Responsible body: Region of Crete
Country: Greece
Short Description: This action adapts and fine tunes the provisions of the National Climate Adaptation law in regional level. It presents and analyze long term meteorological and geological, identify the Hazards and risks in regional level, assesses the expected climate changes and the vulnerability of the Region, as well as their impact in various economic sectors. Finally, it proposes measures and actions for the adaptation to these changes. (In Greek)
Link to source: https://www.crete.gov.gr/perifereiako-schedio-prosarmogis-stin-klimatiki-allagi-stin-kriti/

Title: Safe Village Safe People Programs
Responsible body: Ministry of Internal Affairs – National Emergency and Civil Protection Authority
Country: Portugal
Short Description: The two programs were created by Resolution of the Council of Ministers, in which the Government established a set of measures aimed to introduce “a systemic reform in the prevention and combat of forest fires, extending to other areas of protection and relief”. The “Safe Village” program is defined as a “Program for the Protection of Population Clusters and Forest Protection” and is intended to establish “structural measures to protect people and goods, and buildings in the urban-forest interface, with the implementation and management of cluster protection zones and strategic infrastructures, identifying critical points and places of refuge”. The “Safe

People" program aims to promote "awareness-raising actions for the prevention of risky behaviors, self-protection measures and carrying out simulacrum evacuation plans, in conjunction with local authorities".
Link to source: https://aldeiasseguras.pt/

Title: Simulation of human reactions on a web-cartographic platform
Responsible body: UMR Géoazur -CNRS
Country: France
Short Description: A web cartographic platform for simulating human reactions intended for the scientific community, professionals responsible for the safety and security of citizens and the public
Link to source: https://www.com2sica.cnrs.fr/le-projet/

Title: Social Mobilization After the Earthquake
Responsible body:
Country: Türkiye
Short Description: In February 2023, two very large earthquakes occurred in southern Turkey, affecting a large area where 13.5 million people live. **AHBAB,** which is a civil organization for humanitarian causes, got ahead of the state's Disaster and Emergency Management Department (AFAD) in terms of reaching out to the disaster zone and providing aid and services for the survivors. Moreover, the rampant political polarization in Turkish society translated into a bifurcation of citizens' donation choices while many opted for supporting AHBAP and other civil organizations instead of the state's AFAD and Kızılay (The Turkish Red Crescent) and government-aligned CSOs.
Link to source: https://irgac.org/articles/civil-society-and-solidarity-in-turkey-after-the-earthquakes/
https://ahbap.org/

Title: Virtual Reality Simulation Centre
Responsible body: National Fire Service School (ENB)
Country: Portugal
Short Description: Training and improvement of skills in management of emergency response operations, with real world exercises in a virtual reality environment, in different scenarios of various complexity.
The virtual environment of the simulator allows training decision-making in scenarios in which technical complexity and risk to the safety of the operators themselves do not allow or discourage their reproduction in a real environment (e.g. residential fires, industrial and manufacturing facilities fires, traffic accidents with hazardous materials, mass casualty incidents, etc.).
Link to source: https://www.enb.pt/csrv/index.php/en/

Title: Water infiltration
Responsible body: Mons University and Rochefort cave

Short Description: Climate and environmental changes are having a major impact on the mechanisms and methods by which rain infiltrates the subsoil, and hence on groundwater recharge.
In this context, UMons and the Grotte de Lorette non-profit association are working on a research programme focusing on these infiltrations. A small-mesh electrical tomography line has been installed on the surface of the plateau to provide a highly detailed image. It operates automatically at all times. Interesting results are already emerging on the relationship between infiltration dynamics and meteorological conditions.
Link to source: no link

Title: Water level monitoring – Han cave and Rochefort cave
Responsible body: Domaine des Grottes de Han (private company)
Country: Belgium
Short Description: Measuring instruments for monitoring water levels in caves (already in place in Han-sur-Lesse – Not yet in Rochefort)
Link to source: no link

5. CORE Crisis Scenarios

This chapter provides descriptions of the primary and secondary crisis scenarios in each CORE lab. It chronicles and maps a settings-based contexts, list of events, cascading effects, vulnerable population groups, and relevant crisis-response actors.

		CORE labs large-scale scenarios				
		Karşıyaka CORE lab	Trondheim CORE lab	Naturtejo CORE lab	Crete CORE lab	Famenne-Ardenne CORE lab
Affected population		340.000	180.000	86.729	630.000	67.000 ca.
SyRI		Adaptive Governance	Health and Wellbeing	Social interaction and inclusiveness	Active Memory	Socio-economic resilience
Main Hazards	Heatwaves					
	Landslides					
	Earthquakes					
	Wild-fires					
Other Hazards	Floods					
	Rainstorms					
	Urban fires					
Governance scale		City District	Municipality	Municipality network	Regional	Cross-regional
CORE lab network (e.g., citizens associations, first responders, policy makers, vulnerable groups)		✓	✓	✓	✓	✓
Existing tools		IZUM (Izmir Disaster and Transportation Communication Tool)	CIM for alerting volunteers and staff	App for real time information on national wildfires; GIS information App on national Forest wildfires, and fire risk provider	Permanent exhibition hall of NHMC which informs and trains on natural hazards, the Earthquake simulator, the Evande distant learning platform	Geoportal for real data collection for floods hazard, Flood Management Risk plan, Emergency alarm system app, Citizen preparedness website

Figure 31. Crisis scenario and SyRI framework per CORE lab

As is evident from the chart below, each CORE lab has primary and secondary (and in some cases, tertiary) hazards. As such, in many ways each CORE lab is entangled with the others. The crisis descriptions below, however, will focus primarily on the on the main hazard of each CORE lab, touching on the other hazards when substantial information has been provided. To accrue information on a respective secondary hazard, it thus makes sense to consult the crisis description of the CORE lab that has the respective hazard classified as its main hazard.

EM-DAT Records: Crises scenarios per CORE country

EM-DAT Records	1900-1949							
Country / Recorded Year	1904	1906	1914	1928	1932	1936	1947	1948
Belgium: Flood		2		1				
Greece: Earthquake	1		1	1	1		1	1
Norway: Landslide						1		
Portugal: Wildfire								
Türkiye: Heatwave								
Total	1	2	1	2	1	1	1	1

EM-DAT Records	1950-1999																									
Country / Recorded Year	1953	1954	1955	1956	1965	1966	1967	1968	1971	1978	1980	1981	1983	1985	1986	1988	1990	1991	1993	1994	1995	1996	1998	1999
Belgium: Flood				1					1										2	1			1	
Greece: Earthquake	1	2	1	1	2	2	1	1		1	1	2	1		1	1	2		2		2	1		1
Norway: Landslide																								
Portugal: Wildfire						1							1	1	1			1						
Türkiye: Heatwave																								
Total	1	2	1	2	2	3	1	1	1	1	1	2	2	1	2	1	2	1	4	1	2	1	1	1

EM-DAT Records	2000-2009								2010-2019								2020-2023				
Country / Recorded Year	2000	2001	2002	2003	2004	2005	2007	2008	2010	2011	2013	2014	2016	2017	2018	2019	2020	2021	2022	2023	Total
Belgium: Flood			4	1		1			1	1			1					1		1	20
Greece: Earthquake	1	1	1	1				1				2		2			1	2			44
Norway: Landslide																1	1				3
Portugal: Wildfire		1		1	1	1					1		1	2	1				1	1	16
Türkiye: Heatwave	1						1														2
Total	2	2	5	3	1	2	1	1	1	1	1	2	2	4	1	1	2	3	1	2	85

Figure 32. EM-DAT records for CORE countries and crisis scenarios

The full EM-DAT records for the specific crisis scenario per CORE country can be found in Appendix 7.3.

Context information and limitations of EM-DAT

EM-DAT contains data on the occurrence and impacts of over 26,000 mass disasters worldwide from 1900 to the present day. The database is compiled from various sources, including UN agencies, non-governmental organizations, reinsurance companies, research institutes, and press agencies. The **Centre for Research on the Epidemiology of Disasters (CRED)** distributes the data in **open access** for non-commercial use. EM-DAT data coverage has improved significantly over the last 30 to 40 years. Nevertheless, gaps and quality issues remain. EM-DAT protocols are meant to guide the way information is monitored and collected from sources. However, no universally applied protocol ensures that different sources report disaster impact and losses using the same guidelines to define, for instance:

- the beginning and end of disaster events.
- the geographical footprint of a disaster.
- impact variables such as deaths (in particular, when computed based on excess mortality), affected people, or economic costs.
- the disaster type selected by the sources

Time Bias

Time biases result from unequal reporting quality and coverage over time[1]. The figure below shows the occurrence of disasters in EM-DAT. The figure shows a significant increase that starts in the 1960s. This increase coincides with the creation of OFDA. In 1973, OFDA started compiling disaster data, and the CRED was created[2].

Hazard-related Biases

Hazard-related biases result from unequal reporting quality and coverage for different hazard types. For example, in EM-DAT, data related to biological hazards (e.g., epidemics) and extreme temperature hazards (e.g., heat waves) are less covered and the cover of lower quality.

Threshold Biases

Threshold biases result from unequal reporting quality and coverage for disasters of different magnitudes. High-impact disasters attract more attention, resulting in better media coverage and reporting. This could lead to threshold biases in EM-DAT.

Geographic Biases

Geographic biases result from unequal reporting quality and coverage across space. In general, EM-DAT has a relatively worse coverage for Sub-Saharan Africa regarding the occurrence and the accounting of impact variables. Any disaster type may be subject to geographic biases in EM-DAT as there may be discrepancies between reporting systems from one country to another. This issue is particularly pronounced regarding heat waves.

5.1. Belgium: FA-UGGp

Country: Belgium
CORE: UNESCO Global Famenne-Ardenne Geopark
Crisis: Floods, Rainstorms

5.1.1. Background

The UNESCO Global Famenne-Ardenne Geopark is located in southern Belgium, some 110 kilometres south of the nation's capital city of Brussels. As its hyphenated name suggests, the Geopark is located along the boundaries of two historical and natural regions. The Famenne is a historical and natural region in southern Belgium, characterised by numerous river systems, calcium-rich soil, rock formations, and extensive cave systems. The Ardennes, on the other hand, is a mountain range and forested natural landscape that spans southern Belgium as well as parts of eastern France, western Germany, and the Duchy of Luxembourg. Its hills reach up to nearly 700 metres above sea level. Numerous forests cover the relatively sparsely populated landscape.

The Famenne-Ardenne Geopark, spanning 915 square kilometres with a population of 67,000, is mainly located in the so-called Calestienne area. This is a region distinguished by limestone ground and comprising three river basins: of the Lesse, the Lomme and the Ourthe rivers.

The area's designation as a UNESCO Geopark is in recognition of its comprising a "unified geographical area which boasts geological heritage sites and landscapes of international geological significance".[3] This geological significance in large part relates to the park's hosting the largest concentration of karstic phenomena in Europe – meaning, its landscape is characterised by large limestone formations, including cliffs, ridges, towers, caves, and fissures.

[3] "What is a Geopark?", Geopark Famenne-Ardenne, accessed 15 February 2024, https://www.geoparcfamenneardenne.be/en/what-is-a-geopark.html.

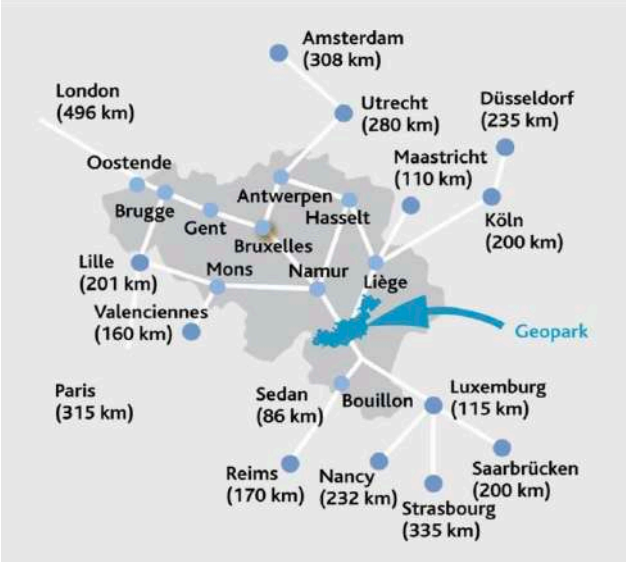


Figure 33. Geographic position of the Geopark

Administratively, the geopark is located within the primarily French-speaking region of Belgium (Wallonia), located partially in 2 provinces: Luxembourg and Namur. Namur has a population of 497.073 persons. Its administrative capital and largest city is Namur with roughly 115.538 inhabitants. Luxembourg (which to its east borders the independent country of the Duchy of Luxembourg) has a population comprising around 280,000 persons. Its administrative capital and largest city is Arlon, with roughly 30,000 inhabitants.

Aside from making up an important international geological site, the Famenne-Ardenne Geopark is a significant regional tourist destination. As stated above, fewer than 70,000 persons permanently reside inside the Geopark, but the area hosts nearly one million tourists annually. Famed tourist spots include the park's complex rock formations and cave systems but also human heritage sites, including buildings erected during the area's functioning as a quarry and industrial region, particularly in the 1700s and 1800s.

Part of the Geopark's stated mission lies in harmoniously amalgamating a flow of tourists with principles of sustainability and equity. As such, natural and cultural heritage assumes a central role as "an instrument of sustainable development".[4] A related explicated purpose of the Geopark includes "preparing for environmental changes by studying the past".[5]

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[4] "Our Projects", Geopark Famenne-Ardenne, accessed 15 February 2024, https://www.geoparcfamenneardenne.be/en/our-projects.html.

[5] "Preparing for Environmental Changes by Studying the Past", Geopark Famenne-Ardenne, accessed 15 February 2024, https://www.geoparcfamenneardenne.be/en/geology/preparing-for-environmental-changes-by-studying-the-past.html.

5.1.2. Crisis description

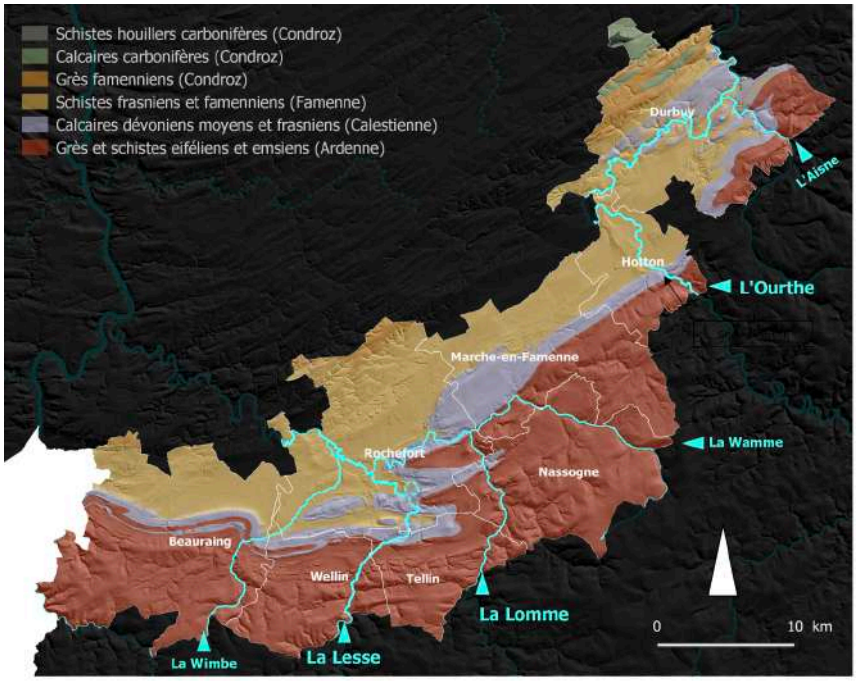

Figure 34. Geological composition and river systems of the Geopark

The major hazard of this CORE Lab is flooding, with rainstorms forming a related secondary hazard. The presence of three river basins and six notable rivers in a traditionally fairly rainfall-prone region of Europe means flooding and heavy rain has been known to occur with relative frequency.

Recently and most significantly, in mid-July 2021, the region was affected by severe floods in a disaster event which was described by some experts as once-in-a-century. It was caused by extreme rainfall inundating the area over a period of around two days. Worse, the July 2021 disaster was preceded a period of lighter rainfall, and one month earlier by a destructive tornado. As such, at the time of the most heavy rainfall, around 12-15 July, the soils were already partly saturated and some infrastructure had already experienced damage. The heavy rainfall caused the various rivers in the area to overflow, flooding the alluvial plains. The bar chart image below displays the monthly rates of precipitation as recorded by the meteorological station at Chanly, measured in millimetres. It shows clearly the higher-than-average amounts of rainfall in July 2021, as well as in the preceding months of that same year. Flow rates recorded in the Geopark's rivers, in comparison with the maximum flows observed in the last 50 years – expressed in cubic metres per second (m3/s) – were as follows: Ourthe, 374 m3/s (max instrumental

234m3/s); Lhomme, 171m3/s (max instrumental 75m3/s); Lesse, 116m3/s (max instrumental 116m3/s).

The ensuing floods affected 202 municipalities in Belgium (which compromises 262 municipalities) – including the Geopark – as well as swathes of western Germany and the Duchy of Luxembourg. They resulted in 42 deaths inside Belgium, including one victim found inside the area of the Geopark (in the village of Hampteau). A total of 4,206 families living within the confines of the Geopark were directly impacted by the floods, with some losing all their possessions. Much public and private infrastructure – including houses, buildings, roads, bridges, sports facilities, and shops – was damaged and forced to temporarily or permanently close. During the peak of flooding, communication networks partially collapsed, as did the regional supply of clean drinking water. Damages directly caused by the floods across the affected regions amounted to billions of euros.

Some of the cascading effects of this disaster included the necessity of quickly finding and organising emergency accommodation for disaster victims, variously on a temporary or longer-term basis. Many tourist attractions and ten geo-sites were impacted by flooding, forcing temporary closures that spanned from between four to 32 days. Their stepwise re-opening was contingent on the speed of repairs and site-specific clean-up efforts. Several riverside campsites were damaged, as well as several natural sites. Throughout the region, much waste accumulated. Trails and circuits within the Geopark and greater area were damaged or blocked, stunting tourists' access.

Shortly following the disaster, two distinct behaviours could be observed amongst visitors and tourists. First: many would-be visitors stayed away from the area, cancelling their trips and accommodations and expressing discomfort in visiting affected regions. Relatedly, some events in the region were cancelled or postponed out of a sense of solidarity with the disastrous events and the victims. Second: some visitors and inhabitants embarked on voyeuristic tourism, inspecting affected sites and seeking out areas of destruction. Such behaviours from outside visitors exacerbated residents' pre-existing feelings of harm and vulnerability, as they were already expressing discomfort stemming from public personnel and volunteers having intruded into their private spheres.

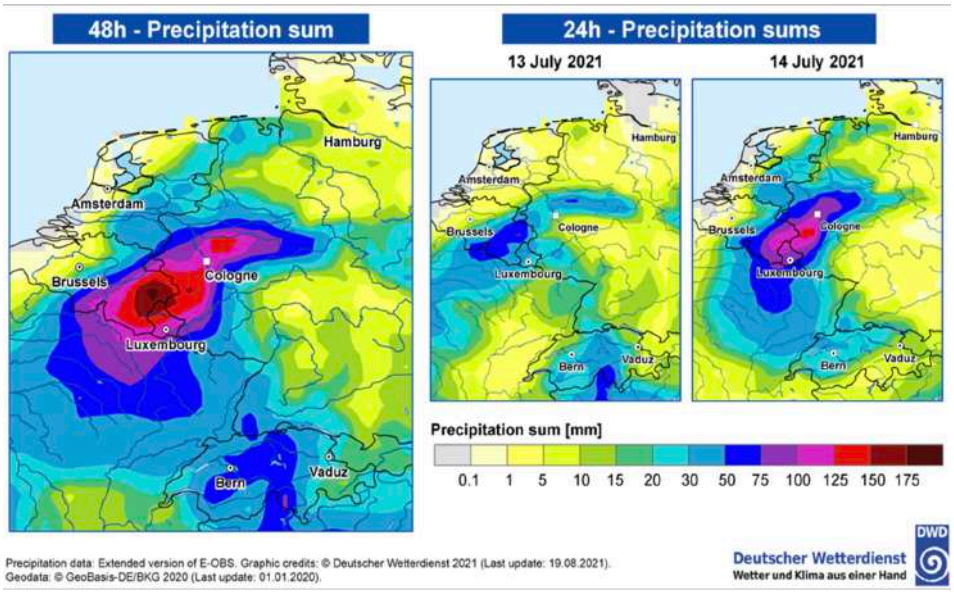

Figure 35. Levels of precipitation in the greater impacted region, 13-14 Jul 2021

In all, the events of July 2021 broke regional historical rainfall records and amounted to some of the most destructive natural disasters the region had experienced. Consequently, several post-disaster assessments were undertaken by governmental, academic, and private-sector bodies. A notable example of this was an international scientific assessment of the situation, which saw scientists from Belgium, Germany, the Netherlands, Switzerland, France, Luxembourg, the United States and the United Kingdom all collaborating in the study. These found that, as a result of climate change and rising global temperatures, the region can in future expect further intense rainfall events at greater frequency, and interspersed with some years and periods of severe drought.

The Geopark is planning to organise public sessions explaining the floods, the tornado, and climatic risks.

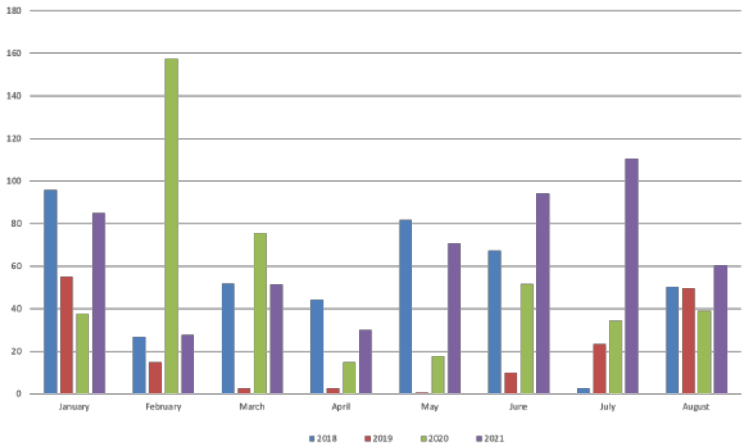

Figure 36. Chart displaying regional rainfall records per year and month

5.1.3. Stakeholders

Particularly during the stage of disaster response and recovery, acts of solidarity were clearly showcased between politicians, emergency services, local associations, and private individuals. Such acts of solidarity amounted to cooperation and aid in the pursuit of helping victims. Much help also flowed into the region from the outside, including fundraising efforts through social media, aimed at donors from non-affected regions. Throughout the affected areas and beyond, crisis centres were set up to manage the collection of various donations, including food, clothing, basic necessities, and household appliances. Also, in the ensuing stage of disaster recovery, the primarily Dutch-speaking northern Belgian region of Flanders offered its services to help revive the tourism industry in the area.

As this event shows, a wide network of stakeholders is spread across the region. Direct regional partners here may include the House of Urbanism (a regional urban-planning agency), the Famenne-Ardenne Agricultural representative association, Public Service agencies (SPW), first responders, emergency services, municipal agencies and municipal social services (CPAS), citizens' associations, merchants' associations, sports associations, the Organization for Mental Health Support, and victim-support associations.

Further related stakeholder groups may include vulnerable persons, Geopark partners, policymakers, municipal or regional government officials, municipal bureaus, as well as cultural associations and cultural centres. The massive financial burden of flooding worldwide means the insurance industry also forms a key invested stakeholder, as the industry allocates many resources into improving local and national resilience strategies.

The events of July 2021 contributed to the establishment of Marhetak, a system of cross-border emergency cooperation in western Germany, southern Netherlands, and eastern Belgium. Marhetak forms one of several existing resources prevailing in the CORE Lab, as is expounded on in the section below.

5.1.4. Existing resources

Marhetak is a crisis management project set up following the disasters of July 2021, led by the cross-border Euregio Meuse-Rhine (a European region spanning municipalities in Belgium, Germany, and the Netherlands).[6] The Wallonia Public Service forms a key partner and stakeholder in the Marhetak project. It is intended to coordinate cross-regional and cross-border crisis response and management for regions in Belgium, Germany, and the Netherlands.

The Marhetak project complements several existing flooding-related resources that can help in mitigating and responding to future disasters. One such resource includes the Public Service of Wallonia's Satellite Imagery project, which since 2021 integrates satellite imagery into Wallonia's cartographic services and is intended to improve view of land cover and land use in region, in large part to mitigate future flooding damage.[7]

The Belgian Local and Provincial Authorities' Special Flood Emergency and Intervention Plan incorporates case-specific contingency plans for floods and other disasters, to be executed by local and provincial agents across the country, and are to be taken into consideration when dealing with local and provincial resilience building and contingency planning in Belgium.[8]

On an EU-level, the Copernicus European Flood Awareness System (EFAS) aims to provide warnings to all relevant actors in case of an imminent or transpiring flooding event. 95 weather stations in Wallonia are connected to the system. Following the July 2021 floods, however, EFAS faced criticism for offering inconsistent and late warnings.[9]

Such measures as detailed above directly conform to the stipulations of the EU Floods Directive - 2007/60/EC, which requires member states to "assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at

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[6] For more information on this project, see "Marhetak: improving euregional cooperation in times of flooding", Marhetak, accessed 15 February 2024, https://marhetak.info/.
[7] See "The Public Service of Wallonia (Belgium) relies on satellite imagery for a comprehensive view of land cover and use", eurisy, accessed 15 February 2024, https://www.eurisy.eu/stories/the-public-service-of-wallonia/.
[8] "Flooding", National Crisis Centre (Belgium), accessed 15 February 2024, https://crisiscenter.be/en/risks-belgium/natural-risks/flooding.
[9] "'How many dead will we accept?' European floods expose failure to heed climate warnings", Politico, accessed 15 February 2024, https://www.politico.eu/article/belgium-european-floods-failure-to-heed-climate-change-warnings/.

risk in these areas and to take adequate and coordinated measures to reduce this flood risk".[10] The Directive also explicates that the information generated by this measure should be accessible to the public, and that the public should have a voice in the ensuing planning process.

Another existing post-disaster resource lies in political assessment and categorisation: following the 2021 disaster, on 28 July, a political commission launched by the Walloon government officially recognised the floods as constituting a natural disaster. This resulted in the inhabitants affected by the floods officially being able to receive financial compensation from government agencies, as well as strengthening victims' claims towards insurance companies.

5.1.5. CORE interests

As has been detailed, numerous resources and services exist to improve the regional, national, or Union-wide response to a flooding or rainstorm event. The July 2021 disasters presented the CORE-lab area with several challenges, however, which RESILIAGE may contribute to addressing in the future.

One circumstance that became most clear was the necessity of strengthening the tourism-communication and -promotion strategies of the area. Tourists may prove important stakeholders and partners in an affected areas' post-disaster clean-up and recovery efforts, not least in their abilities to boost the region's economy. However, for this to occur smoothly and without risk, clear communication channels need to be established, ones that can provide unambiguous information on the state of affairs in affected places. Following the July 2021 disasters, many visitors reported having imagined the area of the Geopark as being inaccessible or risky even in periods when this was patently not the case anymore. This was in large part due to faulty communications from the press, which had been reporting on the disaster and its damages without providing accurate updates on the largely speedy and successful regional recovery efforts.

The July disasters also raised many procedural questions pertaining to whether official warnings were properly phrased and disseminated, whether water dams were properly managed before and during the crisis, and whether existing tools – such as maps, satellite imagery, and meteorological reports – were properly employed by municipal actors in predicting, preparing for, and handling the crisis. Longer-term related questions will include the future regional role of pernicious agricultural practices (such as soil

[10] "Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks", EUR-Lex, accessed 15 February 2024, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32007L0060.

artificialisation), non-resilient land-use planning, and the local presence oil tanks (including petrol stations).

Short- and medium-term solutions may include the planting of hedges, bushes, and trees, thereby increasing soil rooting and natural water barriers.

5.2. Greece: UoC-NHMC

Country: Greece
CORE: Crete
Crisis: Earthquakes, heatwaves, wildfires, tsunamis, floods

5.2.1. Background

Crete, largest of Greek islands is situated in the south-eastern Mediterranean. Located on the Aegean Sea Plate, a small tectonic plate, wedged between African, Eurasian, and Anatolian tectonic plates, a number of fault lines run across Crete. While within the outer non volcanic arc of the eastern Mediterranean, the island is prone to experiencing earthquakes due to the occurrence of the Hellenic subduction zone just south of the island.

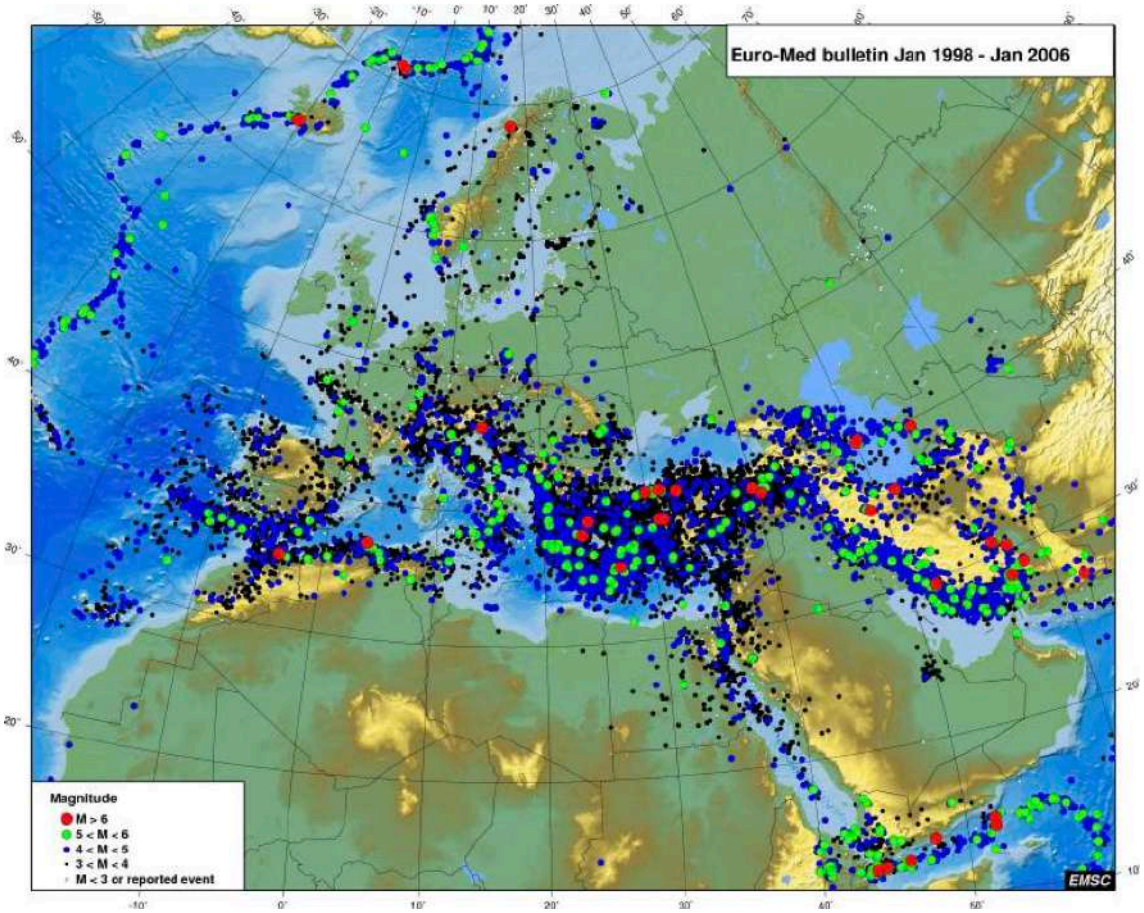

Figure 37. Map indicating the quantity of earthquakes around the eastern Mediterranean, 1998-2006

Human settlement of Crete dates back to prehistoric times. During the Bronze Age one of Europe's earliest advanced civilisation, the Minoan culture, was centred on Crete. Known for their palaces build out of gigantic boulders, the Minoans were also the first

ones to leave behind records of earthquakes. After the decline of the Minoan culture, it became part of Classical Greece and later the Roman Empire, followed by the Byzantines, Venetians and Ottomans. Often considered outsiders, they still all left traces on Crete and shaped it distinct culture which adds to Greece overall but remains distinctive local traits. A brief overview over past major earthquakes shows, that every culture present on Crete had to deal with this disaster albite one could not call them an everyday occurrence.

- 62-66 a.D. West Crete, M=7
- 365 a.D. West Crete, M=8,3
- 375 a.D. North Crete, M=7,8
- 448 a.D. South Crete, M=7,2
- 1236 a.D. West Crete, M=7
- 1303 a.D. Rhodes, M=8
- 1494 a.D. . Heraklion, M=7,2
- 1508 a.D. Ierapetra, M=7,5
- 1604, 1612 a.D. Heraklion, M=7
- 1665, 1673 a.D. Heraklion, M=7
- 1780 a.D. Ierapetra, M=7
- 1810 a.D. Heraklion, M=7,1
- 1856 a.D. NE Crete, M=7,8
- 1926 a.D. Rhodes, M=8
- 1956 a.D. Amorgos, M=7,5

Crete spans 8,450 square kilometres and is inhabited by 624,000 people. The Island is made up of mountainous terrain with peaks of over 2000 meters. Six mountain ranges, the Lefka Ori, the Idi Range, the Asterousia Mountains, the Kedros, the Dikti Mountains and the Thrypti run East-West along Crete's elongated form. Several Rivers run from the mountains to the sea. The climate of the island is separated in two climatic zones. While the majority of the island falls into the Mediterranean hot-summer climate zone, parts of the south-east are hot semi-arid comparable to North Africa. As such during the summer months temperatures of up to 44 ° Celsius have been measured. While the mountain peaks receive snow during the winter months, the lowland usually does not experience temperatures below zero and has very moderate winters.

Arkalochori, Resilage's core site, lies about 30 kilometres inlands from the island's capital Heraklion. A home for 4,800 villagers, it is annually visited by several hundreds of tourists. Situated in central Crete Arkalochori lies in the less mountainous part of Crete in the Pediada Plain at an altitude of 400 meters above sea level. While the town is overall young by Greek standards, a Minoan palace close to the town and the Diktaion Antron cave, a sacred cave of the Minoans close to the town, are major archaeological

sites. There are no notable remnants of the cultures following the Minoans in Arkalochori.

5.2.2. Crisis description

The earthquakes in Crete are the result of tectonic activity between the Eurasian Plate, the Arabian Plate, the Apulian Plate, the African Plate and the Aegean Plate. Crete lies on the very edge of the Aegean Plate on the cusp of the Hellenic subduction zone. There the African Plate pushing north is forced under the Aegean Plate, which in turn is being pushed south by Eurasian Plate. These opposing movements rise the Aegean Plate, forming the comparatively shallow waters of the Aegean Sea and elevating the mountain ranges on Crete and other Greek islands.

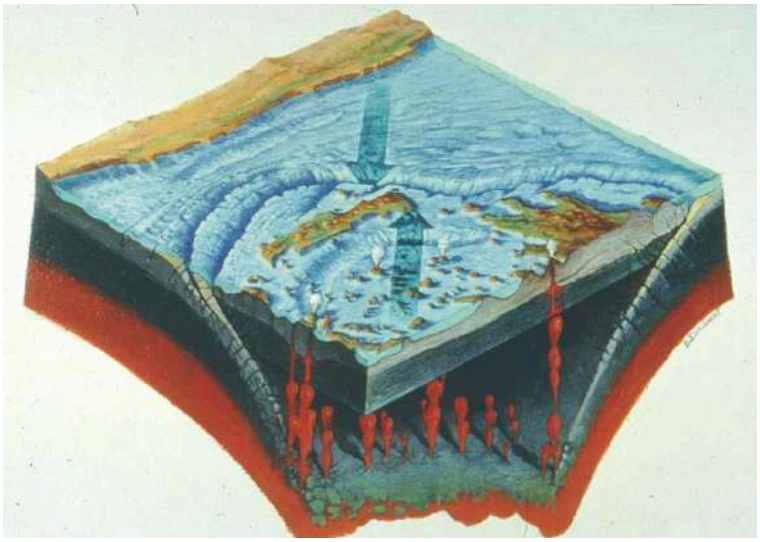

Figure 38. Map showing crosscut of the regional tectonic and volcanic makeup

The movement of the Aegean Plate is 3,5 cm per year southwards, pushed by the Eurasian Plate, while the African Plate moves 1 cm per year northwards.

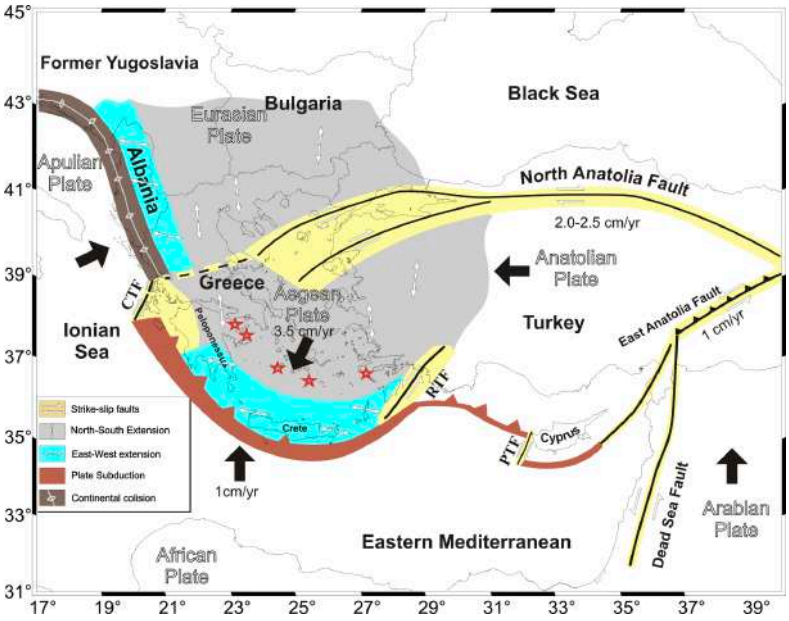

Figure 39. Map showing the fault lines in the eastern Mediterranean

Wedged between these bigger plates, causes the seismic activities on the Aegean Plate. The resulting faults run east-west trending across the Plate. On Crete these fault lines are geomorphological visible in a number of places. Consequently, the faults on the island are well mapped and defined.

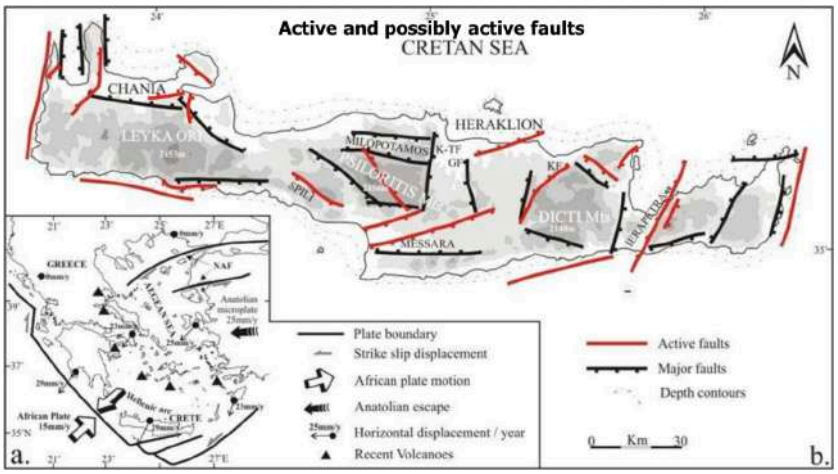

Figure 40. Map showing active and possibly active faults on Crete

The vast majority are inactive faults but several on shore and off-shore are considered active. One of them is the Kasteli fault, which caused the Arkalochori earthquake sequence. To better understand this CORE site's disaster profile, earthquakes must be understood as a sequence. An earthquake is not a singular event but a sequence of

events. Such a sequence consists of five stages. Frist the tectonic movements cause elastic strain. This leads to dilatancy in rock formations, which in turn causes an influx of water. The tremors experiences on the surface are the release of these strains. A major shock is usually accompanied by aftershocks, which are smaller and can occur over a period of time. If the first shock is not the most intensive, the shocks preceding the heaviest tremor are called foreshocks.

The Arkalochori earthquake sequence started on 5th of June 2021 and continued for more than a year. It mainly affected the area of Arkalochori with the epicentre of the earthquake located below the settlement. Before the main earthquake, there was a notable escalation in seismic activity, with from the beginning of June, 160 foreshocks with a magnitude of up to 2 being recorded. The strongest of these foreshocks, with a magnitude of 4.8 on the Richter scale, occurred at the end of July. This increasing activity of foreshocks suggests a gradual increase in tension along the fault in the months leading up to the main event. The main earthquake itself ruptured on the 27th of September at the central and southern section of the fault, which is approximately 7 km long. It is believed that this section was the site of the rupture that triggered the earthquake. After the main earthquake, aftershock activity continued, and by the end of 2021, approximately 570 aftershocks with a magnitude between 2 and 5.3 on the Richter scale had been recorded. These aftershocks were mainly concentrated at the northern and southern ends of the fault, indicating that the fault structure continued to change in response to the stresses released by the main earthquake. In 2022, further aftershocks occurred, with more than 500 events with a magnitude of 2.5 to 4.7 on the Richter scale being recorded. These aftershocks occurred mainly in the northern part of the fault, indicating ongoing activity in this region even after the end of 2021.

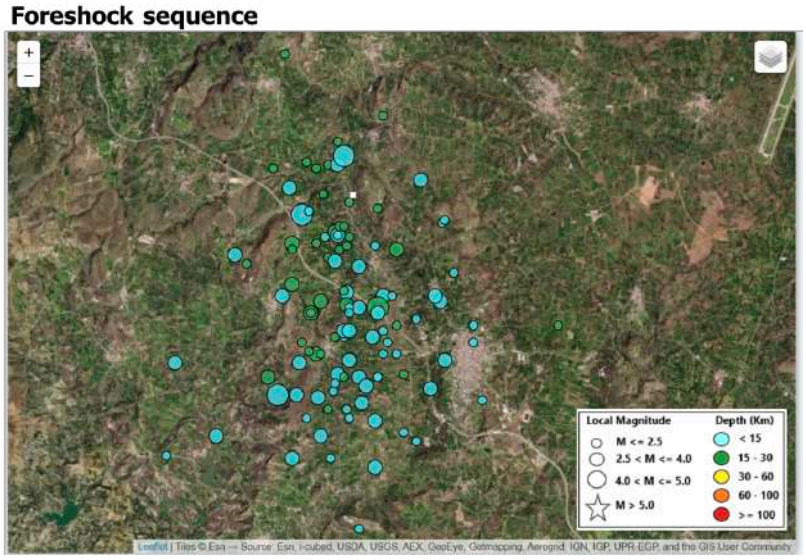

Figure 41. Map showing foreshock sequence, 2021

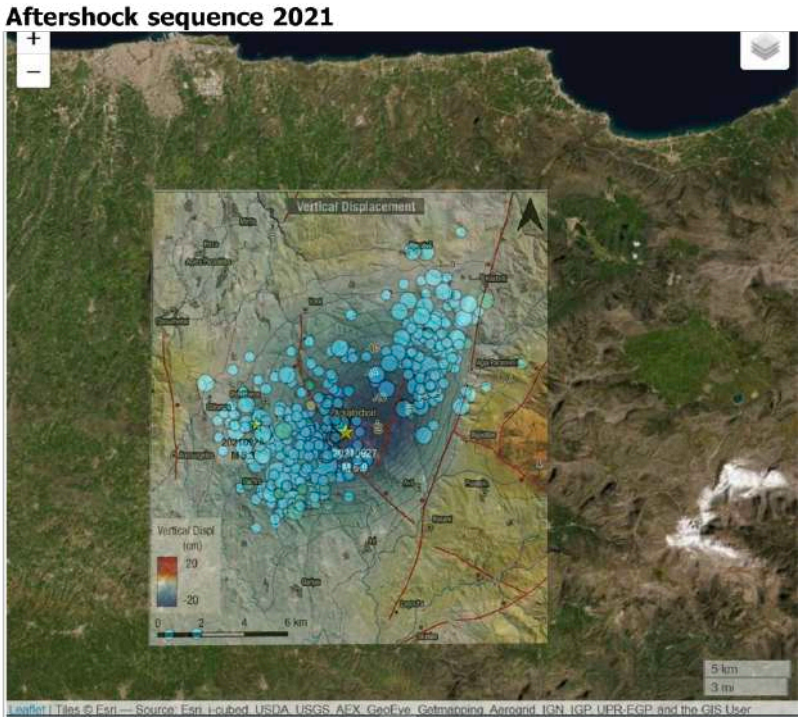

Figure 42. Map showing the aftershock sequence, 2021

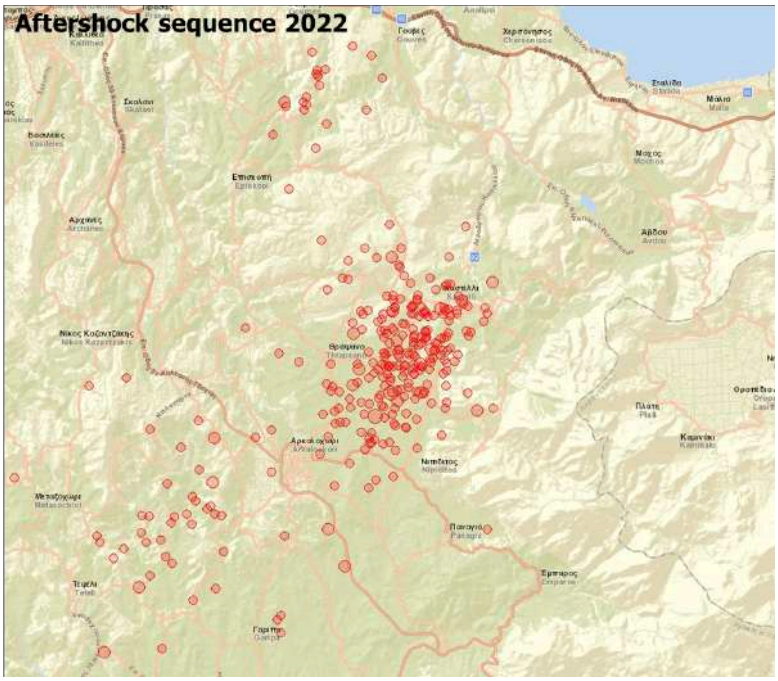

Figure 43. Map showing the aftershock sequence, 2022

A total of over 3000 earthquakes occurred in the area with the highest frequency (>100/d) immediately after the main earthquake.

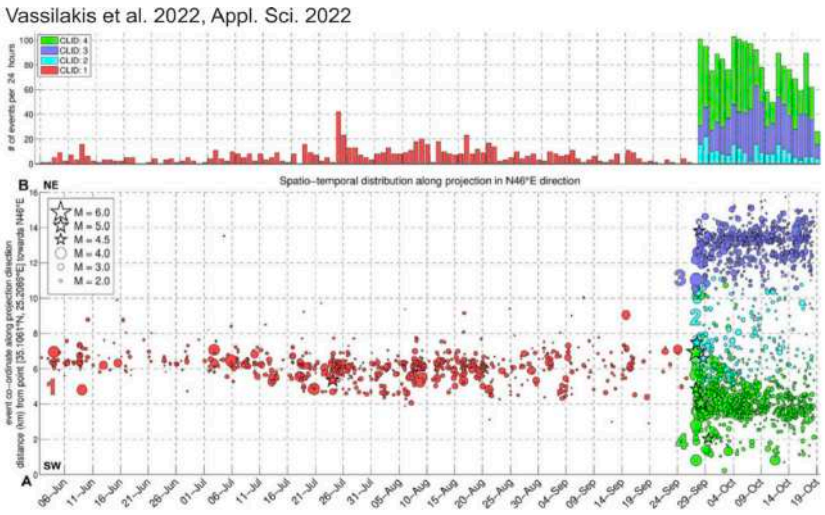

Figure 44. Graph showing frequency of earthquake events, June-October 2022

Over 7,000 residential structures sustained varying degrees of harm, with nearly half (3,900) deemed unfit for repair and requiring demolition. This significant impact on housing stock underscores the earthquake's destructive force.

Fortunately, the human cost remained relatively low, with only one confirmed fatality recorded. Interferometric studies conducted after the earthquake, shed light on ground deformation associated with the event. Measurements revealed subsidence of up to 20 centimetres during the main shock, indicating movement of the earth's surface along the fault line. The spatial distribution of damage observed within the town following the seismic event can be attributed to the underlying geological structure upon which buildings were constructed. The older portion of the town, constructed primarily on thin and unconsolidated marl sediments, experienced significantly severer damage and structural collapse compared to the newer areas built on solid limestone bedrock. This disparity in damage can be attributed to the inherent seismic response characteristics of the underlying strata. Marl, due to its loose and unconsolidated nature, amplifies ground motion during earthquakes. Thus subjecting structures built upon it to intensified seismic forces. Consequently, these structures, which were the oldest buildings in Arkalochori, were more susceptible to damage and collapse. These houses were mainly build from stone masonry. While newer constructions showed varying degrees of damage, the severity was dependent by the underlying substrate. As with older buildings, those newer ones situated on marl sustained significant damage. Conversely, structures built on the more stable limestone bedrock experienced only minor damage on masonry.

5.2.3. Stakeholders

Since the crisis scenario can involve large parts of and even the entirety of the island of Crete, the span of stakeholders in DRM is wide, ranging from vulnerable groups and citizens, to first responders' associations, tourism- and business representatives, and government officials. Since the specific SyRI framework for this CORE lab is "Active Memory", the potential role of cultural workers – including museologists, educators, researchers, archaeologists, and historians – bears especial mentioning. For some further discussion on the work of some stakeholders, see the section below (5.2.4), which deals with existing resources.

The local network as staked out by the CORE lab representatives looks as follows:

- Fire brigade
- First-aid responders (EKAB)
- Local Health Center
- CP Volunteer Xenios Zeus
- Red Cross CP Volunteers
- Municipality
- Center of Local Community
- Local Bishop
- Region of Crete
- Technical Chamber of Crete

5.2.4. Existing resources

The attributions made by residents of Arkalohori regarding the cause of the earthquake were predominantly rooted in rumours, misleading beliefs, and misinformation rather than scientific understanding. It is imperative to address and counteract earthquake-related misinformation to prevent its proliferation. Symptoms indicative of post-traumatic stress, acute anxiety, or phobia were not reported among the residents.

However, peritraumatic reactions were observed, including emotional responses such as uncertainty, anxiety about the future, and fear of further destruction, as well as concerns for the safety of others. Residents displayed peritraumatic reactions that likely contributed to their coping abilities. These reactions included taking action, maintaining hyperfocus, and regulating emotions. Moreover, residents exhibited traits such as staying calm, exercising self-control, striving to be useful, engaging in problem-solving activities, maintaining a goal-oriented approach, fostering social connectedness, and drawing upon prior experience with earthquakes. These factors collectively enhanced their resilience in the face of the seismic event.

An example of this were outdoor meetings and discussions since community centres and church buildings (cultural property) had been impacted by the earthquake.

Figure 45. Photograph showing a tour of earthquake damages

A key objective after the earthquake sequence was to bolster the psychological resilience and community readiness in Arkalochori. To this end the Department of Psychology of the University of Crete and the Natural History Museum of Creteis engaged in a collaborative effort with the residents of Arkalochori. The aim is to both conduct research and outreach to those affected. The objective is to provide psychological support to the residents, thereby reinforcing their coping strategies. A University-led initiative has been established to train mental health professionals in the principles and techniques necessary for intervention following natural disasters. Specifically, the focus is on managing the psychological repercussions experienced by children and adolescents, with the overarching aim of mitigating the psychological impact of such calamities. The University of Crete, in conjunction with Municipal Health Services, is actively collaborating on initiatives designed to lessen the effects of future earthquakes. These efforts involve the inclusion of policy makers, earth scientists and engineers, as well as emergency first responders in order to comprehensively address the multifaceted challenges posed by seismic events.

Experts including engineers, scientists, mental health professionals, and policymakers, along with residents, participated in focus groups. These sessions aimed to stimulate discussions, encourage engagement, and facilitate critical examination of individuals' lived experiences. The overarching objectives were to increase awareness and knowledge pertaining to earthquake preparedness and response. Furthermore, the focus groups served as platforms for aiding residents in comprehending the ramifications of a disaster on both personal and collective levels. Activities within the focus groups included the sharing of prior experiences and beliefs, fostering preparedness, processing emotions and feelings, and fostering community interaction and problem-solving related to disaster issues.

5.2.5. CORE interests

The research interests in the spontaneous outdoor meetings should enhance the knowledge about the various aspects of Arkalochori’s intangible cultural heritage. This

includes practices, representations, values, knowledge, and skills. Clear research targets emerging from this context are include:

- Documenting and analysing the specific practices observed in Arkalochori's earthquake preparedness and response meetings, with a focus on how these practices are passed down through generations and contribute to the community's resilience.
- Investigating the representations of earthquakes and disaster management within Arkalochori's cultural context, exploring how these representations shape individuals' perceptions and responses to seismic events.
- Examining the underlying values embedded in Arkalochori's approach to disaster response, with an emphasis on understanding how these values influence community cohesion and resilience.
- Establish if there exist any form of disaster preparedness among Arkalochori's residents
- Mapping the local knowledge related to earthquakes and disaster management in Arkalochori, thereby identifying key sources of knowledge and how this knowledge is transmitted between generations.
- Assessing the skills and competencies demonstrated by Arkalochori residents in the context of earthquake preparedness and response meetings, with a view to understanding how these skills contribute to the community's adaptive capacity and disaster resilience.

5.3. Norway: TRC

Country: Norway
CORE: Trondheim
Crisis: Landslides, wildfires, urban fires

5.3.1. Background

Trondheim, capital of central Norway's Trøndelag County, is the country's third most populous municipality. A national centre for higher education, its population of 213,000 is complemented each year by 30,000 students. The city houses Norway's largest university by enrolment (the Norwegian University of Science and Technology), a major teaching hospital (St. Olav's University Hospital), as well as a campus of the Norwegian Business School (BI-Trondheim). Consequently, the city is heavily influenced by student culture, with a young, well-educated, interregional, international, and itinerant population.

Located where the Nid River (Nidelva) flows into the Trondheim Fjord – and near the Atlantic Ocean – the city centre is in large part dominated by bodies of water, with downtown located on peninsula connected to the mainland through a narrow isthmus located west of downtown. The suburbs are hilly and, moving outwards, forested. The city's access to oceanic trading routes has afforded its long mercantile and industrial history, a history that is reflected in the cityscape as a whole and in local heritage sites in particular.

The most widely-known example of the latter is the Nidaros Cathedral, a pilgrimage church whose construction commenced in the eleventh century. Owing to numerous devastating fires (including in 1328, 1432, 1531 and 1788) and resultant restorations, the church forms an eclectic blend of various Gothic, Romanesque, and Baroque architectural styles. This history has made it a prominent tourist attraction and an important symbol for the city.

Another prominent historical site is the Stiftsgården, the royal residence palace in Trondheim, which was built in 1774-1778. Stiftsgården is the largest wooden palace in the Nordic countries and an impressive example of Rococo architecture. Stiftsgården has been exposed to several smaller fires, but the biggest threat came during World War II, when the Germans planned to burn down the entire block around the palace. This plan was fortunately averted by Norwegian resistance fighters.

Bakklandet is a district on the east side of the Nid River characterised by narrow streets and wooden houses, often hundreds of years old and mostly unharmed by major urban fires. A prominent local landmark is the wooden Old Town Bridge which connects Bakklandet to the city centre.

The city has repeatedly been devastated by fires. A standout example of this is the city fire of 1681, which merited an almost complete reconstruction of the city centre, post-disaster. The city was rebuilt according to plans by Johan Caspar von Cicignon, a Luxembourg-born architect who disregarded both the city's earlier street grid as well as extant private properties and instead drew straight, long, and broad streets across the city's central isthmus. Such designs were intended to limit the extent and damages of future fires. After the city fires of 1841 and 1842, which also affected large parts of the city, proposals were put forward for the construction of protective walls. That is, it was suggested that all new buildings should be constructed from brick or other fireproof material. The proposal was not adopted, but many of the new houses built after the fires were nonetheless made of brick. This helped reduce the risk of new major fires. In 1846, an area south of the Church of Our Lady was destroyed by fire, and masonry was introduced for new buildings within a specified area. As is evident from the above descriptions, the history and fundamental make-up of the city has been stamped by fire and related disasters.

5.3.2. Crisis description

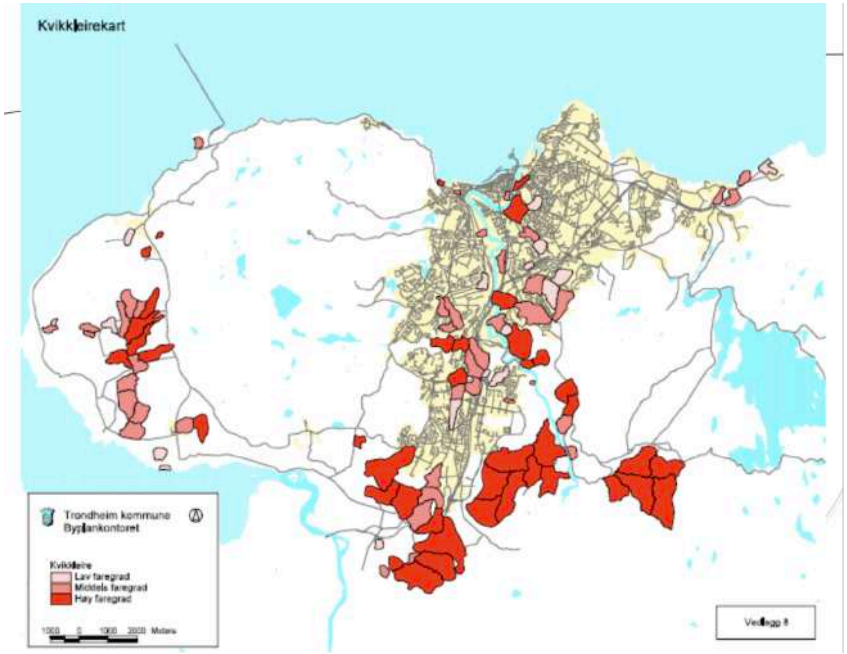

Figure 46. Map showing quick clay distribution in the Trondheim region

This CORE lab's designated main hazard is a specific type of landslide, namely quick clay slides. Much of the region's soil is composed of layers of subterranean quick clay, which formed thousands of years ago during Scandinavian glaciation and post-glacial rebound. Quick clay is easily irritated when exposed to stress such as vibration, penetration, or heavy loads, and can abruptly change its geotechnical characteristics

from a stable and supportive ground to a watery liquid state. This latter state can translate into massive landslides, which not only endanger the landscape and structures in the landslide's path but will also cause the collapse of the above-situated earth, including any manmade structures located atop quick clay deposits.

More than 27,000 inhabitants of Trondheim live in a quick clay zone. In their "Analyses of Risk Scenario 2013" report, the Norwegian Directorate for Civil Protection pointed to quick clay avalanches in densely populated urban areas as a worst-case scenario. Øvre Bakklandet in Trondheim (a subsection of the Bakklandet district described in the Background section) is among the mapped quick clay zones with the most inhabitants and potentially the greatest dire consequences. Equally, the 2009 expert report to the Norwegian government "Konsekvenser av klimaendringer, tilpasning og sårbarhet i Norge" registered 2,000 deaths from landslides in Norway in the past 150 years, and predicted that such events will worsen with the continuing onset of climate change.

Quick clay landslides may also exacerbate the risk of cascading effects, including the CORE lab's secondary hazard, namely urban fires and wildfires. As detailed in the Background section above, Trondheim has a long record of devastating urban fires, and as summers become longer, warmer, and drier – in part due to human-induced climate change – the frequency, duration, and intensity of wildfires can be expected to increase across Trondheim, Norway, and Scandinavia as a whole.

5.3.3. Stakeholders

The Trondheim CORE lab is led by the Trondheim Red Cross (TRC) with the close support and involvement of a wider network. This network consists of citizens' associations, first responders, policymakers, vulnerable groups and is complemented by representatives of Resource Centre on Violence, Traumatic Stress and Suicide Prevention (RVTS Midt), Mental Health Organisation (Mental Helse), Norske Kvinners Sanitetsforening Trondheim (Norwegian Women's Public Health Association), Unit for Trauma Treatment St. Olav's Hospital, Norwegian centre for violence and traumatic stress studies (based in Oslo). These latter organs may help shed particular light on the CORE's specific SyRI framework, which centres on Healtht and Wellbeing. The city's Director of Cultural Heritage and The Cultural Heritage Office Trondheim also form an integral part of the network, highlighting aspects of regional cultural heritage.

The Norwegian Red Cross was established in 1905; Trondheim's chapter counts 800 volunteers and 18 employees. Its primary work lies in search and rescue, first aid, psychosocial support, preparedness, social inclusion, activities for children, youth and adults or the elderly. Since 2009, the Norwegian Red Cross has been recognised by the

King and national government as an auxiliary peacetime organisation to Norwegian authorities.

5.3.4. Existing resources

Trondheim has been one of the most active municipalities in Norway when it comes to mapping and dealing with the risk of quick clay landslides. In order to be ready and deal with a quick clay incident, the Trondheim Red Cross (TRC) has an emergency agreement with the Municipality, an emergency plan with action cards, and periodic training courses and exercises with volunteers and staff. Furthermore, TRC is currently testing some digital solutions, such as apps, to manage volunteers, available resources and so on.

Due to the areas of quick clay in the city, and landslides in the past, the municipality has introduced several measures to reduce the risk and safeguard urban development. Some of these measures include:

- A separate department (and related equipment) for drawing and analyzing soil samples
- Closely following national guidelines on assessing the degree of danger and risk of quick clay zones
- Carrying out ground investigations and on-site visits to identify and monitor unstable areas
- Restricting or prohibiting new construction or expansion of existing buildings in areas with a high risk of quick clay landslides
- Carrying out stabilising measures or erosion control in vulnerable areas
- Informing and guiding citizens on how to prevent and manage quick clay landslides
- Collaborating with other actors to develop new knowledge and technology about quick clay and avalanche risk
- Participating in several national and international projects on the topic

Some concrete results emanating from these measures include

- CIM (Crisis Information Management, F24)
- Trained volunteers and staff (through courses and exercises)
- Emergency agreement with the Municipality
- Emergency plan with action cards
- Volunteer management systems (DiBA – volunteer data base, Resource system, “My Red Cross”)
- Project ENGAGE

5.3.5. CORE interests

The CORE lab hopes to advantage in several ways through its cooperation with RESILIAGE. It is hoped that a better understanding of societal resilience in general and across Europe may help sharpen Trondheim's and TRC's practical comprehension and implementation of the concept. Second, it is hoped that RESILIAGE-induced cooperation will see the expansion and strengthening of local and regional networks, not least through information- and experience-sharing and organisational development.

As regards the SyRI-specific research area of Health and Wellbeing, RESILIAGE research may contribute to the CORE's improved understanding of behavioural and psychological reactions of diverse society groups affected by a disaster or crisis situations. This will abet organisations' providing efficient and correct support during crisis scenarios. Moreover, research results may contribute to better communication and coordination between staff, volunteers, authorities, citizens, and stakeholders.

5.4. Portugal: Naturtejo

Country: Portugal
CORE: Naturtejo, Empresa de Turismo, E.I.M. Unesco Global Geopark
Crisis: Fires

5.4.1. Background[11][12]

Naturtejo is located in the central and eastern part of of Portugal, near the border to Spain. It constitutes a Classified Area according to the Portuguese National Law 142/2008, and is a UNESCO-designated site and Global Geopark under the International Geoscience and Geoparks Programme (IGGP). UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development. Their bottom-up approach of combining conservation with sustainable development while involving local communities is becoming increasingly popular.

Geographically, the Naturtejo Geopark encompasses seven municipalities: Castelo Branco, Idanha-a-Nova, Nisa, Oleiros, Penamacor, Proença-a-Nova, and Vila Velha de Ródão. It spans across the regions of Raia, the region of Beira Interior, through Pinhal Interior, and to Alto Alentejo. Covering 5,067 square kilometres, it is an area of high tourism potential and numerous attractions. Its landscape is characterised by ample geo-diversity, featuring quartizte mountain ridges and inselbergs. It is covered with cork and holm oaks, as well as pine trees in mountain areas. Rock rose and rosemary are abundant. The UNESCO Global Geopark is located in the so called Southern Iberian Meseta, a polygenetic peneplain cut by the Tagus river into a deep valley at the south and bordered on the north by the Central Iberian Belt. The landscape is composed of a wide plain broken by residual relief coming from past climates and a staircase of flat topped tectonic-faulted blocks deeply incised by rivers and streams that are more prominent towards the north.

Naturtejo constitutes a landscape with a long history of human activity and settlement, evinced by several notable architectural landmarks. Such landmarks include the Templar and Hospitallers Castles, as well as old villages with notable medieval components. Most notably, such historical village architecture takes the form of the region's schist villages, which are mountainside settlements built using schist rock.

A central factor and starting point for the territory's regional development is geodiversity. This is a unifying element of a region which also features great cultural diversity. 600 million years of Earth's memory written in the rocks, fossils and landscapes. This history

[11] https://en.unesco.org/global-geoparks/naturtejo-da-meseta-meridional
[12] https://www.visitportugal.com/en/node/156089

is told through elements such as flattened vast areas in which erupted residual granite reliefs (Monsanto), sedimentary (Murracha, Murrachinha, Pedras Ninhas) tectonic alignments (fault scarp of the Ponsul, Sobreira Formosa) and quartzite ridges (Penha Garcia, Ródão, Moradal, Monforte da Beira). The highlands are still cut by deep incision of the hydrographic network of the Lower Tejo. The large geodiversity of the Geopark Naturtejo reflected in a significant number of sites of geological interest, with 176 geosites of which 17 geomonuments, key places for the interpretation of the geology and which have monumental characteristics.

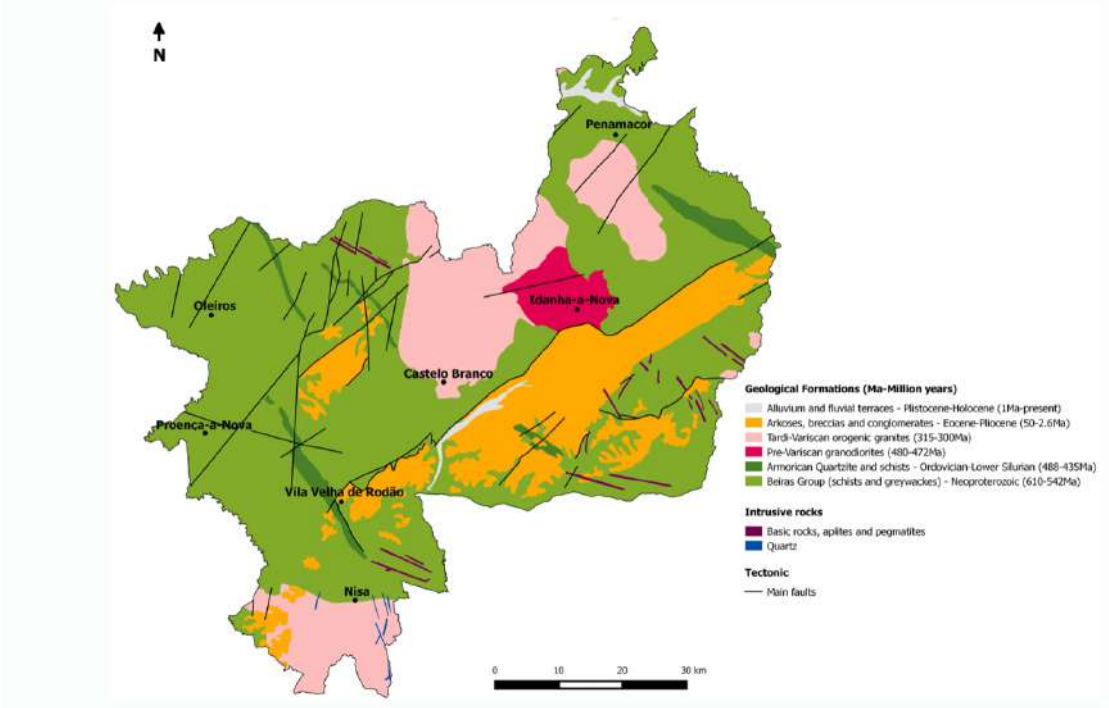

Figure 47. Map showing the geological makeup of the Naturtejo Geopark

The UNESCO Global Geopark is located within the boundaries of six municipalities: Castelo Branco, Idanha-a-Nova, Nisa, Oleiros, Proença-a-Nova and Vila Velha de Ródão. It has 88,164 inhabitants in the latest census of 2011 concentrated in the single city of Castelo Branco and more than 400 villages. People live mostly from services and commerce but agriculture (olive oil, cheese and meat) and forestry are still very important. It has strong historical and cultural components, and promotes the integrated development of tourism. The Geopark is a strong partnership of municipalities and local entrepreneurs for sustainable development. Naturtejo da Meseta Meridional is a public-private partnership responsible for fostering sustainable development in the territory of the UNESCO Global Geopark. Together with the six municipalities and more than 50 associate and partner companies, Naturtejo da Meseta Meridional provides scientific and technical support for protection of geological heritage and regional development projects to organize sustainable tourism diversification and promotion under the umbrella of the UNESCO Global Geopark.

Geoconservation is one of the main aims of Naturtejo da Meseta Meridional UNESCO Global Geopark with several areas protected by local and national laws, providing interpretation to sensitize people to the importance of geology. Naturtejo da Meseta Meridional is responsible for a broad number of educational programs devoted to local schools, but also including international school visits every year. From kindergarten to university and senior college, the UNESCO Global Geopark offer a wide range of educational activities especially prepared by our team of geologists and former school teachers, both at the geosites and local museums, but also in the classroom, according to the Ministry of Education' curricula. These programs are guided by experts in geosciences and are implemented in different places of the Geopark depending on the particular program. This allows the students to learn about the various geosites and to better understand the history of our planet. The Naturtejo da Meseta Meridional UNESCO Global Geopark educational programmes were awarded internationally by Skal International and the national exams on geology and natural sciences include many examples of the UNESCO Global Geopark's diversity almost every year.

Naturtejo da Meseta Meridional offers a large network of trails with more than 550 km that invite visitors to discover the area's geodiversity and culture. Boat trips in the Tagus and Zêzere rivers and bus tours are also available. There is also a museum network that enables the visitor to discover geology and local culture. Local products and real geoexperiences are available in the villages where time flows gently and good life keep goes on.

Related information

- Global Geopark Network Designated Year: 2006
- UNESCO Global Geopark Designated Year: 2015
- Localisation: N39°48'16", W007°29'34"
- Area: 4624.4 km^2

5.4.2. Crisis description

Wildfires, August 2023

- Following a heatwave, wildfires raged across Portugal.
- Fires covered thousands of hectares.
- Caused the evacuation of villages, hotels, and camping sites.

News report[13]:
Around 800 personnel attended a fire near the southern town of Odemira overnight on Monday, with more than 1,400 people having to evacuate. At least nine firefighters have been injured tackling the fires. Temperatures in excess of 40C (104F) are expected to

[13] https://www.bbc.com/news/world-europe-66435160

hit much of the Iberian peninsula this week. Three major fires that scorched hundreds of hectares in Spain over the weekend have been brought under control, but weather alerts remain in place across much of the country. In Portugal, Monday saw a temperature of 46.4C (116F), the hottest of the year so far, recorded in Santarém. The fire near Odemira began on Saturday and was driven south into the hilly interior of the Algarve, Portugal's main tourism region, by strong winds. It has so far destroyed some 6,700 hectares (16,600 acres) of land, while a total of 19 villages, four tourist accommodations and a camping site have been evacuated.

With the flames once again raging minutes from his home, a journalist told Radio 4's World at One programme the fires sent "everybody in this area into a real panic" on Monday but that things had calmed "a little" on Tuesday "simply because the wind has dropped." "We had a very fast wind, a very hot and very dry wind, coming from the east... yesterday and that doubled the size of the fire in just a few hours," he said. "A lot of people were evacuated from their homes, a few of the hotels here had to send guests elsewhere and we've had since yesterday more than 800 firefighters, as well as about 280-odd vehicles." He said commercial eucalyptus and pine forests in the area have been engulfed, adding: "It's wild country, there aren't roads going through them, so when the fires get into the valleys they burn fast and hard, and when the wind... gets going, it's a very dangerous thing to deal with. "The firefighters really can only direct it, try to push it to a place where there are not many trees and hope it naturally runs out of fuel." In the centre of the country, other major fires prompted the closure of several stretches of motorway, including parts of the A1 between Lisbon and Porto.

Sixteen waterbombing aircraft have been deployed to support firefighting efforts across the two areas.

Authorities have declared more than 120 municipalities across Portugal at maximum risk of wildfires.

Ruben del Campo of Spain's State Meteorological Agency told Reuters it was being caused by a large mass of hot, dry air from North Africa and would be "generally more intense, more widespread and a little longer-lasting" than the two that hit in July.

Climate change increases the risk of the hot, dry weather that is likely to fuel wildfires.

The world has already warmed by about 1.1C since the industrial era began and temperatures will keep rising unless governments around the world make steep cuts to emissions.

Wildfires, July-August 2022[14]

- Wildfires raged across central Portugal, destroying tens of thousands of hectares of land.

The Algarve region and the districts of Leiria and Santarém have been most affected by wildfires. One fireplane pilot was killed when the plane crashed. In July, a total of 30,000 hectares (74,000 acres) were burnt by wildfires. In Leiria, a fire blocked a part of

[14] https://en.wikipedia.org/wiki/2022_European_and_Mediterranean_wildfires#Portugal

the A1 which runs from Porto to Lisbon. In Algarve, a fire broke out in the city of Faro, which spread to the Quinta do Lago resort. A fire in the municipality of Palmela in the Lisbon metropolitan area burned 400 hectares (990 acres) of bush and caused 12 injuries. According to the Civil Protection Authority, at least 135 people have been injured since wildfires began, and about 800 people have been evacuated from their homes.
On 31 July, firefighters battled a large wildfire in the municipality of Mafra near the town of Venda do Pinheiro.
On 21 August, a wildfire broke out in the Vila Real District. A fire tornado was filmed in the area.

Wildfires, October 2017[15]

- Wildfires spread across several regions of the Iberian peninsula, including in central Portugal, where 440 fires were combated during at the event's peak.
- Caused 49 deaths (45 in Portugal, 4 in Spain), and more non-fatal injuries.

The **October 2017 Iberian wildfires** were a series of more than 7,900 forest fires affecting Northern Portugal and Northwestern Spain between 13 and 18 October. The wildfires claimed the lives of at least 49 individuals, including 45 in Portugal and four in Spain, and dozens more were injured.
The first fires started on or before 13 October in Galicia. The Prime Minister of Spain Mariano Rajoy and Jorge Gomes, Portugal's secretary of state of internal administration, believed most of the fires were lit by arsonists. By 15 October 2017 winds increased, due in part to Hurricane Ophelia passing between the Azores and the peninsula, which helped fan wildfires in both Portugal and Spain.
In Portugal, on its worst day, firefighters battled over 440 fires. The country sought assistance from European neighbours and Morocco. The Portuguese Minister of Internal Administration Constança Urbano de Sousa, who resigned as a consequence, said "We have all our firefighters out there doing everything they can".
Four months earlier, the June 2017 Portugal wildfires had caused 66 deaths in Portugal, for a total of 115 deaths (111 in Portugal, 4 in Spain) between the two incidents.

June 17 Portugal wildfires[16]

A series of four initial deadly wildfires erupted across central Portugal in the afternoon of 17 June 2017 within minutes of each other, resulting in at least 66 deaths and 204 injured people.
The majority of deaths took place in the Pedrógão Grande municipality, when a fire swept across a road filled with evacuees escaping in their cars. Portuguese officials dispatched more than 1,700 firefighters nationwide to combat the blazes and Prime Minister António Costa declared three days of national mourning. Spain, France, Morocco and Italy deployed firefighters and Water Bombers to help extinguish the fires.

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[15] https://en.wikipedia.org/wiki/October_2017_Iberian_wildfires
[16] https://en.wikipedia.org/wiki/June_2017_Portugal_wildfires

Although most early official reports pointed to a dry thunderstorm as the cause of the tragedy, the President of the Portuguese Firefighters League expressed his conviction the fire was sparked by arsonists.
Four months later, the October 2017 Iberian wildfires would cause 45 deaths in Portugal and four in Spain, for a total of 115 deaths (111 in Portugal, 4 in Spain) between the two incidents.
An intense heat wave preceded the fires, with many areas of Portugal seeing temperatures in excess of 40 °C (104 °F). During the afternoon of 17 June, a total of 156 fires erupted across the country, particularly in mountainous areas 200 km (120 mi) north-northeast of Lisbon. The fires began in the Pedrógão Grande municipality before spreading dramatically causing a firestorm.[9]
Dry thunderstorms preceded the event and may have ignited some fires although arson has not been eliminated as a cause: the National Director of the Judiciary Police, Almeida Rodrigues, has stated that the police, along with the National Republican Guard, have allegedly since found the tree that started the fire when it was struck by lightning. It is not known how this tree was identified out of the many thousands of other burnt trees. The forests of Pinhal Interior Norte, where Pedrógão Grande is located, are predominately composed of farmed Eucalyptus and pine trees, the Eucalyptus having surpassed pine as the dominant tree in the country in the last ten years.
At least 66 people died nationwide in the fires—the largest loss of life due to wildfires in Portugal's history. At least 204 people were injured, including 13 firefighters; five people—four firefighters and one child—were in critical condition. Two firefighters were also reported missing. A total of 44,969 hectares (111,120 acres) of land was burned by the fires as of 20 June. Of this, 29,693 hectares (73,370 acres) was in the Pedrógão Grande area.
The greatest loss of life took place on a rural road in Pedrógão Grande, where 47 people died in or near their cars when a fire overtook the area; 30 people died while trapped in their vehicles while the other 17 died nearby trying to escape on foot. Another 11 people died in Nodeirinho, near the IC8 road. Twelve people survived near Mó Grande as fire overtook the roads by taking refuge in a large water tank near the motorway. Dozens of small communities were severely affected.
Prime Minister António Costa called the disaster "the greatest tragedy we have seen in recent years in terms of forest fires". Three days of national mourning were declared beginning on 18 June. Arriving at Pedrógão Grande before midnight on 17 June, President Marcelo Rebelo de Sousa was visibly shaken, and gave long hugs to Jorge Gomes, the Secretary of State of Internal Administration (who had been on the scene since the fire broke out), Valdemar Ramos, the Mayor of Pedrógão Grande and, after addressing the journalists, Constança Urbano de Sousa, the Minister of Internal Administration. The President met with survivors who were evacuated to Leiria.
More than 1,700 firefighters were deployed to combat the fires. France and Spain provided a collective five water-bombing planes along with 200 members of the Military Emergencies Unit and the European Union began coordinating international relief efforts on 18 June. Many people were evacuated to neighboring Avelar, where residents

provided them with shelter. Low-hanging smoke prevented helicopters from providing support, hampering firefighting efforts. Some survivors criticized inadequate response from the government, claiming no firefighters reached them for hours after the blaze began. They also stated poor forestry planning and "depopulation of remote villages that left many wooded areas untended" were to blame.
In the afternoon of 20 June, according to reports, one of the foreign aid Canadair water bombers crashed over Pedrógão Grande, though Secretary of State of Internal Administration Jorge Gomes could not confirm the reports. Later, the National Authority for Civil Defence dismissed all reports of a plane crash, attributing eye-witness reports of the crash to a gas explosion on a camper trailer.

5.4.3. Stakeholders

- Local and national administration
- Front-line responders
- Civil society

5.4.4. Existing resources

Collective awareness efforts

- Warnings issued from Portuguese government officials during heatwaves, cautioning against use of fire, heavy farming equipment, and the use of fuels.
- Includes cooperation with the Portuguese Armed Forces in surveillance and fire monitoring.

https://www.portugalresident.com/portugal-on-warning-wildfire-danger-to-increase-from-weekend/

European Forest Fire Information System (EFFIS)

- Geographic information system that provides near real-time and historical data on the location and spread of wildfires across Europe.
- https://effis.jrc.ec.europa.eu/

https://www.copernicus.eu/en/european-forest-fire-information-system

Associação SCP Safe Communities Portugal

- Nationally-recognised non-profit association providing information to the public about security and safety – including in the event of wildfires or heatwaves – as well as assisting government authorities, e.g. through information-sharing.
- https://www.safecommunitiesportugal.com/

EU Fire Safety Guide

- Safety guidelines pertaining to how to act in the event of a fire, especially as regards fire safety in buildings.

https://www.modernbuildingalliance.eu/EU-fire-safety-guide

EU Monitoring and policy measures

- Numerous policy and expert tools for monitoring and analysing wildfires are supported by the European Union.

- https://environment.ec.europa.eu/topics/forests/forest-fires_en
https://epthinktank.eu/2022/07/18/forest-fires-and-forestry-policy/

5.4.5. CORE interests

Loss of heritage due to emigration out of the Geopark by younger cohorts (due to lack of economic opportunity) who do not take on the lifestyle and knowledge taking care of the Geopark forests increasing risk factors such as lack of maintenance of woodland and inappropriate behaviour (open fires) during heat waves and hot winds.

5.5. Türkiye: KARBEL

Country: Türkiye
CORE: Karşıyaka
Crisis: Heatwaves, earthquakes, floods

5.5.1. Background

With 347,023 people inhabiting an area spanning 102.4 square kilometres, Karşıyaka is a densely-populated municipal city-district within the larger metropolitan region of İzmir (population: 4,394,694 in 2020) in western Türkiye. Within this region, Karşıyaka ranks number five in population size. It is situated directly across the Gulf of İzmir from the eponymous regional capital city. The latter ranks third nationally in terms of population size and is an important economic and cultural centre.

Karşıyaka's average household size is fairly small at 2.64. Its population skews young, with 84% of residents being from 0 to 64 years of age. The population is also fairly well educated; the proportion of higher-education degree holders, at 29 percent, is on par with international OECD averages and falls significantly above the national average.

Geographically, Karşıyaka borders the Aegean Sea to its south and Mount Yamanlar, a 1,076-metre tall mountain, to its north. Four rivers run through the city's borders. It is a region with little industry and mostly residential and commercial housing stock and infrastructure.

A notable ecological feature is the Gediz Delta, bordering Karşıyaka to its west. This is an important wetland protected by the Ramsar Convention (an intergovernmental treaty outlining the framework for the conservation of wetlands and their natural features and resources). 186 different bird species – including an estimated ten percent of the world's flamingo population – live in this delta, which is formed by the Gulf of İzmir as this flows into the Aegean Sea from the east.

İzmir is one of the most important port cities of the Mediterranean with a long history of trade and cultural exchange connecting the continents of Europe, Asia, and Africa. It is a nodal point of the two oldest trade routes of the world. Namely, first, it was an important station in the Silk Road, which for centuries linked East Asia and Europe and produced and transmitted cultures, ideas, goods, and wealth across regions, countries, and continents. Second, it was (and remains) a hub in the manifold sea trade routes that connected Mediterranean regions to each other and linked the Eastern Mediterranean and Middle East to Europe and the Atlantic World.

The Kemeraltı, Kadifekale and Basmane districts, which are today called "historical İzmir," have great historical significance because it is in these districts that the city gained its character as a port city. This historic harbour, including many nineteenth-century structures such as Gustave Eiffel's Konak Pier, has been included in

the UNESCO World Heritage Tentative List for its historical and architectural significance.

Karşıyaka's history spans further back than the period of Old İzmir. The earliest ceramics found on Küçük Yamanlar Hill are dated by experts to the late Neolithic period (5,000 BC). Western Anatolia experienced its most brilliant and prosperous period under the strong rule of Rome for about 400 years, especially from the 15th century to the 5th century. During this period, Smyrna was in competition with Ephesos and Pergoman and was the richest and most prosperous city of the Asian province.

Karşıyaka is known for the Latife Hanım Köşkü Memorial House, named after Kemal Atatürk's mother Zübeyde Hanım, who died there. This building was recently restored as a memorial house, as were several other historical buildings that fall under the definition of "İzmir Levantine mansions." Other landmarks within district limits include the Science Museum, the Bostanlı Open Air Archaeological Museum, the Earthquake Museum, the Communication Museum and the Hamza Rüstem Photography Museum. St. Helen's Church, opened in 1905, is the oldest Catholic church in the district. Turkey's first opera house, Opera İzmir, was located in the district.

5.5.2. Crisis description

Karşıyaka experiences three RESILIAGE-relevant hazards, the primary crisis scenario being a heatwave and the related urban heat island effect. Secondary hazards include earthquakes and floods.

Heatwaves

Global climate change is widely seen as one of the most important environmental, social and economic threats facing humanity. At this point, all nations are attempting to adapt to the effects of climate change as well as to reduce climate change. The Mediterranean Basin is shown as one of the most sensitive and high-priority regions as regards climate change. In the basin, mean temperatures are rising much faster than the global average (with a trend 20% faster than the global average) and are reported to be 0.4°C higher than the global average in terms of values reached today. In recent years, there has been a notable increase in the number of days warmer than 35 degrees.
Urban areas are particularly vulnerable to changes in climate, in large part due to the "Urban Heat Island Effect."

Karşıyaka is located in the western part of Turkey. Due to its location and climate, Karşıyaka is expected to be highly vulnerable to temperature increases according to the

mid-pessimistic scenarios in the climate projections made by the IPCC. This situation is also anticipated to increase the occurrence and frequency of heatwaves. [17]

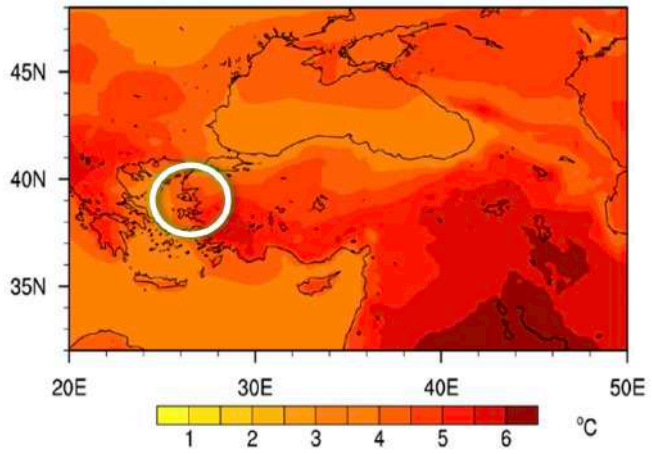

Figure 48. Turkey's summer temperature anomaly for the period 2071-2099 according to the moderate-pessimistic scenario.

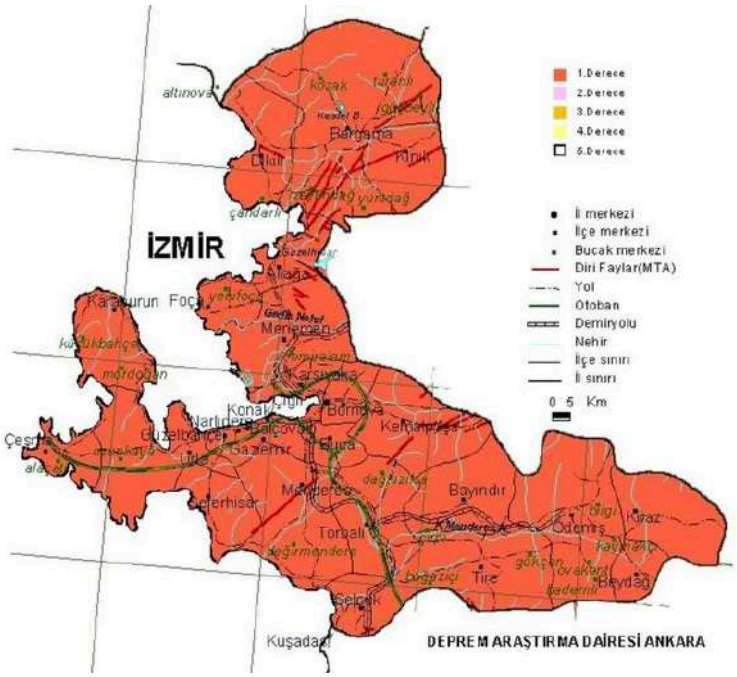

Figure 49. Karsiyaka Earthquake risk map

Factors affecting the formation of urban heat islands can be listed as follows:

[17] Küresel Isınma ve Türkiye - İyimser Senaryo (Ö. L. ŞEN, T. KINDAP, & D. BOZKURT, Eds.). Yeşil Atlas.

- Reduction of natural landscapes (changes in surface cover such as plants and water surface with cooling effect), Material use (artificial materials, natural materials)
- Construction geometry (building dimensions and distance between them, street widths, bare surfaces)
- Urban form
- Heat generated as a result of human activities
- Climate characteristics
- Geographical features (topography, slope, aspect, humidity, etc.)

Temperature changes due to climate change and the urban heat island effect not only affect microclimatic elements, but also have important impacts on urban quality of life and human health, as the figure below displays.

For these reasons, attempts have begun to try to increase understanding of, and the potential for resistance to, heat island effect events in Karşıyaka. Main reasons for the urban heat island effect in Karşıyaka have been shown to include:

- Lack of vegetation
- Increasing impervious surfaces and bare soil
- Limited air circulation because of urban morphology (building dimensions and distance between them, street widths, bare surfaces)
- Lack of albedo

In addition to academic publications, city-specific strategies are being developed to prevent the urban heat island effect and mitigate its negative effects, originating in large part from deforestation and lack of vegetation. In general, high temperature is observed in places where urbanisation is high.

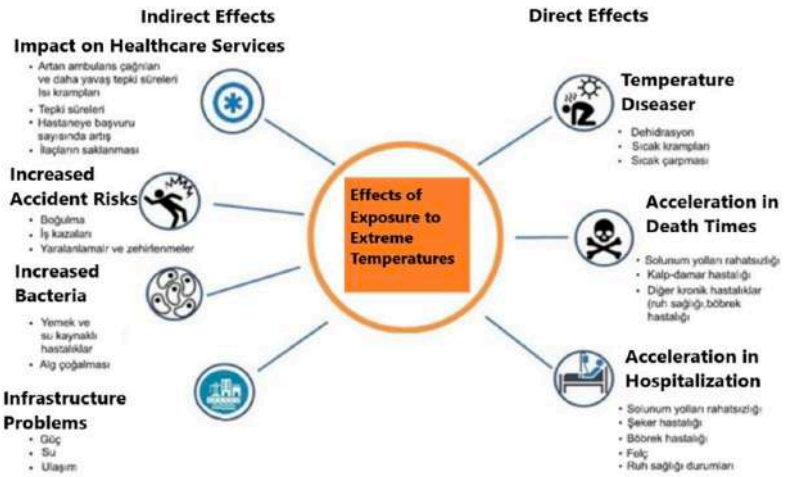

Figure 50. Chart showing effects of extreme temperature exposure

The impact of heatwaves particularly increases the vulnerability of populations who are also impacted highly by climate related disasters e.g. people with chronic diseases, elderly, etc. In this context, a social vulnerability analysis has been conducted for the heat island effect in Karşıyaka. In the study, the seven factors that are highly emphasised in academic literature, which are vulnerable to heat, were taken into consideration. These are: age group, education level, population density, number of households, marital status, gender, and accessibility to cool spots.

The areas displaying high social vulnerability to heat in many ways corresponds to the actual urban heat islands recorded in Karşıyaka during heatwaves and hot air wave events. Through the Land Surface Temperature (LST) map of Karşıyaka District, it is clear that temperatures can vary between 28.16 - 45.72 degrees Celsius. It is evident that felt and actual temperatures are especially higher in the northwest of the city. The lower temperatures in the southern regions are due to the cooling effect of the sea, which very notable in Karşıyaka. Bare rock and soil areas in the north of the city, on the other hand, significantly contribute to high land surface temperatures there.

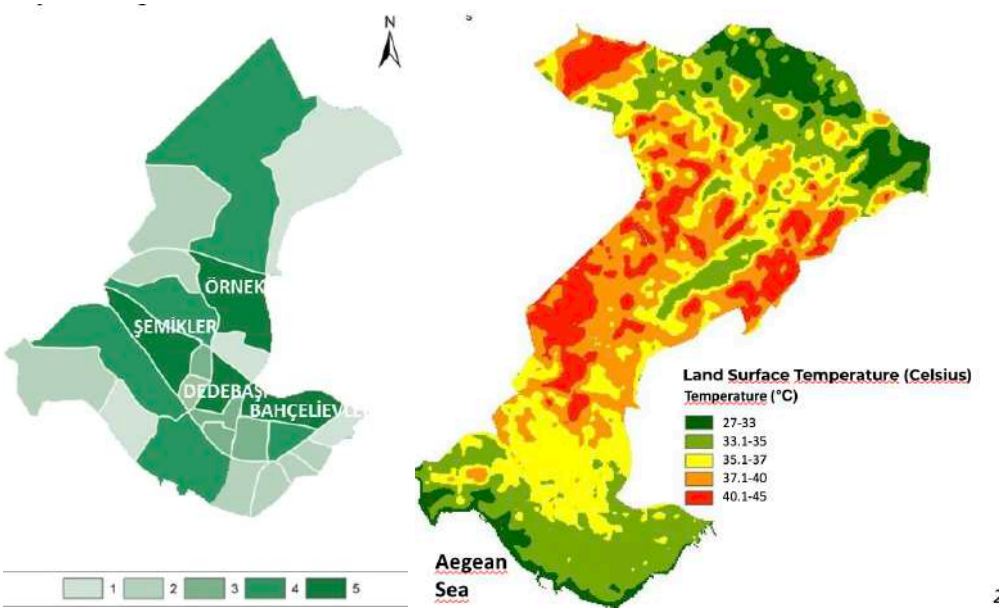

Figure 51. Karsiyaka Social Vulnerability and Surface Temperature Analyses

Earthquakes

Türkiye has a high degree of earthquake risk. The Izmir province, where Karşıyaka is located, is in the first-degree earthquake zone. İzmir is located in the first-degree earthquake zone. There are 13 fault lines in İzmir that can produce a 7.0 magnitude earthquake and many regions are risky in terms of earthquakes. In 2020, a 6.9 magnitude earthquake in the Aegean Sea caused much damage in Karşıyaka and 117 persons lost their lives. 107 persons were rescued from the rubble. Due to this earthquake, 12 buildings were completely destroyed and many buildings were damaged. In the damage assessment works that started immediately after the earthquake, damaged buildings were examined and some of them were demolished.

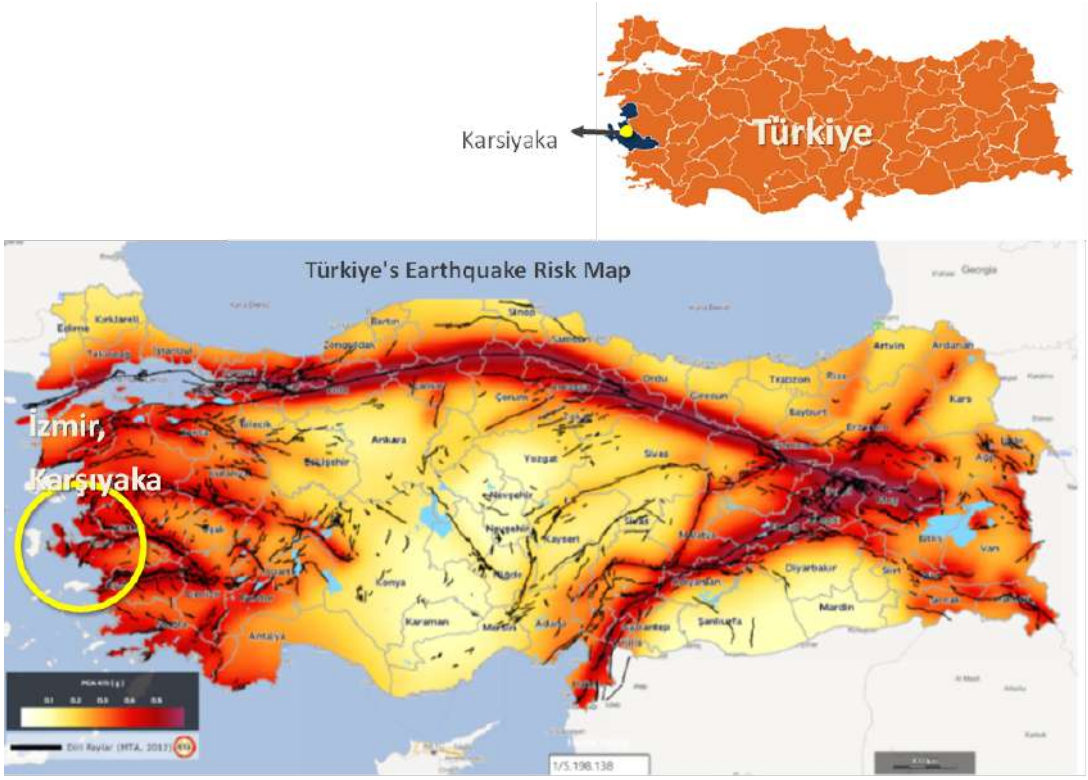

Figure 52. Earthquake risk map of Türkiye and Karsiyaka

Due to the high earthquake risk in Karsiyaka, the seismic risk status of buildings in the district has been analysed. Map 1 indicates the likelihood of buildings in Karşıyaka suffering damage in the event of an earthquake. Map 2, on the other hand, highlights the areas where buildings were damaged following the 6.9 magnitude earthquake in Izmir in 2020.

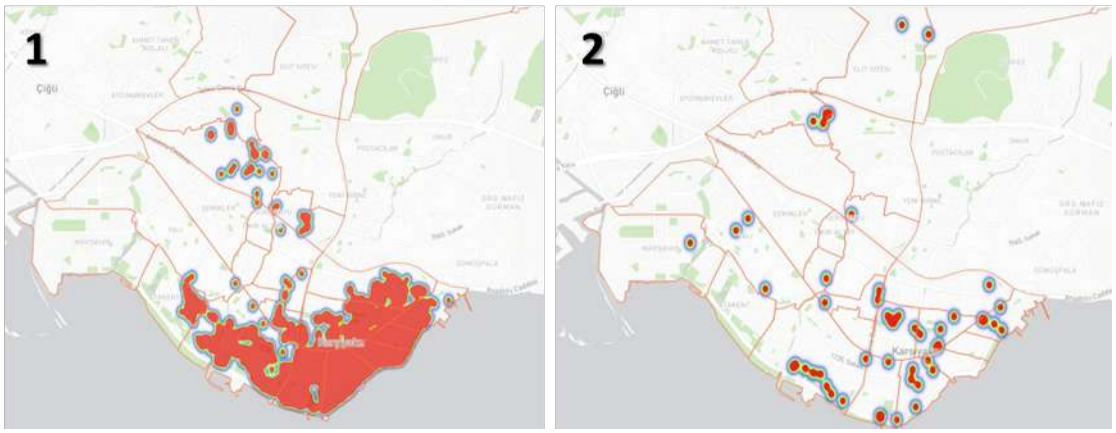

Figure 53. Risky buildings analysis of Karsiyaka district

The map of at-risk buildings before the earthquake regulation totals 1955 buildings, while the map of buildings affected by the earthquake in 2020 totals 100 buildings.

Latife Hanım Mansion Memorial House, which is used as a museum today and is one of the cultural heritage items, was damaged in the earthquake in 2020. The building was closed for use for a while for reinforcement and restoration.

Floods

Karşıyaka district is located in Küçük Menderes Basin and has a 12-kilometre-long coastline. The lowest altitude in the district is 1 metre and this area is vulnerable to river and coastal floods. The presence of transportation infrastructure, residential and commercial spaces close to the coastline and stream beds increases the vulnerability to floods.

The settlement area near the Gediz Delta wetland is characterised by high-density construction and luxury residential blocks. This is an area with a very high groundwater level. Consequently, there are frequent floods in the area, especially in the winter months as a result of the rise of the sea. The residential areas close to the coast are affected by flooding. Major recent flooding events occurred in the years 1995, 2020, and 2022.

The most significant disaster related to flooding was in November 1995, in which nine local districts, including Karşıyaka, were affected. This flood killed 61 people, destroyed 322 buildings and damaged more than 10,000 buildings. According to the Meteorological Disasters Evaluation Reports of the General Directorate of Meteorology, the most serious rainfall- or flood-related disaster occurred in İzmir in 2020. 16 of 332 flood disasters in Turkey were experienced in İzmir. In 2022, a minibus steered off the road and 15 citizens were stranded due to the water brought by the embankment that collapsed when a stream overflowed in Karşıyaka. In areas where rainfall is significant, the colour of the sea has turned brown due to floods and overflow waters. A large part of the local Main Transport Artery was flooded and traffic was blocked.

İzmir Metropolitan Municipality plans to prevent the risk of flooding in Karşıyaka due to sea level rise, especially in winter months, with the “Coastal Rehabilitation Project” that it has been working on for a long time.

Information meetings were held with citizens about the project. Thus, a more resilient city was created and citizens became more resilient by raising awareness. The map below includes an analysis of the surface water absorption capacity of the river. The northern forest region is high, but the middle part is rocky and the place where the slope is high is low. Since there are many green areas in the coastal area, its water absorption capacity is high, but there is a flood risk in this region.

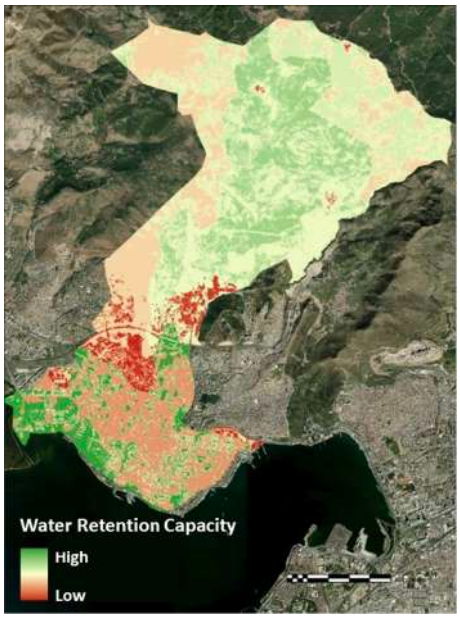

Figure 54. Map showing water retention capacity in Karsiyaka district

5.5.3. Stakeholders

In Turkey, many public institutions work in coordination to carry out initial intervention and aid activities during disaster situations. These are typically the provincial directorates of national organizations in cities that experience disasters. AFAD, Search and Rescue Teams, Fire Department, and healthcare workers can be given as examples of this.

AFAD (Disaster and Emergency Management Presidency): AFAD is the official institution responsible for disaster and emergency management in Turkey. AFAD coordinates the risk mitigation measures and ensures coordination of own and other institutions' teams during disaster situations and initial intervention. They have a separate unit for awareness raising and training of citizens, professional teams, etc.

Search and Rescue Teams: Specialized search and rescue teams within AFAD and other organizations consist of trained professionals tasked with rescuing individuals trapped in debris and locating missing persons.

Gendarmerie and Police: Teams within the Gendarmerie General Command and the General Directorate of Security participate in security, search and rescue, and aid activities during disaster situations.

Health Workers: In emergency situations, healthcare personnel take on the responsibility of providing medical intervention for the injured and coordinating health services.

Fire Departments: Firefighting teams are involved in controlling fires, rescuing individuals trapped in debris, and other emergency interventions.

Moreover, there exist numerous voluntary organizations contributing to this cause. These entities provide support to government institutions by actively participating in emergency aid and rescue operations during times of disasters.

Turkish Red Crescent (Kızılay): The Turkish Red Crescent stands out as a significant voluntary organization dedicated to carrying out aid operations in the event of disasters and emergencies in Turkey. They play an active role in various areas, including blood donation, food assistance, and shelter.

Search and Rescue Association (AKUT): Specializing in search and rescue operations, AKUT is a volunteer organization comprising trained individuals focused on the rescue of those trapped in debris during disasters.

Turkey Disaster Volunteers (TAG): TAG serves as a volunteer platform specifically created for the purpose of intervening in disasters. Trained volunteers undertake responsibilities to provide assistance in disaster-stricken regions.

All the mentioned institutions have local working groups that play an active role in disaster situations.

Additionally, the Disaster and Risk Management Directorate, the Disaster Coordination Center Directorate (AKOM), and the Disaster and Risk Management Directorate of the Izmir Metropolitan Municipality are crucial local stakeholders engaged in pre-disaster, post-disaster, and disaster response scenarios.

After the earthquake in 2020, a Disaster Directorate was established in the Karsiyaka Municipality. Work has begun on the Disaster Emergency Action Plan. These changes and improvements have been carried out together with AKUT, a search and rescue association. Through a joint study, a “Neighbourhood Disaster Volunteers” team was established for each neighbourhood. This action is aimed to provide training to citizens to be better prepared for possible disasters at any time, to increase disaster awareness in general and for the risks in the local and regional area. Overall, it is hoped that disaster resilience is strengthened and improved through the establishment of a stakeholder alliance, which will include the Municipality, citizens/first-responder associations (e.g. KAME – see section on Existing resources), and citizens.

The importance of establishing and ensuring cooperation between different stakeholders is recognised by the Municipality.

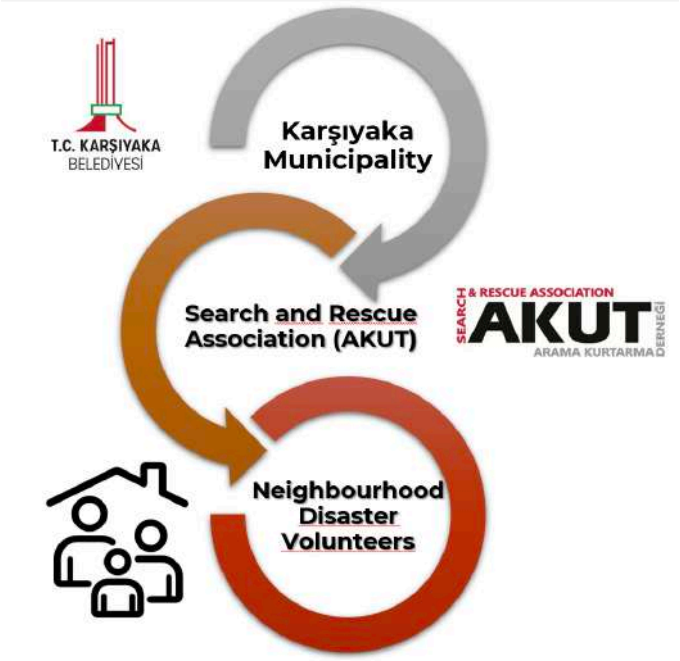

Figure 55. Simplified schema showing Karsiyaka stakeholder relations

Lastly, KAME (Karşıyaka Disaster Response Teams) was established with the decision of Karşıyaka Municipality Council on 2021. It is a part of a structure that can provide first aid in a disaster until the professional teams arrive, support the neighbours and other neighbourhood residents, and support them after the professional teams arrive, facilitating the delivery of necessary assistance to the disaster victims as soon as possible. Continuing on its way with 181 Volunteers, KAME introduced five training and projects until June 2021.

5.5.4. Existing resources

Following the 2020 earthquake, İzmir Metropolitan Municipality launched the İzmir Emergency application. With this application, citizens can request help in case of disaster and share their situation with the authorities. Ensuring post-disaster coordination is also aided through this application.

The municipality is also in the process of testing an application ("TOGETHER Karşıyaka" mobile application) that contains the data, maps and geographical information relevant to disaster management and coordination.

This digital application will be take shape as an open data source, with citizens being able to access maps as well as scientific and technical information to receive knowledge about the current situation on issues that may cause disasters in their city. It is hoped that informing citizens about issues such as surface temperatures, flood risks, and

habitat quality where they live, and their active participation in activities related to these themes – as well as providing a platform for them to convey their ideas – will increase people's awareness and knowledge levels. In turn, this will progress Karşıyaka towards becoming a smart communities. In the future, it is expected that these communities will develop as citizen councils in municipal activities and budget management. The application has been completed but is still in the testing phase. The end goal is to have a more resilient citizenry, staying alert to disasters and able to act as volunteers and to share ideas relating to disaster-prevention.

In the future, this application may be improved to include cooling zones against the urban heat island. It is seen that the factors that most affect the formation of urban heat island are albedo and vegetation ratio, and regulations for these factors are effective. In addition, factors such as construction geometry, urban form, geographical conditions and climate characteristics that affect urban heat island formation are not issues that can be intervened and resolved quickly and easily.

Changes to be made from material change and planting in Karşıyaka were determined as a reduction strategy. Simulations have been carried out with three different scenarios at several points in the city. In line with these strategies and simulations, interventions are planned to be made, starting from the most risky areas within the city.

5.5.5. CORE interests

Through RESILIAGE, it is hoped that Karşıyaka can strengthen its work pertaining to efforts to raise citizen awareness and mitigate crisis-related risks, including the development and implementation of strategies to mitigate the urban heat island effect.

It is recognised that such mitigation will require a multi-pronged approach, starting with spatial decisions (changing building materials, increasing vegetation and water surfaces) and administrative decisions (aiding vulnerable groups, establishing cool urban areas, raising health-risk awareness). But more, RESILIAGE can contribute a sharpened understanding of how to include citizen participation strategies in this issue. RESILIAGE will focus on and foster increasing resilience behaviour related to innovative and adaptive governance schemes and planning, which involve diverse stakeholders and citizens in all the phases of DRM through collaborative processes (co-creation, co-monitoring, and co-maintenance). It will encourage collaborative behaviour and dialogue among local stakeholders, FR and volunteers, and all citizens to become capable partners in all phases of DRM.

Crisis management for all disasters mentioned above, strong communication between stakeholders, ensuring communication between citizens and stakeholders, and developing a strong management approach that affects all of them are very important.

6. Conclusion

This report has thoroughly presented the work and results of **T1.1, Identifying international standards in crisis preparedness and climate change policy**.

In all, the contents of this report aid in the advancement of WP1's aims involving the establishment of a necessary knowledge baseline for future labour within the RESILIAGE project.

The results presented here have centred around four investigative axes, each revolving around the interrelated topics of DRM, CC, CH, and SD:

- Investigating the current state of the international policy field (Section 4.1 – International policies and standards)
- Investigating past EU-funded projects, collectively constituting international best practices & lessons learned (Section 4.2 – Previous EU projects)
- Investigating examples of recent or current best and innovative practices (Section 4.3 – Innovative Practices/Initiatives)
- Detailing each CORE lab, including background, crisis scenarios, stakeholders, existing resources, and CORE interests (Section 5 – CORE Crisis Scenarios)

Together, these repositories constitute a useful and useable baseline of knowledge for the remainder of the RESILIAGE project, as well as a continual point of reference for the work of future WPs.

Throughout this report, references to the potential usefulness of the presented data for future WPs has been alluded to. Nevertheless, such utility bears repeating in this concluding section.

Together with D1.2, this report is forms the knowledge baseline, which will serve as the basis for the various empirical field investigations in WP2 T2.2, T2.3, T2.4;

- they will be the main reference document for T2.5 aiming to model human factors into qualitative and quantitative indicators for measuring community resilience;
- their extensive databases (documented in the Appendices) will feed directly into various tools of WP3 supporting decision makers and civil society alike;
- they will serve as host of examples of good practices, lessons learned, and existing status of soft solutions, trainings, and organisational protocols further developed in WP4;
- and in a similar fashion, aid the policy development for the areas DRM, CC, CH, SD undertaken in WP6 avoiding duplication of existing recommendations and securing evidence-based practice.

7. Appendix

7.1. International policies and guidelines

7.1.1. Database of international policies

Table 2. Database of international policies

Name	Authority	Chief policy	Chief DRM stage/s	Level	Type	Binding	Chief audience/s	Link/s
Sendai Framework for Disaster Risk Reduction	UN	DRM	All	Supra-supranational	International agreement	n	National governments, supranational organisations	https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf?_gl=1*hg0vu4*_ga*OTU5OTY4NDg0LjE2OTc2MzA3ODA.*_ga_D8G5WXP6YM*MTY5OTQzODQ1OS42LjAuMTY5OTQzODQ2My4wLjAuMA.. https://sendaicommitments.undrr.org/
NATO 2030	NATO	DRM	All	Supranational	International agreement	n	National governments	https://www.nato.int/nato2030/
Global Platform for Disaster Risk Reduction	UN	DRM	All	Supranational	Policy-support institution	n/a	National governments, supranational organisations	https://www.undrr.org/news-events/drr-platforms
The World Conference on Disaster Risk Reduction	UN	DRM	All	Supra-supranat	Conference/summit	n/a	National governments, supranational	https://www.wcdrr.org/

				iona l			organisatio ns	
Global Resilience Partnership	NGO/N PO	All	All	n/a	Polic y-supp ort instit ution	n / a	National governmen ts, supranatio nal organisatio ns	https://www.globalresiliencepartnership.org/
European Forum on Disaster Risk Reduction (EFDRR)	UN	DR M	All	Sup rana tion al	Conf erenc e/su mmit	n / a	National governmen ts, supranatio nal organisatio ns	https://efdrr.undrr.org/2021/
European Urban Resilience Forum (EUREFSO)	EU, ICLEI	All	All	Sup rana tion al	Conf erenc e/su mmit	n / a	National governmen ts	https://www.undrr.org/efdrr-roadmap-2021-2030
Directive on the Resilience of Critical Entities	EU	All	All	Sup rana tion al	Direc tive/o utco me	y	National governmen ts	https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/critical-infrastructure-resilience_en
European Climate Change Adaptation Conference (ECCA)	EU	All	All	Sup rana tion al	Conf erenc e/su mmit	n / a	National governmen ts	https://climate-adapt.eea.europa.eu/en/metadata/portals/european-climate-change-adaptation-conference
European Union Disaster Resilience Goals 2023	EU	All	All	Sup rana tion al	Guid elines /BP	n	National governmen ts	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023H0215%2801%29&qid=1676531610023
European Union Civil Protection Mechanism	EU	DR M	All	Sup rana tion al	Direc tive/o utco me	y	National governmen ts	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/eu-civil-protection-mechanism_en
European Union Solidarity Fund	EU	DR M	Respon se,	Sup rana	Direc tive/o	y	National governmen ts	https://ec.europa.eu/regional_policy/funding/solidarity-fund_en

			recovery	tional	utcome			
European Union Cohesion Policy	EU	All	All	Supranational	Directive/outcome	n	National governments, supranational organisations	https://ec.europa.eu/regional_policy/policy/what/investment-policy_en
European Union Urban Agenda	EU	All	All	Supranational	Directive/outcome	n	National governments, supranational organisations	https://futurium.ec.europa.eu/en/urban-agenda
The European Disaster Risk Reduction (DRR) Strategy 2021-2030	EU	DRM	All	Supranational	International agreement	n	National governments, supranational organisations	https://efdrr.undrr.org/sites/default/files/2021-11/EFDRR%20Roadmap%202021-2030.pdf
INSPIRE Technical Guidelines	EU	All	Prevention, preparedness, recovery	Supranational	International agreement	y	National governments	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/eu-civil-protection-knowledge-network_en
Integrated Political Crisis Response (IPCR)	EU	DRM	Response, recovery	Supranational	Directive/outcome	y	National governments	https://www.consilium.europa.eu/media/29699/web_ipcr.pdf
European Green Deal (EU Climate Law)	EU	CC	Prevention, mitigation	Supranational	Directive/outcome	y	National governments	https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en

Fit for 55	EU	CC	Prevention, mitigation	Supranational	Directive/outcome	y	National governments	https://www.consilium.europa.eu/en/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/
European Union Adaptation Strategy on Climate Change	EU	CC	All	Supranational	International agreement	n/a	National governments	https://climate.ec.europa.eu/eu-action/adaptation-climate-change/eu-adaptation-strategy_en
European Union Civil Protection Knowledge Network	EU	DRM	All	Supranational	Policy-support institution	n/a	National governments	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/eu-civil-protection-knowledge-network_en
European Union Disaster Risk Management Knowledge Centre (DRMKC)	EU	DRM	All	Supranational	Policy-support institution	n/a	National governments, supranational organisations	https://drmkc.jrc.ec.europa.eu/
EUR-OPA Major Hazards Agreement	Council of Europe	DRM	All	Supranational	International agreement	n	National governments, supranational organisations	https://www.coe.int/en/web/europarisks
International Charter "Space and Major Disasters"	Multiple space agencies	DRM	Preparedness, mitigation	Supranational	International agreement	n	National governments, supranational organisations	https://disasterscharter.org/web/guest/home;jsessionid=74C4BF2FE1AAB65E1CDD1C029FE75EDB.APP1
IPCC AR6 Synthesis Report: Climate Change 2023	UN	All	Response,	Supra	Directive/o	n	National governments,	https://www.ipcc.ch/report/sixth-assessment-report-cycle/

			mitigation	tional	utcome		supranational organisations	
IPCC Special Report: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation	UN	DRM	All	Supranational	Guidelines/BP	n	National governments, supranational organisations	https://www.ipcc.ch/report/managing-the-risks-of-extreme-events-and-disasters-to-advance-climate-change-adaptation/
Meteoalarm	EUMETNET	DRM	Preparedness, mitigation	Supranational	Policy-support institution	n/a	National governments	https://www.meteoalarm.org/en/live/
Paris Agreement on Climate Change	UN	CC	All	Supra-supranational	International agreement	y	National governments, supranational organisations	https://www.un.org/en/climatechange/paris-agreement https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf
UN Common Guidance on Helping Build Resilient Societies	UN	All	All	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://unsdg.un.org/sites/default/files/2021-09/UN-Resilience-Guidance-Final-Sept.pdf
UNDP Community Based Resilience Analysis CoBRA Conceptual Framework	UN	DRM	All	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://www.undp.org/publications/cobra-conceptual-framework

UN Global Assessment Report on Disaster Risk Reduction	UN	DRM	All	Supranational	Guidelines/BP	n	National governments, supranational organisations	https://www.undrr.org/gar
UN Sustainable Development Goals (SDGs) (aka Agenda 2030)	UN	All	All	Supra-supranational	International agreement	n	National governments, supranational organisations	https://sdgs.un.org/goals https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf
Resilience and Sustainability Facility	IMF	All	Prevention, preparedness, recovery	Supranational	Directive/outcome	n	National governments	https://www.imf.org/en/About/Factsheets/Sheets/2023/Resilience-Sustainability-Facility-RSF
Catastrophe Containment and Relief Trust	IMF	DRM	Mitigation, recovery	Supranational	Directive/outcome	n	National governments	https://www.imf.org/en/About/Factsheets/Sheets/2023/Catastrophe-containment-relief-trust-CCRT
International Panel on Climate Change	UN	All	All	Supra-supranational	Policy-support institution	n/a	National governments, supranational organisations	https://www.ipcc.ch/
UNFCCC Conference of the Parties (COP)	UN	All	All	Supranational	Conference/summit	n/a	National governments, supranational organisations	https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop

Emergency Response Coordination Centre (ERCC)	EU	DRM	Response	Supranational	Policy-support institution	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/emergency-response-coordination-centre-ercc_en
Copernicus Programme Early Warning and Information Systems	EU	DRM	Preparedness, response	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/european-early-warning-and-information-systems_en
European Union Peer Review Programme	EU	All	All	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/peer-review-programme_en
rescEU Union Civil Protection Mechanism	EU	DRM	All	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/resceu_en
National Disaster Management Systems	Nation-state/s	DRM	All	National	Directive/outcome	n/a	National governments	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/national-disaster-management-system_en
European Medical Corps	EU	DRM	Response, recovery	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/european-medical-corps_en

European Civil Protection Pool	EU	DRM	Prevention, preparedness	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/european-civil-protection-pool_en
Emergency Support Instrument	EU	DRM	Response	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/emergency-support-instrument_en
UN Plan of Action on Disaster Risk Reduction for Resilience	UN	DRM	All	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://unsceb.org/un-plan-action-disaster-risk-reduction-resilience-towards-risk-informed-and-integrated-approach
EC INFORM	EU	DRM	All	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://drmkc.jrc.ec.europa.eu/inform-index
UN OCHA Civil-Military Coordination Recommended Practices	UN	DRM	Preparedness, mitigation	Supranational	Guidelines/BP	n	National governments, supranational organisations	https://reliefweb.int/report/world/recommended-practices-effective-humanitarian-civil-military-coordination-foreign-military-assets-fma-natural-and-man-made-disasters-version-10-september-2018
European Union Deployable Military Disaster Relief Capability Package	EU	DRM	Response	Supranational	Directive/outcome	n/a	National governments, supranatio	https://www.pesco.europa.eu/project/deployable-military-disaster-relief-capability-package/

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European Union Concept on Effective CIVMIL Coordination in Support of Humanitarian Assistance and Disaster Relief	EU	DRM	Preparedness	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://data.consilium.europa.eu/doc/document/ST-5536-2019-INIT/en/pdf https://civil-protection-humanitarian-aid.ec.europa.eu/partnerships/relations/civil-military-cooperation-emergencies_en
European Union Mutual Defence Clause (Article 42.7 TEU)	EU	DRM	Preparedness, mitigation	Supranational	International agreement	y	National governments, supranational organisations	https://eur-lex.europa.eu/EN/legal-content/glossary/mutual-defence-clause.html
European Union Solidarity Clause (Article 222 TFEU)	EU	DRM	Response, recovery	Supranational	International agreement	y	National governments, supranational organisations	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12016E222
Euro-Atlantic Disaster Response Coordination Centre	NATO	DRM	Response	Supranational	Policy-support institution	n/a	National governments, supranational organisations	https://www.nato.int/cps/en/natohq/topics_117757.htm#
EN Eurocodes	EU	All	Prevention, preparedness	Supranational	International agreement	y	National governments, supranational organisations	https://eurocodes.jrc.ec.europa.eu/

Copernicus European Flood Awareness System (EFAS)	EU	DRM	Preparedness, mitigation	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://www.efas.eu/en
European Union Floods Directive - 2007/60/EC	EU	DRM	Preparedness, mitigation	Supranational	Directive/outcome	y	National governments, supranational organisations	https://climate-adapt.eea.europa.eu/en/metadata/publications/directive-2007-60-ec-of-the-european-parliament-and-of-the-council-of-23-october-2007-on-the-assessment-and-management-of-flood-risks
European Forest Fire Information System (EFFIS)	EU	DRM	Preparedness, response, mitigation	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://effis.jrc.ec.europa.eu/
European Plate Observing System	EU	DRM	Preparedness, response, mitigation	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://www.epos-eu.org/about-epos/what-we-do
ICOMOS Climate Action Working Group	NGO/NPO	Heritage	All	n/a	Policy-support institution	n/a	National governments, supranational organisations	https://www.icomos.org/en/what-we-do/disseminating-knowledge/icomos-working-groups?start=6
UNESCO "Policy Document On The Impacts Of Climate Change On World Heritage Properties"	UN	Heritage	All	Supranational	Directive/outcome	n/a	National governments, supranatio	https://whc.unesco.org/uploads/activities/documents/activity-397-2.pdf https://whc.unesco.org/archive/2021/whc21-23GA-inf11-en.pdf

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UN Humanitarian Reform Agenda, Cluster Approach	UN	DRM	All	Supranational	Directive/outcome	n/a	Supranational organisations	https://emergency.unhcr.org/coordination-and-communication/cluster-system/cluster-approach-iasc
Global Strategy for the European Union	EU	All	All	Supranational	Directive/outcome	n	National governments, supranational organisations	https://www.eeas.europa.eu/sites/default/files/eu_global_strategy_2019.pdf
Guide to Developing Disaster Recovery Frameworks	World Bank/GFDRR	DRM	Recovery	Supranational	Guidelines/BP	n/a	National governments	https://www.gfdrr.org/sites/default/files/publication/DRF-Guide.pdf
Post-Disaster Needs Assessment	UN, EU, World Bank	DRM	Recovery	Supranational	Guidelines/BP	n/a	National governments	https://www.undp.org/publications/post-disaster-needs-assessment
OpenDRI – Open Data for Resilience Initiative	World Bank	DRM	All	Supranational	Guidelines/BP	n/a	National governments	https://opendri.org/
Understanding Risk Forum	World Bank	DRM	All	Supranational	Conference/summit	n/a	National governments, supranational organisations	https://www.worldbank.org/en/events/2024/06/16/understanding-risk-forum-2024
Global Facility for Disaster Reduction and Recovery (GFDRR)	World Bank	DRM	All	Supranational	Policy-support institution	n/a	National governments, supranational	https://www.gfdrr.org/en

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Risk Preparedness: A Management Manual for World Cultural Heritage	ICCROM/UNESCO/ICOMOS/WHC	DRM	Preparedness	n/a	Guidelines/BP	n/a	National governments, local organisations	https://www.iccrom.org/publication/risk-preparedness-management-manual-world-cultural-heritage
Managing Disaster Risks for World Heritage	ICCROM/UNESCO/ICOMOS/WHC	DRM	All	n/a	Guidelines/BP	n/a	National governments, local organisations	https://whc.unesco.org/en/managing-disaster-risks/
The Red Cross Approach to Resilience	IFRC	DRM	All	Organisational	Guidelines/BP	n/a	National governments, local organisations	https://www.climatecentre.org/downloads/files/Minimum%20Standards/Minimum%20Standards%20for%20climate-smart%20DRR%20%202.0%20NOV%202013.pdf
IFRC Disaster Risk Management Policy	IFRC	DRM	All	Organisational	Directive/outcome	n/a	National governments, local organisations	https://www.ifrc.org/sites/default/files/2022-05/20210127_IFRC-DRM-EN%5B1%5D.pdf
IFRC Framework for Community Resilience	IFRC	DRM	All	Organisational	Directive/outcome	n/a	National governments, local organisations	https://www.ifrc.org/document/ifrc-framework-community-resilience
New Urban Agenda (Habitat III)	UN	CC	All	Supranational	Directive/outcome	n	National governments, local organisations	https://unhabitat.org/about-us/new-urban-agenda https://habitat3.org/the-new-urban-agenda/
Habitat III Issue Paper 15 – On Urban Resilience	UN	All	All	Supranational	Guidelines/BP	n	National governments, local organisations	https://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-15_Urban-Resilience-2.0.pdf

Habitat III Issue Paper 4 – Urban Culture and Heritage	UN	All	All	Supranational	Guidelines/BP	n	National governments, local organisations	https://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-4_Urban-Culture-and-Heritage-2.0.pdf
European Landscape Convention	Council of Europe	CC	Prevention, mitigation	Supranational	International agreement	y	National governments	https://www.coe.int/en/web/landscape
Convention on the Value of Cultural Heritage for Society	Council of Europe	Heritage	All	Supranational	International agreement	y	National governments	https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=199
Globally Important Agricultural Heritage Systems (GIAHS) Programme	UN	Heritage/CC	All	Supranational	Directive/outcome	n/a	National governments	https://www.fao.org/giahs/background/en/
Guidelines on Defining Rural Areas and Compiling Indicators for Development Policy	UN	Heritage/CC	All	Supranational	Guidelines/BP	n/a	National governments, supranational organisations	https://www.fao.org/3/ca6392en/ca6392en.pdf
ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage	ICOMOS/IFLA	Heritage	All	Supranational	Guidelines/BP	n/a	National governments, local organisations	https://www.icomos.org/images/DOCUMENTS/General_Assemblies/19th_Delhi_2017/Working_Documents-First_Batch-August_2017/GA2017_6-3-1_RuralLandscapesPrinciples_EN_final20170730.pdf
International Partnership for the Satoyama Initiative (IPSI)	UN	CC	All	n/a	Policy-support institution	n/a	National governments	https://satoyama-initiative.org/

Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors	ICOMOS	Heritage, CC	Prevention, mitigation	n/a	Guidelines/BP	n/a	National governments, local organisations	https://openarchive.icomos.org/id/eprint/2453/
Convention Concerning the Protection of the World's Cultural and Natural Heritage (World Heritage Convention)	UN	Heritage	Prevention, preparedness	Supra-supranational	International agreement	y	National governments	https://whc.unesco.org/en/conventiontext/
Budapest Declaration on World Heritage	UN	Heritage	Prevention, preparedness	Supranational	Directive/outcome	n	National governments	https://whc.unesco.org/en/documents/1334
Convention for the Safeguarding of the Intangible Cultural Heritage	UN	Heritage	Preparedness	Supra-supranational	International agreement	y	National governments, supranational organisations	https://ich.unesco.org/en/convention
Decisions Adopted at the 31st Session of the World Heritage Committee: WHC-07/31.COM/7.1 and WHC-07/31.COM/7.2	UN	Heritage, CC	All	Supranational	Guidelines/BP	n/a	National governments	https://whc.unesco.org/en/sessions/31COM/documents/
Urban-Rural Linkages: Guiding Principles. Framework for Action to Advance Integrated Territorial Development	UN	CC, DRM	All	Supranational	Guidelines/BP	n/a	National governments	https://unhabitat.org/sites/default/files/2020/03/url-gp-1.pdf
Operational Guidelines for the Implementation of the World Heritage Convention	UN	Heritage	All	Supranational	Guidelines/BP	n/a	National governments	https://whc.unesco.org/en/guidelines/
UNESCO Thematic Indicators for Culture in the 2030 Agenda for Sustainable Development	UN	Heritage, CC	All	Supranational	Guidelines/BP	n	National governments	https://whc.unesco.org/en/culture2030indicators/

Culture for the 2030 Agenda	UN	Heritage, CC	All	Supranational	Guidelines/BP	n	National governments	https://unesdoc.unesco.org/ark:/48223/pf0000264687
Culture Urban Future: Global Report on Culture for Sustainable Urban Development	UN	Heritage, CC	All	Supranational	Directive/outcome	n/a	National governments	https://unesdoc.unesco.org/ark:/48223/pf0000245999
Policy for the Integration of a Sustainable Development Perspective into the Processes of the World Heritage Convention	UN	Heritage, CC	All	Supranational	Guidelines/BP	n/a	National governments, local organisations	https://whc.unesco.org/en/sustainabledevelopment/
The Hangzhou Declaration: Placing Culture at the Heart of Sustainable Development Policies	UN	Heritage, CC	All	Supranational	International agreement	n	National governments	https://unesdoc.unesco.org/ark:/48223/pf0000221238
Introducing Cultural Heritage into the Sustainable Development Agenda	UN	Heritage, CC	All	Supranational	Directive/outcome	n/a	National governments	https://silo.tips/download/sessions-3a-and-3a-a-introducing-cultural-heritage-into-the-sustainable-developm
European Heritage Alliance	NGO/NPO	Heritage	All	n/a	Policy-support institution	n	National governments, local organisations	European Heritage Alliance – coordinated by Europa Nostra
European Climate Pact	EU	CC	All	Supranational	Policy-support institution	n	National governments, local organisations	https://climate-pact.europa.eu/index_en
Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030 – A Disaster Risk-Informed Approach for all EU Policies	EU	DRM	All	Supranational	Guidelines/BP	n/a	National governments, supranational	https://reliefweb.int/report/world/european-commission-launches-sendai-action-plan-disaster-risk-reduction https://www.eumonitor.nl/9353000/1/j4nvhdfcs8bljza_j9vvik7m1c3gyxp/vkcxl6scuryt

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Minimum Standards for Local Climate-Smart Disaster Risk Reduction	IFRC	DRM	All	Organisational	Guidelines/BP	n/a	National governments, local organisations	https://www.climatecentre.org/downloads/files/Minimum%20Standards/Minimum%20Standards%20for%20climate-smart%20DRR%20%202.0%20NOV%202013.pdf
Lima Declaration for Disaster Risk Management of Cultural Heritage	ICOMOS	Heritage, DRM	All	Supranational	Directive/outcome	n	National governments, supranational organisations	https://www.icomos.org/images/DOCUMENTS/Charters/lima_declaration_2010.PDF
New-Delhi Resolution on Impact of Climate Change on Cultural Heritage	ICOMOS	All	Prevention, mitigation	Supranational	International agreement	n	National governments, local organisations	https://www.icomos.org/en/what-we-do/image-what-we-do/156-heritage-and-climate-change
Resolution 19GA 2017/30 Mobilizing ICOMOS and the Cultural Heritage Community to Help Meet the Challenge of Climate Change	ICOMOS	Heritage, CC	Preparedness, response	n/a	Directive/outcome	n	National governments, local organisations	https://www.icomos.org/images/DOCUMENTS/General_Assemblies/19th_Delhi_2017/19th_GA_Outcomes/GA2017_Resolutions_EN_20180206finalcirc.pdf
Venice Declaration on Building Resilience at the Local Level towards Protected Cultural Heritage and Climate Change Adaptation Strategies	UN	Heritage, CC	Preparedness, response, mitigation	n/a	International agreement	n	National governments, local organisations	https://www.preventionweb.net/files/25027_venicedeclaration.pdf
Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis	ICCROM	Heritage, DRM	Preparedness, response	n/a	Guidelines/BP	n	National governments, local organisations	https://www.iccrom.org/news/pioneering-resource-first-aid-cultural-heritage-now-available
Protecting the Cultural Heritage from Natural Disasters	EU	Heritage, DR	All	Supranational	Guidelines/BP	n/a	National governments, supranatio	https://www.europarl.europa.eu/RegData/etudes/STUD/2007/369029/IPOL-CULT_ET(2007)369029_EN.pdf

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Copernicus Services in Support to Cultural Heritage	EU	Heritage	All	Supranational	Directive/outcome	n/a	National governments, supranational organisations	https://op.europa.eu/en/publication-detail/-/publication/220f385f-76bd-11e9-9f05-01aa75ed71a1/

7.1.2. Data point grids for selected policies

7 / European Union - Protecting the Cultural Heritage from Natural Disasters

Table 3. Policy analysis: European Union - Protecting the Cultural Heritage from Natural Disasters

Title: *European Union - Protecting the Cultural Heritage from Natural Disasters*	Type summary: *BP - EU standards*	Content summary: *EU standards on cultural heritage DRM*	SyRI-relevancies: *Active memory; Social Interaction and inclusiveness; Socio-economic resilience*"	DRM references: *All*	Explicit crisis scenarios mentioned: *Earthquake; Fire, Flood; heat; Landslide*	CORE/s mentioned: *All*	Date of issue/launch: *2007*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	**1. Integration of Cultural Heritage:** Emphasizes the importance of integrating cultural heritage protection into sustainability and climate change	**1. Community Engagement:** Recognizes the importance of community engagement in sustainability and climate change initiatives. It suggests that	**1. Scientific Research:** Acknowledges the importance of scientific research in understanding the impacts of climate change and informing sustainable policies. It highlights	**1. Population Growth:** Recognizes the impact of population growth on sustainability and climate change. The increasing global population puts pressure on natural	**1. Vulnerability Assessment:** Recognizes the importance of conducting vulnerability assessments to identify and understand the specific challenges	**1. Effective Communication Strategies:** Recognizes the importance of effective communication strategies in addressing sustainability and climate change challenges.	**1. Cultural Heritage Preservation:** Recognizes the role of cultural heritage in fostering resilience to environmental challenges. Preserving cultural heritage sites,	**1. International Collaboration:** Recognizes the importance of international cooperation in addressing global sustainability and climate change	**1. Cultural Heritage as a Resilience Factor:** Recognizes cultural heritage as a driver of resilience in the face of climate change impacts. Preserving and promoting

	initiatives to ensure the preservation of heritage assets in the face of environmental challenges. **2. Damage Assessment:** Focuses on the need for comprehensive damage assessment of cultural heritage due to environmental actions, including weathering and the effects of climate change. This assessment is crucial for understanding vulnerabilities and developing effective resilience strategies.	involving local communities in decision-making processes and resilience-building efforts can lead to more effective and sustainable outcomes. **2. Social Cohesion:** Highlights the role of social cohesion within communities in addressing sustainability and climate change challenges. Strong social bonds and collaboration among community members can enhance resilience and facilitate collective	the need for evidence-based decision-making to address environmental challenges effectively. **2. Policy Development:** Emphasizes the role of policy development in translating scientific findings into actionable measures for climate change mitigation and adaptation. Effective policies are essential for implementing sustainable practices and promoting resilience in the face of environmental threats.	resources, exacerbates environmental challenges, and influences climate change dynamics. **2. Resource Consumption:** Highlights the relationship between population size and resource consumption. As the population grows, the demand for resources such as water, energy, and food also increases, leading to environmental degradation and contributing to climate change.	faced by vulnerable groups in the context of climate change and sustainability. By assessing vulnerabilities, policymakers and stakeholders can develop targeted interventions to support these groups. **2. Inclusive Decision-Making:** Advocates for inclusive decision-making processes that involve and empower vulnerable groups in sustainability and climate change initiatives. By including	Clear and timely communication plays a crucial role in raising awareness, disseminating information, and mobilizing action in response to environmental crises. **2. Risk Communication:** Highlights the significance of risk communication in conveying information about climate change impacts and sustainability issues to the public. Transparent and accessible risk communicati	traditions, and knowledge can contribute to community resilience, identity preservation, and sustainable development in the face of climate change impacts. **2. Traditional Knowledge:** Highlights the importance of traditional knowledge systems in building cultural resilience. Indigenous practices, local wisdom, and traditional ecological knowledge can offer valuable insights into	challenges. Collaborative efforts among countries, organizations, and stakeholders are essential for sharing knowledge, resources, and best practices to achieve common environmental goals. **2. Cross-Border Partnerships:** Emphasizes the value of cross-border partnerships in promoting sustainability and climate resilience. By fostering collaboration across borders, regions, and sectors, stakeholders can address	cultural heritage assets, traditions, and practices can enhance community resilience, foster social cohesion, and support sustainable development efforts. **2. Heritage Conservation for Sustainability:** Highlights the role of heritage conservation in promoting sustainability. By safeguarding cultural heritage sites, landscapes, and intangible heritage, stakeholders can contribute to environment

	3. Risk Assessment: Recommends formulating tasks for risk assessment related to individual natural hazards, with a specific focus on defining cultural heritage and international cooperation issues in research project calls. This approach aims to enhance preparedness and response mechanisms. **4. Cost-Effective Protection Methods:** Advocates for the implementati	responses to environmental threats. **3. Local Knowledge:** Acknowledges the value of local knowledge and traditional practices within communities in adapting to climate change and promoting sustainability. Leveraging indigenous knowledge can contribute to innovative solutions and sustainable practices. **4. Capacity Building:** Emphasizes the importance of capacity building within	**3. Interdisciplinary Approach:** Advocates for an interdisciplinary approach that integrates scientific knowledge from various fields into policy-making processes. By bridging the gap between science and policy, stakeholders can develop comprehensive strategies that address the complex challenges of sustainability and climate change. **4. Knowledge Exchange:**	**3. Urbanization:** Addresses the trend of urbanization and its implications for sustainability and climate change. The rapid urban population growth poses challenges in terms of infrastructure development, resource management, and resilience to climate-related risks. **4. Land Use:** Discusses the impact of population growth on land use patterns and biodiversity. The	the perspectives and voices of vulnerable communities, policies and strategies can better address their needs and enhance their resilience to environmental challenges. **3. Capacity Building:** Highlights the significance of capacity building among vulnerable groups to enhance their adaptive capacity and resilience. Providing training, resources, and support can empower these groups	on can help individuals and communities understand potential threats, make informed decisions, and take proactive measures to mitigate risks. **3. Community Engagement:** Emphasizes the role of community engagement in crisis communication efforts. Engaging with local communities, stakeholders, and vulnerable groups is essential for building trust, fostering resilience,	sustainable resource management, adaptation strategies, and community resilience in the context of climate change. **3. Community Empowerment:** Emphasizes the empowerment of communities to safeguard their cultural assets and practices. By involving local communities in decision-making processes, promoting cultural diversity, and supporting cultural initiatives, stakeholders can enhance	transboundary environmental issues, enhance disaster preparedness, and promote sustainable development. **3. Multi-Stakeholder Engagement:** Advocates for multi-stakeholder engagement in sustainability and climate change initiatives. Involving diverse actors such as governments, businesses, civil society, academia, and local communities can facilitate knowledge exchange, innovation,	al conservation, biodiversity protection, and the preservation of traditional knowledge systems. **3. Heritage-Based Adaptation Strategies:** Advocates for the integration of heritage-based adaptation strategies in climate change planning. Drawing on cultural values, indigenous knowledge, and historical practices, communities can develop adaptive measures that are culturally appropriate,

	on of cost-effective protection methods for cultural heritage to mitigate the impacts of climate change and ensure the resilience of heritage assets. This includes identifying and implementing measures that offer the best protection at reasonable costs. **5. Understanding Vulnerabilities:** Stresses the importance of understanding and addressing the vulnerabilities of cultural	communities to enhance their resilience to climate change impacts. Providing communities with the necessary skills, resources, and support can empower them to address environmental challenges effectively. **5. Partnerships:** Advocates for partnerships between communities, governmental agencies, and other stakeholders to foster collaboration and collective action in	Stresses the importance of knowledge exchange between scientists, policymakers, and other stakeholders to facilitate informed decision-making. Open communication and collaboration can enhance the effectiveness of policies aimed at promoting sustainability and resilience. **5. Policy Implementation:** Highlights the significance of effective policy implementation in achieving sustainability	expansion of human settlements and agricultural activities to accommodate growing populations can lead to habitat loss, deforestation, and ecosystem degradation, affecting both biodiversity and climate change dynamics. **5. Policy Implications:** Suggests that population management strategies should be integrated into sustainability and climate change policies. Addressing population growth	to cope with climate change impacts, participate in sustainable practices, and contribute to community resilience. **4. Community Engagement:** Emphasizes the importance of community engagement and participation in addressing the needs of vulnerable groups. By fostering community-led initiatives and partnerships, stakeholders can work collaboratively to implement sustainable	and promoting collective action in response to sustainability and climate-related crises. **4. Multi-Stakeholder Collaboration:** Advocates for multi-stakeholder collaboration in crisis communication initiatives. By involving diverse actors such as government agencies, non-governmental organizations, businesses, and media outlets, stakeholders can coordinate efforts, share	community resilience and adaptive capacity to climate-related challenges. **4. Adaptive Strategies:** Advocates for the adoption of adaptive strategies that integrate cultural resilience principles. Drawing on cultural values, heritage, and practices, communities can develop innovative solutions, adaptive measures, and sustainable practices to address climate change impacts and promote	and collective action towards environmental sustainability. **4. Knowledge Sharing:** Highlights the importance of knowledge sharing and capacity building in promoting cooperation on sustainability and climate change. By sharing information, research findings, and expertise, stakeholders can enhance their understanding of environmental challenges, develop	environmentally sustainable, and socially inclusive. **4. Heritage Tourism and Economic Development:** Discusses the potential of heritage tourism as a driver of economic development and sustainability. Leveraging cultural heritage assets for tourism purposes can generate income, create employment opportunities, and support local economies while promoting heritage conservation

	heritage in the context of sustainability and climate change. By recognizing and addressing these vulnerabilities, societies can build resilience and safeguard their cultural heritage for future generations.	sustainability and climate change initiatives. Building strong partnerships can facilitate coordinated responses and resource-sharing.	goals and mitigating the impacts of climate change. Policies need to be practical, enforceable, and responsive to scientific evidence to drive positive environmental outcomes.	through education, healthcare, family planning, and sustainable development initiatives can help mitigate environmental pressures and enhance resilience to climate change.	solutions that benefit vulnerable populations. **5. Policy Integration:** Suggests integrating the concerns and priorities of vulnerable groups into sustainability and climate change policies. By mainstreaming vulnerability considerations into policy development and implementation, decision-makers can ensure that the needs of vulnerable populations are adequately addressed.	information, and amplify messaging on sustainability and climate change issues. **5. Adaptive Communication:** Suggests the need for adaptive communication strategies that can respond to evolving sustainability and climate change challenges. Flexibility, creativity, and innovation in communication approaches can help address complex issues, engage diverse audiences, and drive positive	long-term resilience. **5. Policy Integration:** Suggests integrating cultural resilience considerations into sustainability and climate change policies. By recognizing the value of cultural heritage, promoting cultural diversity, and supporting community-led initiatives, policymakers can enhance resilience, foster social cohesion, and promote sustainable development.	effective solutions, and build resilience to climate impacts. **5. Policy Alignment:** Suggests aligning policies and strategies at national, regional, and international levels to promote cooperation on sustainability and climate change. Harmonizing regulatory frameworks, setting common goals, and fostering collaboration can facilitate coordinated action and collective responses to environmental threats.	and community well-being. **5. Cultural Identity and Climate Resilience:** Emphasizes the link between cultural identity and climate resilience. Preserving cultural traditions, languages, and practices can strengthen community identity, build social capital, and enhance adaptive capacity to climate-related challenges. **6. Heritage Protection in Disaster Risk Reduction:**

						behavioral change towards sustainability.		**6. Technology Transfer:** Recognizes the role of technology transfer in facilitating cooperation on sustainable development and climate resilience. Sharing technological innovations, best practices, and green solutions among countries and partners can accelerate progress towards a more sustainable and climate-resilient future.	Recognizes the importance of heritage protection in disaster risk reduction efforts. Incorporating cultural heritage considerations into risk management plans, emergency response strategies, and climate adaptation measures can help safeguard valuable assets and promote sustainable recovery.
Disaster and Risk Management	**1. Community Engagement:** Highlights the	**1. Community Engagement:** Recognizes the	**1. Evidence-Based Decision Making:** Em	**1. Risk Communication:** Emphasizes the importance	**1. Inclusive Planning:** Emphasizes the importance	**1. Importance of Timely and Accurate**	**1. Cultural Heritage Protection:** Emphasizes the	**1. State-Supported Remedial Actions:** Cooperation	**1. Protection of Cultural Heritage:** Urgent

	importance of community engagement in building societal resilience to disasters. Involving local communities in risk assessment, preparedness planning, and response efforts can enhance social cohesion, empower residents, and improve overall disaster resilience. **2. Capacity Building:** Emphasizes the need for capacity building initiatives to strengthen societal resilience. By providing	importance of community engagement in disaster and risk management. Involving local communities in planning, decision-making, and response efforts can enhance preparedness, resilience, and recovery. **2. Local Knowledge and Expertise:** Highlights the value of local knowledge and expertise in addressing disaster risks. Communities possess valuable insights, traditional	phasizes the importance of evidence-based decision making in disaster and risk management. By integrating scientific research, data analysis, and risk assessments into policy development, decision makers can make informed choices that enhance preparedness, response, and recovery efforts. **2. Scientific Expertise:** Recognizes the value of scientific expertise in informing policy decisions	of effective risk communication strategies to inform and educate the population about potential hazards, preparedness measures, and response protocols. Clear, timely, and accessible communication can help raise awareness, promote behavioral changes, and enhance community resilience. **2. Evacuation Planning:** Highlights the significance of evacuation planning and population	of inclusive planning processes that actively involve vulnerable groups in decision-making, policy development, and preparedness activities. By ensuring the participation and representation of vulnerable populations, including marginalized communities, persons with disabilities, and elderly individuals, in planning efforts, stakeholders can better understand their needs, priorities, and capacities.	**Information:** Emphasizes the critical role of timely and accurate information dissemination during crises to keep the public informed, mitigate confusion, and facilitate appropriate responses. Effective crisis communication helps build trust, reduce uncertainty, and empower individuals and communities to make informed decisions. **2. Risk Communication Strategies:** Advocates for the	importance of safeguarding cultural heritage as a key component of cultural resilience. Recognizing the value of cultural assets, traditions, and practices in fostering community identity, cohesion, and well-being, stakeholders are encouraged to integrate cultural heritage protection into disaster risk reduction strategies 13. **2. Community Empowerment:** Highligh	with various stakeholders such as police, fire services, and the military is essential for effective disaster response related to cultural heritage. **2. Improvement Needs:** There is a need to include representatives of cultural organizations in crisis management, prioritize cultural heritage protection in legal regulations, increase financial support for heritage institutions, and provide regular	responses to disasters should prioritize the protection of cultural heritage to prevent irreversible damage or destruction of heritage sites. **2. Integration into Disaster Management Policies:** It is crucial to integrate concern for cultural heritage into existing disaster management policies and mechanisms to ensure its safeguarding during emergencies. **3. European Strategy:** The

	training, education, and resources to individuals, organizations, and communities, stakeholders can enhance their ability to cope with disasters, adapt to risks, and recover effectively. **3. Risk Communication:** Advocates for effective risk communication strategies to enhance societal resilience. Transparent and timely communication of risks, hazards, and emergency procedures can improve public awareness,	practices, and adaptive strategies that can inform effective risk management approaches. **3. Community-Based Approaches:** Advocates for community-based approaches to disaster preparedness and response. Empowering communities to take ownership of their safety, mobilize resources, and collaborate with authorities can improve overall resilience and reduce vulnerabilities.	related to disaster risk reduction. Engaging scientists, researchers, and technical experts in risk assessment, hazard mapping, and early warning systems can improve the effectiveness of policies and strategies aimed at reducing vulnerabilities and enhancing resilience. **3. Risk Assessment and Monitoring:** Advocates for the use of scientific tools and methodologies for risk assessment	management during disasters. Developing evacuation routes, shelters, and procedures that account for the diverse needs of the population, including vulnerable groups, elderly individuals, and persons with disabilities, is essential for ensuring a safe and orderly evacuation process. **3. Population Vulnerabilities:** Recognizes the vulnerabilities of different population groups in the face of disasters.	**2. Tailored Communication:** Advocates for tailored communication strategies that are accessible, culturally appropriate, and inclusive of diverse languages and formats to reach vulnerable groups effectively. Providing information on risks, preparedness measures, and available support services in a clear, concise manner can empower vulnerable populations to take proactive steps to protect	development and implementation of risk communication strategies that are tailored to the needs, preferences, and literacy levels of diverse audiences. Utilizing multiple communication channels, clear language, visual aids, and culturally sensitive messaging can enhance the reach and impact of communication efforts during emergencies. **3. Community Engagement:** Highlights	ts the role of cultural resilience in empowering communities to cope with and recover from disasters. By drawing on cultural strengths, knowledge systems, and social networks, communities can enhance their adaptive capacities, preserve their cultural identity, and support each other during times of crisis 33. **3. Traditional Knowledge:** Acknowledges the significance of traditional knowledge and indigenous	training for staff in cooperating with rescue teams. **3. Funding Instruments:** The EU has developed special funding instruments for rescue and remedial works in response to major disasters, with a focus on enhancing preventive measures. **4. Integrated Approach:** The document advocates for an integrated multi-hazard risk management approach at the EU level, supported	European Parliament calls for the development of a European strategy to combat natural disasters, including directives on prevention and risk management that take into account the preservation of cultural heritage. **4. Legal Framework:** The Treaty establishing the European Community includes provisions for the conservation and safeguarding of cultural heritage, emphasizing the need to consider

	promote behavioral changes, and facilitate coordinated responses to disasters. **4. Collaborative Partnerships:** Suggests fostering collaborative partnerships among government agencies, non-governmental organizations, private sector entities, and community groups to enhance societal resilience. By working together, sharing resources, and coordinating efforts, stakeholders	**4. Social Cohesion:** Emphasizes the role of social cohesion in enhancing community resilience. Strong social networks, trust among residents, and mutual support systems can facilitate effective communication, coordination, and collective action during emergencies. **5. Vulnerable Populations:** Addresses the needs of vulnerable populations within communities.	and monitoring. Implementing advanced technologies, remote sensing techniques, and modeling approaches can help identify hazards, predict impacts, and prioritize interventions to mitigate risks. **4. Policy Formulation:** Discusses the role of science in shaping policy formulation processes. By translating scientific findings into actionable policy recommendations, governments	Addressing social, economic, and health disparities among populations can help identify and prioritize interventions to reduce vulnerabilities, enhance preparedness, and promote equity in disaster response and recovery efforts. **4. Inclusive Approaches:** Advocates for inclusive approaches to population management in disaster risk reduction. Ensuring the participation and representation of diverse	themselves and their communities. **3. Capacity Building:** Recommends investing in capacity building initiatives that strengthen the resilience and preparedness of vulnerable groups. By providing training, resources, and skills development opportunities to vulnerable populations, stakeholders can enhance their ability to respond to emergencies, access critical services,	the importance of engaging with communities before, during, and after disasters to foster two-way communication, gather feedback, and address concerns. Building relationships, establishing communication networks, and involving community members in decision-making processes can enhance the effectiveness of crisis communication and response activities. **4. Crisis**	practices in building cultural resilience. Leveraging traditional ecological knowledge, local wisdom, and ancestral practices can inform sustainable disaster management approaches, enhance community resilience, and promote intergenerational learning 33. **4. Cultural Practices and Rituals:** Discusses the role of cultural practices, rituals, and ceremonies in promoting resilience and healing in the	by horizontal and vertical integration of policies, financial instruments, and management levels. **5. Cross-Border Cooperation:** Bilateral and multilateral agreements between countries facilitate cross-border cooperation in disaster response, allowing for joint training sessions, information exchange, and mutual assistance during emergencies. **6. International Cooperatio**	cultural aspects in EU actions. **5. International Guidelines:** International organizations like ICOM, ICCROM, and ICOMOS have issued guidelines promoting collaboration and awareness-raising campaigns for protecting cultural heritage from disasters. **6. Cooperation in Crisis Management:** Cooperation between cultural organizations and rescue teams is

	can address complex challenges, leverage expertise, and build collective resilience. **5. Inclusive Planning:** Recommends inclusive planning processes that consider the needs and perspectives of diverse societal groups. Incorporating marginalized populations, vulnerable communities, and minority voices in disaster planning and decision-making can promote equity, social justice, and	Recognizing and addressing the specific vulnerabilities of marginalized groups, elderly individuals, persons with disabilities, and other at-risk populations is essential for ensuring inclusive and equitable disaster management. **6. Community Resilience Building:** Discusses the importance of building community resilience as a proactive approach to disaster risk reduction. Strengthening community capacities,	, and decision makers can develop regulations, guidelines, and frameworks that promote risk reduction, disaster preparedness, and sustainable development. **5. Interdisciplinary Collaboration:** Highlights the importance of interdisciplinary collaboration between scientists, policymakers, practitioners, and stakeholders. Fostering dialogue, knowledge	populations in planning, decision-making, and response activities can lead to more effective, culturally sensitive, and equitable outcomes in disaster management. **5. Community Engagement:** Discusses the role of community engagement in population management strategies. Engaging local communities in risk assessments, planning processes, and response activities can foster a sense of	and contribute to community resilience. **4. Needs Assessment:** Highlights the importance of conducting needs assessments to identify the specific vulnerabilities, challenges, and capacities of different vulnerable groups in disaster-prone areas. Tailoring risk reduction strategies, emergency response plans, and recovery efforts to address the unique needs of vulnerable populations	**Response Coordination:** Stresses the need for coordinated communication efforts among various stakeholders, including government agencies, emergency responders, non-governmental organizations, and the media. Establishing communication protocols, sharing information transparently, and coordinating messaging can improve the coherence and efficiency of crisis response operations.	aftermath of disasters. Engaging in cultural activities, storytelling, and ceremonies can help communities process trauma, strengthen social bonds, and restore a sense of normalcy and continuity 13. **5. Cultural Mapping and Documentation:** Advocates for the mapping and documentation of cultural assets, intangible heritage, and community practices as part of disaster	**n:** International cooperation, such as European collaboration in emergency situations, has proven to be efficient in responding to disasters and providing support across borders. **7. EU Coordination:** While cooperation is often based on bilateral agreements, there is a call for support and coordination from the EU to enhance cost-effective capacity building and rapid	essential in crisis management to ensure the protection and recovery of cultural heritage assets. **7. Funding for Heritage Institutions:** Increasing financial support for cultural heritage institutions is crucial to enable them to effectively deal with risk factors and implement preventive measures.

	resilience for all. **6. Adaptive Governance:** Discusses the importance of adaptive governance structures in promoting societal resilience. Flexible, responsive governance systems that can adapt to changing circumstances, integrate feedback, and learn from past experiences are essential for effective disaster and risk management. **7. Resilient Infrastructure:** Recognizes the role of resilient infrastructur	promoting self-reliance, and fostering a culture of preparedness can enhance overall resilience and reduce reliance on external assistance. **7. Participatory Planning:** Recommends participatory planning processes that involve community members in decision-making and priority setting. Engaging residents in risk assessments, action planning, and resource allocation	exchange, and mutual learning across different disciplines can enhance the effectiveness of disaster and risk management initiatives. **6. Early Warning Systems:** Recommends the integration of scientific data and early warning systems into policy frameworks. Establishing robust monitoring networks, information sharing mechanisms, and communication channels based on scientific	ownership, solidarity, and mutual support that strengthens overall resilience and enhances the effectiveness of disaster management efforts. **6. Special Needs Populations:** Addresses the specific needs of special populations, such as children, elderly individuals, pregnant women, and individuals with medical conditions, in disaster planning and response. Tailoring preparedness measures, communicati	can improve outcomes and reduce disparities in disaster impacts. **5. Community Engagement:** Discusses the role of community engagement in fostering the active participation of vulnerable groups in disaster management processes. Building trust, promoting dialogue, and establishing partnerships with local communities can enhance the effectiveness of interventions, increase social cohesion,	**5. Public Awareness Campaigns:** Recommends the implementation of public awareness campaigns that educate the population about potential risks, preparedness measures, and emergency procedures. Promoting a culture of preparedness, raising awareness about available resources, and encouraging proactive behaviors can enhance community resilience and reduce the impact of disasters.	preparedness and response efforts. By preserving cultural knowledge, artifacts, and traditions, stakeholders can ensure the continuity of cultural practices, support recovery processes, and promote cultural resilience 36. **6. Inclusive Decision-Making:** Stresses the importance of inclusive decision-making processes that respect and incorporate diverse cultural perspectives, values, and	response in emergency situations.	

	e in enhancing societal resilience. Investing in infrastructure that can withstand natural hazards, maintain essential services, and support community functions is critical for reducing vulnerabilities and ensuring continuity during and after disasters.	can lead to more effective and sustainable disaster management outcomes. **8. Community Networks:** Recognizes the significance of community networks and partnerships in disaster response. Leveraging existing social structures, community organizations, and informal networks can facilitate information sharing, resource mobilization, and mutual aid in times of crisis.	evidence can improve response times, decision-making processes, and community resilience. **7. Capacity Building:** Suggests investing in scientific capacity building initiatives to strengthen disaster and risk management capabilities. By training professionals, enhancing research infrastructure, and promoting innovation in scientific fields relevant to disaster resilience, policymakers can foster	on strategies, and support services to meet the unique requirements of these groups is essential for ensuring their safety and well-being during emergencies. **7. Capacity Building:** Recommends investing in capacity building initiatives to enhance population management capabilities in disaster and risk management. Providing training, resources, and tools to emergency responders, healthcare providers,	and empower vulnerable populations to contribute to their own resilience. **6. Policy Integration:** Calls for the integration of vulnerable group considerations into disaster risk reduction policies, frameworks, and programs. By mainstreaming vulnerability assessments, inclusive practices, and equity principles into policy development processes, decision makers can ensure that the needs of vulnerable	**6. Media Relations:** Discusses the role of media relations in crisis communication and the importance of building positive relationships with the media. Providing accurate information, responding to media inquiries promptly, and collaborating with journalists to disseminate key messages can help ensure that accurate and timely information reaches the public. **7. Social Media and**	priorities. By engaging with local communities, cultural groups, and indigenous peoples in decision-making processes, stakeholders can enhance the relevance, effectiveness, and sustainability of disaster risk management initiatives 4. **7. Capacity Building:** Recommends investing in capacity building initiatives that strengthen the cultural resilience of communities. By providing training, resources,		

			a culture of continuous learning and improvement.	and community leaders can improve coordination, response times, and the overall effectiveness of population management strategies.	populations are prioritized and addressed in all phases of disaster management. **7. Empowerment and Resilience:** Recognizes the importance of empowering vulnerable groups to build resilience, self-reliance, and adaptive capacities in the face of disasters. By promoting community-led initiatives, fostering social networks, and supporting local empowerme	**Technology:** Acknowledges the growing role of social media and technology in crisis communication and emphasizes the need to leverage digital platforms for information sharing, real-time updates, and community engagement. Harnessing social media tools, mobile applications, and online resources can enhance communication reach and engagement during emergencies.	and support to preserve cultural heritage, promote cultural diversity, and empower local communities, stakeholders can enhance their ability to withstand and recover from disasters 36.		

					nt efforts, stakeholders can enhance the resilience of vulnerable populations and reduce their exposure to risks.				
Culture and Heritage	**1. Cultural Identity:** Preserving cultural heritage is essential for maintaining societal identity and cohesion during and after disasters. Cultural heritage plays a crucial role in fostering a sense of belonging and continuity within communities. **2. Community**	**1. Community Engagement:** Involving local communities in the protection and preservation of cultural heritage is essential for ensuring the sustainability and resilience of heritage assets. Community engagement fosters a sense of ownership, pride, and responsibility towards cultural	**1. Evidence-Based Decision-Making:** Emphasizing the need for evidence-based approaches in heritage preservation, the document underscores the importance of scientific research, data analysis, and empirical evidence to inform policy decisions related to cultural heritage	**1. Impact of Population on Heritage:** Recognizing that human activities and population growth can have significant impacts on cultural heritage sites, the document highlights the need to manage population dynamics in ways that minimize negative effects on heritage assets.	**1. Inclusivity:** Emphasizing the importance of inclusivity in heritage conservation, the document advocates for the active engagement of vulnerable groups, including minorities, indigenous communities, and marginalized populations, in decision-making processes related to cultural heritage	**1. Emergency Response Planning:** Highlighting the need for comprehensive emergency response plans that include crisis communication protocols for cultural heritage sites, the document underscores the importance of preparedness and coordination in managing crises that threaten	**1. Community Empowerment:** The document highlights the role of cultural resilience in empowering communities to actively participate in heritage preservation efforts, adapt to changing circumstances, and recover from disasters. **2. Heritage Conservation:** Emphasizing the link	**1. International Collaboration:** The document highlights the significance of international cooperation in heritage conservation, suggesting that cross-border partnerships, joint initiatives, and knowledge exchange programs can enhance the protection and	**1. Economic Value:** The document emphasizes the economic value of heritage assets, suggesting that cultural sites, historic landmarks, and traditional practices can attract tourism, generate revenue, and stimulate local economies, thereby serving as drivers of

	Engagement: Involving local communities in the protection and preservation of cultural heritage assets can strengthen societal resilience by fostering a sense of ownership and responsibility. Community engagement initiatives promote awareness and active participation in heritage conservation efforts. **3. Education and Awareness:** Promoting education and awareness	heritage. **2. Partnerships:** Building partnerships between cultural heritage institutions, local communities, government agencies, and other stakeholders is crucial for effective heritage conservation. Collaborative efforts enhance the capacity to protect heritage sites and promote sustainable heritage management practices. **3. Local Knowledge:** Recognizing the value of	protection. **2. Research and Innovation:** Encouraging research and innovation in the field of cultural heritage preservation, the document advocates for the development of new technologies, methodologies, and best practices to enhance the resilience of heritage assets against natural disasters. **3. Policy Development:** Discussing the role of policy frameworks in heritage	**2. Sustainable Tourism:** Addressing the issue of tourism as a factor influencing cultural heritage preservation, the document emphasizes the importance of sustainable tourism practices that balance visitor access with heritage protection. Managing tourist flows and activities can help mitigate the impact of tourism on heritage sites. **3. Community Involvement:** Engaging	preservation. **2. Equitable Access:** Addressing the issue of equitable access to cultural heritage sites and resources, the document underscores the need to ensure that vulnerable groups have equal opportunities to participate in heritage-related activities, benefit from heritage assets, and contribute to heritage conservation initiatives. **3. Empowerment:** Promoting the	heritage assets. **2. Public Awareness and Education:** Emphasizing the role of public awareness and education in crisis communication, the document advocates for outreach programs, training initiatives, and information campaigns that inform communities about emergency procedures, evacuation routes, and heritage protection measures. **3. Stakeholder Engagemen**	between cultural resilience and heritage conservation, the document underscores the need to integrate resilience-building strategies into heritage management practices to enhance the sustainability and longevity of cultural assets. **3. Traditional Knowledge:** Recognizing the value of traditional knowledge and practices in enhancing cultural resilience, the document advocates for the	preservation of cultural heritage. **2. Multilateral Agreements:** Discussing the role of multilateral agreements in promoting cooperation, the document mentions examples of agreements between EU member states and non-member states that facilitate joint efforts in heritage conservation, disaster response, and capacity building. **3. Bilateral Partnerships:** Emphasizing the value of bilateral partnerships	economic growth and job creation. **2. Cultural Identity:** Discussing the role of heritage in shaping cultural identity, the document suggests that heritage assets contribute to a sense of belonging, pride, and continuity within communities, fostering social cohesion, cultural diversity, and intergenerational connections. **3. Tourism Potential:** Highlighting the tourism potential of heritage

	about the value of cultural heritage can enhance societal resilience by instilling a sense of cultural pride and responsibility among individuals and communities. Education programs on heritage preservation contribute to building a resilient society. **4. Heritage as a Resource:** Viewing cultural heritage as a valuable resource for resilience-building, the document highlights the role of heritage in	local knowledge and traditional practices in heritage conservation, the document emphasizes the importance of integrating indigenous knowledge systems and community expertise into heritage preservation strategies. **4. Capacity Building:** Empowering communities through capacity building initiatives, training programs, and educational activities enhances their ability to actively	conservation, the document highlights the need for comprehensive policies that integrate cultural heritage considerations into disaster risk reduction strategies, urban planning initiatives, and environmental protection measures. **4. Legislative Support:** Recognizing the importance of legislative support for cultural heritage protection, the document calls for the incorporatio	local communities in population management strategies is essential for ensuring the sustainable use and preservation of cultural heritage. Community participation in decision-making processes related to heritage sites can help address population-related challenges. **4. Urbanization and Development:** Discussing the impact of urbanization and development on cultural heritage, the document	empowerment of vulnerable groups through capacity building, education, and training programs, the document highlights the role of community empowerment in enhancing the resilience of marginalized communities and promoting their active involvement in heritage preservation. **4. Cultural Diversity:** Recognizing the importance of cultural diversity in heritage conservation, the	**t:** Discussing the importance of engaging stakeholders in crisis communication efforts, the document stresses the need to establish communication channels with heritage professionals, local authorities, community members, and relevant organizations to facilitate coordinated responses to emergencies affecting cultural heritage. **4. Information Sharing:** Promoting the sharing of timely and accurate information	preservation and transmission of indigenous wisdom, skills, and cultural traditions that contribute to community resilience and heritage protection. **4. Adaptive Strategies:** Discussing the importance of adaptive strategies in promoting cultural resilience, the document suggests that heritage sites and communities should develop flexible, innovative approaches to address environment	in heritage protection, the document suggests that agreements between countries, regions, and organizations can facilitate mutual assistance, information sharing, and collaborative projects aimed at safeguarding cultural heritage. **4. EU Support and Coordination:** The document calls for support and coordination from the EU to facilitate cooperation among member states,	sites, the document mentions that well-preserved cultural landmarks, archaeological sites, and heritage trails can attract visitors, boost hospitality industries, and support sustainable tourism practices that benefit local communities. **4. Educational Opportunities:** Emphasizing the educational value of heritage assets, the document suggests that historic sites,

	providing a sense of continuity, stability, and strength to communities facing natural disasters. Heritage assets can serve as anchors for community resilience. **5. Integration into Disaster Planning:** Integrating cultural heritage considerations into disaster planning and risk management strategies is crucial for enhancing societal resilience. Recognizing the importance of heritage	participate in heritage conservation efforts. Building the skills and knowledge of community members contributes to the sustainable management of cultural heritage. **5. Community Resilience:** The document highlights the role of cultural heritage in building community resilience by providing a sense of identity, continuity, and strength in the face of natural disasters. Heritage assets serve	n of heritage preservation principles into national laws, EU regulations, and international agreements to ensure the legal framework for safeguarding heritage assets. **5. International Cooperation:** Stressing the significance of international cooperation in heritage conservation, the document advocates for collaboration among countries, organizations, and experts to	underscores the need for urban planning policies that integrate heritage considerations and promote sustainable development practices to protect heritage assets from population pressures. **5. Heritage Conservation Planning:** Integrating population management considerations into heritage conservation planning is crucial for balancing the needs of local communities with the preservation of cultural heritage.	document stresses the need to safeguard the cultural rights and heritage of vulnerable groups, including linguistic minorities, ethnic communities, and indigenous peoples, to preserve their unique cultural identities. **5. Participatory Approaches:** Advocating for participatory approaches that involve vulnerable groups in heritage conservation decision-making, the document emphasizes	during crises, the document highlights the value of communication networks, information centers, and digital platforms that enable the dissemination of updates, alerts, and instructions to safeguard heritage sites and mobilize response efforts. **5. Crisis Management Training:** Recommending training programs for heritage professionals and emergency responders on crisis communication best	al, social, and economic challenges while preserving cultural values. **5. Risk Preparedness:** Addressing the role of risk preparedness in cultural resilience, the document recommends that heritage institutions and communities establish contingency plans, emergency protocols, and response mechanisms to mitigate the impact of disasters on cultural heritage.	heritage institutions, and relevant stakeholders in addressing common challenges, sharing best practices, and mobilizing resources for heritage conservation. **5. Capacity Building:** Promoting capacity building as a means of fostering cooperation, the document suggests that training programs, workshops, and knowledge-sharing initiatives can strengthen the skills, expertise,	museums, and cultural programs offer learning opportunities, research possibilities, and knowledge dissemination platforms that contribute to lifelong learning, academic pursuits, and cultural exchange. **5. Environmental Sustainability:** Discussing the link between heritage and environmental sustainability, the document mentions that traditional building techniques,

	assets in community well-being can lead to more effective disaster response and recovery efforts. **6. Capacity Building:** Building the capacity of communities to protect and preserve cultural heritage in the face of disasters contributes to societal resilience. Training programs, awareness campaigns, and collaboration with heritage professionals can empower communities to safeguard their heritage assets.	as anchors for community resilience and contribute to social cohesion. **6. Awareness and Education:** Promoting awareness and education about the value of cultural heritage within local communities is essential for fostering a culture of heritage conservation. Educational initiatives raise awareness about the significance of heritage sites and encourage community members to	share knowledge, resources, and best practices in protecting cultural heritage from natural disasters. **6. Capacity Building:** Promoting capacity building in the intersection of science and policy, the document highlights the importance of training heritage professionals, policymakers, and community members in utilizing scientific data and research findings to develop	Developing strategies that account for population dynamics can help ensure the long-term sustainability of heritage sites. **6. Education and Awareness:** Promoting education and awareness about the importance of cultural heritage among local populations is key to fostering a sense of stewardship and responsibility towards heritage assets. Educating communities about the	the value of community-led initiatives, collaborative partnerships, and inclusive practices that prioritize the voices and perspectives of marginalized communities. **6. Social Justice:** Discussing the intersection of heritage conservation and social justice, the document calls for policies and practices that address the socio-economic disparities and inequalities faced by vulnerable groups,	practices, the document suggests the development of capacity-building initiatives that enhance the skills and preparedness of individuals involved in heritage protection and disaster response. **6. Media Relations:** Addressing the role of media in crisis communication, the document underscores the importance of establishing positive relationships with media outlets, journalists, and	**6. Capacity Building:** Promoting capacity building as a key component of cultural resilience, the document suggests that training programs, knowledge sharing initiatives, and skill development activities can enhance the ability of communities and heritage professionals to respond effectively to threats and crises. **7. Sustainable Development:** Connecting cultural resilience to sustainable	and collaboration among heritage professionals, communities, and organizations. **6. Public-Private Partnerships:** Discussing the role of public-private partnerships in heritage conservation, the document highlights the potential for collaboration between government agencies, private enterprises, NGOs, and community groups to support heritage projects,	indigenous knowledge, and cultural landscapes can inspire eco-friendly practices, conservation efforts, and sustainable development models that prioritize heritage preservation and environmental stewardship. **6. Community Empowerment:** Addressing the empowerment potential of heritage assets, the document suggests that involving local communities in heritage conservation projects,

		take an active role in their protection.	effective heritage preservation strategies.	value of heritage can lead to better population management practices.	ensuring that heritage preservation efforts contribute to social inclusion and equity.	communication channels to ensure accurate reporting, public awareness, and effective messaging during heritage emergencies.	development goals, the document underscores the importance of aligning heritage conservation efforts with broader sustainability objectives to ensure the resilience of cultural landscapes, traditions, and practices.	fund conservation efforts, and promote sustainable practices. **7. Stakeholder Engagement:** Emphasizing the importance of engaging diverse stakeholders in cooperative efforts, the document suggests that involving local communities, indigenous groups, heritage experts, government authorities, and civil society organizations can enhance the effectiveness and	cultural initiatives, and tourism activities can empower residents, enhance social inclusion, and promote participatory decision-making processes that prioritize community needs and aspirations. **7. Policy Integration:** Emphasizing the importance of integrating heritage considerations into policy frameworks, the document suggests that recognizing heritage as a driver of development

								inclusivity of heritage conservation initiatives.	can inform urban planning, economic strategies, and social policies that leverage cultural assets for sustainable growth, resilience, and well-being.

9 / ICCROM Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis

Table 4. ICCROM Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis

Title: *ICCROM Handbook and Toolkit on First Aid to Cultural Heritage in Times of Crisis*	Type summary: *BP - cultural heritage DRM*	Content summary: *Report and toolkit on protecting cultural heritage*	SyRI-relevancies: *Active memory; Adaptive governance; Social interaction and inclusivenes s*	DRM references: *All*	Explicit crisis scenarios mentioned: *Earthquake; Fire, Flood; Landslide*	CORE/s mentioned: *None*	Date of issue/launch : *2018*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and	**1. Cultural Heritage as**	**1. Community**	**1. Policy Integration**	It does not explicitly delve into	**1. Inclusive Attitude:** It	**1. Communica**	**1. Community**	**1. Interdiscipli**	**1. Resilience**

Climate Change	**a Driver for Development:** The document recognizes culture as a driver for development and highlights how years of development gains can be lost in an instant when disasters strike. It underscores the role of cultural traditions in coping mechanisms during times of suffering and loss. **2. Resilience and Cultural Heritage Preservation:** It stresses the significance of preserving cultural heritage as a means to	**as First Responders:** The document acknowledges that in most disasters, local communities are the first to respond and secure their cultural heritage. It cites examples like the 2012 conflict in northern Mali, where communities safeguarded ancient manuscripts through traditional networks. Communities often possess valuable knowledge and coping mechanisms that can be utilized in reconstruction and	**for Cultural Heritage:** The publication emphasizes the need for cultural heritage considerations to be formally included in national and local emergency response systems. While cultural heritage may not always be explicitly integrated into these systems, first responders often recognize the importance of heritage in overcoming loss and trauma. This recognition underscores the significance	population management strategies in the context of sustainability and climate change. However, the principles of community engagement, inclusivity, cultural identity, capacity building, and policy integration discussed in relation to cultural heritage preservation can indirectly inform population management approaches in the context of environmental challenges.	stresses the need for an inclusive outlook in cultural heritage first aid to recognize and protect all elements of cultural heritage in disaster-affected areas. This inclusive approach extends to engaging vulnerable groups to ensure their perspectives, needs, and cultural heritage are considered in sustainability and climate change initiatives. **2. Identifying Vulnerabilities:** It suggests identifying	**tion and Coordination:** It underlines the significance of communication and coordination in cultural heritage first aid operations. Effective communication among stakeholders, including emergency responders, cultural heritage professionals, and local communities, is essential for coordinating response efforts and ensuring the preservation of cultural heritage assets during crises.	**Resilience:** The document highlights the importance of cultural heritage in providing refuge to displaced people during crises and facilitating relief work. It acknowledges that local communities are often the first to respond and secure their cultural heritage, showcasing their resilience and traditional coping mechanisms in times of crisis. **2. Inclusive Approach:** Cultural heritage first	**nary Collaboration:** The document underscores the need for interdisciplinary collaboration between cultural heritage professionals, emergency responders, local communities, and humanitarian organizations. By working together, these diverse stakeholders can combine their expertise and resources to effectively safeguard cultural heritage assets in the face of climate	**and Continuity:** Cultural heritage serves as a driver for resilience by providing communities with a sense of continuity, identity, and connection to their past. During crises and climate-related disasters, heritage sites and traditions play a crucial role in helping communities cope, recover, and rebuild, contributing to their overall resilience. **2. Community Identity and Well-being:** Heritage is a driver for

	build resilience against future disasters. It mentions that culture plays a central role in stories of resilience that emerge in the aftermath of disasters. **3. Inclusive Discussions and Broadening the Conversation:** It also aims to include the voices of primary stakeholders, particularly the community, in the recovery and conservation of cultural heritage. By involving the community in these	recovery efforts. **2. Inclusive Attitude and Respect for Diversity:** It emphasizes the importance of an inclusive outlook in cultural heritage first aid to recognize and protect all elements of cultural heritage in disaster-affected areas. It warns against subjective value judgments that may lead to the selective recognition of certain types of heritage, thereby increasing existing	of aligning policy frameworks with the preservation of cultural heritage. **2. Interdisciplinary Approach:** It advocates for an interdisciplinary approach that combines scientific knowledge with policy frameworks to address sustainability challenges and climate change impacts on cultural heritage. By integrating scientific expertise with policy initiatives, stakeholders can develop comprehensi		physical, social, economic, political, and attitudinal vulnerabilities that expose heritage to various hazards. By understanding the vulnerabilities faced by different groups, including vulnerable populations, stakeholders can develop targeted strategies to enhance resilience and sustainability in the face of climate change impacts. **3. Community Resilience:** Engaging vulnerable groups in	**2. Risk Management:** Crisis communication plays a crucial role in risk management strategies. By establishing clear communication channels and protocols, stakeholders can effectively assess risks, disseminate information, and coordinate actions to mitigate the impact of disasters on cultural heritage sites and communities. **3. Community Engagement:** Engaging with local	aid efforts should embrace an inclusive outlook to recognize and protect all elements of cultural heritage in disaster-affected areas. By valuing diverse forms of heritage, including vernacular heritage often overlooked in traditional responses, stakeholders can promote inclusivity and resilience within communities facing climate change challenges. **3. Capacity Building and**	change impacts and crises 6. **2. Community Engagement:** Cooperation with local communities is essential for sustainable cultural heritage preservation. Engaging communities in decision-making processes, sharing knowledge, and involving them in heritage protection efforts can foster a sense of ownership and responsibility, leading to more resilient and sustainable	community identity and well-being, as it reflects the values, beliefs, and traditions of a society. By preserving and promoting cultural heritage assets, stakeholders can strengthen community cohesion, pride, and social well-being, fostering sustainable relationships with the environment and each other. **3. Sustainable Development:** Cultural heritage acts as a driver for sustainable development

	efforts, the document seeks to build resilience against future disasters. **4. Cultural Heritage in Early Recovery:** The document highlights the importance of safeguarding cultural heritage during humanitarian crises, such as earthquakes and conflicts. It mentions that protecting and recovering cultural heritage should not be delayed or separated	inequalities. By respecting diversity, communities can better preserve their cultural heritage and promote sustainability. **3. Community Engagement in Recovery:** It recomments to engage stakeholders within the community, such as site managers, custodians, security guards, and neighbors, to assess threats, constraints, and needs related to cultural heritage. By involving the community in decision-	ve strategies for safeguarding cultural heritage in times of crisis. **3. Context-Specific Response:** Understanding the wider emergency context is crucial for providing effective cultural heritage first aid. By conducting contextual analysis, policymakers and practitioners can identify the specific needs, capacities, and risk factors related to cultural heritage in a given crisis. This tailored approach		cultural heritage preservation efforts can contribute to building community resilience. By involving these groups in decision-making processes and recovery activities, stakeholders can empower vulnerable populations to actively participate in sustainability initiatives and climate change adaptation measures. **4. Context-Specific Response:** Understanding the specific needs and capacities of vulnerable groups is	communities through effective crisis communication is vital for promoting sustainability and resilience in the face of climate change impacts. By involving communities in decision-making processes, sharing information about risks and response measures, and fostering dialogue, stakeholders can enhance community preparedness and response capabilities. **4. Documentation:** It	**Knowledge Sharing:** Engaging with communities to utilize their time-tested coping mechanisms and wealth of knowledge, such as traditional building methods, can enhance resilience in reconstruction and recovery efforts. By leveraging local expertise and empowering communities to participate in heritage preservation, stakeholders can strengthen cultural resilience in the face of	outcomes in the context of climate change and disasters 1. **3. Capacity Building:** It serves as a reference to train cultural first aiders, emergency responders, and volunteers. By providing guidance and tools for capacity building, stakeholders can enhance their skills and knowledge to respond effectively to emergencies, promote sustainability, and address the challenges posed by climate change on cultural heritage.	by supporting local economies, tourism, and cultural industries. By recognizing the economic value of heritage sites and practices, stakeholders can promote sustainable tourism, job creation, and income generation, contributing to the overall sustainability of communities facing climate change challenges. **4. Environmental Stewardship:** Heritage sites often embody

	from humanitarian assistance, especially when the goal is to help people overcome trauma and resume normal daily practices. **5. Vulnerabilities and Hazards:** The publication discusses identifying physical, social, economic, political, and attitudinal vulnerabilities that expose heritage to various hazards. Understanding these vulnerabilities is crucial for mitigating risks and	making processes and recovery efforts, sustainability and resilience can be enhanced. **4. Utilizing Community Knowledge:** It also highlights that communities often have time-tested coping mechanisms and a wealth of knowledge, such as traditional building methods. This knowledge can be valuable in reconstruction and recovery activities, contributing to sustainability	enables informed decision-making and targeted interventions to enhance sustainability and resilience. **4. Advocacy for Policy Inclusion:** It advocates for the inclusion of cultural heritage first aid in international, national, and local emergency response and humanitarian relief systems. By advocating for policy changes that recognize the importance of cultural heritage in disaster response		crucial for providing effective cultural heritage first aid. By tailoring response strategies to address the vulnerabilities of different populations, stakeholders can promote inclusivity, equity, and sustainability in the context of climate change and crises. **5. Capacity Building and Training:** The publication serves as a reference to train cultural first aiders, emergency responders, and volunteers. By providing	accentuates the importance of documentation as part of the salvage and first aid process for cultural heritage. Clear and accurate communication through documentation helps in recording damage, tracking recovery efforts, and sharing information with relevant stakeholders, contributing to the preservation and sustainability of cultural heritage assets. **5. Context-Specific Response:**	climate-related disasters. **4. Interlocking Culture with Humanitarian Assistance:** It marks the interdependence of cultural and humanitarian responses during crises. While saving human lives remains a priority, ensuring the continuity of cultures through actions to secure cultural heritage is essential. By coordinating cultural heritage first aid with humanitarian relief efforts, stakeholders can support	**4. Policy Integration:** Cooperation at the policy level is crucial for integrating cultural heritage considerations into emergency response and sustainability frameworks. By advocating for the inclusion of cultural heritage first aid in national and international policies, stakeholders can ensure that heritage protection is prioritized and coordinated with climate change adaptation efforts.	traditional knowledge and practices related to environmental stewardship and sustainable living. By preserving and promoting these practices, stakeholders can leverage heritage as a driver for sustainable environmental management, climate adaptation, and mitigation efforts, contributing to a more sustainable future. **5. Education and Awareness:** Cultural

	building resilience in the face of climate change and other challenges.	efforts in the aftermath of disasters. **5. Cultural Heritage as a Source of Identity:** It recognizes that cultural heritage, including traditions, artifacts, and buildings, serves as a source of identity for communities. Preserving this heritage is essential for maintaining cultural identity, fostering resilience, and promoting sustainability in the face of climate change and other challenges.	and recovery, stakeholders can promote sustainability, resilience, and the continuity of cultural practices in the face of climate change and crises. **5. Capacity Building and Training:** The document is a reference to train cultural first aiders, emergency responders, and volunteers. By providing guidance on emergency preparedness, response plans, and first aid operations, the document		guidance on engaging with vulnerable groups and addressing their unique needs, the document aims to enhance the capacity of stakeholders to support and empower vulnerable populations in sustainability and climate change resilience efforts.	Tailoring communication strategies to the specific context of the crisis is essential for effective crisis communication. Understanding the cultural, social, and linguistic aspects of the affected community enables stakeholders to communicate information in a way that is accessible, relevant, and culturally sensitive, enhancing the effectiveness of response efforts.	community resilience and sustainability in the aftermath of climate-related disasters. **5. Policy Integration:** Integrating cultural heritage considerations into emergency response and humanitarian relief systems can enhance cultural resilience in the face of climate change impacts. By advocating for the inclusion of cultural heritage first aid in national and international emergency	**5. Knowledge Sharing:** Collaboration in sharing best practices, lessons learned, and innovative approaches is essential for building resilience in the face of climate change. By exchanging knowledge and experiences, stakeholders can enhance their preparedness, response capabilities, and sustainability strategies to protect cultural heritage assets from the impacts of climate-related disasters.	heritage serves as a driver for education, awareness, and knowledge sharing about the importance of preserving traditions, protecting historical sites, and promoting sustainable practices. By raising awareness about the value of heritage in the context of climate change, stakeholders can inspire action, foster cultural appreciation, and promote sustainable behaviors within communities.

			aims to enhance the capacity of stakeholders to address sustainability challenges and climate change impacts on cultural heritage.				response frameworks, stakeholders can promote the continuity of cultural practices and traditions essential for community resilience.		
Disaster and Risk Management	**1. Cultural Heritage as a Source of Resilience:** It highlights how cultural heritage plays a crucial role in providing communities with a sense of continuity, identity, and resilience during disasters and crises. By preserving and protecting cultural heritage assets, stakeholders	**1. Community Engagement:** The document highlights the significance of engaging local communities in cultural heritage preservation efforts. By involving community members in decision-making processes, planning, and response activities, stakeholders	**1. Evidence-Based Decision Making:** The document advocates for evidence-based decision making in cultural heritage first aid. By relying on scientific research, data analysis, and on-the-ground assessments, stakeholders can make	**1. Community Engagement and Participation:** The document emphasizes the active involvement of local populations in cultural heritage preservation efforts. By engaging communities in decision-making processes, planning, and response activities, stakeholders	**1. Identification of Vulnerable Groups:** The publication emphasizes the identification and recognition of vulnerable groups within communities. By understanding the vulnerabilities of specific populations, such as children, elderly individuals, persons with	**1. Risk Communication and Awareness:** Effective communication is essential for disaster preparedness and response. By providing timely, accurate, and relevant information about heritage risks, emergency procedures, and protective measures, stakeholders	**1. Cultural Heritage as a Driver of Resilience:** The document recognizes cultural heritage as a source of strength, continuity, and identity for communities facing disasters. By valuing and safeguarding heritage assets, stakeholders can enhance community resilience, promote	**1. Multi-Stakeholder Collaboration:** The document underscores the need for collaboration among multiple stakeholders, including cultural heritage professionals, emergency responders, government agencies, community organizations, and international partners. By fostering	**1. Resilience Building:** The document acknowledges culture as a driver for development and emphasizes cultural traditions and coping mechanisms in fostering resilience within communities affected by disasters. **2. Integration into Emergency**

	can help communities maintain their social fabric, traditions, and connections to the past, contributing to their overall resilience. **2. Community Engagement and Empowerment:** Societal resilience is promoted through community engagement and empowerment in heritage preservation efforts. By involving local communities in decision-making processes, capacity building, and heritage	can ensure that heritage protection strategies are culturally sensitive, community-driven, and reflective of local needs and priorities. **2. Local Knowledge and Resources:** Communities often possess valuable local knowledge, traditional practices, and resources that can be instrumental in heritage protection and disaster response. By tapping into community expertise and resources,	informed decisions, prioritize actions, and allocate resources effectively to protect heritage assets during disasters and crises. **2. Research and Documentation:** Conducting research and documentation of cultural heritage assets before a crisis occurs is essential for assessing damage, identifying risks, and developing response strategies. By documenting heritage sites,	can ensure that the needs, perspectives, and priorities of populations are taken into account, fostering ownership, resilience, and sustainability in heritage protection. **2. Safety and Well-being of Populations:** Ensuring the safety and well-being of populations is a priority in disaster and risk management. By considering the impact of emergencies on communities, including displacemen	disabilities, and marginalized communities, stakeholders can tailor response strategies, allocate resources, and provide targeted support to ensure the protection and well-being of these groups during disasters. **2. Inclusive Approaches:** Inclusive approaches that consider the diversity, needs, and rights of vulnerable groups are essential in disaster and risk management. By adopting inclusive	can raise awareness, empower communities, and facilitate informed decision-making to mitigate risks and protect cultural heritage assets. **2. Community Engagement:** Crisis communication involves engaging communities, stakeholders, and vulnerable groups in dialogue, consultation, and decision-making processes. By fostering open communication channels,	social cohesion, and support the recovery and rebuilding process following crises. **2. Cultural Continuity and Traditions:** Cultural resilience involves maintaining and revitalizing cultural practices, traditions, and knowledge systems that contribute to community well-being and adaptive capacity in times of adversity. By preserving intangible cultural heritage, promoting intergenerati	partnerships and coordination among diverse actors, stakeholders can pool resources, expertise, and efforts to enhance preparedness, response, and recovery in protecting cultural heritage assets during crises. **2. Interdisciplinary Approach:** Cooperation in disaster and risk management involves adopting an interdisciplinary approach that integrates expertise from various	**Response:** It recommends integrating cultural heritage into national and local emergency response systems to leverage its resilience-building potential. **3. Community Coping Mechanisms:** It mentions that communities often have time-tested coping mechanisms and a wealth of knowledge, like traditional building methods, that should be utilized in reconstruction and

	protection initiatives, stakeholders can empower communities to take ownership of their heritage, build resilience, and contribute to disaster risk management. **3. Inclusive Approaches:** Part of the document advocates for inclusive approaches to cultural heritage first aid that recognize and value diverse forms of heritage, including vernacular heritage often overlooked in traditional	stakeholders can leverage indigenous knowledge and community networks to enhance preparedness, response capabilities, and resilience in the face of disasters and risks. **3. Empowerment and Ownership:** Empowering communities to take ownership of their cultural heritage fosters a sense of responsibility, pride, and resilience. By providing training, capacity building opportunities, and support for	objects, and practices, stakeholders can create baseline data, monitor changes, and inform decision making in disaster and risk management. **3. Policy Integration:** The document highlights the importance of integrating cultural heritage considerations into broader disaster risk management policies and frameworks. By advocating for the inclusion of heritage	t, trauma, and loss, stakeholders can implement measures to protect populations, provide support, and mitigate risks to cultural heritage and human lives. **3. Risk Communication and Awareness:** Effective communication with populations is essential for disaster preparedness and response. By raising awareness about heritage risks, emergency procedures, and protective measures,	practices, cultural heritage first aiders can ensure that vulnerable populations are actively engaged, consulted, and empowered to participate in decision-making processes, planning, and response activities, promoting equity, social justice, and resilience. **3. Capacity Building and Training:** Building the capacity of vulnerable groups, including training, awareness-raising, and	listening to concerns, and involving diverse voices in planning and response activities, stakeholders can build trust, promote collaboration, and enhance the resilience of communities in safeguarding cultural heritage during emergencies. **3. Stakeholder Coordination:** Effective crisis communication requires coordination and collaboration among stakeholders, including	onal knowledge transfer, and supporting cultural expressions, stakeholders can strengthen community resilience and foster a sense of continuity and belonging. **3. Heritage Protection and Risk Reduction:** Cultural resilience is linked to the protection and risk reduction of heritage assets in the face of disasters. By implementing proactive measures, such as risk assessments, emergency planning, and	fields, such as heritage conservation, emergency management, risk assessment, community engagement, and humanitarian assistance. By bringing together diverse perspectives and skills, stakeholders can address complex challenges, identify innovative solutions, and strengthen the resilience of cultural heritage in the face of emergencies. **3. Local and Global Engagement:** Effective cooperation	recovery efforts. **4. Inclusive Attitude:** It suggests that cultural heritage first aid should embrace an inclusive outlook to recognize and protect all elements of cultural heritage. **5. Interdisciplinary Approach:** It proposes integrating scientific knowledge and policy frameworks into cultural heritage first aid efforts to ensure effective and informed decision-making.

	responses. By embracing inclusivity and diversity in heritage preservation efforts, stakeholders can promote social cohesion, resilience, and community well-being in the face of disasters and risks. **4. Capacity Building and Knowledge Sharing:** Building the capacity of communities, cultural first aiders, and emergency responders is essential for enhancing societal resilience in disaster and risk	community-led initiatives, stakeholders can empower communities to protect, preserve, and promote their heritage assets, contributing to disaster risk management and sustainable development. **4. Inclusive Approaches:** The document advocates for inclusive approaches that recognize and respect the diversity of communities and their heritage. By embracing inclusivity, diversity,	protection in national and local policies, stakeholders can ensure that heritage is prioritized, coordinated, and integrated into overall risk management strategies. **4. Capacity Building and Training:** Building the capacity of cultural heritage professionals, emergency responders, and community members is crucial for effective disaster and risk management. By providing training,	stakeholders can empower populations to take proactive steps, make informed decisions, and contribute to heritage preservation efforts during crises. **4. Capacity Building and Training:** Building the capacity of populations, including community members, volunteers, and cultural heritage professionals, is crucial for effective disaster management. By providing training, tools, and	skill development, is crucial for enhancing their preparedness, response capabilities, and resilience in emergencies. By providing targeted support and resources, stakeholders can empower vulnerable populations to contribute to heritage protection efforts, mitigate risks, and recover from disasters. **4. Risk Communication and Awareness:** Effective communication with vulnerable	cultural heritage professionals, emergency responders, government agencies, and community organizations. By sharing information, aligning strategies, and establishing communication protocols, stakeholders can enhance the efficiency, effectiveness, and coherence of response efforts to protect heritage assets and support affected populations. **4. Information Disseminati**	structural reinforcements, stakeholders can reduce vulnerabilities, mitigate risks, and enhance the resilience of cultural heritage sites and collections to withstand and recover from emergencies. **4. Community Engagement and Ownership:** Cultural resilience is reinforced through community engagement, participation, and ownership of heritage preservation efforts. By involving local	entails engaging both local communities and global partners in disaster and risk management efforts. By involving local communities in decision-making, planning, and response activities, stakeholders can ensure that interventions are contextually relevant, culturally sensitive, and community-driven. Additionally, by collaborating with international organizations, donors, and experts,	

	management. By providing training, tools, and resources for heritage protection, stakeholders can empower individuals and communities to respond effectively to emergencies, mitigate risks, and promote resilience. **5. Policy Integration and Coordination:** Societal resilience is strengthened through policy integration and coordination of cultural heritage first aid with broader disaster risk	and cultural sensitivity in heritage preservation efforts, stakeholders can promote social cohesion, equity, and community well-being, enhancing resilience in the face of disasters and risks. **5. Collaboration and Partnerships:** Collaboration between communities, cultural heritage professionals, emergency responders, and other stakeholders is essential for effective disaster and risk management	tools, and resources for heritage protection, stakeholders can enhance preparedness, response capabilities, and resilience in the face of emergencies. **5. Policy Development and Implementation:** Developing and implementing policies that address the protection, preservation, and recovery of cultural heritage in emergencies is essential for effective disaster management. By establishing clear	resources for heritage protection, stakeholders can enhance the preparedness, response capabilities, and resilience of populations in safeguarding heritage assets. **5. Inclusive Approaches:** The document advocates for inclusive approaches that consider the diversity, needs, and rights of populations in disaster and risk management. By embracing inclusivity, cultural sensitivity, and equity, stakeholders	groups is key to disaster preparedness and response. By providing accessible, culturally sensitive, and language-appropriate information about heritage risks, emergency procedures, and support services, stakeholders can ensure that vulnerable populations are informed, prepared, and able to make informed decisions to safeguard their cultural heritage and well-being. **5.**	**on:** Crisis communication involves disseminating information through various channels, such as social media, websites, community meetings, and traditional media. By using multiple communication platforms, stakeholders can reach diverse audiences, ensure accessibility, and promote transparency in sharing updates, alerts, and instructions related to heritage protection and	communities, stakeholders, and vulnerable groups in decision-making, planning, and response activities, stakeholders can empower communities, build social capital, and promote a sense of ownership and responsibility for safeguarding cultural heritage in times of crisis. **5. Adaptive Strategies and Innovation:** Cultural resilience involves adaptive strategies,	stakeholders can access resources, technical support, and best practices to enhance the protection and recovery of cultural heritage on a global scale. **4. Information Sharing and Communication:** Cooperation relies on information sharing, communication, and transparency among stakeholders involved in disaster and risk management. By establishing communication channels, sharing data, and disseminatin	

	management frameworks. By advocating for the inclusion of heritage considerations in emergency response policies, stakeholders can ensure that heritage protection is prioritized, coordinated, and integrated into overall risk management strategies.	. By fostering partnerships, sharing responsibilities, and coordinating efforts, stakeholders can leverage collective expertise, resources, and networks to enhance heritage protection, response capabilities, and resilience.	policies, guidelines, and protocols for heritage first aid, stakeholders can ensure a coordinated, systematic, and timely response to heritage-related risks and disasters. **6. Interdisciplinary Collaboration:** Science and policy intersect in the context of disaster and risk management through interdisciplinary collaboration. By bringing together experts from various fields, including heritage	can promote social cohesion, community well-being, and sustainable development, enhancing resilience in the face of emergencies. **6. Collaboration and Partnerships:** Collaboration between populations, cultural heritage professionals, emergency responders, and other stakeholders is essential for effective disaster management. By fostering partnerships, sharing responsibilities	**Collaboration and Partnerships:** Collaboration between stakeholders, vulnerable groups, community organizations, and service providers is essential for addressing the needs and priorities of vulnerable populations in disaster management. By fostering partnerships, sharing responsibilities, and coordinating efforts, stakeholders can leverage collective expertise, resources, and networks to enhance the protection,	emergency response. **5. Language and Cultural Sensitivity:** Effective crisis communication considers the linguistic and cultural diversity of communities. By providing information in local languages, using culturally appropriate messaging, and respecting cultural norms and practices, stakeholders can ensure that communication is clear, inclusive, and respectful, fostering understanding,	innovation, and creativity in responding to changing conditions and challenges. By fostering adaptive capacity, promoting learning, and encouraging innovation in heritage conservation and disaster management practices, stakeholders can enhance the resilience of cultural heritage, institutions, and communities to cope with and recover from emergencies. **6. Capacity Building and Knowledge**	g updates, stakeholders can facilitate coordination, decision-making, and mutual understanding to support effective response and recovery efforts for cultural heritage in times of crisis. **5. Capacity Building and Training:** Cooperation includes capacity building, training, and knowledge exchange initiatives to enhance the skills, competencies, and preparedness of stakeholders involved in safeguarding	

			conservation, emergency management, policy development, and scientific research, stakeholders can leverage diverse perspectives, expertise, and knowledge to address complex challenges and promote sustainable solutions.	es, and coordinating efforts, stakeholders can leverage collective expertise, resources, and networks to enhance heritage protection, response capabilities, and resilience.	support, and resilience of vulnerable groups in emergencies.	cooperation, and engagement in heritage preservation efforts. **6. Feedback and Evaluation:** Crisis communication involves soliciting feedback, monitoring communication channels, and evaluating the effectiveness of messaging and outreach activities. By seeking input from stakeholders, assessing communication outcomes, and adapting strategies based on lessons	**Sharing:** Cultural resilience is strengthened through capacity building, knowledge sharing, and skills development in heritage conservation and disaster risk management. By providing training, resources, and technical assistance to stakeholders, communities, and institutions, stakeholders can enhance preparedness, response capabilities, and recovery outcomes, fostering resilience in safeguarding	cultural heritage during emergencies. By providing training programs, workshops, and resources, stakeholders can build the capacity of individuals, institutions, and communities to respond to disasters, mitigate risks, and protect heritage assets, fostering a culture of cooperation and shared responsibility.	

						learned, stakeholders can improve communication practices, address gaps, and enhance the impact of communication efforts in disaster and risk management.	cultural heritage assets and promoting sustainable development.		
Culture and Heritage	**1. Resilience Through Cultural Traditions:** It highlights the significance of cultural traditions in fostering resilience, stating that stories of resilience often surface where culture plays a central role. **2. Community Coping**	**1. Community Engagement:** The document emphasizes the importance of engaging with the community, including performers, practitioners, spiritual leaders, and elders, to assess the impact of disasters on intangible heritage. **2.**	**1. Integration of Science and Policy:** The document emphasizes the need to integrate scientific knowledge and policy frameworks into cultural heritage first aid efforts to ensure effective and informed decision-making. **2. Context-Specific**	The document does not explicitly discuss population management in the context of culture and heritage. It primarily focuses on the importance of protecting and preserving cultural heritage during times of crisis, emphasizing community	**1. Inclusive Attitude:** The document stresses the importance of an inclusive outlook to recognize and protect all elements of cultural heritage, indicating the need for cultural heritage first aiders to be aware of the needs of vulnerable groups.	**1. Communication Strategies:** The document emphasizes the importance of identifying strategies for communicating with emergency actors, stakeholders, affected communities, and media groups in the affected area, highlighting the need for	**1. Resilience Building:** The document acknowledges culture as a driver for development and highlights the role of cultural traditions and coping mechanisms in fostering resilience within communities affected by disasters, emphasizing the	**1. Coordination with Emergency Actors:** It emphasizes the importance of coordinating cultural heritage first aid plans with other emergency actors and agencies operating in the area, highlighting the need to align efforts with structural	**1. Heritage as a Driver for Development:** It recognizes culture as a driver for development and highlights the potential of cultural heritage to contribute to community resilience and development, indicating that heritage plays a central role in driving

	Mechanisms: The document acknowledges that communities possess time-tested coping mechanisms and a wealth of knowledge, including traditional building methods. These should be considered in reconstruction and recovery efforts. **3. Protection of Cultural Heritage:** It advocates for the protection of cultural heritage, which is essential in helping individuals	**Community Coping Mechanisms:** It mentions that communities have time-tested coping mechanisms and a wealth of knowledge, such as traditional building methods, which should be utilized in reconstruction and recovery efforts. **3. Community Protection Efforts:** Communities trapped in violent conflicts have been known to prioritize the protection of their cultural	**Response:** Understanding the wider emergency context is crucial for providing effective cultural heritage first aid, highlighting the importance of integrating scientific analysis and policy considerations into response strategies. **3. Inclusive Attitude and Respect for Diversity:** It stresses the importance of an inclusive outlook to recognize and protect all elements of cultural heritage, indicating	engagement, resilience building, and the integration of cultural heritage into emergency response systems.	**2. Community Engagement:** It emphasizes the importance of engaging with the community, including vulnerable groups such as women, children, and the elderly, to assess the impact of disasters on intangible heritage. **3. Vulnerable Group Protection Efforts:** It also highlights the need to protect vulnerable groups during cultural heritage first aid efforts, indicating that cultural	effective crisis communication. **2. Local Language and Communication:** It suggests identifying strategies based on the preferred local language(s) or forms of communication in the affected area to ensure clear and effective communication with all stakeholders involved in cultural heritage first aid operations. **3. Community Engagement:** Effective crisis communicati	importance of cultural resilience in times of crisis. **2. Integration of Cultural Heritage:** It underscores the need to integrate cultural heritage into national and local emergency response systems to leverage its resilience-building potential, indicating that cultural heritage can play a central role in enhancing community resilience. **3. Community Coping Mechanisms:** The document	safety assessments and emergency management activities. **2. Engagement with Custodians:** It also suggests consulting with custodians when heritage sites are used to set up temporary shelters during first aid, indicating the importance of engaging with local custodians to provide guidance on the safe use of cultural heritage sites during emergencies.	positive change within societies. **2. Resilience Building:** It also emphasizes the role of cultural traditions and coping mechanisms, rooted in heritage, in fostering resilience within communities affected by disasters, showcasing how heritage can drive resilience and recovery efforts in times of crisis. **3. Inclusive Policy Frameworks:** The document stresses the importance

	overcome trauma and return to their daily routines. This illustrates the role of heritage in fostering resilience. **4. Integration into Emergency Response Systems:** Stressing the resilience-building potential of cultural heritage, the document calls for its integration into national and local emergency response systems. **5. Inclusive Attitude and Respect for Diversity:** It also	heritage even when personal security is at risk, showcasing the strong connection between communities and their heritage. **4. Community Resilience Building:** The document highlights that protecting cultural heritage is essential for helping communities overcome trauma and resume normal daily practices, indicating the role of heritage in building community resilience.	the need for policy frameworks that embrace diversity and inclusivity. **4. Community Engagement and Policy:** It also highlights the significance of engaging with the community and relevant groups within the community to inform policy decisions regarding the safeguarding of intangible heritage, showcasing the integration of community perspectives into policy frameworks.		heritage first aid should take into consideration the needs of vulnerable groups. **4. Context-Specific Response:** Understanding the wider emergency context is crucial for providing effective cultural heritage first aid, highlighting the importance of identifying vulnerable groups and their specific needs in the affected area. **5. Inclusive Policy Frameworks:** The publication stresses the importance	on involves engaging with the community, including performers, practitioners, spiritual leaders, and elders, to assess the impact of disasters on intangible heritage and to ensure that communication strategies are culturally sensitive. **4. Stakeholder Engagement:** It underscores the importance of engaging with stakeholders and actors at the site to assess their perception of threats, constraints, and needs,	mentions that communities often have time-tested coping mechanisms and a wealth of knowledge, such as traditional building methods, which should be utilized in reconstruction and recovery efforts, showcasing how cultural resilience can be harnessed for post-crisis recovery. **4. Inclusive Attitude:** Cultural heritage first aid should embrace an inclusive outlook to recognize	**3. Interdisciplinary Collaboration:** The document stresses the need for close cooperation with relevant government and humanitarian relief agencies to integrate cultural heritage first aid with broader humanitarian assistance, indicating that actions for securing cultural heritage should be initiated in coordination with relevant agencies. **4. Inclusive Attitude:** Cooperation in the	of inclusive policy frameworks that embrace diversity and inclusivity, indicating the need for policy frameworks that recognize and leverage heritage as a driver for positive development outcomes within communities. **4. Community Engagement:** Effective cultural heritage first aid involves engaging with the community, including vulnerable groups, to assess the impact of disasters on

	encourages cultural heritage first aiders to adopt an inclusive attitude and respect for diversity. This approach contributes to the recognition and protection of all elements of cultural heritage, thereby enhancing community resilience.	**5. Inclusive Approach:** Cultural heritage first aiders are encouraged to adopt an inclusive attitude and respect for diversity to recognize and protect all elements of cultural heritage, ensuring that the community's heritage is safeguarded.	**5. Resilience and Policy Integration:** The publication underscores the need to integrate cultural heritage into national and local emergency response systems to leverage its resilience-building potential, indicating the intersection of policy frameworks and heritage preservation efforts.		of inclusive policy frameworks that embrace diversity and inclusivity, indicating the need for policy frameworks that take into consideration the needs of vulnerable groups.	indicating that effective crisis communication involves active engagement with all relevant parties. **5. Coordination and Cooperation:** Crisis communication in the context of culture and heritage involves coordinating and cooperating with relevant government and humanitarian relief agencies to ensure that communication efforts are aligned with broader relief and recovery initiatives.	and protect all elements of cultural heritage, indicating that an inclusive approach is essential for building cultural resilience within communities affected by crises. **5. Interdisciplinary Approach:** It suggests integrating scientific knowledge and policy frameworks into cultural heritage first aid efforts to ensure effective and informed decision-making, highlighting the interdisciplinary nature of	context of culture and heritage involves an inclusive outlook to recognize and protect all elements of cultural heritage, indicating the importance of inclusive cooperation to ensure the comprehensive protection of cultural heritage in times of crisis. **5. Community Engagement:** Effective cooperation involves engaging with the community and local networks to utilize their time-tested	intangible heritage and to leverage heritage as a driver for community cohesion and recovery, highlighting the transformative power of heritage in driving positive outcomes. **5. Integration into Emergency Response:** The publication suggests integrating cultural heritage into national and local emergency response systems to harness its potential as a driver for development and

							building cultural resilience in the context of culture and heritage.	coping mechanisms and knowledge in reconstruction and recovery efforts, highlighting the importance of community involvement in cooperative cultural heritage first aid initiatives.	resilience, indicating that heritage should be considered a priority in emergency response planning.

12 / ICOMOS - Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors

Table 5. Policy analysis: ICOMOS - Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and Development Actors

Title: *ICOMOS - Heritage and the Sustainable Development Goals: Policy Guidance for Heritage and*	Type summary: *BP-policy guidance documents*	Content summary: *Comprehensive guide on integrating heritage considerations into sustainable development practices*	SyRI-relevancies: *All*	DRM references: *None*	Explicit crisis scenarios mentioned: *Flood*	CORE/s mentioned: *None*	Date of issue/launch: *2020*		

Development Actors									
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	In terms of social, environmental, and integrated sustainability, the process of safeguarding the Medina of Fez has focused on the participation and integration of local society in the sustainability of the rehabilitation and conservation project,-24 This ingenious agricultural, water, and land management system and the cultural	Participation was high: a number of local NGOs were involved in the project development between ADER-Fez and the population; and many local stakeholders participated in the social assessment. -23 Enhance local knowledge for sustainable food production.-25 worldwide communities must be empowered to foster the regeneration	The SDGs Working Group has prepared this Policy Guidance document to illustrate the many ways in which heritage addresses the SDGs-10 The 2030 Agenda for Sustainable Development, adopted by the United Nations in 2015-12 The Policy Guidance document is the first step in addressing this gap.-12 it represents a first attempt to provide a	heritage, particularly agricultural and cultural landscapes, can provide ecosystem services and benefits, food, and livelihood security for millions.-24	SCHEP aims to create sustainable jobs and better employment opportunities for local community members and youth, specifically in low-income and poverty-pocket areas.-47		culture is as essential as the economic, social, and environmental dimensions of sustainable development -13 harnessing traditional knowledge for future innovation in order to address climate action and sustainability challenges.-28 its advocacy for local governments and cultural heritage as a core element of cultural manifestations	ICOMOS SDGs Working Group, in cooperation with the wider ICOMOS membership -8 Working with heritage and environmental specialists can help to provide affordable and clean energy solutions in cultural landscapes, rural, and urban settlements.-56 governments at multiple scales to protect and integrate heritage with sustainable	heritage—natural and cultural, tangible and intangible—is fundamental to addressing the United Nations (UN) Sustainable Development Goals (SDGs)5 to harness the power of heritage to accelerate the achievement of the SDGs culture and heritage in sustainable development was recognized by the United Nations (UN) 11 Enhance

	practice of preserving and maintaining this system has proved its resilience to climatic changes, offering a possible solution to food sustainability for our future.-29 Recognise and use appropriate heritage-based techniques, knowledge and social organization to strengthen resilience and reduce the effects of natural hazards and disasters.-89	, adaptation and resilience of the biodiverse places where they live-100 heritage communities and groups to engage in timely and informed participation -113	policy framework for all actors, including international organizations, national and local governments, businesses, civil society, and expert organizations-15 ensure sustainable consumption and production patterns-13 Harness the potential of strategic partnerships in heritage processes to foster sustainability-oriented heritage and development policies and practices-113				contributes to SDG 11 (Sustainable Cities and Communities, specifically Target 11.4);-35	development, through effective communication, allocation of resources, development and implementation of adequate regulatory frameworks; -113 different heritage organizations, institutions and professionals to communicate and cooperate throughout heritage conservation and management processes.-113	sustainable socio-economic opportunities for all through heritage.-20 Harness heritage, including rural and agricultural landscapes, waterscapes and associated intangible and biotic heritage, for sustainable food production and consumption.-25 Strengthening the dimensions of sustainable development is an essential part of the World Heritage cycle.-16 accelerate

									the implementation of the SDGs using heritage-15 Both cultural and natural heritage sites, while under immense pressure from the impacts of urbanization -13 Harness the potential of heritage in providing viable strategies for the sustainable management of water resources that supports the availability of fresh water and sanitation for all.-51 Harness the potential of heritage for energy-efficient

									development models-57 Harness heritage to enhance the adaptive and transformati ve capacity of communities and build resilience against climate change.-89 heritage can become a tool to serve political purposes that are misaligned with sustainability goals-106
Disaster and Risk Manageme nt		Strengthen the capacity of heritage sites to have risk reduction and management strategies in place to protect against future			Disasters, including climate-related ones, or biological ones like pandemics, as well as wars and conflicts, can exacerbate poverty,				Intangible heritage, including Indigenous knowledge and local skills, can help to reduce exposure and vulnerability to climate-

		epidemics and pandemics.-33			especially for the most vulnerable.-20				related extreme events and other environmental shocks and disasters.-20 Reduce exposure and vulnerability to climate-related extreme weather events and other economic, social, and environmental shocks and disasters by integrating heritage and Indigenous knowledge in community planning and services.-20
Culture and Heritage	Heirtage enables social cohesion, fosters socio-economic	the shared resources embodied in heritage to achieve Prosperity of communities	contribution and be leveraged by all actors in the heritage and development	Ensure that no one suffers from socio-economic exclusion because of	Heritage can contribute to eradicating extreme poverty for all.-20 Ensure that		Cultural landscapes, in particular, constitute a living heritage, closely	the shared medium of heritage and its connections with all aspects of	

	regeneration and poverty reduction, strengthens social well-being, improves the appeal and creativity of regions, and enhances longterm tourism benefits-12 the connecting power of heritage for social cohesion and dialogue, to achieve Peace within and among societies (SDGs)-18 Heritage sites and practices can offer platforms for shared identities, experiences, and exchange, which help alleviate	-8 Consult local communities and ensure that they decide whether specific intangible heritage practices need transforming or enhancement to ensure healthy lives and the promotion of well-being.-33 involving community members in site development through training, awareness, and job creation related to cultural heritage.-46 Heritage sites embody a wide range of values	fields to improve policy and practice.-14	their culture and heritage-20	any heritage-based sustainable economic opportunity benefits from social protection systems for vulnerable groups.-20 Harness the power of heritage in ensuring healthy lives and the promotion of well-being for all at all ages.-33 Heritage organisations can ensure the full and effective participation of all genders and equal opportunities for leadership at all levels of decision-making.-44 Ensure that all genders		connecting culture, nature and communities .-100	human life to create Partnerships the shared medium of heritage and its connections with all aspects of human life, to create Partnerships -18 Support collaborative initiatives between the heritage sector and educational institutions.-39 Harness the potential of heritage to stimulate local empowerment and cooperation through shared responsibility for ensuring healthy terrestrial ecosystems.	

	social inequalities and support the social cohesion and dignity of communities .-70 Harness the role of heritage in the development of just, inclusive and peaceful societies-107	that can be valorised by and for local communities .-58 The shared use of streets, open and green spaces, and the entire historic urban landscape, as well as the intrinsic relationship between public and private spheres, can stimulate interaction, exchange, and integration between different communities and between existing and new residents.-76 The shared use of streets, open and green spaces, and			are able to access and enjoy heritage equally.-45 Create spaces and opportunities for intercultural encounters and communication among conflicting narratives, through cultural heritage sites and practices, by engaging all communities, groups and individuals, with attention to racial, ethnic, gender, intergenerational and disability barriers.-107			-100	

		the entire historic urban landscape, as well as the intrinsic relationship between public and private spheres, can stimulate interaction, exchange, and integration between different communities and between existing and new residents.-76 Harness the potential of heritage to increase the adaptation and resilience of coastal communities to natural hazards, climate change and anthropogen							

		ic activities-95							

13 / ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage

Table 6. Policy analysis: ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage

Title: *ICOMOS-IFLA Principles Concerning Rural Landscapes as Heritage*	Type summary: BP-Policies and regulations	Content summary: *Document that providing guidance on the ethical, cultural, environmental, and sustainable transformation of rural landscape systems*	SyRI-relevancies: *Adaptive governance; Social inclusiveness and interaction; Socio-economic Resilience*	DRM references: *None*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2017*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	Rural landscapes are multifunctional resources.(2) rural heritage is an economic resource: its	Communities as knowledgeholders or local initiatives and collaboration among stakeholders		Increasing human populations and climate change make rural landscapes vulnerable to risks of loss and/or					Rural landscapes are also one of the most common types of continuing cultural landscapes.(1)

	use should be appropriate and should provide vital support to its long-term sustainability.(3) Many rural systems have proven to be sustainable and resilient over time.(4) Many rural systems have proven to be sustainable and resilient over time.（4）	, rural and urban inhabitants, and professionals have contributed to conservation, awareness, and enhancement of rural landscapes as a valuable shared resource.(4)		abandonment or radical change.(3) Demographic and cultural (population growth in urban areas and depopulation in rural areas, urban expansion, intensive infrastructure works, development pressures, loss of traditional practices, techniques, local knowledge, and cultures);（3）					Identification of rural landscapes values at any level aims to provide awareness of rural landscapes' tangible and intangible characters and values, and is the first and necessary step to promote the sustainable conservation of such areas and transmission of their associated knowledge and cultural meanings to future generations.（3）
Disaster and Risk Management							Promote extensive and ongoing cooperation among public institutions, nongovernm		Heritage can contribute to sustaining and increasing the adaptation and

							ental organizations, and universities for research, information sharing, technical assistance, and coordination of a wide variety of knowledge building activities at all administrative levels.5		resilience of rural landscapes by supporting rural and urban inhabitants, local communities, governments, industries, and corporations as integral aspect to managing the dynamic nature, threats, risks, strengths, and potentialities of such areas.（3）
Culture and Heritage	Rural landscapes often provide distinct economic and tourism benefits when closely associated with the communicati	Rural landscape as heritage also includes associated cultural knowledge, traditions, practices, expressions of local human	The complex character of rural landscapes necessitates development of both specific and cross-sectoral policies that consider	timing of data collection and organisation, and involve both experts and local inhabitants.			rural landscapes contribute to land conservation (nature, environment, soil, hydrographic networks) and the transmission	expand their cooperative actions by adopting the dissemination and use of the following principles in order to promote the understanding, effective	Rural landscape as heritage: Refers to the tangible and intangible heritage of rural areas.(2) Rural landscape as heritage

	on and enhancement of their heritage values. (4)	communities' identity and belonging, and the cultural values and meanings attributed to those landscapes by past and contemporary people and communities. (2)	broad cultural, social, economic, and environmental factors.5 Prepare effective policies based on informed local and other knowledge of the landscapes, their strengths and weaknesses, as well as potential threats and opportunities. Sustainably manage rural landscapes and their heritage values				of rural cultures (techniques, knowledge of environment, cultural traditions, etc.) to future generations. (4)	protection, sustainable transformation, and transmission and appreciation of rural landscape heritage as part of human societies and cultures and a crucial resource across the world.(2) These tools should integrate local, traditional and scientific knowledge and use systematic methods that are readily achievable and suitable for use by both specialists and non-specialists in all countries	encompasses cultural, spiritual, and natural attributes that contribute to the continuation of biocultural diversity. (3) Understand rural landscapes and their heritage values (5)

								in order to collect and compare rural landscapes internationally and locally. (5) Communicate awareness of the heritage values of rural landscapes through collaborative participatory actions, such as shared learning, education, capacity building, heritage interpretati	

								on and research activities. Cooperation between rural, peri-urban, and urban inhabitants should be actively encouraged and practiced, both in sharing knowledge of rural landscapes ' heritage and the responsibilities for their management.6 Because many rural	

								landscapes are a mosaic of private, corporate, and government ownership, collaborative working relationships are necessary. collaboration from local to global scales and among all public and private stakeholders.	

Title: *UNESCO Thematic Indicators for Culture in the 2030 Agenda for Sustainable*	Type summary: *Indicators*	Content summary: *UN-issued framework for charting 2030 Agenda*	SyRI-relevancies: *Adaptive governance; Health and wellbeing; Social interaction*	DRM references: *None*	Explicit crisis scenarios mentioned: *None*	CORE/s mentioned: *None*	Date of issue/launch: *2019*		

Development		*cultural progress*	*and inclusiveness*						
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**
Sustainability and Climate Change	- The integration of intangible cultural heritage and traditional knowledge into policies and strategies encourages sustainable development, resilient agriculture, and the conservation of natural resources, contributing to environmental sustainability. - Natural, historically derived, and	- The document emphasizes the importance of integrating cultural factors, knowledge, traditions, and practices of all people and communities into local strategies on environmental sustainability. This integration recognizes the role of communities in shaping sustainable practices	1. The document emphasizes the importance of evidence-based policy-making by calling for improved assessments of the financial commitment of countries and cities to safeguarding cultural and natural heritage, as well as evidence for the role of culture in enhancing resilience and sustainable	1. The document emphazises the importance of inclusive public spaces that are available to all social and cultural groups within the population, highlighting the role of cultural facilities in enhancing urban spaces and reinforcing cultural identity 36. This inclusive approach to urban planning	1. The document draws attention to the importance of assessing the degree of respect accorded to people from different cultures to practice and participate in cultural activities, highlighting the need for intercultural understanding and respect for the rights of vulnerable groups. This assessment aims to ensure the	While crisis communication is not directly discussed in the context of climate change and sustainability, the document's focus on data-driven assessments, monitoring of policies, and inclusive planning processes can contribute to effective communication strategies in times of crisis related to sustainable development	1. The document highlights the role of culture in enhancing resilience through sustainable safeguarding and management of tangible and intangible cultural heritage, as well as natural heritage, to foster climate change mitigation and adaptation. This highlights the	1. It Maintains the need for national and local authorities to collaborate and build on methodologies to disaggregate expenditure on the safeguarding of cultural and natural heritage, including by type of heritage, level of government, and type of funding. This call for cooperation among different levels of	- It emphasizes how safeguarding intangible cultural heritage can effectively contribute to sustainable development within the economic, social, and environmental dimensions of the 2030 Agenda, while also promoting peace and security. This recognition positions intangible cultural heritage as a

	local building practices, along with intangible cultural heritage, can help mitigate the risks of climate-related disasters, support resilience, and enhance the adaptation capacities of communities. - The checklist for climate adaptation and resilience includes traditional practices for resilience and aims to assess measures taken to foster climate change mitigation	and resilience. - The checklist for climate adaptation and resilience includes indicators that assess the impact of climate change on heritage within the last 5 years, highlighting the need to review and monitor how communities are affected by environmental changes. This reflects a community-centered approach to understanding and addressing climate challenges. - The	management of the environment. This highlights the need for data-driven decision-making to support sustainable development goals. 2. It mentions the use of UNESCO data, periodic reports of conventions, national surveys, and information systems for culture as key data sources for assessing climate adaptation and resilience measures. This indicates the reliance on scientific	considers the diverse needs and preferences of different population groups. 2. It discusses the need to assess the diversity and spatial distribution of cultural facilities to ensure the promotion of cultural expressions across the population and to reach a wide range of cultural professionals and businesses. This assessment reflects a population-centered approach to cultural development and infrastructur	inclusion and participation of all cultural communities, including vulnerable populations. 2. The document discusses the monitoring of cultural participation by assessing the proportion of people visiting cultural sites, facilities, and events, as well as household reporting on cultural practices at home, including the use of the internet for cultural purposes. This monitoring process	and climate change.	contribution of cultural practices and traditions to building resilience in the face of environmental challenges. 2. It also mentions the importance of integrating traditional knowledge and cultural practices into policies and strategies to encourage sustainable development, resilient agriculture, and conservation of natural resources. This integration underscores the role of cultural heritage in	governance reflects the importance of coordinated efforts in sustainable heritage management. 2. The document highlights the importance of careful monitoring of the management and safeguarding of cultural and natural heritage, drawing on evidence from administrative data, UNESCO reports, and national surveys to identify strengths and shortcomings in public	driver for sustainable development outcomes across multiple dimensions. - The document highlights the role of intangible cultural heritage in expanding Education for Sustainable Development, emphasizing its potential impact on quality education (SDG 4). By integrating intangible cultural heritage into education initiatives, heritage serves as a driver for promoting sustainable development

	and adaptation through sustainable safeguarding and management of tangible and intangible cultural heritage, as well as natural heritage. - The checklist also evaluates the degree to which new construction in historic areas is based on sustainable, natural, and traditional building techniques and materials, emphasizing the importance of aligning construction	document mentions the role of local Disaster Risk Reduction Plans for heritage sites and elements, indicating the involvement of communities in preparing for and responding to disasters. This involvement underscores the importance of community resilience in the face of climate-related risks. - It discusses the use of traditional knowledge and cultural practices for resilience, which often	data and research to inform policies related to climate change and heritage conservation. 3. It underscores the significance of monitoring and evaluating policies and measures taken to foster climate change mitigation and adaptation through sustainable safeguarding and management of tangible, intangible, and natural heritage at both national and urban	e planning. 3. It mentions the monitoring of public spaces at the city level to guarantee equal access to and diversity of cultural life, underscoring the importance of ensuring that cultural opportunities are accessible to all segments of the population. This monitoring process aims to assess the inclusivity and reach of cultural activities within urban areas. 4. The	helps evaluate the engagement of diverse population groups in cultural activities and assesses the accessibility of cultural opportunities for vulnerable communities. 3. It mentions the assessment of opportunities for civil society and cultural sector professionals to participate in decision-making processes related to cultural activities, policies, and programmes at national		promoting sustainable practices that enhance resilience to climate change impacts. 3. It discusses how natural, historically derived, and local building practices, along with intangible cultural heritage, can help mitigate the risks of climate-related disasters, support resilience, and enhance the adaptation capacities of communities. This recognition of cultural elements in disaster risk reduction	action at national and urban levels 96. This monitoring process requires cooperation between various stakeholders to assess the effectiveness of heritage conservation efforts. 3. It underscores the need for improved assessment of measures taken to foster climate change mitigation and adaptation through sustainable safeguarding and management of tangible, intangible,	through educational practices. - It mentions how the Convention for the Safeguarding of the Intangible Cultural Heritage acknowledges the importance of intangible cultural heritage as a mainspring of cultural diversity and a driver for sustainable development. This acknowledgment positions intangible cultural heritage as a key driver for fostering cultural diversity and sustainable development outcomes.

	practices with the character of historic districts for resilience. - The checklist further includes indicators related to the impact of climate change on heritage, policies supporting the role of women in sustainable environmental management, and actions to reduce environmental impact at heritage sites, all of which contribute to societal resilience. - The checklist for urban areas	stem from community traditions and experiences. This recognition of community-based knowledge highlights the valuable contributions that local communities can make to sustainable development and climate adaptation efforts. - The document underscores the significance of community engagement and participation in cultural initiatives for social cohesion, emphasizing the role of	levels. This monitoring process involves collecting data and evidence to assess the effectiveness of policy interventions. 4. The document highlights the role of cultural policies and strategies in reducing illicit trafficking, encouraging the recovery of stolen assets, and promoting sustainable management of heritage. This demonstrates the link between policy frameworks, enforcement mechanisms	document highlights the role of cultural tourism and eco-tourism in sustainable tourism management, emphasizing their contribution to protecting the environment and promoting responsible tourism practices. This sustainable tourism approach considers the impact of tourism activities on local populations and ecosystems. 5. It discusses the integration	and local levels. This assessment aims to ensure the involvement of diverse stakeholders, including vulnerable groups, in shaping cultural policies and initiatives. 4. The document underscores the role of cultural facilities in providing inclusive public spaces that cater to the needs of all social and cultural groups within the population, promoting social cohesion and cultural understanding. This		and adaptation strategies highlights the role of cultural resilience in addressing climate challenges. 4. The document underscores the significance of cultural tourism and eco-tourism in promoting sustainable tourism management, which plays a primary role in protecting the environment and contributing to resilience. This acknowledgment of cultural tourism as a driver of sustainable	and natural heritage at both national and city levels 96. This emphasis on assessment and collaboration aims to enhance resilience and sustainability through joint efforts in heritage conservation and climate action. 4. The document mentions the importance of assessing the diversity and spatial distribution of cultural facilities to promote cultural expressions across all social and cultural groups	- The document discusses how the Operational Directives for the implementation of the Convention provide guidance to State Parties on strengthening the role of intangible cultural heritage as a driver and guarantor of sustainable development. This guidance underscores the potential of intangible cultural heritage to drive sustainable development initiatives at the national and local levels.

	assesses the integration of cultural factors, knowledge, traditions, and practices into local strategies on environmental sustainability, highlighting the importance of cultural elements in enhancing resilience.	communities in shaping cultural development and sustainability. This community-centered approach aligns with the principles of sustainable development that prioritize inclusive decision-making and local empowerment.	, and sustainable development outcomes. 5. It discusses the integration of cultural elements into territorial planning and infrastructure development to enhance the quality, reliability, sustainability, and resilience of urban spaces. This integration of cultural considerations into policy and planning processes reflects a holistic approach to sustainable urban development.	of cultural facilities into territorial planning to enhance the diversity of public space and citizen well-being, recognizing the role of cultural activities in stimulating social cohesion and serving as meeting points for the population. This integration of cultural facilities into urban planning reflects a population-centric approach to enhancing the quality of urban environments.	emphasis on inclusive public spaces highlights the importance of creating environments that are accessible and welcoming to vulnerable populations. 5. It discusses the integration of cultural elements into territorial planning and infrastructure development to enhance the well-being of citizens, recognizing the role of cultural activities in stimulating social cohesion		practices reflects the link between cultural activities and environmental resilience. 5. It mentions the importance of cultural facilities as part of reliable, sustainable, and resilient infrastructure for cities, emphasizing how historic buildings, urban spaces, and new designs rooted in local contexts enhance urban spaces and cultural identity. This integration of cultural elements into urban planning	within the population, highlighting the role of cooperation in ensuring equal access to cultural opportunities 96. This cooperative approach aims to foster inclusivity and diversity in cultural provision. 5. It discusses the integration of cultural facilities into territorial planning to enhance public spaces and citizen well-being, emphasizing the need for cooperation between urban planners,	- It highlights how the Convention for the Protection of the Underwater Cultural Heritage supports education for sustainable development through ocean literacy and heritage teaching, contributing to making coastal societies sustainable and protecting their cultural identity. This recognition positions underwater cultural heritage as a driver for promoting sustainable practices and cultural preservation

					and serving as meeting points for diverse population groups. This integration aims to create inclusive urban spaces that cater to the needs of vulnerable communities .		contributes to building resilient and culturally vibrant cities.	cultural professionals, and local communities to create vibrant and inclusive urban environments 96. This collaborative approach to urban development promotes cooperation in shaping sustainable and culturally rich cities.	in coastal regions.
Disaster and Risk Management	- The document emphasizes the importance of integrating traditional knowledge and cultural practices into policies and strategies to address the impact of climate change on	- The document emphasizes the importance of integrating cultural factors, including knowledge, traditions, and practices of all people and communities , into local	- The document emphasizes the importance of evidence-based policies and measures to address the impact of climate change on heritage elements and practices. This	The document does not explicitly mention population management in connection to disaster and risk management . However, it does emphasize the importance of	- The document highlights the participation of cultural professionals and disadvantaged groups in institutional mechanisms that provide a framework for dialogue with administration officials in	The document does not explicitly address crisis communication in the context of disaster and risk management . However, the document's focus on community participation	- The document highlights the importance of integrating traditional knowledge and cultural practices into disaster risk reduction and adaptation efforts. By leveraging	- The document underscores the significance of engaging multiple stakeholders in disaster and risk management efforts. By fostering collaboration among governments , local authorities,	- The document emphasizes the importance of safeguarding cultural and natural heritage as a driver of resilience to disasters. By preserving heritage sites, traditional practices,

	heritage elements and practices. This integration aims to enhance societal resilience by leveraging local knowledge and cultural traditions in disaster risk reduction and adaptation efforts. - It mentions the role of natural, historically derived, and local building practices, along with intangible cultural heritage, in mitigating the risks of climate-related disasters and	strategies on environmental sustainability. This integration of cultural elements into environmental strategies highlights the role of community knowledge and practices in enhancing resilience to climate-related risks. - It mentions the need for evidence of policies or actions that support the particular role of women in sustainable environmental management of local resources. This recognition	highlights the role of scientific research and data in informing policy decisions related to disaster risk management and climate adaptation strategies. - It mentions the need for careful monitoring of the management and safeguarding of cultural and natural heritage, including practices, knowledge, and historical artifacts, to identify strengths and shortcomings of public action at the national and	community engagement, local knowledge, and cultural practices in enhancing resilience to disasters and climate-related risks. It primarily focuses on the role of cultural heritage, traditional knowledge, and sustainable practices in building resilience.	policy formulation, management, implementation, and monitoring/evaluation. This engagement ensures that the voices of vulnerable groups are heard in decision-making processes related to disaster and risk management. - It calls for the evaluation of the gender dimension in participatory processes and their impact, including assessing the representation of women in	and traditional knowledge can indirectly support effective communication strategies during crises.	local wisdom and community traditions, stakeholders can enhance resilience to disasters and climate change impacts. - The conservation of cultural and natural heritage is identified as a specific target in disaster and risk management. By safeguarding heritage sites and traditional practices, communities can preserve their cultural identity and strengthen their resilience to environmental challenges.	cultural institutions, and communities, stakeholders can enhance coordination, share resources, and collectively address environmental challenges. - It emphasizes the active participation of local communities in disaster risk reduction and resilience-building initiatives. By involving communities in decision-making processes, planning, and implementation of risk	and historical knowledge, communities can draw on their cultural identity and heritage assets to enhance their capacity to cope with and recover from disasters 36. - It underscores the value of integrating traditional knowledge into disaster risk reduction and climate adaptation strategies. By recognizing and leveraging local wisdom, indigenous practices, and community

	supporting resilience in communities. This recognition highlights how cultural practices contribute to societal resilience by enhancing adaptive capacities and disaster preparedness. - The document underscores the significance of cultural facilities as part of resilient infrastructure for cities, emphasizing how historic buildings, urban spaces, and cultural activities contribute to societal well-being and	of gender-specific roles in environmental management underscores the importance of community participation and gender-sensitive approaches in disaster and risk management. - The document also highlights the significance of training in sustainable or natural construction techniques supported by local and national authorities, which involves community members in	urban levels. This monitoring involves collecting data and evidence to assess the effectiveness of policies and practices in disaster and risk management. - It also calls for improved assessments of the financial commitment of countries and cities to the safeguarding of cultural and natural heritage, as well as evidence for the role of culture in enhancing resilience and sustainable management		management committees, senior leadership positions, and the consideration of women's particular interests in plans and policies. This gender-sensitive approach recognizes the vulnerabilities faced by women in disaster situations and the importance of their active participation in resilience-building efforts. - It also emphasizes the need to assess the diversity and spatial distribution		- It underscores the significance of community engagement in disaster and risk management. By involving cultural professionals, disadvantaged groups, and local communities in decision-making processes, stakeholders can promote cultural resilience and enhance disaster preparedness. - It also addresses the gender dimension of climate change management	management strategies, stakeholders can leverage local knowledge and resources to enhance preparedness and response to disasters. - It also acknowledges the importance of international cooperation in addressing global challenges related to disasters and climate change. By sharing best practices, exchanging knowledge, and collaborating on cross-border initiatives, countries	traditions, stakeholders can harness the resilience-building potential of traditional knowledge systems in mitigating risks and enhancing adaptive capacity. - It highlights the role of cultural heritage in fostering community resilience to disasters. By promoting community engagement, empowering local actors, and preserving cultural practices, stakeholders can strengthen social cohesion, enhance

	identity. This integration of cultural elements into urban planning supports societal resilience by fostering community cohesion and enhancing quality of life. - It discusses the importance of training courses on skills in sustainable or natural construction materials supported by local and national authorities, which contribute to enhancing disaster preparedness and building	acquiring skills for resilient building practices. This training engages communities in disaster preparedness efforts and empowers them to contribute to risk reduction and recovery initiatives. - It discusses the integration of cultural factors, knowledge, traditions, and practices into agricultural strategies, emphasizing the role of community practices in sustainable agriculture and	of the environment. This highlights the importance of aligning financial resources with policy objectives to support disaster risk reduction and environmental resilience efforts. - It discusses the integration of cultural factors, knowledge, traditions, and practices into local strategies on environmental sustainability, emphasizing the role of policy frameworks		of cultural facilities to ensure the promotion of cultural expressions of all social/cultural groups within the population, including vulnerable communities. This focus on inclusivity and accessibility aims to engage vulnerable groups in cultural activities and enhance their resilience through community participation. - It discusses the role of community knowledge, traditions, and practices in		and disaster impacts, highlighting the different roles of women and men in responding to environmental challenges. Recognizing and supporting the particular role of women in sustainable environmental management contributes to cultural resilience and community adaptation. - Monitoring public spaces at the city level, ensuring equal access, and promoting diversity of	can strengthen their resilience and build capacity to mitigate risks and adapt to environmental changes. - It highlights the need for capacity building and knowledge sharing among stakeholders involved in disaster and risk management. By providing training, technical assistance, and resources to enhance the skills and capabilities of individuals and organizations,	disaster preparedness, and build adaptive capacity within communities. - The document links heritage conservation to sustainable development goals, emphasizing the contribution of cultural heritage as a driver of economic, social, and environmental sustainability. By integrating heritage conservation into development policies and practices, stakeholders can leverage

	back better in recovery and reconstruction efforts. This training aims to strengthen societal resilience by promoting sustainable building practices and increasing resilience to future disasters.	environmental management. This integration recognizes the importance of community-based approaches in promoting resilience to climate change impacts in agricultural systems.	in promoting community resilience to climate-related risks. This integration underscores the importance of policy support for leveraging cultural heritage in disaster and risk management initiatives. - The document mentions the existence of national Disaster Risk Reduction Plans for heritage sites/elements as an indicator of institutional and policy frameworks for disaster management. This highlights		disaster risk reduction and adaptation efforts, highlighting the importance of integrating cultural factors into local strategies on environmental sustainability. This integration recognizes the unique contributions of vulnerable groups and marginalized communities to resilience-building initiatives.		cultural life contribute to building cultural resilience. Public spaces that facilitate cultural activities and social cohesion play a vital role in enhancing community resilience to disasters and risks.	stakeholders can improve their preparedness and response to disasters. - The document calls for the integration of disaster risk reduction and climate adaptation measures into national and local policies. By aligning strategies, coordinating actions, and promoting coherence across sectors, stakeholders can foster cooperation and collaboration in addressing interconnected challenges	heritage assets to promote sustainable tourism, enhance local economies, and support environmental stewardship. - It provides guidance on mainstreaming heritage conservation into national and local processes for sustainable development. By embedding heritage considerations in policy frameworks, planning processes, and risk management strategies, stakeholders can harness the potential of heritage

			the role of policy documents and frameworks in guiding disaster preparedness and response efforts in the context of cultural heritage conservation.					related to disasters and environmental risks.	as a driver of resilience and sustainable development in the context of disasters and environmental risks.
Culture and Heritage	- The document emphasizes that cultural heritage plays a crucial role in shaping societal identity and fostering social cohesion. By preserving cultural traditions, values, and practices, communities can strengthen	- The document underscores the importance of community engagement in cultural preservation and heritage conservation efforts. By involving local communities in decision-making processes, planning initiatives,	- The document emphasizes the need for evidence-based policy making in the field of culture and heritage. By leveraging scientific research, data, and indicators, policymakers can make informed decisions, set priorities, and allocate	- The document highlights the impact of population growth and urbanization on cultural heritage. As cities expand and populations increase, there is a growing need to balance development pressures with heritage	- The document accentuates the importance of inclusive participation and representation of vulnerable groups in cultural heritage initiatives. By engaging marginalized communities, indigenous peoples, and other	- The document highlights the need for risk assessment and preparedness planning to anticipate and mitigate potential crises that could impact cultural assets and heritage sites. By conducting vulnerability assessments	- The document highlights how cultural heritage, including tangible and intangible assets, serves as a source of resilience for communities facing adversity. By drawing on traditional knowledge, cultural practices, and	- The document advocates for multilateral collaboration and partnerships to address global challenges related to culture and heritage. By fostering cooperation among countries, regions, and international organization	1. The document emphasizes how cultural heritage can drive economic development by attracting tourism, creating job opportunities, and stimulating local economies. By leveraging heritage assets, such as historic

	their sense of belonging, unity, and resilience in the face of challenges. - It underscores the importance of empowering communities through the preservation and promotion of cultural heritage. By engaging local stakeholders, supporting cultural initiatives, and valuing community knowledge, societies can enhance their capacity to adapt, recover, and thrive in the midst of disruptions.	and heritage management, stakeholders can ensure the active participation and ownership of communities in safeguarding their cultural identity and heritage. - It also highlights the significance of local knowledge and practices embedded within communities in preserving cultural heritage. By valuing traditional skills, customs, and beliefs, communities can maintain their cultural heritage,	resources effectively to support heritage conservation, cultural development, and sustainable practices. - It underscores the role of research and innovation in advancing the understanding and management of cultural heritage. By investing in research, technology, and interdisciplinary collaborations, stakeholders can enhance conservation practices, develop new methodologies, and address	conservation efforts, sustainable urban planning, and community engagement to safeguard cultural assets and identity. - It also emphasizes the importance of demographic diversity in shaping cultural landscapes and heritage preservation. By recognizing and celebrating the cultural richness of diverse populations, stakeholders can promote inclusivity, intercultural dialogue, and social	vulnerable populations in decision-making processes, heritage planning, and cultural activities, stakeholders can promote diversity, empower voices, and ensure that heritage management reflects the needs and perspectives of all stakeholders. - It highlights the significance of upholding the cultural rights of vulnerable groups in the context of heritage preservation. By recognizing and protecting	, identifying potential threats, and developing emergency response plans, stakeholders can proactively address risks and ensure the protection and preservation of cultural heritage in the face of natural disasters, conflicts, or other emergencies. - It emphasizes the importance of developing clear and effective communication strategies to disseminate information,	historical experiences, communities can adapt to change, recover from shocks, and maintain a sense of identity and continuity in challenging circumstances. - It points to the importance of community engagement and participation in preserving and promoting cultural heritage as a means of building resilience. By involving local communities in heritage conservation, cultural revitalization, and	s, stakeholders can exchange best practices, share resources, and coordinate actions to protect and promote cultural diversity, heritage preservation, and sustainable development. - It highlights the need for cross-sectoral engagement and cooperation to integrate cultural considerations into various policy areas, such as urban planning, environment	sites, cultural festivals, and traditional crafts, stakeholders can generate income, foster entrepreneurship, and promote sustainable tourism practices that benefit communities and contribute to economic prosperity. 2. It document underscores the role of cultural heritage as a driver of innovation and creativity in various sectors, including the creative industries, design, and

	- The document highlights the significance of intergenerational knowledge transfer in building societal resilience. By passing down cultural practices, stories, and skills from one generation to another, communities can ensure continuity, resilience, and adaptive capacity over time. - It advocates for inclusive decision-making processes that respect and integrate	pass down intergenerational knowledge, and enhance their resilience to external threats and changes. - It emphasizes that culture and heritage play a vital role in fostering social cohesion and inclusivity within communities. By celebrating cultural diversity, promoting dialogue, and respecting different cultural expressions, communities can strengthen their bonds,	emerging challenges in heritage preservation and promotion. - The document calls for robust monitoring and evaluation mechanisms to assess the impact of cultural policies and heritage initiatives. By tracking progress, measuring outcomes, and evaluating the effectiveness of interventions, policymakers can ensure accountability, transparency, and continuous	cohesion, while also addressing the challenges of cultural integration and heritage representation. - It stresses the role of population management in building community resilience and adaptive capacity to protect cultural heritage. By empowering local communities, fostering social networks, and promoting cultural traditions, stakeholders can enhance the ability of populations to cope with change,	the cultural heritage of indigenous peoples, minorities, and disadvantaged communities, stakeholders can promote social justice, respect cultural diversity, and address historical injustices related to heritage loss, displacement, and marginalization. - It points to the importance of capacity building and skills development among vulnerable groups to enhance	raise awareness, and coordinate response efforts during crises affecting cultural heritage. By establishing communication channels, protocols, and networks, stakeholders can facilitate timely and accurate information sharing, mobilize resources, and engage with communities, authorities, and relevant stakeholders to address emergency situations and safeguard cultural assets. - It stresses	sustainable development initiatives, stakeholders can empower communities, strengthen social bonds, and enhance adaptive capacities to respond to external pressures and threats. - It shows the value of cultural diversity and inclusivity in fostering resilience within communities. By recognizing and celebrating diverse cultural expressions, traditions, and identities, stakeholders can promote	al management, education, and economic development. By fostering dialogue and collaboration across different sectors, stakeholders can ensure that cultural heritage is recognized as a vital component of sustainable development strategies and decision-making processes. - It draws attention to the importance of community involvement and participation in heritage	technology. By drawing inspiration from heritage practices, traditional knowledge, and artistic expressions, stakeholders can foster innovation, promote cultural entrepreneurship, and support the growth of creative economies that contribute to social and cultural vitality. 3. It highlights how heritage can serve as a driver of social inclusion, identity formation, and community empowerme

	diverse cultural perspectives. By valuing cultural diversity, promoting dialogue, and involving marginalized groups in decision-making, societies can enhance their resilience, responsiveness, and sustainability. - It links heritage conservation to sustainable development goals, emphasizing the role of cultural heritage in promoting societal resilience. By integrating	promote understanding, and build a sense of belonging among diverse members. - It advocates for community-based approaches to heritage conservation and cultural development. By tailoring initiatives to local needs, preferences, and aspirations, stakeholders can ensure that cultural interventions are contextually relevant, sustainable, and responsive to the priorities and values of communities	improvement in cultural heritage management and sustainability. - The document pushes for the integration of cultural considerations into broader policy frameworks and development agendas. By mainstreaming culture and heritage into urban planning, environmental management, disaster risk reduction, and sustainable development strategies, policymakers can	preserve heritage practices, and respond to external threats. - It discusses the relationship between population management and heritage tourism. As tourism activities impact local populations and heritage sites, there is a need to balance visitor demands with community needs, sustainable tourism practices, and heritage conservation to ensure the long-term viability and integrity of cultural	their participation in cultural heritage management. By providing training, education, and resources to marginalized communities, stakeholders can empower individuals, strengthen community resilience, and promote the transmission of traditional knowledge and practices within vulnerable populations. - It discusses the role of heritage protection in safeguarding the cultural	the role of community engagement in crisis communication and response efforts related to cultural heritage. By involving local communities, heritage custodians, and cultural practitioners in decision-making processes, risk assessments, and emergency planning, stakeholders can build trust, foster collaboration, and leverage local knowledge and resources to protect and recover cultural	social cohesion, tolerance, and mutual understanding, which are essential components of resilient societies. - It also advocates for the integration of heritage-based strategies into resilience-building efforts at the local, national, and international levels. By leveraging cultural heritage assets, such as historic buildings, traditional practices, and community knowledge, stakeholders can develop	conservation and cultural resilience initiatives. By engaging local communities, indigenous groups, and marginalized populations in decision-making processes, stakeholders can ensure that cultural heritage is preserved, promoted, and managed in a manner that respects community values, traditions, and aspirations. - It emphasizes the value of capacity building, knowledge sharing, and skills development	nt. By preserving and promoting cultural traditions, languages, and intangible heritage, stakeholders can strengthen social cohesion, foster intercultural dialogue, and empower marginalized groups to reclaim their heritage, assert their identities, and participate in cultural life. 4. It acknowledges the role of heritage as a driver of environmental sustainability and

	heritage conservation into development strategies, fostering cultural tourism, and supporting local economies, societies can leverage their cultural assets to enhance resilience and well-being. - The document calls for the integration of cultural heritage considerations into broader policy frameworks for societal resilience. By mainstreaming cultural values, heritage preservation,	. - It highlights the importance of capacity building and empowerment within communities to safeguard and promote cultural heritage. By providing training, resources, and support to community members, stakeholders can enhance local skills, knowledge, and agency in preserving and leveraging cultural assets for sustainable development and resilience. - It underscores the value of	leverage cultural assets to enhance resilience, social cohesion, and quality of life in communities. - It places accent on the importance of capacity building and knowledge sharing in bridging the gap between science and policy in the cultural heritage sector. By fostering collaboration, training programs, and exchange platforms, stakeholders can strengthen the evidence base, build	assets. - It addresses how population management influences cultural identity and well-being. By recognizing the cultural rights of diverse populations, promoting cultural expression, and fostering a sense of belonging, stakeholders can enhance the quality of life, mental health, and social cohesion within communities, while also preserving intangible heritage. - The	rights and identities of vulnerable groups. By implementing measures to protect sacred sites, intangible heritage, and cultural expressions of marginalized communities, stakeholders can preserve cultural continuity, promote intergenerational transmission, and address the vulnerabilities faced by indigenous peoples and minority groups. - It addresses the importance of social inclusion	assets in times of crisis. - It also discusses the importance of capacity building and training programs to enhance the resilience of cultural heritage stakeholders in managing crises and communicating effectively during emergencies. By providing education, skills development, and resources to heritage professionals, emergency responders, and community members,	innovative solutions, adaptive strategies, and sustainable practices to address environmental, social, and economic challenges. - It highlights the importance of capacity building, education, and skills development in enhancing cultural resilience. By providing training programs, awareness-raising initiatives, and knowledge-sharing platforms, stakeholders can empower individuals,	in fostering cooperation among cultural heritage stakeholders. By providing training programs, workshops, and networking opportunities, stakeholders can enhance the capacity of individuals and institutions to collaborate effectively, implement best practices, and leverage cultural assets for sustainable development 2. - The document calls for policy	resilience. By integrating traditional ecological knowledge, sustainable land management practices, and heritage conservation strategies, stakeholders can promote environmental stewardship, biodiversity conservation, and climate resilience, contributing to the protection of natural resources and ecosystems. 5. The document emphasizes how heritage can drive education, awareness, and cultural literacy

	and community engagement into disaster risk reduction, climate adaptation, and sustainable development policies, societies can build resilience, foster innovation, and promote social cohesion.	partnerships and collaboration among communities, governments, civil society, and cultural institutions in advancing cultural heritage goals. By fostering cooperation, sharing resources, and building networks, stakeholders can amplify the impact of community-led initiatives, promote cultural diversity, and strengthen heritage conservation efforts.	institutional capacity, and promote best practices in heritage conservation and management. - The document emphasizes the value of international cooperation and partnerships in advancing science-informed policies for cultural heritage. By sharing expertise, resources, and experiences across borders, stakeholders can address global challenges, promote cultural diversity,	document calls for policy responses that integrate population management considerations into cultural heritage strategies. By aligning demographic trends with heritage planning, urban development, and community engagement, policymakers can address the needs and aspirations of diverse populations, promote cultural diversity, and ensure the sustainable management of heritage resources.	and equity in cultural heritage management. By promoting access to cultural resources, heritage sites, and cultural activities for vulnerable groups, stakeholders can enhance social cohesion, promote cultural diversity, and foster a sense of belonging and pride within marginalized communities. - The document calls for the development of policy frameworks and guidelines	stakeholders can strengthen preparedness, response capabilities, and recovery efforts in the event of disasters or threats to cultural heritage. - The document highlights the significance of coordination and collaboration among diverse stakeholders, including government agencies, cultural institutions, civil society organizations, and international partners, in implementing coordinated	communities, and institutions to preserve and leverage cultural heritage for resilience-building purposes. - The document calls for the integration of cultural resilience considerations into policy frameworks, governance structures, and development plans. By mainstreaming cultural heritage preservation, disaster risk reduction, and community resilience strategies, stakeholders can ensure a holistic and	harmonization and alignment at the national and international levels to promote cooperation in cultural heritage preservation and promotion. By harmonizing legal frameworks, regulatory mechanisms, and governance structures, stakeholders can create an enabling environment for cooperation, innovation, and mutual support in the field of culture and heritage. - It recognizes the role of	among communities and future generations. By incorporating heritage education programs, heritage interpretation initiatives, and cultural heritage awareness campaigns, stakeholders can enhance public understanding, appreciation, and stewardship of cultural heritage, fostering a sense of pride and responsibility towards heritage assets. 6. It calls for the integration of heritage considerations

			and safeguard heritage for future generations.		that prioritize the needs and rights of vulnerable groups in cultural heritage management. By integrating principles of inclusivity, diversity, and equity into heritage policies, strategies, and programs, stakeholders can ensure that heritage initiatives benefit all members of society, particularly those who are most at risk of exclusion and marginalization.	crisis communication strategies for cultural heritage. By fostering partnerships, sharing best practices, and aligning efforts across sectors, stakeholders can enhance the effectiveness of response measures, promote information exchange, and mobilize support for heritage conservation and recovery in times of crisis. - The document calls for the integration of crisis communication consideratio	inclusive approach to building resilience that recognizes the interconnectedness of cultural, social, and environmental dimensions.	public-private partnerships in advancing cultural heritage conservation and sustainable development goals. By fostering collaboration between government entities, private sector actors, and civil society organizations, stakeholders can leverage resources, expertise, and innovation to implement heritage projects, promote cultural tourism, and support community-based initiatives.	ns into policy frameworks, governance structures, and development plans to leverage heritage as a driver of sustainable development. By mainstreaming heritage values, principles, and practices into decision-making processes, stakeholders can ensure that heritage is recognized as a strategic asset that drives social, economic, and environmental progress.

						ns into cultural heritage policies, frameworks, and management plans. By mainstreaming risk communication, emergency response protocols, and community engagement strategies into heritage governance structures, stakeholders can ensure a proactive and coordinated approach to protecting and preserving cultural assets during crises, while also promoting resilience and			

						sustainability in heritage management.			

24 / United Nations - Culture for the 2030 Agenda

Table 7. Policy analysis: United Nations - Culture for the 2030 Agenda

Title: *United Nations - Culture for the 2030 Agenda*	Type summary: *Report*	Content summary: *UNESCO-issued report on culture's role in 2030 Agenda*	SyRI-relevancies: *Active memory; Health and wellbeing*	DRM references: *All*	Explicit crisis scenarios mentioned: *earthquake; flood; landslide*	CORE/s mentioned: *Norway; Türkiye*	Date of issue/launch: *2018*		
	Societal Resilience	**Community**	**Science and Policy**	**Population management**	**Vulnerable-group engagement**	**Crisis communication**	**Cultural resilience**	**Cooperation**	**Heritage as a driver**

Sustainability and Climate Change	**1. Cultural Heritage Preservation**: The report emphasizes the importance of preserving cultural heritage as a means of fostering societal resilience in the face of climate change and environmental hazards. Examples such as the 'Siq Stability' project in Petra, Jordan, demonstrate how efforts to assess and manage natural hazards at cultural sites contribute to the resilience of communities and the preservation	**1. Community-Based Initiatives:** The document showcases various community-based initiatives that leverage cultural practices and local knowledge to address sustainability challenges. For example, in Petra, Jordan, local stakeholders have implemented traditional small-scale farming and inclusive tourism products as responses to changing agricultural conditions. These initiatives demonstrate how	**1. Integration of Science and Traditional Knowledge:** The publication underscores the value of integrating scientific research with traditional knowledge and cultural practices to inform sustainable development policies. Initiatives such as the UNESCO project in Vanuatu, which safeguards traditional meeting places as cyclone refuges, demonstrate how the integration of local knowledge with scientific	**1. Cultural Perspectives on Population Dynamics:** It emphasizes the role of cultural perspectives in understanding and addressing population dynamics. It recognizes that cultural beliefs, practices, and norms influence population trends, reproductive health behaviors, and migration patterns. By integrating cultural considerations into population management strategies, policymakers can develop	**1. Inclusive Cultural Policies:** The publication emphasizes the role of inclusive cultural policies in engaging vulnerable groups in the context of sustainability and climate change. It underscores the importance of ensuring that cultural policies and programs take into account the needs and perspectives of vulnerable communities, including indigenous peoples, minorities, and marginalized groups. By promoting	**1. Cultural Heritage as a Resilience Asset:** The document emphasizes the role of cultural heritage as a resilience asset in crisis communication and management. It acknowledges that cultural heritage, including tangible and intangible heritage, serves as a source of identity, knowledge, and resilience for communities facing crises, including those related to climate change. By recognizing the value of	**1. Preservation of Traditional Knowledge and Practices:** ◦ The document highlights the case of Vanuatu benefiting from UNESCO's Intangible Cultural Heritage Fund to safeguard cultural practices related to building traditional meeting places that serve as refuges during cyclones. This example demonstrates how traditional knowledge and practices	**1. International Collaboration for Resilience Building:** ◦ The document highlights UNESCO's projects such as 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' in Indonesia, the Philippines, and Timor-Leste. These projects focus on harnessing local and indigenous knowledge to address	**1. Preservation of Cultural Heritage for Resilience:** ◦ The document emphasizes the importance of preserving cultural heritage as a means of promoting resilience in the face of climate change and natural disasters. Initiatives like the UNESCO project 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)'

	of cultural identity. By safeguarding cultural heritage, societies can maintain a sense of continuity and strength in the midst of environmental challenges. **2. Traditional Knowledge for Disaster Resilience**: The document discusses the value of traditional knowledge and practices in enhancing societal resilience to climate-related disasters. Initiatives such as the UNESCO project in Vanuatu,	communities can adapt and thrive by drawing on their cultural heritage and engaging in sustainable practices 3. **2. Local Stakeholder Engagement:** It emphasizes the importance of engaging local communities and stakeholders in sustainable development efforts. By involving communities in decision-making processes, policy development, and project implementation, initiatives can be tailored to local needs	expertise enhances disaster risk reduction efforts. By combining scientific data with traditional wisdom, policymakers can develop more effective strategies for climate change adaptation and resilience-building. **2. Capacity Building for Sustainable Development:** It discusses UNESCO's global capacity-building program for safeguarding intangible cultural heritage for sustainable development. This program	more contextually relevant and effective approaches to address demographic challenges and promote sustainable development. **2. Community Engagement and Participation:** It underscores the significance of community engagement and participation in shaping population management policies and programs. Initiatives such as the UNESCO project in Vanuatu, which focuses on	inclusive cultural policies, policymakers can create opportunities for vulnerable groups to participate in decision-making processes, access cultural resources, and contribute to sustainable development efforts 9, 8. **2. Cultural Heritage Preservation:** The document highlights the significance of cultural heritage preservation in supporting vulnerable groups and communities. It	cultural heritage in crisis communication, policymakers can leverage cultural resources to foster community cohesion, preserve traditional knowledge, and facilitate effective communication during and after crises. **2. Community Engagement and Participation:** It underscores the importance of community engagement and participation in crisis communicati	contribute to cultural resilience in the face of natural disasters and climate change impacts. ◦ UNESCO's project 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' focuses on harnessing local and indigenous knowledge to address climate change impacts and hydro-meteorological hazards in Indonesia,	climate change impacts and hydro-meteorological hazards, showcasing international cooperation in resilience-building efforts. ◦ Initiatives like the Bandung Creative City Forum (BCCF) in Indonesia bring together creative enterprises, associations, and individuals from the private and public sectors to improve the quality of life in Bandung through creative urban-scale prototypes. These	focus on harnessing local and indigenous knowledge to address climate change impacts and build resilience in coastal and small island communities. This project underscores the value of cultural heritage in enhancing community resilience. ◦ UNESCO's efforts to protect culture in emergencies, including armed conflicts and natural disasters, contribute to the resilience of communities and the reduction of

	which focuses on safeguarding traditional meeting places (nakamals) as cyclone refuges, illustrate how indigenous knowledge contributes to disaster risk reduction and community resilience. By integrating traditional knowledge into disaster preparedness and adaptation strategies, societies can build adaptive capacity and enhance their resilience to environmental threats. **3.**	and priorities, leading to more effective and sustainable outcomes. This community-centered approach ensures that sustainability efforts are inclusive, participatory, and responsive to the unique contexts and challenges faced by different communities 5. **3. Preservation of Cultural Heritage:** It highlights the significance of preserving cultural heritage as a means of fostering	aims to create positive institutional and professional environments that harness the potential of cultural heritage for sustainable development and peaceful societies. By training professionals from governments, civil society, and communities, UNESCO seeks to enhance policy development, inventorying, and safeguarding practices, thereby promoting evidence-based decision-making and policy coherence in	safeguarding traditional meeting places as cyclone refuges, demonstrate how community-based approaches can enhance disaster resilience and address population displacement issues. By involving local communities in decision-making processes and policy implementation, policymakers can ensure that population management strategies are inclusive, responsive to local needs, and sustainable in the long	acknowledges that cultural heritage, including intangible heritage and traditional knowledge, plays a crucial role in providing resilience and identity for vulnerable populations in the face of environmental challenges. By safeguarding cultural heritage and promoting traditional practices, policymakers can empower vulnerable groups to preserve their cultural identity, adapt to climate change	on and resilience-building efforts. It recognizes that involving local communities in communication strategies, disaster preparedness, and response planning is essential for promoting effective crisis communication. Initiatives such as UNESCO's work to protect culture in emergencies, including armed conflict and natural disasters, demonstrate the significance	the Philippines, and Timor-Leste. This project aims to identify and document local and indigenous knowledge in coastal and small island communities, supporting resilience-building efforts. **2. Heritage Preservation and Disaster Risk Reduction:** ◦ UNESCO's efforts to protect culture in emergencies, including armed conflicts and natural disasters, contribute to the	projects demonstrate the power of cooperation and collaboration in driving sustainable urban development and community resilience. **2. Global Capacity Building and Knowledge Sharing:** ◦ UNESCO's global capacity-building program for safeguarding intangible cultural heritage for sustainable development aims to create positive institutional and professional environment	disaster risks. Preserving heritage at risk and combating illicit trafficking of cultural artifacts support the achievement of Sustainable Development Goal (SDG) 16 to prevent violence and combat crime. The Heritage Emergency Fund assists Member States in preparing for and responding to emergency situations related to cultural heritage, highlighting the strategic role of cultural

	Community -Based Adaptation: This analysis highlights community-based initiatives that leverage cultural practices and local knowledge to address sustainability and climate change challenges. Examples of local stakeholders implementing traditional small-scale farming and inclusive tourism products in Petra, Jordan, demonstrate how communities can adapt and thrive in response to changing environmental	community resilience and identity in the face of climate change and environmental threats. Projects such as the 'Siq Stability' initiative in Petra focus on assessing and managing natural hazards to protect cultural sites, ensuring that communities can continue to draw strength and inspiration from their heritage in times of crisis. By safeguarding cultural heritage, communities can maintain a sense of continuity,	the field of cultural heritage preservation. **3. Policy Coherence for Sustainable Development:** The document highlights the adoption of a new chapter of the Operational Directives on safeguarding intangible cultural heritage and sustainable development at the national level. This milestone in the development of the 2003 Convention aims to enhance policy coherence for sustainable development by	term. **3. Gender Equality and Reproductive Health:** The publication highlights the importance of gender equality and reproductive health in population management efforts. It acknowledges that women's empowerment, access to reproductive health services, and education play crucial roles in shaping population dynamics and promoting sustainable development. By	impacts, and contribute to sustainable development initiatives 3, 24. **3. Community Resilience Building:** It underscores the importance of community resilience building in engaging vulnerable groups in sustainable development and climate change adaptation. It recognizes that vulnerable populations often face disproportionate risks and vulnerabilities related to environmental changes. Initiatives	of community engagement in preserving cultural heritage and promoting resilience. By prioritizing community participation, policymakers can ensure that crisis communication efforts are contextually relevant, inclusive, and responsive to local needs. **3. Cultural Diversity and Communication Strategies:** It highlights the role of cultural diversity in shaping effective communicati	resilience of communities and the reduction of disaster risks. Preserving heritage at risk and combating illicit trafficking of cultural artifacts support the achievement of Sustainable Development Goal (SDG) 16 to prevent violence and combat crime. The Heritage Emergency Fund, established in 2015, assists Member States in preparing for and responding to emergency situations	s to harness the potential of cultural heritage for sustainable development and peaceful societies. This program has benefited over 70 countries, highlighting the importance of international cooperation in sharing knowledge and best practices for cultural sustainability. ◦ The General Assembly of the States Parties to the 2003 Convention adopted a new chapter on safeguarding intangible cultural	heritage in building social cohesion and peace. **2. Integration of Heritage in Sustainable Development:** ◦ The document underscores the integration of cultural heritage into sustainable development frameworks. The 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage links nature conservation and the preservation of cultural properties. This

	conditions. By engaging in sustainable practices rooted in cultural heritage, communities can build resilience and contribute to sustainable development . **4. Education and Awareness through Culture**: The study discusses projects such as the Weather Stations initiative, which uses literature and storytelling to engage communities in discussions about climate	connection, and resilience in the face of environmental challenges 3 . **4. Indigenous Knowledge and Community Resilience:** The publication discusses the importance of harnessing indigenous knowledge and traditional practices to enhance community resilience to climate-related disasters. Projects like the UNESCO initiative in Vanuatu, which	encouraging States Parties to integrate the safeguarding of intangible cultural heritage into their development plans, policies, and programs at all levels. By promoting policy coherence and integration of cultural heritage considerations into national development frameworks, policymakers can ensure that sustainability goals are effectively mainstreamed across sectors and levels of governance. **4. Interdisciplinary**	prioritizing gender equality, reproductive rights, and family planning services, policymakers can address demographic challenges, reduce population growth rates, and enhance the well-being of individuals and communities 8. **4. Policy Coherence and Integration:** The document emphasizes the need for policy coherence and integration in addressing population	such as the UNESCO project focusing on strengthening the resilience of coastal and small island communities towards climate change impacts demonstrate how community-based approaches can enhance the adaptive capacity of vulnerable groups. By prioritizing community resilience building, policymakers can support vulnerable populations in addressing climate-related hazards and promoting	on strategies for crisis management . It acknowledges that diverse cultural perspectives , languages, and communication practices influence the effectiveness of crisis communication. By embracing cultural diversity and multilingual communication approaches, policymakers can enhance the reach and impact of crisis communication efforts, particularly in multicultural and multilingual contexts.	related to cultural heritage, emphasizing the strategic role of culture in building social cohesion and peace. **3. Climate Change Adaptation and Education:** ◦ The document mentions the international project 'Weather Stations,' which uses literature and storytelling to engage in discussions about climate change. This project aims to raise awareness and educate people about	heritage and sustainable development at the national level. This milestone aims to enhance policy coherence for sustainable development and encourages States Parties to integrate cultural heritage safeguarding into their development plans, policies, and programs at all levels, emphasizing the need for international cooperation in promoting cultural resilience. **3. Cross-Cultural Exchange**	convention, ratified by 193 States Parties, promotes sustainable development by actively protecting and managing cultural and natural World Heritage properties. It contributes to environmental sustainability , economic development , and social cohesion by acknowledging and conserving the diversity of cultural and natural heritage. ◦ UNESCO's work on safeguarding intangible cultural heritage for

	change. By promoting education and awareness through cultural means, such as literature and storytelling, societies can foster resilience and inspire new perspectives on environmental challenges.	safeguards traditional meeting places (nakamals) as cyclone refuges, demonstrate how local knowledge and cultural traditions can play a vital role in disaster risk reduction and community resilience. By integrating indigenous knowledge into climate change adaptation strategies, communities can build adaptive capacity and strengthen their resilience to environmental threats 28, 24.	**Approaches to Climate Change:** It emphasizes the need for interdisciplinary approaches to address climate change challenges. Projects such as the 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts' initiative focus on harnessing local and indigenous knowledge to address climate-related disasters in Indonesia, the Philippines, and Timor-	management issues within the broader context of sustainable development. It calls for the alignment of population policies with environmental sustainability goals, social inclusion objectives, and economic development strategies. By integrating population considerations into national development plans, climate change adaptation initiatives, and urban development frameworks, policymakers can ensure that	sustainable development 5, 24. **4. Social Inclusion and Empowerment:** It emphasizes the need for social inclusion and empowerment of vulnerable groups in the context of sustainability and climate change. It acknowledges that promoting social inclusion, addressing inequalities, and empowering vulnerable populations are essential for achieving sustainable development goals. By	This inclusive approach to crisis communication can contribute to building trust, promoting community resilience, and ensuring that information reaches all segments of the population. **4. Heritage Emergency Fund and Communication Initiatives:** The publication references the Heritage Emergency Fund, a multi-donor fund established by UNESCO to assist Member States in	climate change through creative means, contributing to cultural resilience by fostering dialogue and understanding of environmental challenges. ◦ Initiatives like the 'Siq Stability' project in Petra, Jordan, demonstrate how governments are assessing, managing, and mitigating natural hazards to protect heritage sites from climate change impacts. This project	**and Learning:** ◦ Projects like Libremapping in Dakar bring together young digital artists from Montreal and Dakar to create projection mapping in public spaces. This initiative not only fosters cross-cultural exchange but also promotes learning and collaboration between different communities, showcasing the value of cooperation in cultural initiatives for sustainability and resilience. ◦ The	sustainable development aims to create positive institutional and professional environments to harness the potential of cultural heritage for sustainable development and peaceful societies. This capacity-building program emphasizes the role of cultural heritage in driving sustainable development outcomes and promoting social inclusion. **3. Heritage as a Catalyst for Sustainable Urban**

			Leste. By integrating science with local knowledge and cultural practices, policymakers can develop holistic strategies that enhance community resilience and adaptation to climate change impacts.	population dynamics are managed in a way that supports sustainable development outcomes and enhances societal resilience.	ensuring that vulnerable groups have access to education, healthcare, livelihood opportunities, and decision-making processes, policymakers can enhance their resilience, well-being, and capacity to contribute to sustainable development efforts 3, 5.	preparing for and responding to emergency situations related to cultural heritage. This fund supports the implementation of UNESCO Culture Conventions and highlights the strategic role of culture in building social cohesion and peace. By investing in communication initiatives that raise awareness about the importance of cultural heritage preservation and resilience-building,	exemplifies the integration of cultural heritage preservation with climate change adaptation efforts.	Weather Stations project involves cultural institutions in various cities appointing writers-in-residence to explore climate change through literature and storytelling. This project engages communities in discussions about climate change and promotes international cooperation in addressing global environmental challenges through creative means.	**Development:** ◦ UNESCO's initiatives focus on articulating culture's contribution to sustainable urban development. The New Urban Agenda and Sustainable Development Goal 11 emphasize the role of culture in building inclusive, safe, resilient, and sustainable cities. UNESCO's work aims to support the implementation of SDG 11 and protect the world's cultural and natural heritage,

						policymakers can mobilize support for crisis response efforts and promote a shared understanding of the value of cultural assets in times of crisis.			showcasing how heritage serves as a catalyst for sustainable urban development. ◦ Projects like the Bandung Creative City Forum (BCCF) in Indonesia demonstrate how creative enterprises and collaborations in urban settings can improve the quality of life and promote sustainable development. These initiatives highlight the transformative power of cultural heritage in driving sustainable urban development and

									fostering community resilience.
Disaster and Risk Management	**1. Cultural Heritage Preservation for Resilience:** ◦ The document emphasizes the importance of preserving cultural heritage as a means of promoting societal resilience in the face of disasters and risks. Initiatives like the	**1. Community Engagement for Disaster Resilience:** ◦ The document emphasizes the importance of community engagement in disaster and risk management. Projects like Libremapping in Dakar and the	**1. Evidence-Based Decision-Making:** ◦ UNESCO supports Member States in conceiving and implementing disaster risk reduction plans through the provision of policy advice and methodological tools. In	While the document does not explicitly address population management in the context of disaster and risk management, it underscores the significance of community engagement, local knowledge, and cultural heritage	**1. Community Participation and Empowerment:** ◦ The document emphasizes the role of community engagement in disaster risk reduction and resilience-building. Projects such as Libremapping in Dakar	While the publication does not specifically focus on crisis communication strategies in disaster and risk management contexts, it underscores the importance of community engagement, cultural heritage preservation, and capacity-	**1. Preservation of Cultural Heritage:** ◦ The document underscores the importance of preserving cultural heritage as a means of promoting resilience in the face of disasters. Initiatives such as safeguarding intangible cultural	**1. International Partnerships and Collaboration:** ◦ UNESCO collaborates with various international organizations, such as the International Committee of the Red Cross (ICRC), the Blue Shield, and the	**1. Cultural Heritage as a Source of Resilience:** ◦ The document highlights the importance of preserving cultural heritage as a means of promoting resilience in communities facing disasters. Initiatives such as safeguarding intangible

	UNESCO project 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' focus on harnessing local and indigenous knowledge to address climate change impacts and build resilience in coastal and small island communities. This project underscores the value of cultural heritage in enhancing community resilience and	Weather Stations project engage communities in discussions about climate change and disaster risks through cultural initiatives. These projects promote awareness, knowledge sharing, and community participation in addressing environmental challenges and building resilience. By involving communities in disaster risk management efforts, these initiatives empower local residents to contribute to	Serbia, for example, an integrated system for disaster risk management of cultural and natural heritage is being established, incorporating mitigation, preparedness, response, and recovery measures. This evidence-based approach to disaster risk management helps governments make informed decisions and implement effective strategies to reduce risks and enhance resilience. ◦ The UNESCO project 'Strengtheni	preservation in enhancing community resilience and addressing environmental challenges. These aspects indirectly relate to population management by emphasizing the role of communities and cultural resources in building resilience and promoting sustainable practices in the face of disasters and risks.	and the Weather Stations project engage communities, including vulnerable groups, in discussions about climate change and disaster risks through cultural initiatives. By involving vulnerable groups in these initiatives, communities are empowered to contribute their knowledge, experiences, and perspectives to resilience-building efforts. This participatory approach fosters community ownership of	building activities that involve communication and knowledge sharing. Effective communication plays a crucial role in disseminating information, raising awareness, and fostering collaboration among stakeholders in disaster resilience and cultural heritage protection efforts.	heritage linked to traditional practices that provide refuges during disasters contribute to the resilience of communities. For example, projects in Vanuatu focus on safeguarding traditional knowledge and skills for building structures that are resilient to cyclones, highlighting the role of cultural heritage in enhancing community resilience. ◦ UNESCO's efforts to protect cultural heritage in	International Council of Museums (ICOM), to forge partnerships and promote cooperation in protecting cultural heritage during armed conflicts. These partnerships facilitate North-South, South-South, and triangular cooperation in developing countries, enhancing the capacity of local actors to safeguard cultural heritage in times of crisis. ◦ The UNESCO Creative Cities Network	cultural heritage linked to traditional practices that provide refuge during disasters contribute to the resilience of communities. For example, projects in Vanuatu focus on safeguarding traditional knowledge and skills for building structures that are resilient to cyclones, showcasing how cultural heritage can serve as a source of resilience in disaster-prone areas. ◦ UNESCO's efforts to protect

	preserving traditional knowledge for disaster risk reduction. ◦ UNESCO's efforts to protect culture in emergencies, including armed conflicts and natural disasters, contribute to the resilience of communities and the reduction of disaster risks. Preserving heritage at risk and combating illicit trafficking of cultural artifacts support the achievement of Sustainable Development Goal (SDG)	resilience-building strategies. ◦ UNESCO's project 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' focuses on harnessing local and indigenous knowledge in coastal and small island communities to address climate change impacts and build resilience. This project underscores the value of community	ng Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' focuses on identifying and documenting local and indigenous knowledge related to disaster resilience. By integrating scientific knowledge with local insights, this project promotes evidence-based approaches to addressing climate change impacts and		risk reduction strategies and promotes inclusive decision-making processes. ◦ UNESCO's project 'Strengthening Resilience of Coastal and Small Island Communities Towards Hydro-Meteorological Hazards and Climate Change Impacts (StResCom)' focuses on harnessing local and indigenous knowledge in vulnerable coastal and small island communities to address climate change impacts and	emergencies, including armed conflicts and natural disasters, aim to support resilience by preserving heritage at risk and promoting social cohesion. By safeguarding cultural assets and combating illicit trafficking of cultural artifacts, these initiatives contribute to the resilience of communities and help maintain cultural identities in times of crisis. **2. Community Engagemen**	(UCCN) serves as an international platform for cooperation among cities worldwide to leverage culture and creativity for sustainable urban regeneration and development. By pooling resources, sharing knowledge, and implementing innovative practices, cities within the network collaborate to promote cultural-driven initiatives that contribute to achieving sustainable development goals, particularly in the context of	cultural heritage in emergencies, including armed conflicts and natural disasters, aim to support resilience by preserving heritage at risk and promoting social cohesion. By safeguarding cultural assets and combating illicit trafficking of cultural artifacts, these initiatives contribute to the resilience of communities and help maintain cultural identities in times of crisis, highlighting the intrinsic

	16 to prevent violence and combat crime. The Heritage Emergency Fund assists Member States in preparing for and responding to emergency situations related to cultural heritage, highlighting the strategic role of cultural heritage in building social cohesion and peace. **2. Capacity Building for Disaster Risk Reduction:** ◦ UNESCO supports Member States in	engagement and local knowledge in enhancing disaster resilience and promoting sustainable practices in vulnerable regions. **2. Preservation of Cultural Heritage and Local Knowledge:** ◦ The document highlights the role of cultural heritage preservation and local knowledge in enhancing community resilience to disasters. Initiatives like the UNESCO Intangible Cultural Heritage Fund	building resilience in vulnerable communities. **2. Policy Coherence for Sustainable Development:** ◦ UNESCO has worked to enhance policy coherence for sustainable development by integrating the safeguarding of intangible cultural heritage into national development plans, policies, and programmes. The General Assembly of the States Parties to the 2003		build resilience. By engaging vulnerable groups in documenting local knowledge and developing educational materials, this project promotes the active participation of marginalized communities in disaster risk management and adaptation strategies. **2. Cultural Heritage Preservation and Social Inclusion:** ◦ The document highlights the role of cultural heritage preservation in	**t and Empowerment:** ◦ The document emphasizes the importance of community engagement in disaster risk reduction and resilience-building efforts. Projects such as Libremapping in Dakar and the Weather Stations project engage communities in discussions about climate change and disaster risks through cultural initiatives. By involving communities	urban sustainability. **2. Capacity-Building and Training:** ◦ UNESCO's global capacity-building programme for safeguarding intangible cultural heritage for sustainable development involves cooperation with over 70 countries to enhance policy development, inventorying, and safeguarding of cultural heritage. By providing training to professionals from governments	value of heritage in disaster management. **2. Community Empowerment through Heritage:** ◦ The document emphasizes the role of cultural heritage in empowering communities to address disaster risks and build resilience. Projects such as Libremapping in Dakar and the Weather Stations project engage communities in discussions about climate change and

	conceiving and implementing disaster risk reduction plans through policy advice, methodological tools, and capacity-building activities targeting government officials at national and local levels. In Serbia, an integrated system for disaster risk management of cultural and natural heritage is being established to incorporate mitigation, preparedness, response, and recovery measures, complement	support the safeguarding of intangible cultural heritage linked to traditional practices that provide refuges during disasters. For example, in Vanuatu, the Fund assisted in safeguarding knowledge and skills for building traditional structures that are resilient to cyclones, emphasizing the importance of preserving local knowledge for disaster risk reduction. ◦ UNESCO's efforts to protect cultural	Convention adopted a new chapter of the Operational Directives on safeguarding intangible cultural heritage and sustainable development at the national level. This initiative aims to align cultural heritage preservation efforts with sustainable development goals and promote policy coherence across sectors. ◦ The document highlights UNESCO's global capacity-building programme for safeguarding		supporting vulnerable groups and promoting social inclusion in disaster and risk management. Initiatives such as safeguarding intangible cultural heritage linked to traditional practices that provide refuges during disasters contribute to the resilience of vulnerable communities. For example, in Vanuatu, assistance from UNESCO's Intangible Cultural Heritage Fund helped safeguard traditional	, including vulnerable groups, in resilience-building activities, these projects empower communities to contribute their knowledge and experiences to disaster management strategies, fostering community resilience. ◦ UNESCO's capacity-building programmes for safeguarding intangible cultural heritage aim to create positive environments that harness the potential of cultural heritage for	, civil society, and communities, UNESCO promotes cooperation at the national and international levels to harness the potential of intangible cultural heritage for sustainable development and peaceful societies. ◦ Regional training sessions organized by UNESCO aim to enhance cooperation among peacekeepers and relevant stakeholders in incorporating cultural property protection into humanitarian	disaster risks through cultural initiatives. By involving communities, including vulnerable groups, in resilience-building activities, these projects empower individuals and groups to contribute their knowledge and experiences to disaster management strategies, showcasing how heritage can empower communities to tackle challenges. ◦ UNESCO's capacity-building programmes for safeguarding

	ed by relevant training workshops. This capacity-building initiative aims to enhance disaster resilience and protect cultural heritage in the event of disasters. ◦ The document also mentions the emergency assistance provided by UNESCO's Intangible Cultural Heritage Fund to safeguard intangible cultural heritage specifically linked to knowledge and skills for building traditional	heritage in emergencies, including armed conflicts and natural disasters, contribute to the resilience of communities by preserving heritage at risk and combating illicit trafficking of cultural artifacts. These initiatives support the resilience of communities by safeguarding cultural assets and promoting social cohesion in the face of disasters. **3. Cultural Initiatives for Community**	intangible cultural heritage for sustainable development, which aims to create positive institutional and professional environments to harness the potential of intangible cultural heritage for peaceful societies. By building capacity and promoting policy coherence, UNESCO supports the integration of cultural heritage preservation into national planning processes, contributing to sustainable development outcomes.		knowledge and skills for building structures that are resilient to cyclones, benefiting vulnerable groups in disaster-prone areas. ◦ UNESCO's efforts to protect cultural heritage in emergencies, including armed conflicts and natural disasters, aim to support vulnerable groups by preserving heritage at risk and promoting social cohesion. By safeguarding cultural assets and combating illicit	sustainable development and peaceful societies. By training professionals and communities in heritage preservation and disaster risk reduction, UNESCO supports the empowerment of individuals and groups to build resilience through cultural practices and knowledge. **3. Knowledge Sharing and Awareness:** ◦ UNESCO projects focus on harnessing local and indigenous knowledge	action, security strategies, and peace-building processes. By fostering cooperation among countries and organizations, these training sessions promote a coordinated approach to protecting cultural heritage in conflict zones and promoting cultural pluralism. **3. Policy Coherence and Integration:** ◦ The General Assembly of the States Parties to the 2003 Convention adopted a	intangible cultural heritage aim to create positive environments that harness the potential of cultural heritage for sustainable development and peaceful societies. By training professionals and communities in heritage preservation and disaster risk reduction, UNESCO supports the empowerment of individuals and groups to build resilience through cultural practices and knowledge, demonstrating how

	structures that provide refuges during disasters. This assistance in Vanuatu highlights the importance of preserving cultural practices and heritage as a means of enhancing resilience to climate-related disasters. **3. Cultural Initiatives for Disaster Resilience:** ◦ Projects like Libremapping in Dakar and the Weather Stations project engage communities in discussions about	**Resilience:** ◦ Projects like the Bandung Creative City Forum (BCCF) in Indonesia demonstrate how creative enterprises and collaborations in urban settings can improve the quality of life and promote sustainable development. By fostering cultural initiatives and creative partnerships, these projects engage local communities in resilience-building activities and promote sustainable practices that enhance community well-being.	**3. Capacity-Building and Training:** ◦ UNESCO's capacity-building initiatives in disaster risk reduction and cultural heritage preservation aim to enhance the skills and knowledge of professionals, government officials, and communities. For example, the capacity-building programme for safeguarding intangible cultural heritage has trained over 1,800 professionals from governments		trafficking of cultural artifacts, these initiatives contribute to the resilience of vulnerable communities and promote social inclusion in post-disaster recovery efforts. **3. Capacity-Building and Training:** ◦ UNESCO's capacity-building programmes for safeguarding intangible cultural heritage for sustainable development aim to create positive institutional and professional	to address climate change impacts and build resilience in vulnerable coastal and small island communities. By documenting local knowledge and developing educational materials based on science and indigenous knowledge, these projects promote knowledge sharing and awareness-raising to enhance community resilience to disasters and climate change.	new chapter on safeguarding intangible cultural heritage and sustainable development, aiming to enhance policy coherence for sustainable development. This initiative encourages States Parties to integrate the safeguarding of intangible cultural heritage into their development plans, policies, and programmes at all levels, promoting cooperation and coordination in cultural heritage preservation efforts.	heritage can drive community empowerment in disaster and risk management. **3. Heritage as a Catalyst for Sustainable Development:** ◦ The document underscores the role of heritage as a driver for sustainable development, highlighting how cultural heritage can contribute to building inclusive, resilient, and sustainable communities. By integrating heritage preservation into urban planning, regeneration

	climate change and disaster risks through cultural initiatives. These projects promote awareness, knowledge sharing, and community engagement in addressing environmental challenges and building resilience. By integrating culture into disaster risk management and resilience-building efforts, these initiatives demonstrate the potential of cultural approaches in enhancing societal resilience.	◦ The document also mentions the importance of public-private partnerships in supporting heritage-based urban revitalization and community development. By engaging various stakeholders, including local communities, governments, and private entities, these partnerships contribute to community resilience, economic growth, and cultural preservation.	, civil society, and communities in more than 70 countries. These training activities contribute to building resilience, promoting sustainable practices, and safeguarding cultural heritage in the face of disasters and risks.		environments that harness the potential of cultural heritage for peaceful societies. These programmes benefit vulnerable groups by enhancing their skills, knowledge, and capacity to contribute to sustainable development and disaster risk reduction. By training professionals from governments, civil society, and communities, UNESCO supports the empowerment of vulnerable groups in preserving cultural			, and development initiatives, UNESCO promotes a culture-based approach that leverages heritage as a driver for sustainable urban development. Projects such as the conservation and revitalization of Indian heritage cities demonstrate how heritage-led strategies can improve the quality of life, promote sustainable tourism, and enhance cultural identities, showcasing heritage as a catalyst for sustainable

					heritage and building resilience.				development in disaster-prone areas.
Culture and Heritage	**1. Preservation of Cultural Practices for Resilience:** ◦ The document emphasizes the importance of preserving cultural practices and traditions as a means of enhancing societal resilience. Initiatives	**1. Community Participation in Heritage Preservation:** ◦ The document highlights the importance of community participation in heritage preservation efforts. It underscores the significance	**1. Evidence-Based Decision-Making:** ◦ The document underscores the significance of science and research in informing evidence-based decision-making processes related to cultural heritage	The document does not mention population management in the context of culture and heritage.	**1. Safeguarding Intangible Cultural Heritage:** ◦ The document acknowledges the significance of intangible cultural heritage as a source of identity, resilience, and social cohesion for vulnerable groups, including	The document does not explicitly discuss crisis communication in the context of culture and heritage. The focus of the document is primarily on the role of culture, heritage, and creative industries in sustainable development	**1. Heritage Preservation and Resilience:** ◦ The document underscores the importance of preserving cultural heritage as a means of enhancing community resilience in the face of natural disasters, armed conflicts,	**1. International Collaboration for Heritage Preservation:** ◦ The document underscores the importance of international cooperation in preserving and safeguarding cultural heritage,	The document discusses heritage as a key driver in the context of culture and heritage. It emphasizes the importance of protecting and promoting cultural and natural heritage, and integrating it into urban planning and

	that focus on safeguarding intangible cultural heritage, such as traditional knowledge and skills for building structures resilient to disasters, play a crucial role in strengthening communities' ability to cope with challenges. By maintaining and transmitting cultural practices that have proven effective in times of crisis, societies can build resilience and adaptability	of engaging local communities in safeguarding tangible and intangible cultural heritage, as their active involvement ensures the sustainability and relevance of heritage conservation initiatives. By involving communities in decision-making processes, planning, and implementation of heritage projects, UNESCO and its partners promote a sense of ownership and responsibility among community	preservation and promotion. By conducting studies, assessments, and evaluations, policymakers and practitioners can better understand the value, significance, and impact of cultural practices and traditions on communities and societies. Evidence-based approaches help identify effective strategies for safeguarding intangible cultural heritage, promoting cultural diversity, and integrating		indigenous peoples, ethnic minorities, and marginalized communities. By safeguarding and revitalizing intangible cultural practices, such as traditional music, rituals, and craftsmanship, UNESCO and its partners support the empowerment and cultural rights of vulnerable groups, enabling them to preserve their heritage and transmit their knowledge to future generations. ◦	, social inclusion, and peace-building. While the document emphasizes the importance of leveraging culture and heritage for resilience, community engagement, and sustainable development, it does not specifically address crisis communication strategies or emergency response mechanisms in relation to culture and heritage.	and other crises. By safeguarding tangible and intangible cultural assets, such as historic sites, traditional knowledge, and cultural practices, UNESCO and its partners contribute to the resilience of communities by maintaining connections to their past, fostering a sense of identity, and providing sources of strength and continuity during times of adversity. ◦ Initiatives focused on heritage preservation and disaster	particularly through UNESCO's conventions and programmes. By fostering collaboration among countries, organizations, and communities, UNESCO supports the exchange of knowledge, best practices, and expertise in heritage preservation, contributing to the protection of cultural diversity and the promotion of mutual understanding. ◦ Initiatives such as the Creative Cities	sustainable development strategies. It also discusses the role of heritage in peace-building and sustainable development activities.

	to changing circumstances. ◦ UNESCO's projects, such as the StResCom initiative in Indonesia, the Philippines, and Timor-Leste, aim to harness local and indigenous knowledge to address climate-related hazards and disasters. By documenting and integrating traditional practices into disaster risk reduction strategies, these projects demonstrate how cultural heritage can serve as a valuable	members, fostering a collective commitment to preserving cultural traditions and practices. ◦ Initiatives such as the Libremapping project in Dakar and the Weather Stations project engage communities in discussions about climate change, disaster risks, and cultural heritage through artistic and cultural activities. By involving communities in dialogue and creative expression, these	culture into sustainable development policies and programmes. ◦ UNESCO's global capacity-building programmes and training materials on gender and intangible cultural heritage aim to sensitize participants to the gender dimensions of cultural practices and build competencies for developing gender-responsive safeguarding measures. By integrating scientific research and gender analysis into		Initiatives aimed at revitalizing intangible cultural heritage among vulnerable communities involve awareness-raising, capacity-building, and community participation, demonstrating the importance of inclusive and participatory approaches to heritage preservation. By engaging vulnerable groups in the documentation, transmission, and promotion of their cultural expressions, UNESCO contributes to the		risk reduction demonstrate the link between cultural resilience and sustainable development, highlighting the role of cultural heritage in promoting community cohesion, social stability, and adaptive capacity. By integrating cultural considerations into resilience-building strategies, UNESCO supports the ability of communities to withstand and recover from shocks and stresses, emphasizing the intrinsic	Network and capacity-building programmes demonstrate the role of international cooperation in leveraging cultural resources for sustainable development. By facilitating partnerships and knowledge sharing, UNESCO promotes cooperation in addressing common challenges related to heritage conservation, urban development, and the creative economy, emphasizing the value of cultural exchange	

	resource for enhancing societal resilience and promoting sustainable development in vulnerable communities. **2. Community Engagement and Empowerment:** ◦ The document underscores the role of community engagement and empowerment in fostering societal resilience through culture and heritage. Projects that involve communities in heritage preservation, disaster risk	projects empower individuals to contribute their perspectives, knowledge, and experiences to heritage preservation and resilience-building efforts, showcasing the importance of community engagement in promoting cultural heritage. **2. Community Empowerment through Cultural Practices:** ◦ The document underscores the role of cultural practices and traditions in	policy initiatives, UNESCO supports evidence-based decision-making processes that enhance women's participation in heritage preservation and decision-making, highlighting the role of science in promoting gender equality and cultural diversity. **2. Policy Development and Implementation:** ◦ The document highlights the role of policy development and implementati		recognition and visibility of diverse cultural identities and knowledge systems, highlighting the agency and resilience of marginalized communities. **2. Gender Equality and Women's Empowerment:** ◦ The document addresses the role of culture and heritage in promoting gender equality and women's empowerment, particularly through initiatives focused on safeguarding	value of culture in enhancing resilience at local, national, and global levels. **2. Community Empowerment and Participation:** ◦ The document emphasizes the empowerment of communities through cultural engagement and participation, highlighting the agency of individuals and groups in preserving and revitalizing their cultural heritage. By promoting community-led	and collaboration in advancing the goals of the 2030 Agenda. **2. Capacity-Building and Knowledge Sharing:** ◦ The document highlights UNESCO's global capacity-building programmes aimed at safeguarding intangible cultural heritage for sustainable development. By providing training, resources, and technical assistance to countries and communities, UNESCO fosters	

	management, and climate adaptation initiatives empower individuals to take an active role in building resilience. By valuing and leveraging local knowledge, practices, and cultural assets, communities can strengthen their resilience capacities and enhance their ability to respond to challenges collectively. ◦ UNESCO's capacity-building programmes for safeguarding intangible cultural	empowering communities to address challenges and build resilience. By preserving and transmitting traditional knowledge, skills, and rituals, communities can enhance their adaptive capacity and strengthen their social fabric. Projects that focus on safeguarding intangible cultural heritage linked to disaster risk reduction, such as the preservation of traditional building techniques in Vanuatu, demonstrate how cultural	on in supporting the preservation, promotion, and sustainable management of cultural heritage. National and international policies, frameworks, and guidelines play a crucial role in shaping the legal, institutional, and financial mechanisms for heritage conservation, community engagement, and capacity-building initiatives. By aligning policies with international conventions and recommendations, countries		and revitalizing cultural practices traditionally practiced by women. For example, projects in Morocco aim to safeguard female chants and music traditions, which not only enliven gatherings but also convey values recognized as part of community identities. By supporting the revitalization of these traditions and promoting women's participation, UNESCO contributes to the empowerme		initiatives, capacity-building programmes, and inclusive decision-making processes, UNESCO fosters cultural resilience by strengthening local ownership, knowledge transmission, and adaptive responses to change. ◦ UNESCO's support for community-based approaches to cultural heritage preservation underscores the importance of participatory practices in building resilience	cooperation in enhancing institutional and professional capacities for heritage preservation, policy development, and cultural sustainability. ◦ Through knowledge sharing and capacity-building activities, UNESCO promotes cooperation among diverse stakeholders, including governments, civil society, and local communities, to harness the potential of intangible cultural heritage for sustainable development and peaceful	

	heritage aim to create positive institutional and professional environments that harness the potential of cultural heritage for sustainable development and peaceful societies. By training professionals and communities in heritage preservation and disaster risk reduction, UNESCO supports the empowerment of individuals and groups to contribute to societal resilience through cultural practices and traditions,	practices empower communities to cope with environmental hazards and crises. ◦ UNESCO's capacity-building programmes for safeguarding intangible cultural heritage aim to create positive institutional and professional environments that harness the potential of cultural heritage for sustainable development and peaceful societies. By training professionals and community members in heritage preservation,	can strengthen their commitment to safeguarding tangible and intangible cultural heritage for future generations. ◦ UNESCO's work on international conventions and recommendations, such as the Convention for the Safeguarding of the Intangible Cultural Heritage, provides a policy framework for Member States to develop strategies and action plans for heritage preservation.		nt and social inclusion of women in vulnerable communities. ◦ UNESCO's efforts to integrate gender equality into the safeguarding of intangible cultural heritage, including through global capacity-building programmes and gender-responsive training materials, demonstrate a commitment to addressing the specific needs and contributions of women in cultural preservation and	and promoting sustainable development. By engaging communities in the identification, documentation, and safeguarding of their cultural expressions, UNESCO enhances the resilience of vulnerable groups, fosters social cohesion, and ensures the continuity of cultural traditions in the face of external pressures and challenges. **3. Intangible Cultural Heritage**	societies. By facilitating collaborative learning and skill development, UNESCO contributes to the strengthening of international cooperation in cultural heritage management and policy implementation. **3. Policy Coherence and Integration:** ◦ It emphasizes the importance of policy coherence for sustainable development, particularly in integrating the safeguarding of intangible cultural	

	highlighting the role of culture in fostering community resilience. **3. Cultural Identity and Social Cohesion:** ◦ The document emphasizes the role of cultural identity and social cohesion in promoting societal resilience. Cultural heritage, including tangible and intangible assets, plays a significant role in shaping collective identities and fostering a sense of belonging within communities	documentation, and transmission, UNESCO supports the empowerment of individuals to safeguard and promote their cultural heritage, fostering a sense of pride, identity, and resilience within communities. **3. Cultural Identity and Social Cohesion:** ◦ The document emphasizes the role of cultural identity and social cohesion in fostering community resilience and well-being. Cultural	By promoting the integration of culture into policy-making processes, UNESCO supports the recognition and protection of cultural diversity, creativity, and innovation as essential components of sustainable development, highlighting the role of policy coherence in advancing cultural heritage goals. **3. Capacity-Building and Knowledge Sharing:** ◦ The document		transmission. By mainstreaming gender into policies and programmes for safeguarding intangible cultural heritage, UNESCO promotes inclusive and equitable engagement of vulnerable groups, including women and girls, in cultural heritage initiatives. **3. Community-Based Approaches:** ◦ The document emphasizes the value of community-based approaches to cultural	**and Adaptation:** ◦ The document highlights the adaptive capacity of intangible cultural heritage in promoting resilience and sustainability among communities facing environmental, social, and economic changes. By recognizing the dynamic nature of cultural practices, rituals, and knowledge systems, UNESCO supports the resilience of communities by enabling them to draw on their cultural resources to	heritage into national development plans, policies, and programmes. By encouraging States Parties to UNESCO's conventions to align cultural heritage preservation with sustainable development goals, UNESCO promotes cooperation in advancing holistic approaches to cultural sustainability and resilience. ◦ The adoption of new chapters of operational directives on safeguarding intangible cultural	

	. By preserving and promoting cultural heritage, societies can strengthen social cohesion, build trust, and enhance solidarity, all of which are essential components of resilience in the face of challenges. ◦ UNESCO's initiatives to protect cultural heritage in emergencies, such as armed conflicts and natural disasters, aim to support social cohesion and peace-building efforts. By safeguarding	heritage, including tangible and intangible assets, plays a vital role in shaping collective identities, fostering a sense of belonging, and promoting intercultural dialogue within communities. By preserving and promoting cultural diversity, societies can strengthen social cohesion, build trust, and enhance solidarity, contributing to the resilience and vibrancy of communities. ◦	emphasizes the importance of capacity-building and knowledge sharing in bridging the gap between science, policy, and practice in the field of culture and heritage. Capacity-building initiatives, training programmes, and research collaborations help strengthen the skills, competencies, and networks of professionals, policymakers, and community members involved in heritage preservation and		heritage preservation and promotion, highlighting the active participation and engagement of vulnerable groups in decision-making processes and safeguarding measures. By fostering community ownership and local solutions, UNESCO supports the agency and resilience of vulnerable communities in preserving their cultural traditions and knowledge systems, contributing to social cohesion and sustainable		navigate challenges, preserve traditions, and innovate in response to evolving circumstances. ◦ Initiatives focused on safeguarding intangible cultural heritage for sustainable development demonstrate the resilience-building potential of cultural practices and traditions, showcasing how communities leverage their cultural assets to address contemporary issues, promote social inclusion,	heritage and sustainable development at the national level reflects UNESCO's commitment to enhancing policy coherence and cooperation among countries in integrating cultural considerations into development frameworks. By promoting dialogue and collaboration on cultural heritage policies, UNESCO contributes to the alignment of national and international efforts in advancing the role of culture in sustainable	

	heritage at risk and combating illicit trafficking of cultural artifacts, UNESCO contributes to maintaining cultural identities, fostering intercultural dialogue, and promoting understanding among diverse communities, all of which are essential for building resilient and inclusive societies.	UNESCO's initiatives to protect cultural heritage in emergencies, such as armed conflicts and natural disasters, aim to support social cohesion and peace-building efforts. By safeguarding heritage at risk and promoting cultural exchange and understanding, UNESCO contributes to building bridges among diverse communities, fostering mutual respect, and promoting dialogue as essential	promotion. By fostering interdisciplinary dialogue and collaboration, UNESCO supports the exchange of best practices, innovative approaches, and scientific knowledge to enhance the effectiveness and impact of cultural heritage policies and programmes. ◦ UNESCO's initiatives, such as the Creative Cities Network and the StResCom project, promote knowledge sharing and collaboration		development. ◦ UNESCO's emphasis on participatory processes and local solutions in culture-engaged actions underscores the importance of inclusive and community-driven approaches to heritage management. By prioritizing the voices and aspirations of vulnerable groups, UNESCO promotes cultural diversity, social inclusion, and fundamental freedoms, recognizing		and enhance well-being. By valuing and revitalizing intangible cultural heritage, UNESCO contributes to the resilience of communities by fostering creativity, adaptability, and cultural continuity in the face of uncertainty and change.	development.	

		components of community cohesion and resilience.	among cities, communities, and experts to address urban challenges, climate risks, and heritage preservation. By leveraging scientific research, policy expertise, and community engagement, UNESCO facilitates the co-creation of sustainable solutions that integrate culture, heritage, and resilience-building strategies, highlighting the role of science and policy in fostering inclusive and sustainable		the agency and contributions of marginalized communities to cultural sustainability.			

			development .					

7.2. Previous EU projects

7.2.1. Previous EU projects 2010-2023

Table 8. Previous EU projects 2010-2023

Project's acronym	Project's name	CORDIS link to the project	Project's own website (if available)	Keywords	Project's duration
HERACLES	HEritage Resilience Against CLimate Events on Site	https://cordis.europa.eu/project/id/700395	http://www.heracles-project.eu/	cultural heritage; climate change; ICT platform;	1 May 2016 - 30 Apr 2019
LIQUEFACT	Assessment and mitigation of liquefaction potential across Europe: a holistic approach to protect structures / infrastructures for improved resilience to earthquake-induced liquefaction disasters	https://cordis.europa.eu/project/id/700748	http://www.liquefact.eu/	community resilience; risk mitigation; risk assessment; liquefaction	1 May 2016 - 31 Oct 2019
I-REACT	Improving Resilience to Emergencies through Advanced Cyber Technologies	https://cordis.europa.eu/project/id/700256	http://project.i-react.eu/	climate change; emergency management; tech tools; risk assessment; online platform; mobile application	1 Jun 2016 - 31 May 2019
RESILIENS	RESILENS: Realising European ReSiliencE for CritIcaL INfraStructure	https://cordis.europa.eu/project/id/653260		Resilience; Resilience measurement; Critical Infrastructures; European Resilience Management Guideline; Resilience Management Matrix and Audit toolkit;	1 May 2015 - 30 Apr 2018
SMR	Smart Mature Resilience	https://cordis.europa.eu/project/id/653569	https://smr-project.eu/home/	Risk assessment; Policies for building	1 Jun 2015 - 30 Jun 2018

				resilience; Resilience communication tool; Resilience maturnity model; climate change	
DARWIN	Expecting the unexpected and know how to respond	https://cordis.europa.eu/project/id/653289	https://h2020darwin.eu/about/	Crisis management; Soft solutions; resilience management guideline; training packages; serious games;	1 Jun 2015 - 30 Sept 2018
ARCH (LC)	Advancing Resilience of Historic Areas against Climate-related and other Hazards	https://cordis.europa.eu/project/id/820999	https://savingculturalheritage.eu/	Disaster management; Cultural heritage; Climate change; Tech tools	1 Jun 2019 - 31 Aug 2022
RESOLUTE	RESilience management guidelines and Operationalization appLied to Urban Transport Environment	https://cordis.europa.eu/project/id/653460	https://www.resolute-eu.org/	Crisis management; Smart cities; Tech tools; Collaborative Resilience Assessment and Management Support System (CRAMSS)	1 May 2015 - 30 Apr 2018
RESISTO (CIP)	RESIlience enhancement and risk control platform for communication infraSTructure Operators	https://cordis.europa.eu/project/id/786409	https://www.resistoproject.eu/	Tech tool; online platform; risk preparedness; communication	1 May 2018 - 31 Oct 2021
CUIDAR	Cultures of Disaster Resilience among children and young people	https://cordis.europa.eu/project/id/653753		Resilience; Vulnerable groups; Communication guidelines; Disaster management	1 Jul 2015 - 30 Jun 2018
beAWARE	Enhanced situational awareness improves decision-making during extreme weather events	https://cordis.europa.eu/project/id/700475	https://beaware-project.eu/	Crisis management; Climate change; mobile application; tech tools; social media	1 Jan 2017 - 31 Dec 2019

POP-ALERT	Population Alerting: Linking Emergencies, Resilience and Training	https://cordis.europa.eu/project/id/608030		Risk preparedness; cultural differences; language barrier; crisis management; toolkit; information framework	1 Apr 2014 - 31 March 2016
STAIR4SECURITY	STAIR4SECURITY-STANDARDS, INNOVATION AND RESEARCH FOR SECURITY	https://cordis.europa.eu/project/id/853853		Crisis management; collaborative platform; e-learning tool; standardization	1 Jan 2019 - 30 Jun 2021
FASTER	First responder Advanced technologies for Safe and efficienT Emergency Response	https://cordis.europa.eu/project/id/833507	https://www.faster-project.eu/	Emergency preparedness; emergency response; first responders; Tech tools; Augmented reality	1 May 2019 - 30 Apr 2022
BRIDGE	BRIDGE: Bridging resources and agencies in large-scale emergency management	https://cordis.europa.eu/project/id/261817	https://www.sintef.no/en/projects/2011/bridge/	emergency management; crisis management; solutions; tech tools; interoperability	1 Apr 2011 - 30 June 2015
RESILOC	Resilient Europe and Societies by Innovating Local Communities	https://cordis.europa.eu/project/id/833671	https://www.resilocproject.eu/	Resilience, Community resilience, Risk Awareness, Framework, Methodologies, Indicators, Policies	1 June 2019 - 30 November 2022
DRIVER +	DRiving InnoVation in crisis management for European Resilience	https://cordis.europa.eu/project/id/607798	https://www.driver-project.eu/	crisis management, test-bed; portfolio of solutions; crisis management solutions	1 May 2014 - 30 Apr 2020
IMPACT	Impact of Cultural aspects in the management of emergencies in public Transport	https://cordis.europa.eu/project/id/653383	https://web.archive.org/web/20200219205843/http://www.impact-csa.eu/	sociocultural background; cultural risk assessment; emergency management; public transport; soft soultions	1 May 2015 - 31 Oct 2017

TACTIC	Tools, methods And training for CommuniTIes and Society to better prepare for a Crisis	https://cordis.europa.eu/project/id/608058		soft solutions; risk preparedness; communicatoin strategies	1 May 2014 - 30 Apr 2016
OPSIC	Operationalising Psychosocial Support in Crisis	https://cordis.europa.eu/project/id/312783		crisis management cycle; psychosocial support; handbook; online platform	1 Febr 2013 - 31 Jan 2016
COMRADES	Collective Platform for Community Resilience and Social Innovation during Crises	https://cordis.europa.eu/project/id/687847		community resilience; tech tools(app); social media; communication during crisis	1 Jan 2016 - 31 Dec 2018
ATHENA	ATHENA	https://cordis.europa.eu/project/id/313220		crisis communication; dogotal tools; best practice guidelines; crisis management	1 Dec 2013 - 30 Nov 2016
SECTOR	SECURE EUROPEAN COMMON INFORMATION SPACE FOR THE INTEROPERABILITY OF FIRST RESPONDERS AND POLICE AUTHORITIES	https://cordis.europa.eu/project/id/607821		crisis management; collaborative information systems;	1 Jul 2014 - 30 Jun 2017
ASSISTANCE	ADAPTED SITUATION AWARENESS TOOLS AND TAILORED TRAINING SCENARIOS FOR INCREASING CAPABILITIES AND ENHANCING THE PROTECTION OF FIRST RESPONDERS	https://cordis.europa.eu/project/id/832576	https://assistance-project.eu/	first responders; technological solutions; augmented reality; virtual reality; disaster management	1 May 2019 - 31 Jul 2022
BuildERS	Building European Communities' Resilience and Social Capital	https://cordis.europa.eu/project/id/833496	https://buildersproject.eu/	climate change; vulnerable groups; crisis management; communication	1 May 2019 - 30 Apr 2022

				guidelines; soft solutions; technical solutions; Policies	
ResiStand	Increasing disaster Resilience by establishing a sustainable process to support Standardisation of technologies and services	https://cordis.europa.eu/project/id/700389		disaster management; standardisation;	1 May 2016 - 30 Apr 2018
CRISYS	Critical Response in Security and Safety Emergencies			crisis management; policies and regulations; crisis management system;	1 Febr 2011 - 31 May 2012
DITAC	Disaster Training Curriculum	https://cordis.europa.eu/project/id/285036		disaster management; education and training; first ressponders; cultural differences	1 Jan 2012 - 31 Dec 2014
ACRIMAS	Aftermath Crisis Management System-of-systems Demonstration	https://cordis.europa.eu/project/id/261669		crisis management; legislative frameworks; aftermath crisis management	1 Febr 2011 - 31 May 2012
ELITE (LESSONS LEARNED)	ELICIT TO LEARN CRUCIAL POST-CRISIS LESSONS	https://cordis.europa.eu/project/id/312497		crisis management; disaster management; best practices; lessons learned; repository; risk preparedness	1 Jan 2013 - 30 Jun 2014
PEP	Public Empowerment Policies for Crisis Management	https://cordis.europa.eu/project/id/284927		risk preparedness; public empowerment; cooperation between stakeholders and citizens; communication	1 Jan 2012 - 31 Dec 2014
COSMIC	The COntribution of Social Media In Crisis management	https://cordis.europa.eu/project/id/312737		disaster management; communication needs; social media; ICT	1 Apr 2013 - 31 March 2015

PSYCRIS	PSYcho-Social Support in CRISis Management	https://cordis.europa.eu/project/id/312395		psycho-social support; community resilience; guidelines for preparedness, prevention and intervention for crises	1 Jul 2013 - 30 Jun 2016
NITIMESR	A Networked and IT-enabled Firm's Perspective on Crisis Management	https://cordis.europa.eu/project/id/317382		human-centred system design; crisis information management; networked crisis management	1 Oct 2012 - 30 Sept 2016
PANDORA	Advanced Training Environment for Crisis Scenarios	https://cordis.europa.eu/project/id/225387		Soft solutions; training; simulation; crisis management; virtual room	1 Jan 2010 - 31 March 2012
CRISMA	Modelling crisis management for improved action and preparedness	https://cordis.europa.eu/project/id/284552		emergency planning; emergency decision making; decision support; software framework; crisis management	1 March 2012 - 31 Aug 2015
Reaching out	demonstRation of EU effective lArge sCale tHreat and crIsis maNaGement OUTside the EU	https://cordis.europa.eu/project/id/700151		crisis management; end user platform; legal and policy recommendations;	1 oct 2016 - 30 Nov 2019
INTERACT	The INTERnAtional network on Crisis Translation	https://cordis.europa.eu/project/id/734211	https://sites.google.com/view/crisistranslation/home	crisis communication; culture & language; risk preparedness; resilience	1 Apr 2017 - 31 March 2020
FORTRESS	Foresight Tools for Responding to cascading effects in a crisis	https://cordis.europa.eu/project/id/607579		crisis management; cooperation between stakeholders; supporting tools; online platform;	1 Apr 2014 - 31 March 2017
IMPRESS	IMproving Preparedness and Response of HEalth	https://cordis.europa.eu/project/id/608078		health services response; health services preparedness;	1 May 2014 - 30 Apr 2017

	Services in major criseS			dcision support system; decision making; communication between stakeholders;	
CARISMAND	Culture And RISkmanagement in Man-made And Natural Disasters	https://cordis.europa.eu/project/id/653748	https://www.carismand.eu/	disaster management; culture; risk perception; risk preparedness; risk communication; toolkit for improving policies and communication	1 Oct 2015 - 30 Sept 2018
EDUCEN	European Disasters in Urban centres: a Culture Expert Network (3C – Cities, Cultures, Catastrophes)	https://cordis.europa.eu/project/id/653874	http://educenhandbook.eu/	culture; disdaster response; community resilience; soft solutions	1 May 2015 - 30 Apr 2017
HEIMDALL	HEIMDALL - MULTI-HAZARD COOPERATIVE MANAGEMENT TOOL FOR DATA EXCHANGE, RESPONSE PLANNING AND SCENARIO BUILDING	https://cordis.europa.eu/project/id/740689	https://heimdall-h2020.eu/	risk preparedness; crisis management; tools; response planning; communication platform and tools; risk assessment tools; first responders	1 May 2017 - 31 Jan 2021
A4A	Alert for All	https://cordis.europa.eu/project/id/261732		Crisis management; crisis communication with citizens; information management; human behavior in crisis; crisis perception; soft solutions; communication & coordination	16 March 2011 - 15 Dec 2013
ESPREssO	Enhancing Synergies for disaster PRevention in the EurOpean Union	https://cordis.europa.eu/project/id/700342	https://www.espressoproject.eu/	Policy making; Climate change; Resilience;	1 May 2016 - 31 Oct 2018

GEO-PICTURES	GMES and Earth Observation with Position-based Image and sensor Communications Technology for Universal Rescue, Emergency and Surveillance management	https://cordis.europa.eu/project/id/242390		Tech solution; satellites; earth observation; disaster management	1 March 2010 - 30 Apr 2012
LETSCROWD	Law Enforcement agencies human factor methods and Toolkit for the Security and protection of CROWDs in mass gatherings	https://cordis.europa.eu/project/id/740466	https://letscrowd.eu/	Risk assessment; Innovative Communication Procedures; Coordination between first responders; Law enforcement agencies;	1 May 2017 - 31 Oct 2019
OFF-WEGO	OFF-network Wireless communications for Emergencies and General Operations	https://cordis.europa.eu/project/id/834193		Tech solution; Direct Mode communication technology; mobile communication;	1 Nov 2018 - 28 Febr 2019
OPTI-ALERT	Opti-Alert: Enhancing the efficiency of alerting systems through personalized, culturally sensitive multi-channel communication	https://cordis.europa.eu/project/id/261699		Crisis management; Alerting systems; Crisis communication; Cultural differences; Multi-channel communication; Tech tools	1 Jan 2011 - 30 Apr 2014
SOTERIA	Online and Mobile Communications for Emergencies	https://cordis.europa.eu/project/id/606796	https://www.soteria-h2020.eu/documents/	Communication channels; emergency management; social media; tech tools	1 Sept 2014 - 28 Febr 2017
ICRED	Integrated European Disaster Community Resilience	https://cordis.europa.eu/project/id/256316		Community resilience; Resilience framework;	1 Jul 2010 - 30 Jun 2014
URBAN GreenUP	New Strategy for Re-Naturing Cities through Nature-Based Solutions	https://cordis.europa.eu/project/id/730426	https://www.urbangreenup.eu/	climate change; digital tool; environment;	1 Jun 2017 - 31 May 2023

DISCOMPOSE	Disasters, Communication and Politics in South-Western Europe: the Making of Emergency Response Policies in the Early Modern Age	https://cordis.europa.eu/project/id/759829	http://discompose.unina.it/	Cultural heritage; Collective memory; natural disasters	1 Febr 2018 - 31 Jan 2024
SHELTER	Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community based Resilience	https://cordis.europa.eu/project/id/821282	https://shelter-project.com/	Climate change; Cultural heritage	1 Jun 2019 - 31 May 2023
RISE	Real-time Earthquake Risk Reduction for a Resilient Europe	https://cordis.europa.eu/project/id/821115	http://www.rise-eu.org/home/	Tech tools, Risk preparedness, Forecasting	1 Sept 2019 - 31 May 2023
TURNkey	Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response actions	https://cordis.europa.eu/project/id/821046	https://earthquake-turnkey.eu/	Tech tools; Forecasting; Earthquakes; Cloud platform	1 Jun 2019 - 31 May 2022
H_2020 Insurance	Oasis Innovation Hub for Catastrophe and Climate Extremes Risk Assessment	https://cordis.europa.eu/project/id/730381		Climate change; risk assessment; insurance schemes	1 May 2017 - 31 Oct 2020
KULTURISK	Knowledge-based approach to develop a cULTUre of Risk prevention	https://cordis.europa.eu/project/id/265280		Risk awareness; risk preparedness	1 Jan 2011 - 31 Oct 2020
RURITAGE	Rural regeneration through systemic heritage-led strategies	https://cordis.europa.eu/project/id/776465	https://www.ruritage.eu/	cultural heritage, rural areas, resilience	1 Jun 2018 - 31 Aug 2022

PROACTIVE	PReparedness against CBRNE threats through cOmmon Approaches between security praCTItioners and the VulnerablE civil society	https://cordis.europa.eu/project/id/832981	https://proactive-h2020.eu/	Risk preparedness; CBRN hazards; tech tools; societal resilience	1 May 2019 - 31 August 2023
PANDEM	Pandemic Risk and Emergency Management	https://cordis.europa.eu/project/id/652868	https://arquivo.pt/wayback/20200510212537/http://www.pandem.eu.com/	Risk preparedness; communication; crisis management; first responders; emergency management	1 Sept 2015 - 31 March 2017
IncREO	Increasing Resilience through Earth Observation	https://cordis.europa.eu/project/id/312461		Climate change; risk preparedness; civil protection; disaster management; earth observation	1 Jan 2013 - 31 Dec 2014
CLARITY	Integrated Climate Adaptation Service Tools for Improving Resilience Measure Efficiency	https://cordis.europa.eu/project/id/730355	https://clarity-h2020.eu/	Climate change; digital tool; risk preparedness;	1 Jun 2017 - 31 Aug 2020
PEP	Public Empowerment Policies for Crisis Management	https://cordis.europa.eu/project/id/284927		Crisis management; Crisis communication; Policies of public empowerment; Best practices; Online tool; Resilience	1 Jan 2012 - 31 Dec 2014
iProcureSecurity	Strategic Partnership of Emergency Medical Service Practitioners for Coordination of Innovation Procurement	https://cordis.europa.eu/project/id/833291	https://project.iprocuresecurity.eu/	Emergency medical service; Climate change; Policies and recommendations	1 May 2019 - 31 Dec 2020
EVACUATION	Testing communication strategies to save lives in emergency evacuation	https://cordis.europa.eu/project/id/748647	https://cdr.leeds.ac.uk/project-evacuation/	Emergency response; Civil evacuation; Communication guidelines and strategies	1 March 2018 - 4 July 2020

AGILE	AGnostic risk management for high Impact Low probability Events	https://cordis.europa.eu/project/id/101121356	https://www.project-agile.eu/	Crisis Management, Policies, Sustainable economies	1 October 2023 - 29 September 2026
C2IMPRESS	CO-CREATIVE IMPROVED UNDERSTANDING AND AWARENESS OF MULTI-HAZARD RISKS FOR DISASTER RESILIENT SOCIETY	https://cordis.europa.eu/project/id/101074004	https://www.c2impress.com/	Risk Awareness, Climate change, Governance	1 October 2022- 30 September 2025
CLIMAAX	CLIMAte risk and vulnerability Assessment framework and toolboX	https://cordis.europa.eu/project/id/101093864	https://www.climaax.eu/	Climate change, Risk Assessment, Finance Monitoring , Framework	1 January 2023 - 31 December 2026
CORE	sCience and human factOr for Resilient sociEty	https://cordis.europa.eu/project/id/101021746	https://www.euproject-core.eu/	Human Factors, Resilience; Awareness campaigns; Vulnerable groups; Training ; Communication	1 September 2021 - 31 August 2024
CROWD4SDG	Citizen Science for Monitoring Climate Impacts and Achieving Climate Resilience	https://cordis.europa.eu/project/id/872944	https://crowd4sdg.eu/	Indicators; Policies; Climate action; Dosaster response; Crowdsourcing;	1 May 2020 - 30 April 2023
DIRECTED	DIsaster Resilience for Extreme ClimaTe Events providing interoperable Data, models, communication and governance	https://cordis.europa.eu/project/id/101073978	https://directedproject.eu/	Disaster Risk Management; Digital solution; Communication; Giovernance; Climate Change; Tropical problems; Resilience	1 October 2022- 30 September 2026
DIREKTION	Disaster Resilience Knowledge Network promoting innovation, technology uptake and multi-stakeholder cooperation	https://cordis.europa.eu/project/id/101121249		Disaster Resilience; Policies; Crisis management	1 october 2023 - 30 September 2026

ENGAGE	Engage Society for Risk Awareness and Resilience	https://cordis.europa.eu/project/id/882850	https://www.project-engage.eu/	Risk Awareness, Resilience, Disaster management	1 July 2020- 31 December 2023
FIRE-RES	Innovative technologies and socio-ecological-economic solutions for fire resilient territories in Europe.	https://cordis.europa.eu/project/id/101037419/results	https://fire-res.eu/	Fire Management, Risk preparedness, Risk Awareness, Disaster management	1 December 2021 - 30 November 2025
FIRELOGUE	Cross-sector dialogue for Wildfire Risk Management	https://cordis.europa.eu/project/id/101036534	https://firelogue.eu/	Fire Management, Risk preparedness, Risk Awareness, Disaster management, Communication	1 November 2021- 31 October 2025
FirEUrisk	Developing a holistic, risk wise strategy for European wildfire management	https://cordis.europa.eu/project/id/101003890	https://fireurisk.eu/	Fire Management, Risk preparedness, Risk Awareness, Disaster management, Training	1 April 2021 - 31 March 2025
FUTURESILIENCE	Creating FUTUre societal RESILIENCE through innovative, science-based co-creation labs	https://cordis.europa.eu/project/id/101094455	https://futuresilience.eu/	Resilience, Policies, Crisis Management, Soft tools, Methodologies, Disaster Preparedness	1 January 2023- 31 December 2025
HYBLAND	Development of a hybrid methodology for the susceptibility and hazard analysis of landslides	https://cordis.europa.eu/project/id/101027880	http://www.hybland.eu/	Landslide, Hazard assessment, methodologies, Disaster Management	18 April 2022 - 17 April 2024
IMPETUS	Dynamic Information Management Approach for the implementation of climate-resilient adaptation packages in European Regions	https://cordis.europa.eu/project/id/101037084	https://climate-impetus.eu/	Climate change, Risk Assessment, Framework, Resilience, Human Factors	1 October 2021 - 30 September 2025
INDEED	Strengthening a comprehensive approach to preventing and counteracting radicalisation based on a universal evIdeNce-	https://cordis.europa.eu/project/id/101021701	https://www.indeedproject.eu/	Disaster preparedness, Disaster Management, Policies, Human Factors	1 September 2021 - 31 August 2024

	based moDEl for Evaluation of raDicalisation prevention and mitigation				
LANDSCAPEforCHANGE	A LANDSCAPE approach to cultural heritage management in the context of climate CHANGE	https://cordis.europa.eu/project/id/101106194		Climate change, Cultural Heritage, Disaster Management	3 July 2023 - 2 July 2025
LINKS	Strengthening links between technologies and society for european disaster resilience	https://cordis.europa.eu/project/id/883490	https://links-project.eu/	Disaster Management, Risk management, Disaster Resilience, Communication, Crowdsourcing, Toolkit, Disaster Risk perception and vulnerability, Soft Solutions, Training,	1 June 2020 - 30 November 2023
MEDiate	Multi-hazard and risk informed system for Enhanced local and regional Disaster risk management	https://cordis.europa.eu/project/id/101074075	https://mediate-project.eu/	DSS; tech tools; climate changes; crisis management	1 Oct 2022 - 30 Sept 2025
MulHaRes	A probabilistic decision framework for MULti-HAzard RESilience of residential building portfolios subjected to floods and landslides	https://cordis.europa.eu/project/id/893147	https://faculty.ozyegin.edu.tr/deryadeniz/mulhares/	Disaster management, Preparedness, Floods, Landslides, Rainfalls, Framework, Model, Resilience	1 June 2020 - 28 September 2022
MYRIAD-EU	Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the E.U	https://cordis.europa.eu/project/id/101003276	https://www.myriadproject.eu/	Multi-hazard risk management, Framework	2 June 2021 - 31 August 2025
OVERWATCH	Integrated holographic management map for safety and crisis events	https://cordis.europa.eu/project/id/101082320		Disaster management; Technologies; Digital solutions, AI; drones	1 Nov 2022 - 31 Oct 2025

PARATUS	Promoting disaster preparedness and resilience by co-developing stakeholder support tools for managing the systemic risk of compounding disasters	https://cordis.europa.eu/project/id/101073954		Climate Crisis, Disaster Preparedness, Disaster Management, Risk assessment, Human Factors	20 July 2022 - 30 September 2026
RescueME	Equitable RESilience solutions to strengthen the link between CUltural landscapEs and coMmunitiEs	https://cordis.europa.eu/project/id/101094978		Cultural Heritage, Resilience, Disaster Management, Risk assessment, Climate change	1 February 2023 - 31 July 2026
RiskPACC	Integrating Risk Perception and Action to enhance Civil protection-Citizen interaction	https://cordis.europa.eu/project/id/101019707	https://www.riskpacc.eu/	Risk Perception, Risk management, Methodologies, Best practices, Resilience, Disaster Management, Human Factors	1 September 2021 - 31 August 2024
Search & Rescue	Search and Rescue: Emerging technologies for the Early location of Entrapped victims under Collapsed Structures and Advanced Wearables for risk assessment and First Responders Safety in SAR operations	https://cordis.europa.eu/project/id/882897	https://search-and-rescue.eu/	Technologies, Digital solutions, Disaster management, First responders	1 July 2020 - 30 June 2023
STRATEGY	Facilitating EU pre-Standardization process Through stReamlining and vAlidating inTeroperability in systems and procEdures involved in	https://cordis.europa.eu/project/id/883520	https://strategy-project.eu/	Crisis Management, Communication, Emergency response planning	1 September 2020 - 31 August 2023

	the crisis manaGement cYcle				
SYNERGIES	Innovating Preparedness by Leveraging SYNERGIES and Enhancing Results of DRM Projects	https://cordis.europa.eu/project/id/101121172		Preparedness, Communication, Training, Human Factors, Disaster management, Resilince	1 December 2023 - 30 November 2026
THE HuT	The Human-Tech Nexus - Building a Safe Haven to cope with Climate Extremes	https://cordis.europa.eu/project/id/101073957	https://thehut-nexus.eu	Disaster risk management, prevention and preparedness, landslides, floods, heatwaves	2 October 2022 - 30 September 2026
TREEADS	A Holistic Fire Management Ecosystem for Prevention, Detection and Restoration of Environmental Disasters	https://cordis.europa.eu/project/id/101036926	https://treeads-project.eu/		1 December 2021 - 31 May 2025
PANTHEON	Community-Based Smart City Digital Twin Platform for Optimised DRM operations and Enhanced Community Disaster Resilience	https://cordis.europa.eu/project/id/101074008		Risk Assessment, Disaster management, Framework, Technologies	1 January 2023 - 31 December 2025
TeamAware	Team Awareness Enhanced with Artificial Intelligence and Augmented Reality	https://cordis.europa.eu/project/id/101019808	https://teamaware.eu/	Disaster Management, Risk Management	1 May 2021 - 30 April 2024
FiBeGa	Filling the Behavioral Gap in Disaster Risk Reduction and Climate Change Adaptation	https://cordis.europa.eu/project/id/101044374		Behaviour, Awareness, Policies, Risk assessment, Indicators, Participatory methodologies	1 Sept 2023 - 31 August 2028

RESCUER	first RESponder-Centered support toolkit for operating in adverse and infrastrUcture-less EnviRonments	https://cordis.europa.eu/project/id/101021836	https://rescuerproject.eu/	Technological platform, Disaster Management platform	1 July 2021 - 30 June 2024
SILVANUS	Integrated Technological and Information Platform for wildfire Management	https://cordis.europa.eu/project/id/101037247	https://silvanus-project.eu/	Wildfire Management, Disaster Management, Risk monitoring	1 October 2021 - 31 March 2025
CREXDATA	Critical Action Planning over Extreme-Scale Data	https://cordis.europa.eu/project/id/101092749	https://crexdata.eu/	Crisis Management, Disaster Management	1/1/2023 - 31 December 2025
INSUREADAPT	Public–Private Insurance Partnerships for Adapting to Multi-Hazard Climate Change Risks	https://cordis.europa.eu/project/id/101086783		Risk management, Disaster Management, Climate Change	1 December 2023- 30 November 2028
DYNAMO	Dynamic Resilience Assessment Method including combined Business Continuity Management and Cyber Threat Intelligence solution for Critical Sectors	https://cordis.europa.eu/project/id/101069601	https://horizon-dynamo.eu/	Disaster cycle, Human Factors, Methodologies	1 October 2022 - 30 September 2025
iRESET	Improving community Resilience through Experimentally validated tools for assessing the performance of Structures under Earthquake and Tsunami hazards	https://cordis.europa.eu/project/id/101022337		Risk assessment, resilience, tools, tsunami flows, coastal communities	1 May 2022 - 1 June 2025
ERA4EH	Earthquake Risk plAtform For european	https://cordis.europa.eu/project/id/101086280		AI, RIsk monitoring, Risk management, Cultural Heritage	1 January 2023 - 31 December 2026

	cities Cultural Heritage protection				
YADES	Improved Resilience and Sustainable Reconstruction of Cultural Heritage Areas to cope with Climate Change and Other Hazards based on Innovative Algorithms and Modelling Tools	https://cordis.europa.eu/project/id/872931	https://yades-project.eu/	Cultural Heritage, Resilience, Climate change, Training, Prevention, Risk preparedness	1 April 2020 - 31 March 2025
ATLANTIS	Improved resilience of Critical Infratsructures AgainsT LArge scale transNational and sysTemic rISks	https://cordis.europa.eu/project/id/101073909	https://www.atlantis-project.eu/	Cyber Security, Disaster preparedness,	1 October 2022 - 30 September 2025
SPATIAL	Spatial-Temporal Dynamics of Flood Resilience	https://cordis.europa.eu/project/id/101040939		Resilience, Flood	1 April 2023 - 31 March 2028
FosResil	Fostering Resilience' in Front-line Environmental Management Practice: A Multi-Sited Ethnography of Novel Constellations of Environmental Value in Practice	https://cordis.europa.eu/project/id/101024490		Climate change, Awareness, Communication, Resilience, Environmental management	1 December 2021- 30 November 2024
REGILIENCE	Resilience Strategies for Regions	https://cordis.europa.eu/project/id/101036560	https://regilience.eu/	Communication, Resilience, Dissemination, Climate change, Awareness	1 November 2021 - 31 October 2025
RESONATE	Resilient forest value chains – enhancing resilience through natural and socio-economic responses	https://cordis.europa.eu/project/id/101000574	https://resonateforest.org/	Resilience, Forests, Climate change, Risk Management, Policies	1 April 2021 - 31 March 2025
RESIST	Regions for climate	https://cordis.europa.eu/project/id/101093968	https://resist-project.eu/	Policies, Climate change	1 January 2023- 31 December 2027

	change resilience through Innovation, Science and Technology				
ResAlliance	Landscape resilience knowledge alliance for agriculture and forestry in the Mediterranean basin	*https://cordis.europa.eu/project/id/101086600*	https://www.resalliance.eu/	Policies, Climate change, Resilience, Network, Forestry	1 December 2022 - 30 November 2025
REINFORCE	Integrated landscape management for resilient mountain forests under global changes	https://cordis.europa.eu/project/id/891671	https://www.reinforceeu.eu/	Policies, Climate change, Resilience, Forestry	14 June 2021 - 6 november 2023
PEERS	Co-developing pathways towards Climate resilient regions in Europe	https://cordis.europa.eu/project/id/101093942	https://peers-project.eu/	Policies, Climate Change, Resilience, Methodology	1 January 2023 - 31 December 2027
CURE	Copernicus for Urban Resilience in Europe	https://cordis.europa.eu/project/id/870337	https://cure-copernicus.eu/index.html	Risk monitoring, Risk management, Disaster Management, Risk assessment, Preparedness, Technological Platform	1 January 2020 - 30 April 2023
InvigoratEU	Invigorating Enlargement and Neighbourhood Policy for a Resilient Europe	https://cordis.europa.eu/project/id/101132124	N/A	Foreign Policy, Policies,	1 January 2024- 31 December 2026
HERIT4AGES	User-centric and data-driven retrofitting solutions for a resilient, energy-efficient, low-emission and inclusive cultural heritage.	https://cordis.europa.eu/project/id/101123175		Cultural Heritage, Climate Change, Urbanistics	1 November 2023 - 31 October 2027
HERITACT	HERITAGE ACTIVATION THROUGH ENGAGING EXPERIENCES TOWARDS	https://cordis.europa.eu/project/id/101094998	https://www.heritact.eu/	Cultural Heritage, Climate Change, Methodologies, Digital solutions, Soft solutions, Toolkit	1 March 2023 - 28 February 2026

	SUSTAINABLE DEVELOPMENT				
RESPOND	Next-generation equipment tools and mission-critical strategies for First Responders	https://cordis.europa.eu/project/id/883371		Technological platform, Disaster Management, First Responders	1 June 2020 - 31 May 2023
Co-Evolvers	Coevolutionary approach to unlock the transformative potential of nature-based solutions for more inclusive and resilient communities	https://cordis.europa.eu/project/id/101084220	https://co-evolvers.eu/	Methodology, Preparedness, Policies, Governance	1 November 2022 - 31 October 2026
INT-ACT	Intangible Cultural Heritage, Bridging the Past, Present, and Future	https://cordis.europa.eu/project/id/101132719	https://intactproject.eu/	Intangible Cultural Heritage, Vulnerable groups, Communities, Methodologies	1 January 2024 - 31 December 2026
SoPhia	SOCIAL PLATFORM FOR HOLISTIC HERITAGE IMPACT ASSESSMENT	https://cordis.europa.eu/project/id/870954	https://sophiaplatform.eu/en	Cultural Heritage, Impact Assessment, Best practices, Policies, Platform	1 January 2020 - 31 December 2021

7.2.2. Previous EU projects ranked by relevance for RESILIAGE

Table 9. Previous EU projects 2010-2023, ranked by relevance for RESILIAGE

mean= 3 (4/123=3.25% of the total amount of projects identified)	
RESILOC	Resilient Europe and Societies by Innovating Local Communities
KULTURISK	Knowledge-based approach to develop a cULTUre of Risk prevention

MEDiate	Multi-hazard and risk informed system for Enhanced local and regional Disaster risk management
RescueME	Equitable RESilience solutions to strengthen the link between CUltural landscapEs and coMmunitiEs
mean= 2.75 (12/123=9.76% of the total amount of projects identified)	
DARWIN	Expecting the unexpected and know how to respond
DRIVER +	DRiving InnoVation in crisis management for European Resilience
TACTIC	Tools, methods And training for CommuniTIes and Society to better prepare for a Crisis
CARISMAND	Culture And RISkmanagement in Man-made And Natural Disasters
A4A	Alert for All
SOTERIA	Online and Mobile Communications for Emergencies
PEP	Public Empowerment Policies for Crisis Management
ENGAGE	Engage Society for Risk Awareness and Resilience
FIRE-RES	Innovative technologies and socio-ecological-economic solutions for fire resilient territories in Europe.
FIRELOGUE	Cross-sector dialogue for Wildfire Risk Management
FirEUrisk	Developing a holistic, risk wise strategy for European wildfire management
REGILIENCE	Resilience Strategies for Regions
mean= 2.5 (10/123=8.13% of the total amount of projects identified of the total amount of projects identified)	
SMR	Smart Mature Resilience
POP-ALERT	Population Alerting: Linking Emergencies, Resilience and Training
FASTER	First responder Advanced technologies for Safe and efficienT Emergency Response
OPSIC	Operationalising Psychosocial Support in Crisis
EDUCEN	European Disasters in Urban centres: a Culture Expert Network (3C – Cities, Cultures, Catastrophes)
CORE	sCience and human factOr for Resilient sociEty
RiskPACC	Integrating Risk Perception and Action to enhance Civil protection-Citizen interaction
SYNERGIES	Innovating Preparedness by Leveraging SYNERGIES and Enhancing Results of DRM Projects
ARCH (LC)	Advancing Resilience of Historic Areas against Climate-related and other Hazards
HERITACT	HERITAGE ACTIVATION THROUGH ENGAGING EXPERIENCES TOWARDS SUSTAINABLE DEVELOPMENT
mean= 2.25 (4/123=3.25% of the total amount of projects identified)	
SHELTER	Sustainable Historic Environments hoListic reconstruction through Technological Enhancement and community based Resilience

LANDSCAPEforCHANGE	A LANDSCAPE approach to cultural heritage management in the context of climate CHANGE
LINKS	Strengthening links between technologies and society for european disaster resilience
TREEADS	A Holistic Fire Management Ecosystem for Prevention, Detection and Restoration of Environmental Disasters
PANTHEON	Community-Based Smart City Digital Twin Platform for Optimised DRM operations and Enhanced Community Disaster Resilience
mean= 2 (26/123=21.14% of the total amount of projects identified)	
HERACLES	HEritage Resilience Against CLimate Events on Site
I-REACT	Improving Resilience to Emergencies through Advanced Cyber Technologies
CUIDAR	Cultures of Disaster Resilience among children and young people
STAIR4SECURITY	STAIR4SECURITY- STANDARDS, INNOVATION AND RESEARCH FOR SECURITY
BRIDGE	BRIDGE: Bridging resources and agencies in large-scale emergency management
IMPACT	Impact of Cultural aspects in the management of emergencies in public Transport
BuildERS	Building European Communities' Resilience and Social Capital
PEP	Public Empowerment Policies for Crisis Management
CRISMA	Modelling crisis management for improved action and preparedness
HEIMDALL	HEIMDALL - MULTI-HAZARD COOPERATIVE MANAGEMENT TOOL FOR DATA EXCHANGE, RESPONSE PLANNING AND SCENARIO BUILDING
OPTI-ALERT	Opti-Alert: Enhancing the efficiency of alerting systems through personalized, culturally sensitive multi-channel communication
ICRED	Integrated European Disaster Community Resilience
RURITAGE	Rural regeneration through systemic heritage-led strategies
EVACUATION	Testing communication strategies to save lives in emergency evacuation
C2IMPRESS	CO-CREATIVE IMPROVED UNDERSTANDING AND AWARENESS OF MULTI-HAZARD RISKS FOR DISASTER RESILIENT SOCIETY
DIRECTED	DIsaster Resilience for Extreme ClimaTe Events providing interoperable Data, models, communication and governance
DIREKTION	Disaster Resilience Knowledge Network promoting innovation, technology uptake and multi-stakeholder cooperation
FUTURESILIENCE	Creating FUTUre societal RESILIENCE through innovative, science-based co-creation labs
STRATEGY	Facilitating EU pre-Standardization process Through stReamlining and vAlidating inTeroperability in systems and procEdures involved in the crisis manaGement cYcle

THE HuT	The Human-Tech Nexus - Building a Safe Haven to cope with Climate Extremes
FiBeGa	Filling the Behavioral Gap in Disaster Risk Reduction and Climate Change Adaptation
SPATIAL	Spatial-Temporal Dynamics of Flood Resilience
FosResil	Fostering Resilience' in Front-line Environmental Management Practice: A Multi-Sited Ethnography of Novel Constellations of Environmental Value in Practice
ResAlliance	Landscape resilience knowledge alliance for agriculture and forestry in the Mediterranean basin
INT-ACT	Intangible Cultural Heritage, Bridging the Past, Present, and Future
mean= 1.75 (7/123=5.69% of the total amount of projects identified)	
beAWARE	Enhanced situational awareness improves decision-making during extreme weather events
COMRADES	Collective Platform for Community Resilience and Social Innovation during Crises
COSMIC	The COntribution of Social Media In Crisis management
PANDORA	Advanced Training Environment for Crisis Scenarios
LIQUEFACT	Assessment and mitigation of liquefaction potential across Europe: a holistic approach to protect structures / infrastructures for improved resilience to earthquake-induced liquefaction disasters
CRISYS	Critical Response in Security and Safety Emergencies
YADES	Improved Resilience and Sustainable Reconstruction of Cultural Heritage Areas to cope with Climate Change and Other Hazards based on Innovative Algorithms and Modelling Tools
mean= 1.5 (7/123=5.69% of the total amount of projects identified)	
ATHENA	ATHENA
ELITE (LESSONS LEARNED)	ELICIT TO LEARN CRUCIAL POST-CRISIS LESSONS
ESPREssO	Enhancing Synergies for disaster PRevention in the EurOpean Union
DISCOMPOSE	Disasters, Communication and Politics in South-Western Europe: the Making of Emergency Response Policies in the Early Modern Age
CROWD4SDG	Citizen Science for Monitoring Climate Impacts and Achieving Climate Resilience
Search & Rescue	Search and Rescue: Emerging technologies for the Early location of Entrapped victims under Collapsed Structures and Advanced Wearables for risk assessment and First Responders Safety in SAR operations
PEERS	Co-developing pathways towards Climate resilient regions in Europe
mean= 1.25 (19/123=15.45% of the total amount of projects identified)	
DITAC	Disaster Training Curriculum

PSYCRIS	PSYcho-Social Support in CRISis Management
INTERACT	The INTERnAtional network on Crisis Translation
GEO-PICTURES	GMES and Earth Observation with Position-based Image and sensor Communications Technology for Universal Rescue, Emergency and Surveillance management
OFF-WEGO	OFF-network Wireless communications for Emergencies and General Operations
TURNkey	Towards more Earthquake-resilient Urban Societies through a Multi-sensor-based Information System enabling Earthquake Forecasting, Early Warning and Rapid Response actions
IncREO	Increasing Resilience through Earth Observation
CLIMAAX	CLIMAte risk and vulnerability Assessment framework and toolboX
HYBLAND	Development of a hybrid methodology for the susceptibility and hazard analysis of landslides
IMPETUS	Dynamic Information Management Approach for the implementation of climate-resilient adaptation packages in European Regions
PARATUS	Promoting disaster preparedness and resilience by co-developing stakeholder support tools for managing the systemic risk of compounding disasters
TeamAware	Team Awareness Enhanced with Artificial Intelligence and Augmented Reality
RESCUER	first RESponder-Centered support toolkit for operating in adverse and infrastrUcture-less EnviRonments
CREXDATA	Critical Action Planning over Extreme-Scale Data
DYNAMO	Dynamic Resilience Assessment Method including combined Business Continuity Management and Cyber Threat Intelligence solution for Critical Sectors
REINFORCE	Integrated landscape management for resilient mountain forests under global changes
HERIT4AGES	User-centric and data-driven retrofitting solutions for a resilient, energy-efficient, low-emission and inclusive cultural heritage.
RESILIENS	RESILENS: Realising European ReSiliencE for CritIcaL INfraStructure
SoPhia	SOCIAL PLATFORM FOR HOLISTIC HERITAGE IMPACT ASSESSMENT
mean= 1 (34/123=27.64% of the total amount of projects identified)	
RESOLUTE	RESilience management guidelines and Operationalization appLied to Urban Transport Environment
RESISTO (CIP)	RESIlience enhancement and risk control platform for communication infraSTructure Operators
SECTOR	SECURE EUROPEAN COMMON INFORMATION SPACE FOR THE INTEROPERABILITY OF FIRST RESPONDERS AND POLICE AUTHORITIES
ASSISTANCE	ADAPTED SITUATION AWARENESS TOOLS AND TAILORED TRAINING SCENARIOS FOR INCREASING CAPABILITIES AND ENHANCING THE PROTECTION OF FIRST RESPONDERS
ResiStand	Increasing disaster Resilience by establishing a sustainable process to support Standardisation of technologies and services

ACRIMAS	Aftermath Crisis Management System-of-systems Demonstration
NITIMESR	A Networked and IT-enabled Firm's Perspective on Crisis Management
Reaching out	demonstRation of EU effective lArge sCale tHreat and crIsis maNaGement OUTside the EU
FORTRESS	Foresight Tools for Responding to cascading effects in a crisis
IMPRESS	IMproving Preparedness and Response of HEalth Services in major criseS
LETSCROWD	Law Enforcement agencies human factor methods and Toolkit for the Security and protection of CROWDs in mass gatherings
URBAN GreenUP	New Strategy for Re-Naturing Cities through Nature-Based Solutions
RISE	Real-time Earthquake Risk Reduction for a Resilient Europe
H_2020 Insurance	Oasis Innovation Hub for Catastrophe and Climate Extremes Risk Assessment
PROACTIVE	PReparedness against CBRNE threats through cOmmon Approaches between security praCTItioners and the VulnerabIE civil society
PANDEM	Pandemic Risk and Emergency Management
CLARITY	Integrated Climate Adaptation Service Tools for Improving Resilience Measure Efficiency
iProcureSecurity	Strategic Partnership of Emergency Medical Service Practitioners for Coordination of Innovation Procurement
AGILE	AGnostic risk management for high Impact Low probability Events
INDEED	Strengthening a comprehensive approach to preventing and counteracting radicalisation based on a universal evIdeNce-based moDEl for Evaluation of raDicalisation prevention and mitigation
MulHaRes	A probabilistic decision framework for MULti-HAzard RESilience of residential building portfolios subjected to floods and landslides
MYRIAD-EU	Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the E.U
OVERWATCH	Integrated holographic management map for safety and crisis events
SILVANUS	Integrated Technological and Information Platform for wildfire Management
INSUREADAPT	Public–Private Insurance Partnerships for Adapting to Multi-Hazard Climate Change Risks
iRESET	Improving community Resilience through Experimentally validated tools for assessing the performance of Structures under Earthquake and Tsunami hazards
ERA4EH	Earthquake Risk plAtform For european cities Cultural Heritage protection
ATLANTIS	Improved resilience of Critical Infratsructures AgainsT LArge scale transNational and sysTemic rISks
RESONATE	Resilient forest value chains – enhancing resilience through natural and socio-economic responses
RESIST	Regions for climate change resilience through Innovation, Science and Technology
CURE	Copernicus for Urban Resilience in Europe

InvigoratEU	Invigorating Enlargement and Neighbourhood Policy for a Resilient Europe
RESPOND	Next-generation equipment tools and mission-critical strategies for First Responders
Co-Evolvers	Coevolutionary approach to unlock the transformative potential of nature-based solutions for more inclusive and resilient communities

7.3. EM-DAT records per crisis scenario and CORE country

Disaster Type	Country	Magnitude	Magnitude Scale	Start Year	Start Month	Start Day	End Year	End Month	End Day	Total Deaths	No. Injured	No. Affected	No. Homeless	Total Affected
Earthquak	Greece	6,2	Richter	1904	8	11	1904	8	11	4		1620		1620
Earthquak	Greece	6,3	Richter	1914	11	27	1914	11	27	14				
Earthquak	Greece		Richter	1928			1928			103				
Earthquak	Greece	6,9	Richter	1932	9	26	1932	9	26	151	669	9654	12318	22641
Earthquak	Greece	7,6	Richter	1947	10	6	1947	10	6	3	20		35000	35020
Earthquak	Greece	6,5	Richter	1948	4	22	1948	4	22	2	45	10110	1220	11375
Earthquak	Greece	6,8	Richter	1953	8	12	1953	8	12	476	2412		138865	141277
Earthquak	Greece	7	Richter	1954	4	30	1954	4	30	31	200			200
Earthquak	Greece		Richter	1954	4	20	1954	4	20	25				
Earthquak	Greece		Richter	1955	4	19	1955	4	19	8	149	25056	1377	26582
Earthquak	Greece	7,8	Richter	1956	7	9	1956	7	9	53	100			100
Earthquak	Greece	6,2	Richter	1965	4	5	1965	4	5	32	200			200
Earthquak	Greece	6,3	Richter	1965	3	9	1965	3	9	38	253	30000		30253
Earthquak	Greece	5,9	Richter	1966	9	1	1966	9	1	1	123	15000		15123
Earthquak	Greece	6,3	Richter	1966	2	5	1966	2	5	1	50	11000		11050
Earthquak	Greece	5,9	Richter	1967	5	1	1967	5	1	9	56	16527		16583
Earthquak	Greece	7,2	Richter	1968	2	20	1968	2	20	19	18	4000	3600	7618
Earthquak	Greece	6,4	Richter	1978	6	20	1978	6	20	50	100	600000		600100
Earthquak	Greece	6,3	Richter	1980	7	12	1980	7	12	1	17			17
Earthquak	Greece	5,6	Richter	1981	3	10	1981	3	10	2		450		450
Earthquak	Greece	6,7	Richter	1981	2	24	1981	2	24	22	400	80000		80400
Earthquak	Greece	6,2	Richter	1983	3	24	1983	3	24		7	480		487
Earthquak	Greece	5,6	Richter	1986	9	13	1986	9	13	20	300	45000		45300
Earthquak	Greece	5,8	Richter	1988	10	16	1988	10	16		25			25
Earthquak	Greece	5,5	Richter	1990	12	21	1990	12	21	1	60			60
Earthquak	Greece	5,1	Richter	1990	6	16	1990	6	16		1			1
Earthquak	Greece	5,3	Richter	1993	7	14	1993	7	14		5	600		605
Earthquak	Greece	5,2	Richter	1993	3	27	1993	3	27	1	16	1500		1516
Earthquak	Greece	6,6	Richter	1995	5	13	1995	5	13	26	60	15000		15060
Earthquak	Greece	6,3	Richter	1995	6	15	1995	6	15	26	100	7500	6300	13900
Earthquak	Greece	5,6	Richter	1996	8	6	1996	8	6			1500		1500
Earthquak	Greece	5,8	Richter	1999	9	7	1999	9	7	143	2000	113031	108	115139
Earthquak	Greece	5,6	Richter	2000	5	26	2000	5	26			600		600
Earthquak	Greece	6,5	Richter	2001	7	26	2001	7	26			300		300
Earthquak	Greece	5,7	Richter	2002	12	2	2002	12	2		17	150		167
Earthquak	Greece	6,3	Richter	2003	8	14	2003	8	14		50			50
Earthquak	Greece	6,4	Richter	2008	6	8	2008	6	8	2	240	3468		3708
Earthquak	Greece	6,9	Richter	2014	5	24	2014	5	24	3	2	75000		75002
Earthquak	Greece	6,1	Richter	2014	1	26	2014	2	3		23	2000		2023
Earthquak	Greece	6,3	Richter	2017	6	12	2017	6	12	1	11	720		731
Earthquak	Greece	6,7	Richter	2017	7	21	2017	7	21	2	120			120
Earthquak	Greece	7	Richter	2020	10	30	2020	10	30	2	19	900		919
Earthquak	Greece	5,8	Richter	2021	3	3	2021	3	3		11		2700	2711
Earthquak	Greece	6	Richter	2021	9	27	2021	9	27	1	20		2316	2336
Heat wav	Türkiye	43	°C	2007	6		2007	6		3				
Heat wav	Türkiye	46	°C	2000	6		2000	7		11	300			300
Flood	Belgium		Km2	1906	5	14	1906	5	14	6				
Flood	Belgium		Km2	1906	4		1906	4						
Flood	Belgium		Km2	1928			1928					6000		6000
Flood	Belgium		Km2	1956	5	29	1956	5	29	4				
Flood	Belgium		Km2	1971	8	26	1971	8	26			600		600
Flood	Belgium		Km2	1993	1	11	1993	1	11			600		600
Flood	Belgium		Km2	1993	12	20	1993	12	31					
Flood	Belgium		Km2	1994	8		1994	8				135		135
Flood	Belgium		Km2	1998	9	12	1998	9	14	1		140		140
Flood	Belgium		Km2	2002	1	27	2002	1	27			600		600
Flood	Belgium		Km2	2002	2	11	2002	2	11			1200		1200
Flood	Belgium		Km2	2002	8	26	2002	8	26			600		600
Flood	Belgium	0	Km2	2002	12	24	2002	12	24	2				
Flood	Belgium		Km2	2003	1	1	2003	1	8					
Flood	Belgium		Km2	2005	9	10	2005	9	11			210		210
Flood	Belgium	8458	Km2	2010	11	11	2010	11	15	3		690		690
Flood	Belgium		Km2	2011	1	8	2011	1	13					
Flood	Belgium		Km2	2016	6	2	2016	6	8	1				
Flood	Belgium		Km2	2021	7	14	2021	7	15	39		1950	100000	101950
Flood	Belgium	50	Km2	2023	11	6	2023	11	10			3000		3000
Wildfire	Portugal		Km2	1966	9	6	1966	9	12	25				
Wildfire	Portugal		Km2	1983	9	24	1983	9	24					
Wildfire	Portugal		Km2	1985	9	9	1985	9	9	14				
Wildfire	Portugal	375	Km2	1986	6	15	1986	6	15	15	50			50
Wildfire	Portugal	1824	Km2	1991			1991							
Wildfire	Portugal	428	Km2	2001	9		2001	9						
Wildfire	Portugal	4260	Km2	2003	8		2003	9		14		150000		150000
Wildfire	Portugal	1080	Km2	2004	7		2004	8		2				
Wildfire	Portugal		Km2	2005	5	15	2005	7	14	15	136			136
Wildfire	Portugal		Km2	2013	1		2013	8		9				
Wildfire	Portugal		Km2	2016	8	8	2016	8	13	4	200	699	462	1361
Wildfire	Portugal	300	Km2	2017	6	17	2017	6	21	64	204	500		704
Wildfire	Portugal	2240	Km2	2017	10	15	2017	10	16	45	71		2700	2771
Wildfire	Portugal		Km2	2018	8	3	2018	8	8		79	250		329
Wildfire	Portugal		Km2	2022	7	9	2022	7	12	3	187			187
Wildfire	Portugal		Km2	2023	8	5	2023	8	9		35	1400		1435
Mass mo	Norway			2019	7	30	2019	7	30	1		150		150
Mass mo	Norway			2020	12	30	2020	12	30	10	10	1000		1010
Mass mo	Norway			1936			1936			73				

Figure 56. EM-DAT records per crisis scenario and CORE country

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