ARCH

ARCH State-of-the-Art Report 1

Historic areas, conservation practices, and relevant regulations / policies

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List of Abbreviations

Abbreviation	Meaning
BBB	Building Back Better
CC	Climate Change
CH	Cultural Heritage
CCHWG	Climate Change and Cultural Heritage Working Group
CURE	CUlture in city REconstruction and recovery
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
HULA	Historic Urban Landscape Approach
HV	Heritage Value
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICOM	International Council of Museums
ICOMOS	The International Council On Monuments and Sites
LA	Landscape Approach
SDGs	Sustainable Development Goals
SotA	State-of-the-Art
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHC	World Heritage Centre

Executive Summary

Aim of the report is to define and discuss state of art in terms of historic areas, current practices and regulations and policies relevant to the research subject of ARCH project and its further intersection with topics of cultural heritage and disaster risk management. ARCH is a European-funded research project that aims to enhance the resilience of areas of cultural heritage to climate change-related and other hazards. Tools and methodologies are developed with the pilot cities of Bratislava, Camerino, Hamburg, and Valencia, in a co-creative approach with local policy makers, practitioners, and community members. Therefore, the report is partially aimed to management and participatory governance of cultural heritage and implementation of disaster risk management methodology into existing frameworks.

At the beginning of the report we define key terms relating to the subject matter: cultural heritage conservation and management; typology of historic areas; fundamental conservationist principles of heritage value, authenticity and integrity; disaster risk management and climate change impacts and adaptation of relevance to the ARCH pilot cities as well, and whether/how they reflect certain regulatory frameworks.

The report further discusses other key topics and issues in the focus area. Firstly, we scope out the topic of managing cultural heritage at risk, covering its basic principles, related international frameworks and participatory governance. These are reviewed in relation to the typical cycle of Disaster Risk Management and climate change adaptation. Finally, the link between cultural heritage with sustainable urban development is explored more broadly, with respect to key frameworks for sustainable development and participatory governance.

The next subsection is dedicated to the analysis of regulatory frameworks at international, national, regional and local levels, considering the DRM cycle. Analysis is exploring substantial documents for cultural heritage conservation and management, as well as national or regional policies and legislation. This part of the report reflects on whether such policies address resilience against hazards (including those related to climate change) and if so, how this process evolved over the last decades.

The report concludes with a summary of the discussion, resulted in statement, that cultural heritage management and disaster risk management remain poorly integrated. Only some recognition has emerged in certain international and EU frameworks and guidance documents, but these are yet to be made operational. The improvement might be achieved via developed frameworks, engaging culture as cross-cutting discipline and participatory governance into cultural heritage management practices.

1. Introduction

ARCH is a European-funded research project that aims to enhance the resilience of areas of cultural heritage to climate change-related and other hazards. Tools and methodologies are developed with the pilot cities of Bratislava, Camerino, Hamburg, and Valencia, in a co-creative approach with local policy makers, practitioners, and community members. The results will be combined into a collaborative disaster risk management platform for local authorities and practitioners, the urban population, and international expert communities. A range of models and methods will be developed to support decision-making at appropriate stages of the management cycle. The results of the co-creation processes with the pilot cities will be disseminated to a broader circle of other European municipalities and practitioners and through European standardization.

1.1. Background information and aim of this report

The aim of the report is to indicate state of art in the topic focused on historic areas, conservation practices and regulation/policies, connected to climate change (CC) and other hazards related topics, within the scope of the ARCH project. Firstly, were on the basis of related literature search and survey of current discourse in the expert field, essential concepts and definitions described. Secondly, there was an objective stated, to follow whether/how is Disaster Risk Management cycle (DRM) reflected in the current practice (conservationist, legislative). Intention was to put emphasis on ARCH project pilot cities (Bratislava, Camerino, Hamburg, Valencia) and their issues related to the dealing with the impacts of CC and implementation of DRM tools.

1.2. Relation to other SotA reports and deliverables

Regarding the core topic - historic areas, as well reflected in the title of the project ARCH, the output of this report practically relates to all reports, considered in D7.1. *SotA 2: Disaster risk management, emergency protocols, and post-disaster response* elaborated DRM cycle and related frameworks and methodologies, that are followed within this report; *SotA 3: Building back better* is connected to current practices and policies, that are needed to be considered while implementing Building back better methodology into praxis in relation to cultural heritage (CH); output of this report provides useful data for the subject of *SotA 4: Decision support frameworks and technologies; SotA 5: Gender aspects in conservation and regulation of historic areas, disaster risk management, emergency protocols, postdisaster response techniques, and techniques for building back better* provides essential output for processes, considered within this report; *SotA 6: Existing standards and regulatory frameworks* complements the task of regulatory framework mapping, while focusing on standardisation processes.

The topic of this report is relevant to other ARCH deliverables, handling the issues of CH, DRM, conservation practice and regulatory framework, in particular: *D7.3: Mapping and characterisation of experiences and good practices; D7.4: ARCH disaster risk management framework; D4.2: Historic Area Information System (HArIS); D4.3: Threats and Hazard Information System (THIS); D4.4: Knowledge Information Management System for Decision Support; D5.1: Hazard models for impact assessment; D5.2: Handbook on Heritage Asset Vulnerability.*

1.3. Structure of this report

This report starts with an introduction of the topic, afterwards, the main definitions and terms are presented and explained. The main part of the report starts with the discussion over main topics, firstly historic areas, then conservationist and management practices and lastly relevant regulatory framework. The report concludes with a summary of the discussion and our most important findings.

2. Key concepts and definitions

This section provides an identification of the important concepts and definitions, further used within the paper. The aim is to focus on the topic of protection of CH, while addressing the scope of CC adaptation.

2.1. Conservation of cultural heritage

CH is very diverse, although limited and irretrievable resource. Authenticity, integrity and sustainability are essential components in today heritage practice, guiding its care and use and safeguarding the successful transitions to the future generations.

According to European standardization, **CH** is defined as: tangible and intangible entities of significance to present and future generations. [1] Considering the complexity of the topic and further need to detail the subject within the scope of ARCH project we would adopt the definition developed by ICOMOS Climate Change and Cultural Heritage Working Group (CCHWG) in 2019, when CH should be categorized into six following typologies (all covered within the ARCH project, in terms of issues characterized by ARCH pilot cities):

1. moveable heritage;
2. archaeological resources;
3. buildings and structures;
4. cultural landscapes;
5. associated and traditional communities;
6. intangible heritage.

There is also further need to explain closely the terms of and **tangible and intangible cultural heritage. Tangible cultural heritage** refers to physical artefacts produced, maintained and transmitted intergenerationally in a society. It includes artistic creations, built heritage and other physical or tangible products of human creativity, which are carriers of cultural significance within society and are considered to be worthy of preservation in the future. [2] **Intangible cultural heritage** "*means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity*." [2]

It is also called living cultural heritage, usually expressed in one of the following forms: oral traditions; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional craftsmanship.

2.2. Historic areas

In the context of ARCH we follow the UNESCO Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas [3] of 1976, and subsume under the term **'heritage asset'** single buildings, structures, artefacts as well as whole **historic areas**. Those "shall be taken to mean any groups of buildings, structures and open spaces including archaeological and palaeontological sites, constituting human settlements in an urban or rural environment, the cohesion and value of which, from the archaeological, architectural, prehistoric, historic, aesthetic or sociocultural point of view are recognized," [3] and should be preserved unchanged. Among these is possible to distinguish: prehistoric sites, historic towns, old urban quarters, villages and hamlets as well as homogeneous monumental groups.

Among terminology both pertinent to the topic of historic areas and relevant to the ARCH project, we distinguish several expressions, differing in a several details. **Historic urban areas**, "large and small, include cities, towns and historic centres or quarters, together with their natural and human-made environments," [4] represent the embodiment of traditional urban values, within their role as historical documents. Text of the World Heritage Convention defines **Historic sites** as the "works of human or the combined works of nature and human, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view." [5] **Urban conservation** views architecture as but one element of the overall urban setting and is not limited to the preservation of single buildings, therefore it becomes complex and multilateral discipline and by this definition lies at the core of urban planning. [6] European Union research report No.16, SUIT: sustainable development of urban historical areas through an active integration within towns, from 2005 [7] settled three main categories of **urban heritage:**

- Monumental heritage of exceptional cultural value;
- Non-exceptional heritage elements but present in a coherent way with a relative abundance;
- New urban elements to be considered (for instance): The urban built form; The open space (streets, public open spaces), Urban infrastructures (material networks and mechanism).

The paper provides also an interesting discussion over defining built CH in terms of management, when two aspects are distinguished:

- **heritage by designation:** all cultural objects that are listed, institutionalised and labelled by experts.
- **heritage by appropriation:** the social, or ethnologic heritage that includes landscapes, townscapes, living places and non-exceptional building ensembles.

Concept of **historic urban landscape**, shall by *UNESCO Recommendation on the Historic Urban Landscape* from 2011 *"be understood as the urban area, the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of "historic centre" or "ensemble" to include the broader urban context and its geographical setting. It also includes*

social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity." [6] The document operates with terms landscape approach (LA) and historic urban landscape approach (HULA). LA is a framework for making landscape-level conservation decisions, developed by International Union for Conservation of Nature and the World Wildlife Fund. [6] Its aim is to help reaching decisions about the advisability of specific interventions1, and to facilitate the planning, negotiation and implementation of activities across a whole landscape. "HULA was developed by and within several adjoining disciplines, such as rural, cultural, urban and natural landscape management and territorial governance." [8] It integrates the goals of urban heritage conservation and social and economic development. Aim is to preserve the quality of the human environment, enhancing the productive and sustainable use of urban spaces, while recognizing their dynamics and promoting social and functional diversity. "It is rooted in a balanced and sustainable relationship between the urban and natural environment, between the needs of present and future generations and the legacy from the past. It considers cultural diversity and creativity as key assets for human, social and economic development, and provides tools to manage physical and social transformations and to ensure that contemporary interventions are harmoniously integrated with heritage in a historic setting and take into account regional contexts, while learning from the tradition s and perceptions of local communities and respecting the values of the national and international communities." [6]

2.3. Issues of value, authenticity and integrity

Clear understanding of the cultural significance of the place, the needs of its stakeholders is what stands at the beginning of a good heritage conservation practice. This includes the development of policies to both manage change and assess risks. To understand the history of the site development, is important to assess its associations, integrity and authenticity, therefore this understanding goes beyond a physical condition and fabric analysis. [9, p. 17]

Articulation of **heritage values** (HV) is used as a reference point for all conservation decisions. Assessment of values, that are attributed to heritage is a very important activity in any conservation effort, because of its eminent influence on the decisions that are made. HV are often called "**cultural significance**." This term is given a central role by *Australia ICOMOS Burra Charter, 2013*, [10] and means *aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.* [10, p. 2]

Value can be defined as the relative social attribution of qualities to things, therefore is depending on society and can change over time. Certain values can be related more specifically to the intrinsic aspects of the monument or site (design, material, and workmanship), while other values can be associated with its location and its relationship to the setting. [11, p. 14] There are many types of values with complex interactions between them. A typology of HV would be an effective guide to characterization and would move conservation stakeholders closer to having common language, when all parties' values can be expressed

[1] such as a new road or plantation

and discussed. The *Burra charter* devised HV into four groups as described above in the definition. *Research Report by The Getty Conservation Institute: Assessing the Values of Cultural Heritage* [12, pp. 5-31] developed provisional typology of HV, described in table 1. It is necessary to adopt a holistic approach to its evaluation, characterized by the integration of use and non-use values.

The European Commission's 2014 *Communication Towards an integrated approach to cultural heritage for Europe* [13] underlined the importance of maximising the intrinsic, economic, and societal value of CH, in order to promote inter-cultural dialogue. In the agenda for CH research and innovation *Getting Cultural Heritage to Work for Europe*, [14] CH is understood as a production factor and hereby an important resource for innovation, social inclusion and sustainability.

Table 1: Provisional typology of heritage values

Sociocultural Values	- Historical - Cultural/symbolic - Social - Spiritual/religious - Aesthetic
Economic Values	- Use (market) value, - Non-use (nonmarket) values: Existence Option Bequest

Authenticity is a crucial aspect in the assessment of heritage assets. Generally speaking, authenticity is ascribed to a heritage asset that is materially original or genuine as it was constructed and as it has aged and weathered in time. *The 1994 Nara Document on Authenticity* [15] stresses the credibility or truthfulness of the information sources for the assessment of authenticity, and notes that the diversity of cultures and heritage can be understood as an irreplaceable source of spiritual and intellectual richness for all humankind. Authenticity derives from the definition of the asset, and therefore may be understood in different ways depending on the context of its historical significance.

The heritage significance of a historic area, that results from gradual growth or development can be defined in terms of its historical **integrity**. Integrity generally refers to the material completeness and sound condition of an object or site. **'Historical integrity'** relates to the current form of a heritage asset as a result of growth and changes over time. The intrinsic qualities of a heritage asset include: quality of its design, materials, workmanship, setting and relationship to the setting. Over time, the original may be partially damaged, intentionally modified or even destroyed, while its original integrity caused to be diminished or lost. Historic asset may at different periods of its history, become part of a new whole, creating genuine part of its historical stratigraphy. Treatments aimed at the restoration of a heritage asset should refer to this new potential unity and therefore should be carried out within the framework defined by it. [11, p. 15]

Many conservation management and assessment standards, such as the constructs of authenticity and integrity, will need to be rethought in the light of CC. "*As circumstances change and the world goes through rapid and far-reaching transitions in the environment, land area,*

land use, ecology, energy, economic, and political and social systems, alternative ways and means of sustaining the significance of heritage places will continue to evolve." [9, p. 16]

2.4. Heritage at risk

"Cultural heritage is always at risk. It is at risk from the depredations of war. It is at risk in the face of nature's occasional eruptions and irruptions. It is at risk from political and economic pressures. It is at risk from the daily forces of slow decay, attrition and neglect. It is even at risk from the hand of the over-zealous conservator!" [16, p. 17]

According to general need for protection of CH, different frameworks were established or developed to manage its protection. Although negative impacts of climate-related and other hazards on urban areas are widely discussed, their impacts on historic areas have not been studied extensively enough. In addition, according to the United Nations Educational, Scientific, and Cultural Organisation (UNESCO), **disaster risk reduction** (DRR) does not register as a priority area for management of World Heritage property, despite the increasing vulnerability of historic areas to hazards.

In order to enhance the resilience of historic areas (including preparation, safeguarding, conservation and management, response and recovery), is ARCH covering the whole DRM cycle, defined below and in Figure 1. DRM methodology in context of ARCH, is elaborated in detail within the content of *SotA 2 report: Disaster risk management, emergency protocols, and post-disaster response.*

Disaster risk management are *processes for designing, implementing, and evaluating strategies, policies, and measures to improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response, and recovery practices, with the explicit purpose of increasing human security, well-being, quality of life, and sustainable development*. [9, p. 96]

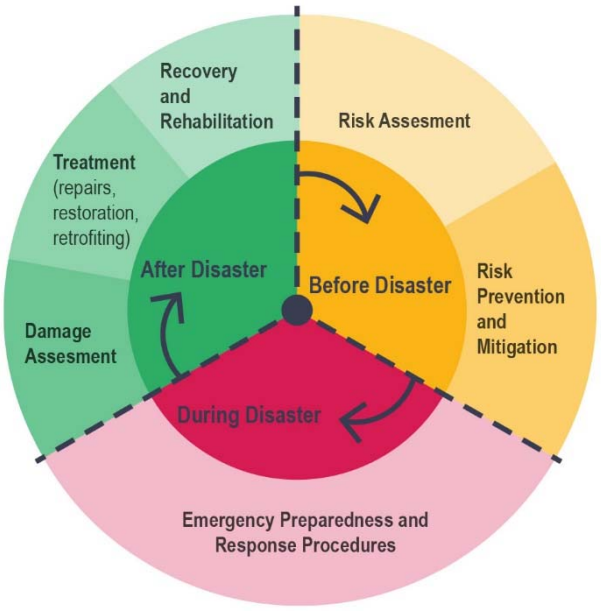

Figure 1: Diagrammatic representation of integration of disaster risk management planning into overall site management and regional planning.

Adapted from: Disaster Risk Management of Cultural Heritage in Urban Areas: A Training Guide: 1.4 Principles for Disaster Risk Management for Cultural Heritage

Available on: http://www.r-dmuch.jp/en/project/itc/training_guide/sections/section_3/module1_4.html

2.4.1. Climate change and heritage

When The International Council On Monuments and Sites (ICOMOS) was founded in 1966, in order to work for the conservation and protection of CH, CC was not considered as an urgent threat to CH. Much higher on the agenda were more traditionally understood threats to CH, like conflicts, rapid urban development and natural disasters. Nowadays, CC has become one of the most significant and fastest growing threats to people and their CH worldwide.[2]

European Commission's document on *the European Framework for Action on Cultural Heritage* [17] is defining 5 pillars on which the framework is based. **Pillar 3: Cultural heritage for a resilient Europe: safeguarding endangered heritage**. The framework entails three clusters of actions, while one aiming on **protection of CH against natural disasters and climate change**. In order to this task, a set of actions are being developed to research, develop and disseminate evidence-based and cost-effective strategies and tools. These will be used to manage risks and improve the resilience of Europe's CH in the event of natural disasters and against the intensifying effects of climate change.

2.4.2. Climate change related and other hazards

Unequivocal scientific evidence shows that unprecedented concentrations of greenhouse gases (GHGs), driven by human activities such as burning of fossil fuels and deforestation, are contributing to climate changes including warming of the oceans and atmosphere, sea level rise and diminished snow and ice. The hazards relevant to the four pilot cities in the ARCH project are outlined in Table 2 below.

Table 2: Summary of hazards related to ARCH pilot cities. Processed according to: ARCH: Questionnaire for partner cities to develop city narratives and tasks

Pilot City	Exposure to climate change related or other hazards
Bratislava	- pluvial flooding - droughts - winds erosions, slope movements, landslides - heatwaves - erosion

[2] ICOMOS, 19GA 2017/30. Resolution 19GA 2017/30 encourages all ICOMOS Members to strengthen their efforts to aid in implementing the Paris Agreement, emphasizing cultural heritage and landscape-based solutions, noting the need for rapid and deep reductions in emissions to reverse the increase in the global average temperature to well below 2°C; that adaptation efforts should take into consideration vulnerable communities and ecosystems, and enhance understanding and action with respect to loss and damage from climate change; and the need for solidarity with those nations most impacted by, or least able to bear the cost of, climate change to enable them to safeguard their heritage.

Camerino	- Seismic hazard - Hydrogeological risks *(non-specified)*
Hamburg	- Natural Hazards *(non-specified)* - stormwaters - climate hazards *(non-specified)*
Valencia	- Flooding - Heat Waves - Sea Level Rise - Saline intrusion - Coastal erosion - Forest fires - Drought

The impacts of these CCs are already damaging infrastructure, ecosystems, and social systems – including CH – that provide essential benefits and quality of life to communities. [9, p. 4] Specific drivers3 and impacts are outlined in the table 3 below. Table is for the sake of simplicity shortened to individual climate drivers although many of these climate drivers act in combination, whit complexity of interactions, difficult to capture here.

Table 3: Summary of key climate drivers and impacts, which can be expected to affect heritage materials, sites and landscapes

Summary of the types of climate drivers which can be expected to affect heritage	- Increased Temperature - Sea Level Rise - Climate Change (e.g. temperature, precipitation, humidity and wind) and air pollution combined (outdoor) - Climate Change (e.g. temperature and humidity) and air pollution combined (indoor) - Precipitation and humidity
Summary of the types of climate impacts which can be expected to affect heritage	- Sea level rise, - Coastal flooding - Coastal erosion - Loss of sea ice - Glacial melt - Permafrost thaw, ice patch melt and warming soils - Changed freeze/thaw cycles - Increased ocean temperatures - Increased storm intensity and/or frequency - More extreme rainfall - Increased humidity - Increased wind or changes in wind direction - Drought - Aridification

[3] "*Drivers are aspects which change a given system. Changes in both the climate system and socioeconomic processes including adaptation and mitigation are drivers of hazards, exposure, and vulnerability. Drivers can, thus, be climatic or non-climatic. Climatic drivers include: warming trend, drying trend, extreme temperature, extreme precipitation, precipitation, snow cover, damaging cyclone, sea level, ocean acidification, carbon dioxide fertilisation. Non-climatic drivers include land use change, migration, population and demographic change, economic development ".*https://www.ipcc.ch/site/assets/uploads/2018/02/ar5_wgII_spm_en.pdf

	- Heatwaves - Changes in seasonality - Changes in species distribution driven by climatic changes

Except for climate change related hazards, there are other types of threats, either with natural or human origin: fire, earthquakes, floods, armed conflicts, tsunami, avalanches, mud and land-slides and flows, winds or tropical storms, hazards of human origin (vandalism, theft, arson, the use of exploitation devices, accidents), inadequate maintenance, industrial pollution and disasters. Each of the hazards, impacting the heritage assets, requires development of risk – preparedness strategies and various technical and planning actions (DRM). In addition, one of the ARCH pilot cities, Camerino, is suffering from the consequence of 2016 earthquake, nature – related disaster.

In line with above, the *Partnership on Culture and Cultural Heritage of the Urban Agenda for the EU* [18] focuses on the resilience of cultural and natural heritage. In its *Orientation Paper* the challenges and key objectives for urban areas regarding resilience and heritage are four-fold:

1. to safeguard the heritage from natural disaster of climate change and to lower its vulnerability;
2. to improve the quality of CH and open/green spaces to reduce risks and promote heritage as an instrument for building resilience;
3. to manage urban transformation processes without provoking/inducing further environmental risks. Aiming this the maintenance of the built CH and the building stock is a key issue;
4. to contribute to urban resilience by supporting new quality areas and projects that do not add pressures or constitute potential threats to the environment.

3. Managing cultural heritage at risk

In addition to those impacts mentioned within the table above, is necessary to mention large scale human displacement and migration, loss of existing communities, flooding, desertification, wind damage and major changes to cityscapes, landscapes and all types of heritage buildings, sites and Places. CCs will unprecedentedly affect what is now considered to be good conservation practice, therefore some modifications will be required, either to enhance position of CH as an asset in adaptation to CCs and to address its the eligible impacts. [9, p. 16] In following part we discuss the aims of CH management, in terms of protecting diverse heritage values. We then list established methodologies for effective management of CH at risk and importance of participatory governance.

3.1. Principles for managing cultural heritage at risk

Publication *"RISK PREPAREDNESS: A Management Manual for World Cultural Heritage,"* [16] published by ICCROM in 1998,[4] as well-developed manual for experts dealing with CH in terms of DRM, appears to be relevant for ARCH. The following principles to guide effective management of CH at risk are developed within the manual. In the section below are analysed according to DRM cycle.

How it addresses DRM: It does considerably, while principles have implications in risk planning, recovery and response.

Before disaster:

- The key to effective protection of CH at risk is advance planning and preparation.
- Advance planning for CH properties should be conceived in terms of whole property (buildings, structures, and their associated contents and landscapes).
- Advance planning for the protection of CH against disasters should integrate relevant heritage considerations within a property's overall disaster prevention strategy.
- Preparedness requirements should be met in heritage buildings by means which will have least impact on heritage values.
- Heritage properties, their significant attributes and the disaster – response history of the property should be clearly documented as a basis for appropriate disaster planning, response and recovery.
- Maintenance programmes for historic properties should integrate a cultural - heritage - at - risk perspective.[5]

[4] This publication is also mentioned in section 4.1.1.

[5] Maintenance programmes are often conceived in terms of the daily causes of deterioration of a property (temperature, humidity); this should be expanded to include analysis of all possible human and natural resources of decay and loss, to reduce or mitigate risk.

- Property occupants and users should be directly involved in development of emergency - response plans.

During disaster:

- Securing heritage features should be a high priority during emergencies.

After disaster:

- Following a disaster, every effort should be made to ensure the retention and repair of structures of features that have suffered damage or loss.

Before/during/after disaster:

- Conservation principles should be integrated where appropriate in all phases of disaster planning, response and recovery.[6]

3.2. International frameworks to manage cultural heritage at risk

Since the first international cooperation efforts in terms of international response to disasters and conflicts in the late 19th century,[7] substantial development was achieved. Mitigation and relief were prioritized within the first strategies, while post-disaster and post-conflict reconstruction and recovery began to be considered within the strategies in the 1990s.[8] Current discourse towards international cooperation has been enhanced around common approach and importance of "build back better" (BBB) approaches in post-disaster settings, peacebuilding, culture and reconciliation in post-conflict recovery, emphasizing community involvement. [19, p. 15] Below are several current related global networks listed and described.

Current global frameworks and tools for reconstruction and recovery:

- **Joint Declaration on Post-Crisis Assessments and Recovery Planning** [20] signed by the European Commission, the United Nations, and the World Bank **in 2008**. Aim of the Document is not only to foster better synergies and provide more coordinated support to national counterpart, but also develop common approach for post-crisis assessments and recovery planning.

- **Sendai Framework for DRR 2015-2030** [21]**,** endorsed by the UN General Assembly in 2015, is a 15-year, voluntary, non-binding agreement with seven targets and four priorities for action. Document recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and rest of stakeholders. It aims for the following outcome: "*The substantial reduction of disaster risk and losses in lives,*

[6] Adapted from: [16]
[7] For more detailed background, see: cure framework, pp. 15 – 16.
[8] We are dealing with this topic in more detail in section 4.1.1.

livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries." [21, p. 12]

- **2030 Agenda for the Sustainable Development** "*is the first **international agenda to acknowledge the power of culture** for creating decent work and economic growth, **reducing inequalities, protecting the environment, promoting gender equality and building peaceful and inclusive societies.** The New Urban Agenda adopted in 2016 also places special emphasis on the role of culture in **building sustainable cities**."* [22, p. 1] 2030 Agenda for Sustainable Development, within its 17 Sustainable Development Goals (SDGs), adopted by United Nations. acknowledges the integral role of culture across many of the SDGs.[9] **Culture for the 2030 Agenda** demonstrates the vast scope of culture's contribution to sustainable development. "*From cultural heritage to cultural and creative industries, from sustainable tourism to cultural institutions, culture enables and drives the social, environmental, and economic dimensions of sustainable development."* [19, p. 17]

Culture in all its forms is fundamental, cross-cutting element. Although it has been included as an important component in the above-mentioned international frameworks, it still remains to be considered within BBB approach[10] and other reconstruction and recovery frameworks.

3.3. Participatory Governance of Cultural Heritage

CH is needed to be effectively and democratically governed, therefore, next to DRM, integrated policies are essential. In the model of culture-based governance, the role of communities is crucial. It requires commitment, collaboration, and coordination between stakeholders at all levels. Preservation of the CH values and promotion the cultural and creative industries is ensured by the participation of local governments, while designing, implementing and monitoring policies.

"Acknowledging the city as a 'cultural construct' where built structures and open spaces are closely linked to the social fabric." [19, p. 9] In order to plan effectively, implement and finance reconstruction and recovery strategies, is essential to incorporate participatory approaches into the governance systems.

- Key principles concerning participatory approach are these:
- Cultures of concerned communities and as well, individuals are taken into accounts
- Involvement of communities within activities such as debris removal (provide potential cash-for-work program to support livelihoods, serve as a catalyst for economic recovery)

[9] Quality education (SDG 4), economic growth and sustainable consumption and production patterns (SDGs 8 and 12), environmental sustainability (SDGs 14 and 15), inclusive and peaceful societies (SDG 16), gender equality (SDG 5), food security (SDG 2), and health (SDG 3). Culture is explicitly addressed in Goal 11 – 'to make cities and human settlements inclusive, safe, resilient, and sustainable' – which identifies cultural and natural heritage as essential levers for promoting sustainable development.

[10] The issue is nuanced within the SotA 2 report.

- Appropriate knowledge-sharing and capacity-building
- The participatory approach is supposed to be supported by local governments, responsible for delivering basic services. [19, pp. 4-35]

"The role of associated communities and traditional custodians in best practice conservation management planning is fundamental, to ensure social inclusion and social cohesion and a full understanding of the values of the place. Meaningful public participation is also needed to ensure the legitimacy of climate change adaptation planning and implementation. Similarly, administrators and town planners have the obligation to do good and comprehensive Conservation action plans, supporting the community and the surrounding historic urban landscape." [9, p. 18]

EU has number of initiatives that impact and support the national policies in the field of CH. Particularly relevant for the topic of CH governance is the **Council conclusion on Participatory Governance of Cultural Heritage** [23] and the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, ***Towards an integrated approach to cultural heritage for Europe***, [13] both published in 2014. First of the documents mentioned above highlights that the involvement of all interested parties in decision-making, planning, implementing, monitoring and evaluating CH policies and programmes can increase public awareness of the values that it represents, reinforce transparency and accountability in the use of public resources, and build trust between citizens and public authorities. [23]

The CUlture in city REconstruction and recovery Framework [19] is operational guidance for city reconstruction and recovery using a project cycle approach. It addresses policy-makers and practitioners and provides operational tools that integrate culture throughout all phases of the DRM cycle. In the CURE framework culture functions are considered to be the main drivers to integrate people-centred and place-based policies, which in turn are employed for socio economic recovery and physical reconstruction. The focus of this section is supported within components: 1.2, 3.2, 4.3, where participatory approach is needed. This framework is further elaborated in SotA 3, considering BBB processes across the whole framework. Phases of the CURE framework are described in table 4.

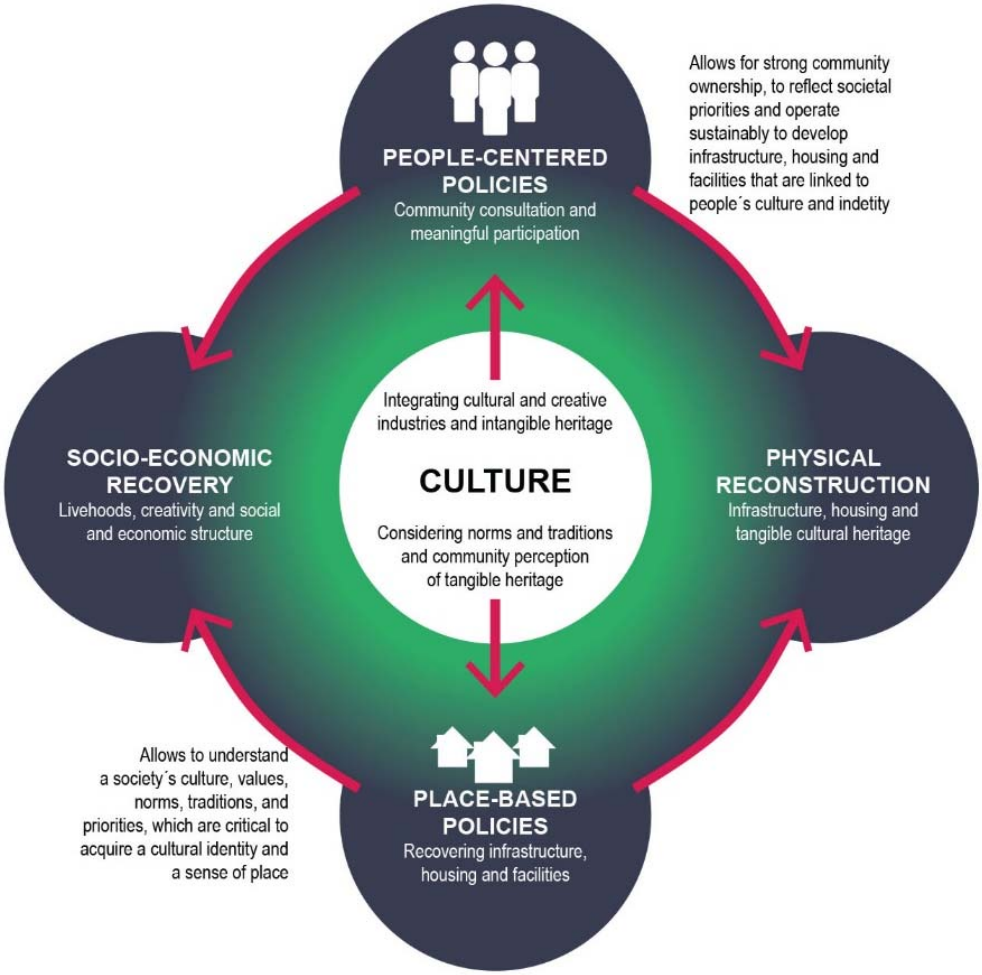

Figure 2: CUlture in City REconstruction and Recovery Framework. Adapted from: Culture in city Reconstruction and recovery: The Position Paper, Paris: UNESCO, 2018, pp. 24.

PHASE 1	Damage and Needs Assessment	Component 1.1: Tangible Cultural Heritage
		Component 1.2: Intangible Cultural Heritage
		Component 1.3: Creative and Cultural Industries
		Component 1.4: Cultural Tourism
		Component 1.5: Historic Housing Stock and Land resources
	Scoping	Component 1.6: Data Collection and Analysis
		Component 1.7: Asset Mapping
		Component 1.8: Stakeholder Mapping
		Component 1.9: Vision Development
PHASE 2	Setting Policy and Strategy	Component 2.1: Designing and Planning Process
		Component 2.2: Regulatory Mechanisms
		Component 2.3: Civic Engagement
PHASE 3	Financing	Component 3.1: Identifying Funding Resources
		Component 3.2: Management of Land Resources
		Component 3.3: Land Value Capture
		Component 3.4: Land Readjustments
		Component 3.5: City-led Financing tools
PHASE 4	Implementation	Component 4.1: Institutional Arrangements
		Component 4.2: Risk Management
		Component 4.3: Communication and Engagament Strategy

Table 4: Phases of Culture in City Reconstruction and Recovery Framework
Adapted from: Culture in city Reconstruction and recovery: The Position Paper, Paris: UNESCO, 2018, pp. 36.

4. Relevant frameworks, regulations and policies for resilient cultural heritage

When addressing the Historic Areas resilience in all the DRM Cycle we firstly need to refer to and understand the CH dominant conservation philosophy, as defined by key international frameworks, and how this is made operational at national and regional levels of governments; for what, first of all, we need to understand its evolution during the last centuries and decades.

The aim of this section is to analyse from the DRM cycle point of view the most representative documents, international standard-setting documents, regarding CH conservation; as well as national or regional policies and legislations, in order to understand how they tackle (if they do) the resilience of Historic Areas against hazards or climate change, and, to see if this perception has evolved -and how- during the last decades. A selection of the main recognized CH conservation Charts, Declarations, Recommendations and Conventions are analysed hereafter.

The international council on monuments and sites, ICOMOS, is the most representative non-government organization tackling the preservation of heritage. It develops and adopts CH **Conservation and Restoration Charters** since 1931 (Athens Charter - conference) [24], aiming to develop internationally agreed preservation and restoration principles that should be adapted to the national or local particularities by the local governments.

Some of the most representative regulations and policies for Historic Areas safeguarding are those published by UNESCO. The operational principles of such legal instruments by UNESCO are the following [25]: **Declaration,** a purely moral or political commitment, binding States on the basis of good faith. **Recommendation,** addressed to one or more States, a Recommendation is intended to encourage them to adopt a particular approach or to act in a given manner in a specific cultural sphere. In principle, a Recommendation does not create a legally binding obligation on Member States. **Convention,** synonymous with treaty, this term refers to any agreement concluded by two or more States. Such an agreement is based on the joint will of the parties upon whom the convention imposes binding legal commitments.

All the above mentioned barely tackle the Historic Areas' resilience against hazards. As part of the evolving of the CH conservation philosophy during the last centuries, DRM in Heritage Areas has also started to be assessed in the last few decades, and this has led to the main -not standard-setting- Manuals and Training Guides (underlined in this document and further analysed in ARCH's SotA 2). The aim of these documents is to include the Hazards or Risks preparedness and response in the criteria or CH sites safeguarding, as part of the "classical" heritage conservation criteria.

European Union and the Council of Europe mostly refer to the Declarations, Recommendations, Conventions and Charters by the above organizations, but also organizes its own Conventions or Treaties that develop principles, declarations or resolutions for the safeguarding of its CH.

4.1.1. Normative instruments at the International level: Declarations, Recommendations, Conventions and Charters

At an international level, key documents include:

- **The Athens Charter for the Restoration of Historic Monuments - 1931** [26]
  Adopted at the first International Congress of Architects and Technicians of Historic Monuments.

  How it addresses DRM: It does not. Related to Before disaster measures: It refers to *"strict custodial protection"*, means protection of heritage before damages occur (not hazards but damages in general). Conclusions refer to the *"Technical and moral cooperation"* of communities, states, institutions and associations. It also mentions *"The role of education in the respect of monuments".* Related to During disaster measures: It does not mention it, but in the conclusions *"It recommends that the public authorities in each country be empowered to take conservatory measures in cases of emergency".* Related to After disaster measures: It gives criteria on restoration and reconstruction (main objective of the Conference). It particularly mentions *"Modern techniques and materials"* and it refers to *"protection of areas surrounding the historic sites"*.

- **The Venice Charter. International charter for the Conservation and Restoration of Monuments and Sites – 1964** [27]
  Adopted at the second International Congress of Architects and Technicians of Historic Monuments.

  How it addresses DRM: It does not. The Venice Charter served to deepen in and detail the Heritage Conservation theory and it did, but, as the Athens Charter, in terms of disaster risk management it didn't tackle the resilience or adaptation of heritage to hazards or risks.

- **Recommendation concerning the Protection, at National Level, of the Cultural and Natural Heritage - 1972** [28]**.**
  Adopted by the UNESCO General Conference held in Paris in 1972.

  How it addresses DRM: It first mentions the need of undertaking the risks or hazards that heritage faces to.

  Before disaster: On its 23rd recommendation, that the *"Member States should investigate effective methods of affording added protection to those components of the cultural and natural heritage that are threatened by unusually serious dangers".* On it 25th recommendation it also says that *"Measures should also be taken to prevent pollution and guard against natural disasters and calamities, and to provide for the repair of damage to the cultural and natural heritage".*

  It also mentions dealing with the tourist development as a risk, noting that *"(tourism development programmes) should be carefully drawn up so as not to impair the intrinsic character and importance of that heritage"* and also *"determine the impact of visitor use"* in natural heritage sites.

- **Convention Concerning the Protection of the World Cultural and Natural Heritage - 1972** [5]
  Adopted by UNESCO in the same General Conference held in Paris in 1972. It firstly defines the climate/natural hazards that heritage faces: ***calamities and cataclysms; serious fires, earthquakes, landslides; volcanic eruptions; changes in water level, floods and tidal waves.***

  How it addresses DRM: Significantly, the Convention outlines the risks that heritage faces in its first starting consideration: "*Noting that the cultural heritage and the natural heritage are increasingly threatened with destruction not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage or destruction".* In another of the basis considerations, it says *"the magnitude and gravity of the new dangers threatening them (WH), it is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value".*

  Before disaster: On its 5th article it proposes *"to develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage". This convention also established the (ongoing) "List of World Heritage in Danger"* (article 11), where it describes the sites that will be included: *"The list may include only such property forming part of the cultural and natural heritage as is threatened by serious and specific dangers, such as the threat of disappearance caused by accelerated deterioration, large-scale public or private projects or rapid urban or tourist development projects; destruction caused by changes in the use or ownership of the land; major alterations due to unknown causes; abandonment for any reason whatsoever; the outbreak or the threat of an armed conflict; calamities and cataclysms; serious fires, earthquakes, landslides; volcanic eruptions; changes in water level, floods and tidal waves".*

  When defining the Educational Programmes to be launched, it defines that *"They shall undertake to keep the public broadly informed of the dangers threatening this heritage".*

  During/After disaster: When analysing the Conditions and Arrangements for International Assistance (between State Parties), it defines that *"Requests based upon disasters or natural calamities should, by reasons of the urgent work which they may involve, be given immediate, priority consideration by the Committee, which should have a reserve fund at its disposal against such contingencies."*

- **The Declaration of Amsterdam / Amsterdam Charter – 1975** [29]
  The Congress on the European Architectural Heritage held in 1975 *(European Architectural Heritage Year)* in Amsterdam. The Committee of Ministers of the Council of Europe adopted the developed criteria in the Amsterdam Charter.

  How it addresses DRM: Unlike the 192 UNESCO Convention, it does not tackle nor mention disaster risk management in heritage sites.

- **Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas - 1976** [3]
  Adopted by the UNESCO General Conference in Nairobi.

  How it addresses DRM: It focuses on *Heritage Areas* and some of the external dangers that are being exposed to, but it does not mention hazards or climate change related risks. Interestingly, it "broadens" the terms of CH Safeguarding, *"Safeguarding shall be taken to mean the identification, protection, conservation, restoration, renovation, maintenance and revitalization of historic or traditional areas and their environment."* which gives us the more holistic view of heritage conservation, and which can be seen as an initial reflection of the "before, during and after" heritage damage processes are held.

  During/After disaster: It recommends Member States that *"Public authorities should also set aside special funds for the repair of damage caused by natural disasters."*

- **The Charter of Krakow – 2000** [30]
  ICOMOS Conference on Conservation developed the principles for Conservation and Restoration of Built Heritage, the Krakow Charter, in year 2000. It first defines the conservation methods and the types of built heritage.

  How it addresses DRM: It focuses on Built Heritage conservation criteria and procedures. But, in the same time, the main difference with the other Charters is that it specifically mentions that *"As an essential part of this process* (management of dynamic changes in built heritage), ***it is necessary to identify risks, anticipate appropriate prevention systems, and create emergency plans of action****"*, which can be perceived as the first mention in international Normative Instruments to identifying, prevention and the creation of emergency plans; all those elements that are actually part of the Disaster Risk Management cycle.

It seems quite evident that the drafting of this Charter was fed by the ICCROM manual called *"RISK PREPAREDNESS: A Management Manual for World Cultural Heritage"* [16] (also participated by UNESCO, ICOMOS and WHC) which was published in 1998, only two years before this Krakow Charter was approved. Although not being a Charter or Convention -not being a standard-setting document- adopted by the UN Member States or governments, it was only a well-developed manual for experts, this document that deepens in the issue should be considered for disaster risk management of Historic Areas.

Also, some years before, in 1993 and 1997 the Committee of Ministers of the Council of Europe approved two very relevant recommendations (the first documents that directly referred to disaster risk management in Heritage Sites), the *"Recommendation No. R (93) 9 on the protection of the architectural heritage against natural disasters"* and the *"Recommendation No. R (97) 2 on sustained care of the cultural heritage against physical deterioration due to pollution and other similar factors"* which will be analysed afterwards in this report.

- **Recommendation on the Historic Urban Landscape, 2011** [6]
  Adopted by UNESCO on its 35th session in Paris, November 2011.It interestingly focuses on Climate Change threats, which represents a clear change of perception on the disaster risk identification -also, slightly, the management- topic.

  How it addresses DRM: As said, it goes further with the hazards and risks identification and management for Historic Areas. Starting in the Preamble, it notes that some perceptions regarding Historic Areas, such as Climate Change, were not present when drafting the 1976 Recommendation: *"under processes of demographic shifts, global market liberalization and decentralization, as well as mass tourism, market exploitation of heritage, and climate change, conditions have changed and cities are subject to development pressures and challenges not present at the time of adoption of the most recent UNESCO recommendation on Historic Areas in 1976".* In the Introduction in also mentions *"an increasing risk of climate-related disasters".*

  Before disaster: When identifying the *Challenges* for the Historic Urban Landscapes, it underlines and describes three: *Urbanization and Globalization, Development and Environment.* It is well worth to mention how it describes the Environment related Climate Change related challenges and other hazards: *19. Human settlements have constantly adapted to climatic and environmental changes, including those resulting from disasters. However, the intensity and speed of present changes are challenging our complex urban environments. (…) 20. Changes to historic urban areas can also result from sudden disasters and armed conflicts. These may be short lived but can have lasting effects. The historic urban landscape approach may assist in managing and mitigating such impacts.*

  When considering *Tools* to be adopted for Historic Urban Landscapes, it highlights the need of planning tools to manage the changes and, also, assess the impacts of those changes: *"planning tools should (…) provide for the monitoring and management of change to improve the quality of life and of urban space. (…) Heritage, social and environmental impact assessments should be used to support and facilitate decision-making processes within a framework of sustainable development".*

  During/After disaster: It does not mention these phases, but one of the aims of the Recommendation is to facilitate decision-making processes, therefore, to be prepared to provide quick and sound responses to hazards or disasters.

In parallel to these Charters and Recommendations, particularly in the last two decades, DRM in Historic Areas has been tackled by several instruments, those which, not being standard-setting Charters, have undergone the DRM in CH sites. It is not the aim of this report to deepen in these (they have been taken into consideration in other ARCH State of the Art reports), but the following should be mentioned:

- The abovementioned ICCROM manual *"RISK PREPAREDNESS: A Management Manual for World Cultural Heritage"* (1998).
- The "*Special Thematic Session on Risk Management for Cultural Heritage"* [31] (UN World Conference on Disaster Reduction, Kobe, Japan, 2005).

- The "*Managing Disaster Risks for World Heritage"* [32] (UNESCO, ICCROM, ICOMOS and IUCN, 2010). 32
- The "*Session on Resilient Cultural Heritage"* (Sendai, Japan, 2015). [33]
- Also, some relevant publications such as the *"World Heritage: Fostering resilience"* (World Heritage n°74 - January 2015). [34]
- Finally, recently published by ICOMOS are the European Quality Principles for EU interventions (2019) with potential impact upon Cultural Heritage and tackling Risk assessment and mitigation. [35]

4.1.2. Current European Union legislation and standardization

All the previous documents are standard-setting documents, including the recommendation for the International, National and Regional governments and bodies to assure that those criteria are included in their legislation. EU itself, has, as the Charters did, also addressed the safeguarding of CH with key documents, including the following.

European Union

The **Lisbon Treaty** or **Treaty of the European Union** (TEU, 2007) [36] does *"ensure the safeguarding and development of the European Cultural Heritage"* but it delegates to the purpose made legislations. It recognises the cultural diversity of all the Member States, but notes that, the EU, as part of its core values, shall "*respect its rich cultural and linguistic diversity, and shall ensure that Europe's cultural heritage is safeguarded and enhanced"* (Article 3). The Treaty on the Functioning of the European Union (TFEU, 2007) [37] further specifies that *"The Union shall take cultural aspects into account in its action under other provisions of the Treaties, in particular in order to respect and to promote the diversity of its cultures"* (Article 167.4).

- **Recommendation of 20 December 1974 from the Commission to the Member States on the protection of the architectural and natural heritage** [38]

  Dated 1974, it refers to the "*Convention concerning the protection of the World Cultural and Natural Heritage adopted in November 1972 by UNESCO, and the European Architectural Heritage Year* (1975)*"*, both analyzed above.

- **Council conclusions of 17 June 1994 on the drawing up of a Community action plan in the field of Cultural Heritage** [39]

  It very slightly mentions *"tourism and environment"* as actions that are envisaged (those to be aware of when regarding CH conservation).

At a strategic level, the Council of the European Union adopted on 27 November 2018 the Conclusions on the **Work Plan for Culture 2019-2022** [40]**,** in which "Sustainability in CH" has been identified as one of the five priorities for European cooperation in cultural policy making [41]. Following the legacy of the European Year of Cultural Heritage in 2018, the European Commission launched a set of 60 concrete actions in the ***European Framework for Action on Cultural Heritage.*** [17]

Council of Europe

The **European Cultural Convention** (1954) had among its aims *"to promote national contributions to Europe's common cultural heritage respecting the same fundamental values and to encourage in particular the study of the languages, history and civilization of the Parties to the Convention".*

- **The Convention for the Protection of the Architectural Heritage of Europe - 1985** [42]
  It refers to the 1975 Amsterdam Charter and to the 1976 Recommendations. It only mentions *"the effects of pollution"* among the risks that architectural heritage faces.
- **The European Convention on the Protection of the Archaeological Heritage - 1992** [43]
  It mentions the need of ensuring the *"environmental impact assessment"* for the safeguarding of the archaeological Heritage Sites.

- **The European Landscape convention - 2000** [44]
  It only mentions very slightly the need of *"landscape management"* to ensure the maintenance of those facing environmental processes: *"to ensure the regular upkeep of a landscape, so as to guide and harmonise changes which are brought about by social, economic and environmental processes".*

Between the many **Resolutions, declarations and recommendations** adopted by the Ministers responsible for CH and the Committee of Ministers, the following should be mentioned, as they directly deal with the Risk Management for CH. **These are the first (oldest) recommendations that come from the European institutions in regard of the CH management against hazards.**

- **Recommendation No. R (93) 9; on the Protection of the Architectural Heritage against natural disasters – 1993** [45]
  Although being quite outdated, it is a very interesting document. It refers (among others) to the *"Parliamentary assembly of the Council of Europe on protecting the Cultural Heritage against disasters, 1986"* and it deepens in the topic.

  It first describes the disaster risk related terminology: ***"Natural disaster"***, ***"Hazard"***, ***"Vulnerability"*** *and* ***"Risk"*** *are defined.* How it addresses DRM: It does address the Disaster Risk Management phases (note calling them DRM), although not comprising all (it mainly focuses on the Before Disaster tasks) and not analyzing them in depth.

  Before disaster. It includes a whole paragraph to *"Risk Assessment".* Another for *"Disaster prevention and mitigation strategies"* and one for the *"Legal and administrative framework for disaster protection";* therefore, it nearly covers all the *Before disaster* part of the DRM cycle (Risk Assessment, Risk prevention and mitigation and Emergency preparedness). It deepens in the issue and furthermore **it gives guidelines and also checklists for disaster prevention and mitigation strategies.** Lastly, it provides a full paragraph to the "Education and Training need" of the professionals.

During disaster. It mentions in between the *"Legal and administrative framework for disaster protection"* the need of Authorities responsible to: *"produce and maintain records, monitor disaster activity and produce protection strategies, implement salvage, recording and emergency work, provide educational and technical assistance and guidance, and plan and implement restoration projects after the disaster".*

After disaster. In the same paragraph, it mentions the need of Authorities responsible to: *"plan and implement restoration projects after the disaster*". It also mentions contingency funds to be prepared by national and local funds: *"Adequate and quickly accessible (*economic*) resources should be established for (…) and for contingency funding in the event of a disaster".* Lastly, it mentions the restoration and recovery when speaking about the insurance of heritage assets "*it shall represent the full cost to be incurred at the time of the loss or damage, in order to repair, restore or reinstate the buildings or objects to their condition before the disaster*" but it does not deepen in particularities or recommendations for that recovery process.

- **Recommendation No. R (97) 2; on Sustained Care of the Cultural Heritage against physical deterioration due to pollution and other similar factors - 1997** [46]
  Based (between others) in the previous Recommendation, it provides two new interesting definitions; ***"Risk Analysis:*** *the systematic study allowing the identification and assessment of all risks which threaten the physical condition and the economic and cultural value of the heritage concerned"*, and ***"Risk Management:*** *characterized by the optimization of the relevant financial, technical and human resources based on thorough knowledge and skill and good coordination, with an emphasis on good communication between everyone involved".* The content itself, does not go further than the previous recommendation.

4.1.3. National and regional policies in ARCH pilot cases' countries

As previously mentioned, most of the recommendations and charts adopted by UNESCO, ICOMOS, ICOM, ICCROM or the EU itself, usually recommend each of the Member States to take into account what is being exposed to develop their own guidance and regulations, therefore, national legislations are the ones that define the legal conservation and restoration procedures for CH ant its management in Europe (meaning, EU frameworks are not legally binding, while national legislations are). Maybe, it's worthwhile pointing at European projects at the national level, such as PROCULTHER (Protecting CH from the Consequences of Disasters), co-funded by DG ECHO (Directorate-General for European Civil Protection and Humanitarian Aid Operations of the European Commission). The project aims at developing a common European methodology along with standard operating procedures for protecting CH during emergencies; promoting the development of preparedness arrangements in this sector in a number of UCPM participating States; creating a multi-national, multi-stakeholder and multi-sectoral asset able to provide guidance to interested States for developing preparedness measures for the protection of CH during emergencies and to intervene globally, in case of international emergency, to support national response efforts of affected countries in this sector.

The international legislation is relatively flexible with the States when it comes to developing domestic CH policies in the way that is most compatible with their own traditions and policy

practices.[11] In many Western countries, the public sector has traditionally been the central actor in heritage management, particularly in Europe. [47, p. 39] However, the socio-political context and distribution of power in each country may vary, resulting in different responsible authorities from one system to another. Usually, in Europe certain countries have more a centralised system (Italy), others are highly decentralised (Germany).

Following, the legal instruments that refer to CH conservation and management in the four countries in which ARCH project has pilot cities, and a short analysis of how they handle the hazards and disaster risk management.

Slovakia (pilot *city* of Bratislava)

In addition to main legal framework concerning monuments protection, described above, several strategic and conceptual documents were developed by the Government of Slovak Republic:

- **Declaration of the National Council of Slovak Republic on protection of cultural heritage** from 28. 2. 2001, resolution no. 91/2001 Coll.
- **Conception of protection of monuments**, resolution of Government of Slovak Republic no. 813/2011, update: no. 411/2013 and no.189/2015
- **Strategy of protection of monuments for years 2017 – 2022,** resolution of Government of Slovak Republic no. 588 from 13.12. 2017.

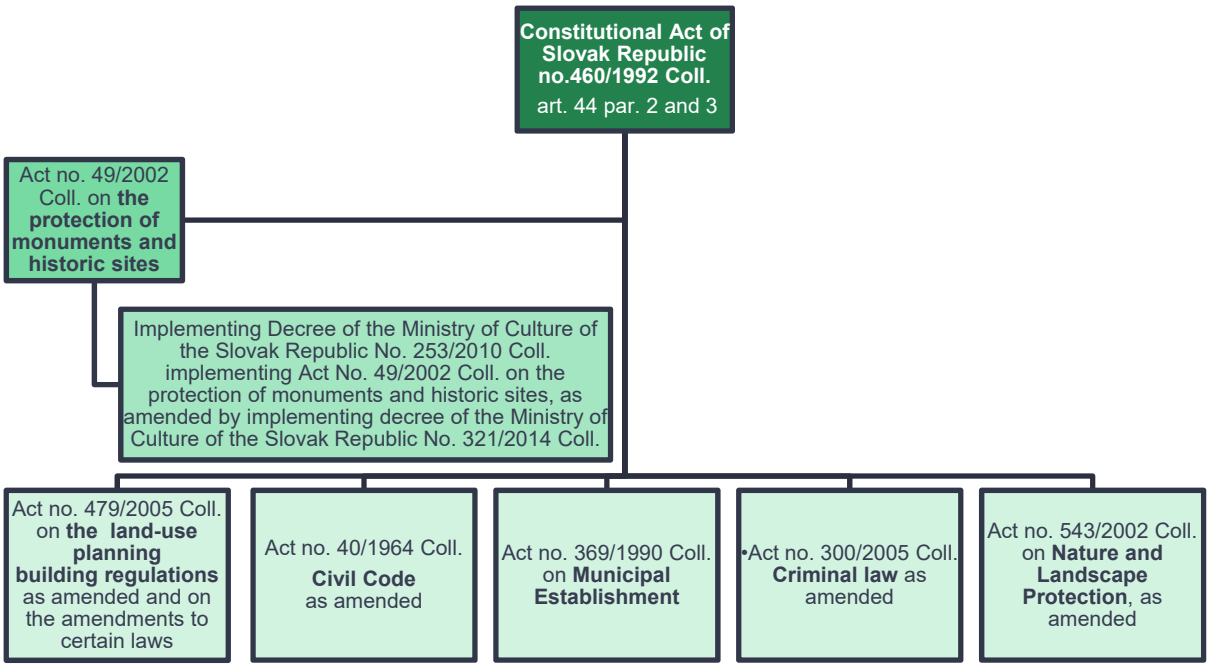

Figure 3: Protection of cultural heritage in Slovakia – main legal framework

[11] For example, the Faro Convention Explanatory report, section C, stated that "*There will often be alternative means of achieving the objectives, and it is open to Parties to choose the route most suited to their own national traditions of law, policy and practice, always taking into account the need to ensure that their own approaches are consistent with those of neighbouring States and other Parties*". Available at: https://rm.coe.int/16800d3814

How it addresses DRM: Slovak law, concerning CH does not address DRM. Even though, documents **"The concept of protection of monuments"** and **"Strategy of protection of monuments for years 2017 – 2022",** both define the impact of climate changes on cultural monuments, they do not set any further steps nor methodology or principles to handle the negative impacts of climate change.[12]

The city of Bratislava mainly follows its Land – use plan, that does not address DRM directly. A new analytical document (Atlas) which focuses on the impacts of climate change related risks has been recently developed and will be put into practice soon, but it does not focus specifically on impacts on CH. As an administrator/owner of heritage environment, the City is required to abide to legislative framework mentioned above. Bratislava is the only city in Slovakia, with its own expert authority in this field - Municipal Monuments Preservation Institute, which however lacks the competences of the state administration. The Institute, in the role of the municipality, acts as a mediator between stakeholders of state administration, concerning the topics of CH preservation, issues partial statements for building permits and investment activities and is an advisory organisation to the city in this field.

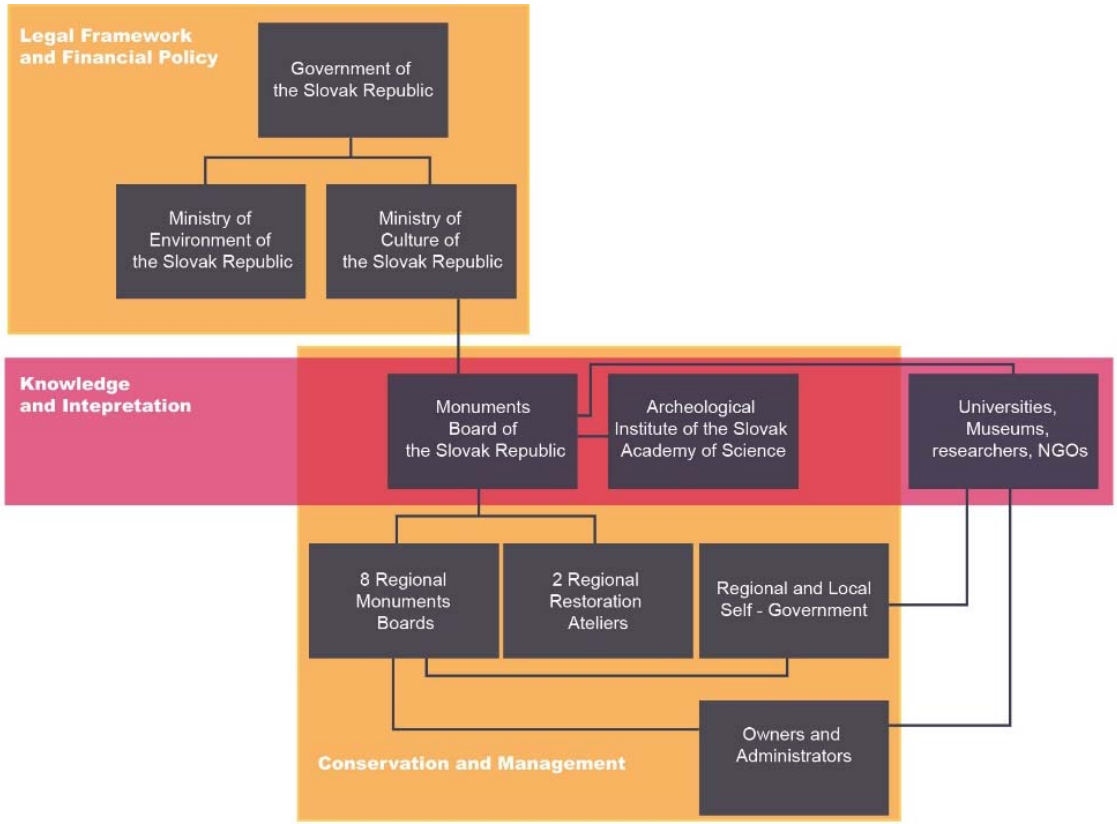

Figure 4: Institutional framework regarding cultural heritage in Slovakia. Adapted from: https://www.coe.int/en/web/herein-system/slovak-republic#Legal

[12] The only document, defining processes in case of crisis is "Methodological instruction of Ministry of Culture of Slovak Republic on the protection of national cultural monuments in case of extreme situations" no. MK - 3010/2008-10/11546 from 21.8. 2008. However this document is rather recommendatory and concerns only movable pieces of cultural heritage.

Germany (pilot city of Hamburg)

In conformity with the jurisdictional and legislative requirements, both the Federal and the sixteen States governments of Germany are responsible for management of CH. In accordance with the division of competences between the Federation and the Länder (Federal States), the Länder are responsible for the preservation of monuments. For this reason, the structure and forms of the CH's organization and the authorities in charge of the preservation of monuments differ from one state to another. The Länder are responsible for both adopting laws and, in their capacity as the highest heritage preservation authorities (alongside the districts, municipalities and in some cases the administrative regions) – for implementing them. A Länder Ministry (or Senate's department) is the highest authority in charge of the heritage's preservation within the Länder is a designated Ministry (or Senate's department). In each case, the Land's laws on heritage preservation provide from Regional Office for the Preservation of Monuments. Its role is to advise the subordinate authorities (municipalities, districts, towns not belonging to rural districts) as well as the owners of monuments and represent conservation interests in public planning and building projects.

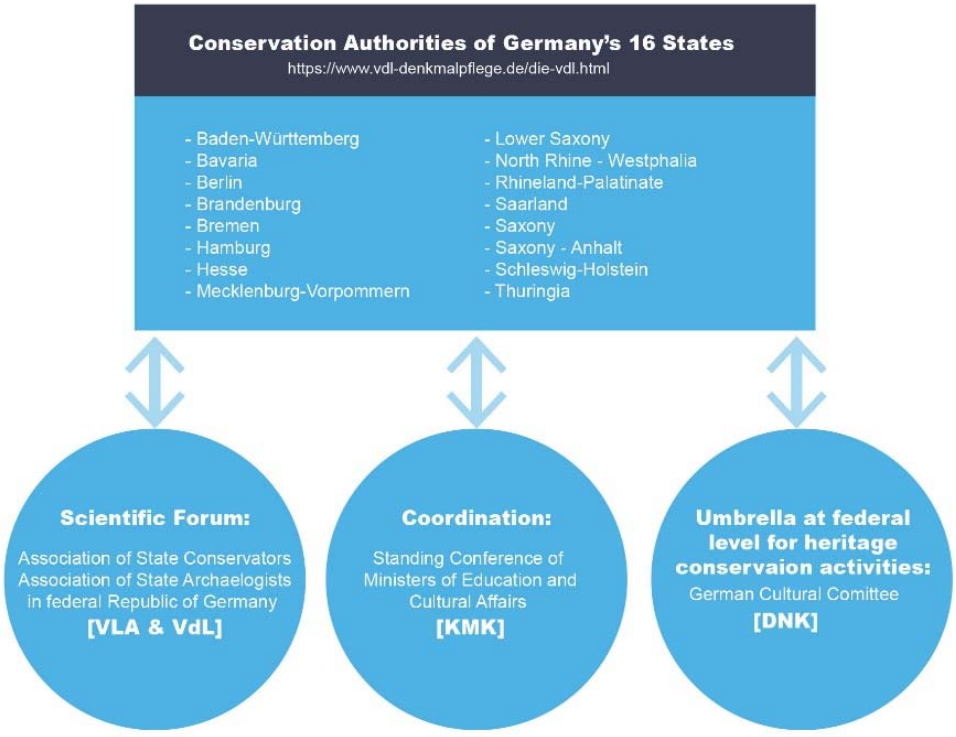

Figure 5: Institutional framework regarding cultural heritage in Germany

The lowest authorities in charge of the heritage preservation (districts, municipalities) generally implement protection and preservation's measures. In some instances, smaller Länder - such as Saarland or city-states such as Berlin, **Hamburg** and Bremen - link the different administrative authorities and levels mentioned above. In Hamburg only one administrative level exits that deals with all instances of heritage preservation. The strategic decisions and legal provisions are taken by the same administrative unit that issues locally permissions as well as implementing protection and preservation measures, risk management and tax certificates. The same unit runs as well restoration workshops and surveys the safeguarding

of the World Heritage site. Archaeological heritage is dealt with by the archaeological museum of Hamburg.

How it addresses the DRM: The city of Hamburg as a Land has units in the Ministry of Interior and Sport, that are dealing with the DRM issues [48] and prevention plans. [49] Those are able to give a good overview on what is flooded, which features “main risk” in Hamburg as a “coastal city.” [50] In terms of built heritage, Ministry of town development and housing and the Bezirk Mitte (local administration) are dealing with flooding risk and DRM in the area (particularly for the Speicherstadt and Kontorhaus District, that are emphasised in the ARCH project).

Spain (pilot city of Valencia)

CH conservation in Spain is regulated by national **Law 16/1985 on the Spanish Historical Heritage** [51]. The national law is responsible for defining the CH sites that must be inventoried and/or registered as a “BIC” (*Bien de Interés Cultural* – Property of Cultural Interest), the main listing body for heritage sites in the country. The Autonomous Communities have the responsibility to establish the additional levels of protections under their own laws. Lastly, there is a public institution called Cultural Heritage Institute of Spain (IPCE), a General Subdirectorate attached to the General Directorate of Fine Arts and Cultural Heritage of the Ministry of Education, Culture and Sport. Its mission is the research, conservation and restoration of the properties that make up the CH.

How it addresses the DRM: The Spanish Historical Heritage law does not address the disaster risk management. It focuses on the inventory and register of goods but does not deepen in the procedures for heritage conservation or restoration, it neither does on disasters that heritage faces out.

In the **Autonomous Community of Valencia**, the ruling law is the **Law 4/1998**, which does not refer to disaster risks or its management.

Italy (pilot city of Camerino)

Responsibility for CH in Italy is situated on Ministry for Heritage and Cultural Activities (MIBACT). Four levels of government (State, Regions, Provinces and Municipalities) share responsibilities in the cultural field, according to Italian Constitution. Heritage protection is listed among the cultural responsibilities to be retained by the State, with few exceptions listed in art.5 of **Cultural Heritage and LandscapeCode (Legislative Decree n. 42, issued 22nd January 2004)**. Regions, Municipalities, Metropolitan Areas and Provinces, shall cooperate with the Ministry in performing its protection tasks. [52, pp. 3-5] The Ministry, through its peripheral offices, called *Soprintendenze*, assures the surveillance and the inspecting operations on the CH. Recently, the Ministry re-organised its peripheral offices. Thanks to this reform, the Local Offices of the Ministry, were unified in unique offices that have in charge competences on all the kinds of goods that form the CH but are more disseminated on the territory. In any case, the Ministry can delegate the operations on the CH and the management of Monuments and Museums to other Public Institutes or to private associations, providing that they assure to follow the guidelines and prescriptions issued by the local competent

Soprintedenza. [53, pp. 9-10]. In 2008, by the Law n° 63 26/03/2008, the system of responsibility for landscape protection has been balanced by giving responsibility back to the State, in cooperation with regional authorities [52, p. 5]. In 2010 the Marche Region developed an own law for CH: regional law n° 4 09/02/2010. The law has the objective of disciplining assets and activities about CH according the articles: 117 and 118 of the Italian Constitution and in compliance with the legislative decree n° 42 22/01/2004. With this law the Marche Region has the task of carrying out actions to protect of CH, according to the Code of Cultural Heritage and Landscape, to support and promote the conservation of the CH by restoration, prevention and recovery actions.

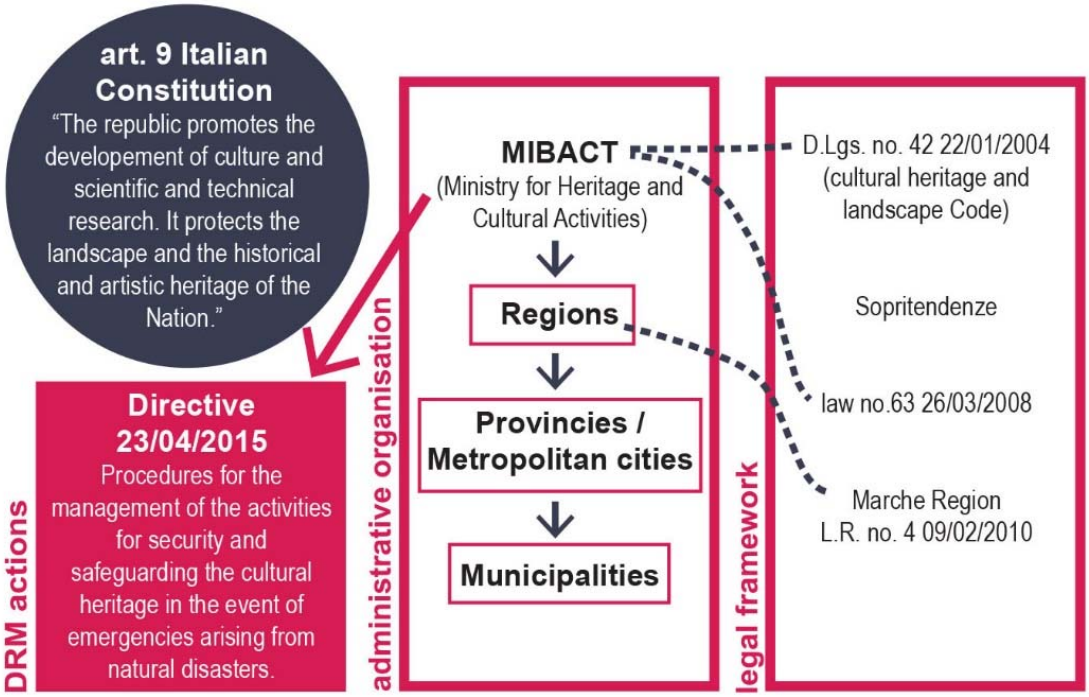

Figure 6: Institutional and legal framework regarding cultural heritage in Italy

How it addresses the DRM: According to **Cultural Heritage and Landscape Code**, MIBACT developed a specific directive in order to manage securing and rescue activities of CH in case of disasters. [54]

The city of Camerino doesn't have specific plans, programmes or guidelines about Disaster Risk Management. The management of post phases of disaster events is mainly entrusted to Protezione Civile (a public institution with the aim to protect life of people, and the integrity of buildings, infrastructures' and environment) with which all the municipalities, provinces and regions collaborate. Starting from the dramatic earthquake in 2016, the municipality of Camerino, driven by the need to manage and control the reconstruction of buildings into its territory, has started to use digital technologies, like GIS Systems, that can be considered a partial and preliminary step to develop and share a disaster risk management.

5. ARCH project issues and connections

The content of report was scoped mainly within relatively common conservational topics, while analysing towards to implementation of DRM methodologies in conservational practice, current valid legislation and management of CH. Although the issues of CC and its impact on CH became widely discussed topic in the current scholarly debate, cross – sectional overview showed, that the gap between theory and practice (legislation, governance, management tools) need yet to be filled. That was quite clearly proven by our analysis, discussed below (except for several exceptions).

Intention was to introduce the subject of typology of historic areas, the very subject of ARCH project, as reflected in the acknowledged international documents. Then to highlight nuances within the definitions and frameworks. One of the aims of the report was also to introduce and discuss several conservationist principles regarding the topic, related to the subject of ARCH. Issues of authenticity, integrity or heritage values, in terms of both tangible and intangible heritage, are not biases nor obstacles but rather fundamental principles and need to be considered within the ARCH. Following discussion on the topic of managing CH in the CC era, while respecting those principles, might be of interesting outcome (not only) within the consortium. On the other hand it should be mentioned, that conservational practice itself, might have to overcome several biases or theoretical constructs in order to link DRM cycle and CH management more effectively (e.g. towards to consideration of BBB approaches).

Throughout the report, we dedicated relatively lot of attention to examine current regulations and policies. DRM methodologies in legislative frameworks are being reflected rather recently (in several charters, recommendations and documents developed by Council of the Europe and European Commission). By the analysis we noticed almost absence of implementation of DRM policies regarding ARCH pilot cities. The ARCH project should make an attempt to search for the ways of implementation of DRM principles into existing legal frameworks of pilot cities. Especially, when length of these processes is taken into consideration. One of the ways, might be represented within the participatory governance frameworks or by bringing CH management into DRM cycle. The DRM cycle methodologies should be not only decision makers oriented, but also towards communities and individuals, that can become a part of recovery processes of (their) CH (e.g. CURE framework). However, the objectives mentioned above, should not be achieved outside of abiding of fundamental principles connected to protection of historic areas as bearers of immense cultural values.

Tendencies, that originated from international dialogue, highlighting the importance of culture in the sustainable development (Culture for the 2030 Agenda) are needed to be adopted by practice, communities, heritage practitioners, decision makers etc. Culture should be considered as an essential component in almost every framework, regarding both DRM and CH management. One of the biggest challenges of the ARCH will be to adopt these principles, combine, enhance and apply them in order to safeguard CH of historic areas.

6. Conclusion

Historic areas currently represent the most tangible evidence of the wealth and diversity of cultural, religious and social activities. Their safeguarding and integration into the life of contemporary society is a basic factor in town-planning and land development. CCs has become one of the most significant and fastest growing threats to people and their CH worldwide. In order to save these assets from the dangers of deterioration or even total destruction, there is global need to develop professional competencies, (also transmission of traditional skills and knowledge) policies, regulations and laws that allow clearer engagement between climate action and the heritage sector and to underpin these with tools that ensure accountability. The multiple and interconnecting layers of CC impacts must become a baseline competency of heritage management, as are sustainable development principles. Although negative impacts of climate-related and other hazards on these areas, are widely acknowledged and discussed, implementation of DRM cycle and CH management into praxis does not genuinely reflect the state of current debate.

The idea of CH must be acted upon in its broadest sense, when defining relations between CH, CC adaptation and resilience, culture and place are (often) closely tied. Best conservation practice recognises the deep relationship between tangible and intangible CH, and that for intangible heritage places, the traditional custodians and associated communities must be involved. CH is both impacted by CC and a source of resilience for communities. The importance is to understand those dynamics in order to safeguard our planet and its heritage amidst a changing climate.

7. References

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8. Annex

8.1. Glossary of specialist terms

Term	Explanation	Source
Heritage asset	single buildings, structures, artefacts as well as whole historic areas	[3]
Conservation-restoration	Actions and activities focused on safeguarding of (tangible) cultural heritage, respecting its significance, including providing it for present and future generations. Conservation and restoration also consist of terms: preventive restoration, remedial restoration, restoration.	[1]
Historic area/city	“Historic and architectural (including vernacular) areas” shall be taken to mean any groups of buildings, structures and open spaces including archaeological and palaeontological sites, constituting human settlements in an urban or rural environment, the cohesion and value of which, from the archaeological, architectural, prehistoric, historic, aesthetic or sociocultural point of view are recognized. Among these “areas”, which are very varied in nature, it is possible to distinguish the following “in particular: prehistoric sites, historic towns, old urban quarters, villages and hamlets as well as homogeneous monumental groups, it is being understood that the latter should as a rule be carefully preserved unchanged.	[3]
Historic urban area	large and small, include cities, towns and historic centres or quarters, together with their natural and human-made environments. Beyond their role as historical documents, these areas embody the values of traditional urban cultures.	[4]
Urban heritage	three main categories: - Monumental heritage of exceptional cultural value; - Non-exceptional heritage elements but present in a coherent way with a relative abundance; - New urban elements to be considered (for instance): The urban built form; The open space (streets, public open spaces), Urban infrastructures (material networks and mechanism).	[7]
Heritage by designation	all cultural objects that are listed, institutionalised and labelled by experts.	[7]

Heritage by appropriation	the social, or ethnologic heritage that includes landscapes, townscapes, living places and non-exceptional building ensembles.	[7]
Urban conservation	Urban conservation is not limited to the preservation of single buildings. It views architecture as but one element of the overall urban setting, making it a complex and multifaceted discipline. By definition, then, urban conservation lies at the very heart of urban planning.	[6]
Landscape approach	The landscape approach is a framework for making landscape-level conservation decisions. The landscape approach helps to reach decisions about the advisability of particular interventions (such as a new road or plantation), and to facilitate the planning, negotiation and implementation of activities across a whole landscape.	[6]
Historic urban landscape	This wider context includes notably the site's topography, geomorphology, hydrology and natural features, its built environment, both historic and contemporary, its infrastructures above and below ground, its open spaces and gardens, its land use patterns and spatial organization, perceptions and visual relationships, as well as all other elements of the urban structure. It also includes social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity.	[6]
Historic urban landscape approach	Is aimed at preserving the quality of the human environment, enhancing the productive and sustainable use of urban spaces, while recognizing their dynamic character, and promoting social and functional diversity. It integrates the goals of urban heritage conservation and those of social and economic development. It is rooted in a balanced and sustainable relationship between the urban and natural environment, between the needs of present and future generations and the legacy from the past.	[6]
Heritage site	Works of human or the combined works of nature and human, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.	[5]
Significance	Articulation of heritage values	[1]
Cultural Significance	Means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in	[10]

	the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.	
Heritage values	Can be defined as the relative social attribution of qualities to things, therefore is depending on society and can change over time. Certain values can be related more specifically to the intrinsic aspects of the monument or site (design, material, and workmanship), while other values can be associated with its location and its relationship to the setting.	[11]
Authenticity	Heritage asset that is materially original or genuine as it was constructed and as it has aged and weathered in time.	[15]
Integrity	This term generally refers to the material completeness and sound condition of an object or site.	[11]
Historical integrity	Term relates to the current form of a heritage asset as a result of growth and changes over time.	[11]

8.2. Key resources

ICOMOS Climate Change and Cultural Heritage Working Group. 2019. The Future of Our Pasts: Engaging Cultural Heritage in Climate Action. Paris: ICOMOS, July 1, 2019. [Online].

Available on: https://indd.adobe.com/view/a9a551e3-3b23-4127-99fd-a7a80d91a29e

- Concerns cultural heritage in the era of climate change

STOVEL, Herb. *Risk Preparedness: A Management Manual for Cultural Heritage*. Rome: ICCROM, 1998. [Online].

Available on: http://icorp.icomos.org/wp-content/uploads/2017/10/ICCROM_17_RiskPreparedness_en.pdf

- Concerns management of cultural heritage in the context of risk preparedness linked to non-climate related hazards

UNESCO, The World Bank. *Culture in city Reconstruction and Recovery: The Position Paper*, Paris: UNESCO, 2018. [Online].
https://www.preventionweb.net/files/61959_131856wprevisediipublic.pdf

- Describes CURE framework and how to integrate communities and culture within the recovery of cities.

The world bank. *Guide to Developing Disaster Recovery Frameworks.* 2015.
Available on: https://www.gfdrr.org/sites/default/files/publication/DRF-Guide.pdf

- Provides insight into to Disaster Recovery Frameworks

UNESCO, ICCROM, ICOMOS, IUCN, *Managing Disaster Risks for World Heritage*, 2010. [Online]. Available on: https://whc.unesco.org/en/managing-disaster-risks/

- Deals with the DRM in Cultural Heritage sites