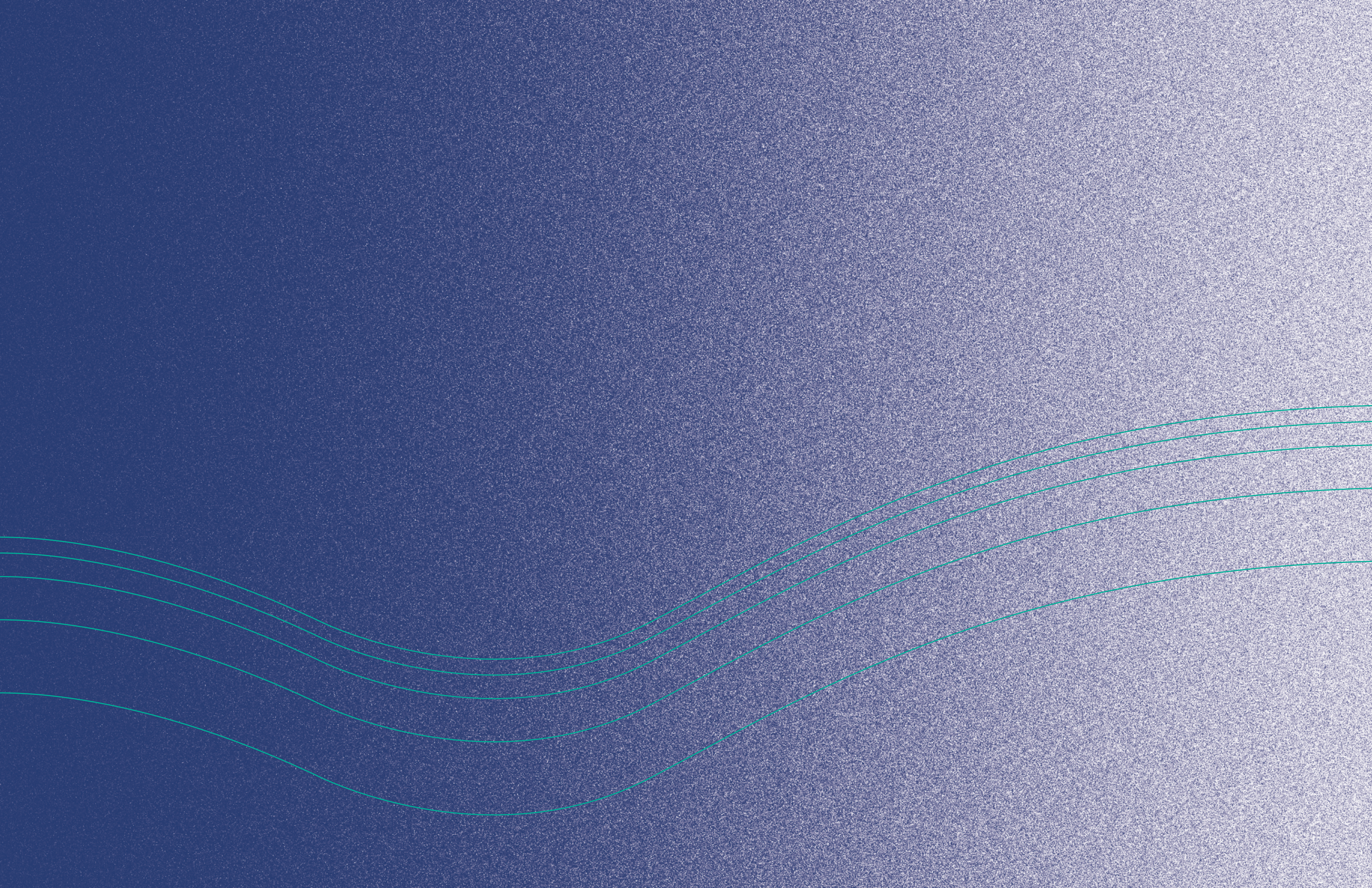


LEARNING FROM DISASTER: BUILDING CITY RESILIENCE THROUGH CULTURAL HERITAGE IN NEW ORLEANS

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ABSTRACT

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We are grateful for the valuable contributions of Alejandro Lopez-Lamia, Clara Irazábal, Ross Eisenberg and Ophelie Chevalier, whose review and comments greatly enriched this publication.

This document presents the experience of New Orleans in building city resilience through cultural heritage in response to the effects of Hurricane Katrina and the devastating consequences on the lives of the city residents. The document provides an overview of the various resilience planning frameworks and explores their connections to cultural heritage and the new urban agendas. Through the assumptions underlying the notion of Resilient Heritage, the document first explores the challenges associated with heritage preservation and resilient urban development in the LAC region, to later analyze the experience of New Orleans and the conditions and factors that led the city to overcome the urgency of the disaster and transform itself into an international reference in urban resilience. The experience highlights the key role of the New Orleans intangible cultural assets in underpinning its resilient nature and strength. Finally, the paper assesses the relevance of this experience to the case of LAC cities, given the similarities in cultural heritage and climate change vulnerability, to promote urban resilience across the region.

JEL Codes

- Z1 Cultural Economics · Economic Sociology · Economic Anthropology
- Z18 Public Policy
- H84 Disaster Aid
- Q54 Climate · Natural Disasters and Their Management · Global Warming
- Q58 Government Policy
- R11 Regional Economic Activity: Growth, Development, Environmental Issues, and Changes
- Q01 Sustainable Development

Key Words

sustainable development, urban infrastructure, urban planning, cities, resilience, cultural heritage, urban revitalization, disaster risk management, intangible heritage, Hurricane Katrina.

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INTRODUCTION

INTRODUCTION ¹

Building city resilience in the light of climate change has become a priority for most governments in Latin America and the Caribbean (LAC). In search of effective solutions, the role that urban cultural heritage can play both in the prevention and in the outcome of climate change and natural disasters has come into focus, highlighting its potential as an active component of urban resilience. Cultural heritage is increasingly being recognized by government officials and city planners as a driver for the socioeconomic development and sustainability of cities. Meanwhile, the concept of urban resilience has become one of the key constructs for planning efforts around the world seeking to guarantee a

better future for citizens. As the global spotlight on climate change and natural disasters intensifies, city governments and planners are prioritizing the capacity to mitigate disaster risks in a way that catalyzes positive socioeconomic change. Many cities with substantial cultural heritage are directly threatened by the effects of a changing climate, and their need to strengthen their capacity for resilience is thus paramount. In this context, in light of recent experiences, it is becoming increasingly clear that urban cultural heritage should not be viewed as a passive victim of natural disasters, but rather as a key contributor to risk mitigation, sustainable recovery and building resilience (Jigyasu 2019).

The concepts of resilience and cultural heritage in an urban development and planning context regularly shift alongside the growth of new management frameworks and practices for cities. In any case, urban frameworks that explicitly link resilience and cultural heritage are rare. This report uses the singular case of New Orleans, Louisiana, understood within a wider LAC context, to examine and illustrate the nexus of resilience planning and cultural heritage. The lessons of this experience may be useful for municipal officials, development institutions, and other city planning actors working in urban resilience, disaster risk management, cultural heritage preservation and management, and other related fields.

Analyzing New Orleans's cultural history considering the major threats it confronts—natural disasters, infrastructure failures, socio-economic inequity and instability, and others—offers valuable lessons for resilient urban planning. As the birthplace of jazz, a center of Creole cuisine, and home to famously multicultural architecture, New Orleans is the product of a diverse social and economic history that continues to sustain it to this day. Because of its geographic location, New Orleans is also highly vulnerable to environmental threats, as evidenced by the extreme impacts caused by Hurricane Katrina in 2005.

The ways in which New Orleans responded to and recovered from the devastation of Hurricane Katrina and its aftermath provide valuable resilience policy, planning, and implementation lessons for LAC cities. The New Orleans experience demonstrated how planning and management for city resilience are critical for disaster prevention, response, and recovery, and that a rich cultural heritage can strengthen sustainable urban development before and after a disaster. Tens of thousands of residents have shaped countless planning processes in urban and community development in New Orleans since Hurricane Katrina's destruction. The varied successes and failures of these efforts indicate how challenging they can be. Nevertheless, the city's cultural heritage is clearly at the heart of its newly gained resilience and adaptability.

New Orleans's combination of rich heritage and significant vulnerability to climate change is shared with many cities in the LAC region. LAC cities are home to a wide range

of cultural assets that shape their diverse urban heritages. The combined legacy of indigenous, African, Hispanic, Portuguese, and other European cultures has greatly enriched the region, concentrating today in its cities. Urban heritage includes not only the tangible assets found in buildings, plazas, and urban cores built in pre-Columbian, colonial, and postcolonial times; but also intangible heritage, such as food, music, arts, languages, crafts, and cultural industries. The unique intersections of these various cultural elements help compose the identities of each city across the LAC region.

Just like New Orleans, LAC cities increasingly suffer the effects of climate change. Extreme weather events like floods, fires, landslides, droughts, and storm surge, exacerbated by rising sea levels and global temperatures, are negatively impacting urban systems, including infrastructure, housing, livelihoods, and many more. These impacts have hit Caribbean cities especially hard, causing severe loss of life and economic damage. The changing climate disrupts cultural heritage preservation and its potential contribution to urban development, particularly in cities with vulnerable cultural heritage, weak institutions and risk management capabilities, and limited financial resources. In Peru in 2017, El Niño Costero caused severe flooding along the coast, including in the city of Trujillo's Historic Centre and part of the Chan Chan Ruins, a World Heritage Site. Other recent examples, like the 2017 earthquakes in Mexico, intense storms in the Caribbean and Central America, and landslides in the Andes, manifest the terrible consequences when hazards collide with the vulnerabilities of LAC cities, their heritage, and their social and economic capital.

THIS REPORT USES THE SINGULAR CASE OF NEW ORLEANS, LOUISIANA, UNDERSTOOD WITHIN A WIDER LAC CONTEXT, TO EXAMINE AND ILLUSTRATE THE NEXUS OF RESILIENCE PLANNING AND CULTURAL HERITAGE.

¹ This publication is the product of a Cutting-Edge initiative financed by the IDB's Knowledge, Innovation and Communication Sector (KIC).

The unique intersections of these various cultural factors help compose the particular identities of each city across the LAC region.



New Orleans provides a valuable demonstration of the relationship between resilience and urban heritage.

The development of suitable natural disaster risk and climate change responses requires a better understanding of the relationship between cultural heritage and climate resilience. Heritage assets and practices, when stewarded and promoted, can contribute to a city's resilience to climate change and strengthen recovery efforts and communities both during and after disasters. New Orleans provides a valuable demonstration of the relationship between resilience and urban heritage, not only because of its internationally recognized importance as a cultural and creative center and its experience with a major disaster, but also for its more recent, related investments in resilience and hazard mitigation planning that grew from the challenges set by the Katrina experience.

This report is divided into three sections, following this Introduction. Section Two reviews the debate around resilience and heritage, expressed in resilience frameworks and urban heritage programs, and continues with an overview of LAC's cultural heritage context. Section Three presents the New Orleans case, looking into the main strategies and factors that led its response and the construction of its newly gained resilience capacity. Section Four closes with lessons learned for application to LAC cities.²

² [Due to the geographical interest of the Inter-American Development Bank's work, this report will focus solely on the Latin American and Caribbean region. For this reason, we have not studied the applicability and relevance of this paper's findings to other regions.](#)

URBAN RESILIENCE AND CULTURAL HERITAGE:

ORIGINS, DEFINITIONS, AND LINKAGES

Resilience, cultural heritage & their integration.



Urban resilience and cultural heritage are both concepts with complex histories and multiple definitions. While policy and planning dialogue have increasingly recognized the importance of integrating these two areas for resilient heritage management, successful examples remain rare in practice.

The impact of disasters and hazards on urban heritage goes well beyond the built environment, affecting the livelihoods, identities, and social relationships that shape culture (World Bank 2017a). Faced with the adversity of disasters and conflicts, “culture builds resiliency by reinforcing the abilities of people to be innovative and creative” (UNESCO 2010). Although cultural heritage preservation traditionally focuses on the mitigation of risks and losses, because of the close relationship between culture and wider economic and social conditions, an approach of heritage management through resilience can leverage culture to build stronger local economies and identities.

To unpack this relationship further, this section will address both urban resilience and heritage separately, then move towards a more interrelated understanding of these topics and their relationship with the LAC context. In doing so, resilience will be approached from its definitions and the experience of several frameworks linked to climate change challenges. Cultural heritage will be reviewed through current debates at the level of supranational and local institutions.

Resilience is associated with cities' capacity to resist and recover from shocks and stresses

There is a wealth of literature on the topic of resilience, applied across various disciplines and scales. Resilience frameworks originated in the field of psychology, and only recently have they been developed and applied to city planning and management, ranging from infrastructure engineering to economic development to social wellbeing to climate change (Leichenko 2011). Although the meaning of urban resilience varies according to the urban context (Meerow et al. 2015), broadly speaking, resilience is associated with cities' capacity to resist and recover from shocks and stresses (Leichenko 2011). These shocks and stresses can be both natural and social and are often connected (Anguelovski et al. 2019). Resilience should not be understood, however, as a mere process of “bouncing back”—particularly in contexts of poverty where such ideas could be exploited to maintain a substandard status quo (Hillier and Castillo 2013). Therefore, questioning the application of resilience demands an understanding of to whom it applies and for what purposes (Meerow et al. 2015). Because resilience is only “useful as a concept and as progressive practice if it is explicitly associated with the need to improve the life prospects of disadvantaged groups” (Vale 2014), it must be utilized for social good.

The disaster risk management cycle typically involves four phases: mitigation, preparedness, response, and recovery. Within this

management cycle, resilience includes the “ability to absorb disturbances, to be changed and then to re-organize and still have the same identity (retain the same basic structure and ways of functioning). It includes the ability to learn from the disturbance” (Aldunce et al. 2014), or disaster. Resilience also considers the “ability of a system and its component parts to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the reservation, restoration, or improvement of its essential basic structures and functions” (Aldunce et al. 2014). As such, resilience is a complex proposition, involving “technical, organizational, social, and economic dimensions. It is fostered not only by government, but also by individual, organization, and business actions” (Schwab 2014). A resilient city and community should aspire to recover and strengthen livelihoods (Schwab 2014) irrespective of the shocks and stresses affecting them (Arup and The Rockefeller Foundation 2014).

There are many overlapping frameworks (and corresponding definitions) of resilience in use around the world, including in climate adaptation, climate mitigation, sustainable development, and disaster risk management, to name a few.³ While all such concepts could be encompassed under one overarching resilience framework, a common criticism of

resilience analysis and planning is that it has grown to comprise too many elements across too many disciplines, threatening its utility to planning and development discourse and application. At the same time, finding the means to address complex urban challenges is imperative under climate change. As our cities age, their conditions can worsen, and resources can become scarcer. Resilience frameworks help manage increasing risks and improve living conditions for all.

³ [The Overseas Development Institute \(2015\) notes that though some of these definitions are used synonymously, especially adaptation and resilience, many consider adaptation to be about actors, policies, and projects, while resilience is more about systems.](#)

2.1 URBAN RESILIENCE AND CLIMATE CHANGE

Table 1 Types of City Resilience Frameworks

TYPE	DISASTER RISK REDUCTION AND MITIGATION (DRRM)	URBAN-HOLISTIC RESILIENCE FRAMEWORK	SOCIAL-ECOLOGICAL RESILIENCE FRAMEWORK
EXPLANATION	<p>This framework is based on one of the most popular definitions of resilience, citing the capacity of a system to “bounce back” to a previous state (Schipper and Langston 2015). The most common definition of this framework type comes from the United Nations Office of Disaster Risk Reduction (UNDRR, formerly UNISDR) and is used by many other UN agencies: “Disaster risk reduction is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development” (UNDRR 2018). DRRM separates hazard risk from exposure risk, considering hazards themselves as more difficult to mitigate than exposure to them. Under disaster-focused frameworks, actions include reducing and mitigating the exposure risk of vulnerable assets, such as human settlements and critical infrastructure systems, particularly in disadvantaged communities. Disaster-focused frameworks are often chosen because of their relative simplicity in measuring effectiveness and their ability to facilitate the alignment of investments to mitigation efforts.</p>	<p>This framework links disaster risk reduction across dimensions of urban (and sometimes rural) management. Urban-holistic resilience frameworks include benefits akin to the UN’s Sustainable Development Goals (SDGs).⁴ Essentially, social co-benefits are part of the core resilience goals of urban-holistic frameworks, while also calling for the reduced risk of natural hazards. In 2017, the United Nations Climate Change Secretariat called for a better integration of climate change adaptation, disaster risk reduction, and sustainable development frameworks (UN Secretariat 2017). The urban-holistic approach represents the first attempt at that objective. Central to these frameworks is the idea that acute shocks and long-term stresses can coexist in cities, and that they can exacerbate each other. Therefore, reducing risk to hazards is important, but not enough by itself. Stresses, such as poverty, inequality, and aging infrastructure all make shocks worse, just as unmitigated shocks cause more intense stresses.</p>	<p>These frameworks adopt an urban-holistic definition of resilience while inviting more systems-level analysis. They consider resilience as the capacity of a system to not only deal with change, but also to continue to develop (Schipper and Langston 2015). This interpretation emphasizes the ability to adapt to changes and disturbances, to shift from undesirable conditions into new circumstances. The social-ecological approach also highlights elements of natural systems that can serve as positive characteristics of social and infrastructural systems. Social-ecological frameworks also consider multi-scalar and temporal aspects of urban resilience as a means to “shift from the mainstreaming of the resilience-building paradigm toward a critical understanding and management of resilience trade-offs” (Chelleri et al. 2015).</p>
EXAMPLE	<p><i>Sendai Framework for Disaster Risk Reduction (2015-2030)</i>⁵</p>	<p><i>100 Resilient Cities – City Resilience Framework (CRF)</i>⁶</p>	<p><i>Stockholm Resilience Centre Framework</i>⁷</p>



Three types of city resilience frameworks, described in Table 1, are applied most popularly in cities: the disaster risk reduction and mitigation framework, the urban-holistic framework, and the social-ecological framework. Each has unique elements while also building off each other. These frameworks have been employed individually and in combination with the others, as they neither contradict nor are mutually exclusive, and each embodies a valid approach for city planning and management.

Framework indicators specific to urban resilience are still relatively new and are evolving. They vary greatly depending on the city they may be intended for, thus making comparisons across cities more difficult. Nevertheless, some sets of indicators should be recognized for the qualities that may facilitate their further application, such as the UNISDR Scorecard for its flexibility, and Arup’s City Resilience Index for its nuance.

While each framework type has been used successfully, all have a common limitation: they lack understanding of cross-disciplinary connections and interdependencies. What makes resilience such a compelling concept is the notion that on a *systemic* level it is greater than the sum of its parts. For example, investments in early childhood education and after-school programs boost the urban system’s resilience to crime, evidenced by lower crime rates. Resilience is also limited by city management practices, which may be governed by political cycles and rigid budgets. Despite these flaws and the need for further improvement, resilience

frameworks can still help cities develop more resilient characteristics. With resilience frameworks and indicators being used more around the world, cities will be able to unlock more opportunities for funding resilience and share its stewardship. In the meantime, applying the appropriate resilience framework will help cities deal with the complexity of threats they face and benefit from opportunities.

⁴The UNDP Sustainable Development Goals are not explicitly highlighted here as a resilience framework because they do not have an explicit framework for cities. Only one Goal mentions cities, SDG 11, aiming to “make cities and human settlements inclusive, safe, resilient and sustainable” (United Nations 2015b).

⁵The Sendai Framework for Disaster Risk Reduction is a voluntary, non-binding agreement for 2015-2030 which recognizes the primary role of countries in reducing disaster risk and sharing that responsibility with stakeholders including local government, the private sector, and civil society.

⁶The CRF is a useful structure to help cities explore the strengths and weaknesses of their systems. 100 Resilient Cities used several diagnostic tools based on the CRF to examine interdependencies and diagnose where to build capacity, which is particularly helpful for lower capacity municipalities that do not monitor city management.

⁷The Stockholm Resilience Centre (SRC) has developed scientific guidelines for decision-makers, including development agencies, in both urban and rural contexts. These principles model the systems thinking approach embedded in the SRC’s resilience definition. While urban-holistic frameworks may be grounded in systems thinking, they are usually oriented to existing city management practices. Here, the SRC presents a more universal framework, one that can be applied at multiple scales and contexts.



2.2 CULTURAL HERITAGE AND THE URBAN AGENDA

URBAN RESILIENCE AND CULTURAL HERITAGE (ORIGINS, DEFINITIONS, AND LINKAGES)

Like resilience, cultural heritage is a frequently discussed yet poorly defined concept. It refers mainly to tangible sites, objects, and properties, as well as intangible practices, traditions, and rituals. This dual tangible-intangible approach represents a shift in understanding from exclusively preserving old monuments to incorporating the protection of social and cultural practices (Carrión 2018; United Nations 2015a). While some may distinguish between “cultural heritage” and “culture” based on an inclusion or exclusion of the past, heritage does involve contemporary culture. The Inter-American Development Bank (IDB) launched the Living Heritage (*Patrimonio Vivo*) program that promotes an understanding of heritage as an evolving and dynamic process rather than a snapshot in time (Navarrete et al. 2020a; 2020b), involving the continuous interaction between people, communities, and their physical and natural heritage. In this sense, heritage has the potential to configure locally based

sustainable economies (Rojas 2019; Skoll and Korstange 2014) and contribute to strengthening both local and national identities (World Bank 2017a).

Just as the definition of cultural heritage has changed over time, so has its role in international discourse. In 2005, UNESCO held the Convention on the Protection and Promotion of the Diversity of Cultural Expressions, representing the first clear effort to include culture in development policy and acknowledging the pivotal role culture and heritage play in promoting a more sustainable future. Later, the global approach to cultural heritage began to recognize that heritage areas are a complex system that encompasses broader urban dynamics, and that people are central to the development and use of cultural heritage and its interpretation (ICOMOS 2013).

But only more recently have culture and cultural heritage been established as fundamental elements of the international

development agenda. From 2013 to 2015, the #culture2015goal campaign under the slogan “The Future We Want Includes Culture” promoted the inclusion of cultural aspects into the United Nations 2030 Agenda for inclusive, safe, resilient, and sustainable cities. As a result, UNESCO included an urban culture target within several Sustainable Development Goal components, including quality of education; sustainable cities; decent work and economic growth; responsible consumption and production; peace, justice, and strong institutions; and gender equality. Further, the New Urban Agenda advances inclusive urban economies by coupling traditional creative expressions with local resources, incorporating culture in local production and consumption patterns, and acknowledging the importance of culture and heritage as pathways to increase civic engagement and participation.

While some may distinguish between “cultural heritage” and “culture” based on an inclusion or exclusion of the past, heritage does involve contemporary culture.

“The future we want includes culture”



THE NEW URBAN AGENDA ADVANCES INCLUSIVE URBAN ECONOMIES BY COUPLING TRADITIONAL CREATIVE EXPRESSIONS WITH LOCAL RESOURCES, INCORPORATING CULTURE IN LOCAL PRODUCTION AND CONSUMPTION PATTERNS AND ACKNOWLEDGING THE IMPORTANCE OF CULTURE AND HERITAGE AS PATHWAYS TO INCREASE CIVIC ENGAGEMENT AND PARTICIPATION.

disasters and climate change. Various international agreements have recognized climate change as the most significant natural threat to the preservation of urban heritage. The 2015 Sendai Framework for Disaster Risk Reduction establishes the need to support and protect cultural heritage from natural disasters, calling for local city action. Cities and countries across the world have also committed to mitigating and adapting to climate change through the United Nations Framework Convention on Climate Change (1992).

Moreover, the relationship between culture, cultural heritage, and the development of cities has been highlighted in a way that speaks to the overlap between these dimensions. Cultural heritage has been increasingly understood and addressed as a contributor to city sustainability and a driver for further inclusion and social cohesion. The inherent features of historic centers linked to compactness, walkability, and strong local identities

provide valuable opportunities for urban regeneration aligned with the themes of the IDB Living Heritage program, namely, inclusion, productiveness, collaboration, ecoefficiency, and resilience (Navarrete et al. 2020a).

Today, UNESCO executes several culture-, innovation-, and creativity-based efforts to achieve the commitment of various relevant international agreements. Through city networks (like the UNESCO Creative Cities Network), knowledge sharing platforms, and capacity building workshops, culture and heritage are being progressively woven into prevailing policies and practices of sustainable development and climate change.



The growing consensus on the important connection between resilience and cultural heritage has given way to more structured conceptual definitions and development programs. Indeed, several international organizations have recognized that risks and hazards can affect cultural heritage. Since the 1980s, the Getty Conservation Institute and the World Monuments Fund have raised awareness about the importance of protecting cultural heritage from natural and manmade disasters. In 2007, UNESCO's World Heritage Centre published "Climate Change and World Heritage" to help predict and manage climate change impacts on heritage and aid countries in implementing responses. In 2013, the International Council on Monuments and Sites created the International Scientific Committee on Risk Preparedness, a global platform for the preparedness and protection of heritage from disasters. And in 2015, UNESCO adopted a Strategy for the Reinforcement of its Action for the Protection of Culture and the Promotion of Cultural Pluralism in the Event of Armed Conflict, updated in 2017 to cover natural disasters as well.

In 2017, a Technical Deep Dive (TDD) by the World Bank, UNESCO, 100 Resilient Cities, and the Institute of Disaster Mitigation for Urban Cultural Heritage (R-DMUCH) helped incorporate cultural heritage management into their resilience frameworks. The collaboration recognized "the unique role and contribution of culture in reducing disaster risk and fostering resilience" (World Bank 2017b). Using Japanese examples as case studies, the TDD identified public practices that link cultural heritage and resilience. For

instance, to mitigate the effects of seismic activity in Kyoto, the Kiyomizu-dera Temple Area uses traditional earthquake-resistant Japanese construction methods. At the same time, the local community there has passed down its knowledge in emergency response and preparedness from one generation to the next.

The American Planning Association has also addressed historic preservation in disaster mitigation, preparedness, and response:

Disasters tend to seek out the most vulnerable targets, and quite often older, historical buildings and districts in a community are hit hardest. Some of the most commonly affected sites include historic riverfront districts; coastal properties; and brick, masonry, and other older, seismically vulnerable structures, particularly historic churches and civic buildings. Many properties that are not officially designated as historic resources but add to a community's cultural character will also likely be damaged. The potential loss of these resources can have a traumatic impact on a community already burdened by the significant social and economic losses caused by a disaster. (Schwab 2014)

Likewise, UNESCO has highlighted the many advantages that leveraging culture and heritage for development brings, including greater resilience. Each "non-monetized benefit"—social inclusion, social capital, trust in public institutions, environmental stewardship, climate change risk reduction—can be considered part of resilience-based urban planning. In constructing the concept of resilient heritage, resilience planning frameworks link to variables that incorporate heritage and historic city centers.

SINCE THE 1980S, THE GETTY CONSERVATION INSTITUTE AND THE WORLD MONUMENTS FUND HAVE RAISED AWARENESS ABOUT THE IMPORTANCE OF PROTECTING CULTURAL HERITAGE FROM NATURAL AND MANMADE DISASTERS.

2.3 RESILIENT URBAN CULTURAL HERITAGE

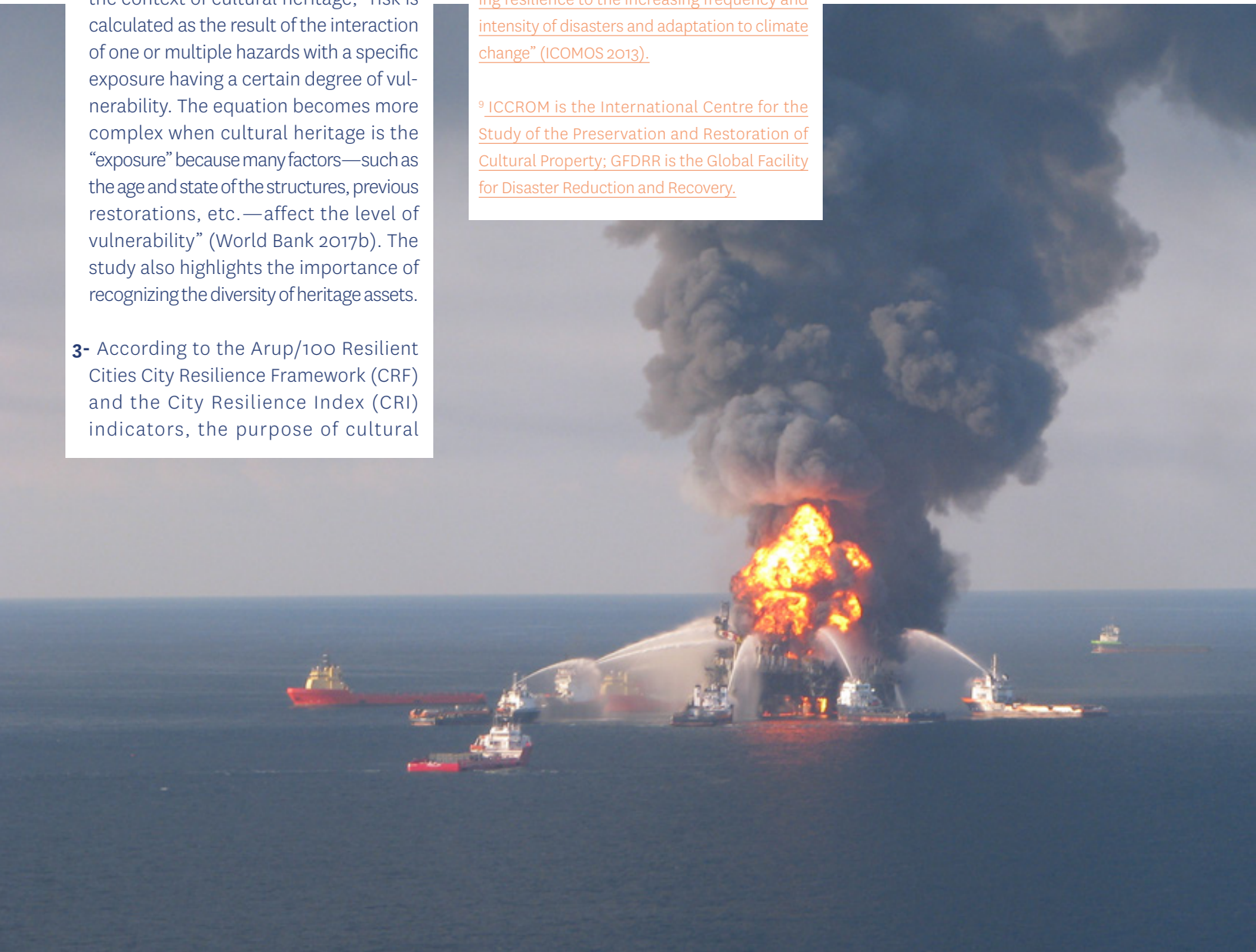
Many other international organizations have implemented programs that integrate disaster risk management and cultural heritage:

- 1- The clearest definition of the benefits of investments in cultural heritage comes from the Fourth Session of the Global Platform for Disaster Risk Reduction, led by UNESCO and UNISDR.⁸ UNISDR calls for the protection of cultural heritage in both the disaster recovery phase and the longer-term resilience-building phase. Of note is the psychosocial support that strong cultural heritage fosters and its personal and community-wide benefits.
- 2- Joint efforts between ICCROM, UNESCO, the World Bank, and GFDRR have helped integrate disaster risk management into cultural heritage policy and management.⁹ As exemplified in Figure 1, one study published by this consortium notes, in the context of cultural heritage, “risk is calculated as the result of the interaction of one or multiple hazards with a specific exposure having a certain degree of vulnerability. The equation becomes more complex when cultural heritage is the “exposure” because many factors—such as the age and state of the structures, previous restorations, etc.—affect the level of vulnerability” (World Bank 2017b). The study also highlights the importance of recognizing the diversity of heritage assets.
- 3- According to the Arup/100 Resilient Cities City Resilience Framework (CRF) and the City Resilience Index (CRI) indicators, the purpose of cultural

heritage with respect to resilience is to “[c]reate a sense of collective identity and mutual support. This includes building a sense of local identity, social networks, and safe space; promoting features of an inclusive local cultural heritage; and encouraging cultural diversity while promoting tolerance and a willingness to accept other cultures” (Arup and The Rockefeller Foundation 2014). This description emphasizes the importance of “an inclusive cultural heritage,” but does not describe how to define or foster it.

⁸ “The protection of cultural heritage should be promoted, not only because of its intrinsic historic or artistic value, but also because of the fundamental spiritual and psychosocial support and the sense of belonging it provides to communities during the disaster recovery phase, as well as the contribution it makes towards building resilience to the increasing frequency and intensity of disasters and adaptation to climate change” (ICOMOS 2013).

⁹ ICCROM is the International Centre for the Study of the Preservation and Restoration of Cultural Property; GFDRR is the Global Facility for Disaster Reduction and Recovery.



Hazard

- Natural variability.
- Anthropogenic climate change.
- Earthquakes and tsunami flooding.
- Lightning and fire.
- Attacks by violent groups.
- Population growth, etc.

+ Exposure

Cultural heritage.

+ Vulnerability

- Age and state of the structures.
- Previous restoration.
- Candles (religious custom).

= Risk

Figure 1 Example of Risk Calculation
Source: (World Bank, 2017)

4- In 2018, the British Council, in collaboration with 100 Resilient Cities, reviewed its experience in Athens to detail some of the ways culture contributes to building a resilient city under the CRF:

Culture contributes to the economic dimension of resilience by generating income and employment, and driving facets of entrepreneurship, innovation, new technologies and tourism. Culture is an accelerator to the social dimension of resilience by strengthening the social capital of a city. Culture can also embrace the environmental dimension of resilience by providing insight and tools for raising awareness about ecological responsibility. Culture in its many forms brings both monetized and intrinsic value to the process of resilience through its emphasis on creativity, heritage, the promotion of local knowledge systems and the protection of cultural diversity. (Palmer 2018)

Because of the lack of an overarching vision for how cultural heritage can foster urban resilience, this report aims to contribute to a deeper debate towards building one. Based on a review of the abovementioned urban resilience frameworks and definitions, certain elements of urban resilience are clearly linked to cultural practices and cultural heritage investment, but are not explicitly described. Investing in cultural heritage and targeting practices that enable its future development can advance a range of resilience-building benefits. These benefits are listed in Table 2 and include social cohesion and rootedness, economic development, and a sense of place, among others.

All these elements build resilience as they bring multi-scalar and multi-temporal benefits, from personal to community to city to global resilience in the short, medium, and long terms. They also encompass different views of resilience action across disaster risk reduction and mitigation, urban-holistic, and social-ecological resilience frameworks. Altogether, investing in these foundational elements of resilience fosters a population more equipped to build and strengthen cultural heritage practices.

Culture is an accelerator to the social dimension of resilience by strengthening the social capital of a city.

RESILIENCE BUILDING ELEMENTS		RESULTS OF INVESTING IN CULTURAL HERITAGE
↳	PSYCHO-SOCIAL HEALTH	Supports residents during critical mitigation, response, and recovery phases of disaster
↳	CULTURAL DIVERSITY	Increases community tolerance and diversity of responses
↳	SOCIAL COHESION AND ROOTEDNESS	Unites and strengthens community ties to people and the environment before and after shocks and stresses
↳	A CULTURE OF PREPAREDNESS AND ADAPTATION	Acculturates through education, training, and habit-formation the ability to respond to a changing environment and society
↳	A SENSE OF PLACE	Develops residents’ pride of place and raises a city’s global profile
↳	ECONOMIC DEVELOPMENT AND INVESTMENT	Creates the stability needed for investment
↳	ECOLOGICAL SUSTAINABILITY	Ensures natural resources for the spread of cultural heritage
↳	GLOCAL STEWARDSHIP	Understands the global implications of local actions and vice versa
Table 2 Co-Benefits of Cultural Heritage Investment for Urban Resilience Source Author’s elaboration		



2.4 RESILIENT CULTURAL HERITAGE IN LAC CITIES

Latin America and the Caribbean are home to an abundance of cultural heritage in all its tangible, intangible, and natural forms. Of the 1,092 sites currently on UNESCO’s World Heritage List, 141 (12.9%) are in LAC. Ninety-six are cultural assets, while 38 are natural assets, and seven are other properties. The 96 cultural sites are spread across the region, as shown in Figure 2. Mexico hosts the greatest number of Heritage sites, followed by Brazil, Peru, and Cuba. Only a few LAC countries have no World Heritage Sites: the Bahamas, Dominica, Granada, and Jamaica.¹⁰ Moreover, national governments protect several heritage areas under their local legislation alongside many other unprotected yet still highly important areas for communities and their identity.

LAC’s World Urban Heritage is spread throughout many cities and settlements across the region, concentrated in historic centers. The IDB classifies tangible urban heritage in LAC into four groups: historic cities, historic centers, historic neighborhoods, and monumental complexes. Most of the region’s urban heritage is concentrated in historic centers; 42 historic city centers in LAC have been declared UNESCO World Heritage Sites; 18 more Heritage Sites in LAC include cities, historic neighborhoods, and monumental complexes.

Through sustainable tourism, cultural heritage can contribute to resiliency by promoting community and economic development. Many cities across the region invest in cultural industries and events, seeking to boost their international image and attract new tourists and investors. In LAC, tourism is a growing sector of the economy: in 2017 it generated

8.6% of GDP directly and 15.2% indirectly, 7.3% of direct total exports and 19.8% of indirect exports, and 6.3% of direct capital investment and 12.9% of indirect capital investment (World Travel & Tourism Council 2017). The profound diversity of cultural heritage within and across LAC cities and countries can help sustain the sector as an essential pillar of development.

Rapid urbanization in LAC has damaged cultural heritage and threatens local identities.¹¹ This phenomenon can be seen in the deterioration and abandonment of heritage sites, the economic struggles of cultural industries, the shift from traditional ways of life to modern urban lifestyles, and the depopulation of central and historic areas. Urban economic and social decline is often presaged by the neglect and abandonment of historic structures, which leads to their obsolescence. Outmigration of the local population to peripheral and newly built areas follows, while vulnerable population groups become concentrated in historic centers and experience a rise in crime, pollution, and social segregation. Poor local governance, inefficient land use plans, insufficient transportation systems, and inadequate maintenance and management of historic structures and neighborhoods intensify the harm these residents endure.

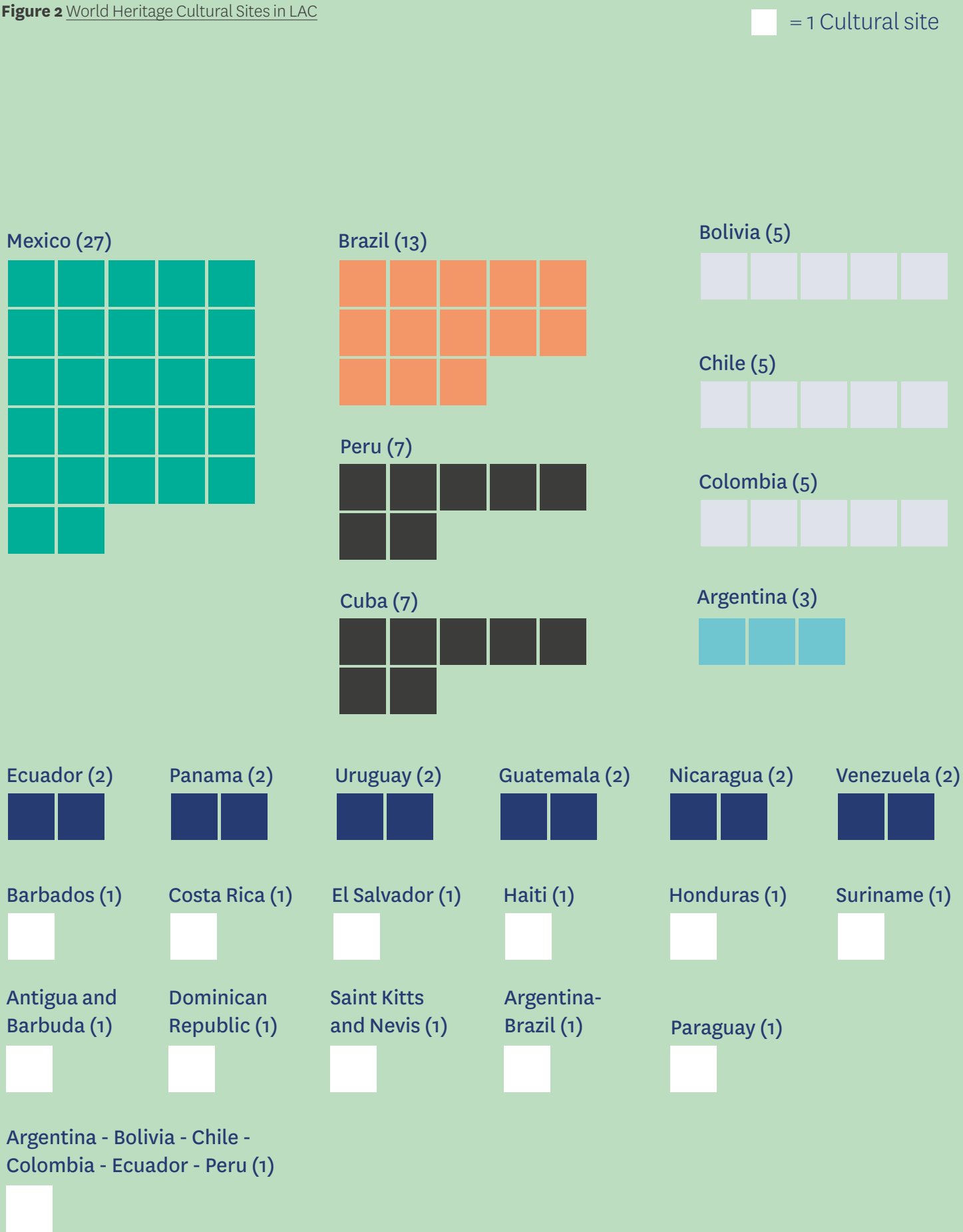
THE IDB CLASSIFIES TANGIBLE URBAN HERITAGE IN LAC INTO FOUR GROUPS:

- CITIES
- HISTORIC CENTERS
- HISTORIC NEIGHBORHOODS
- MONUMENTAL COMPLEXES

¹⁰ Five cultural sites in LAC are considered at risk by UNESCO: i) the Caribbean Coast Fortification in Panama; (ii) the Humberstone and Santa Laura Saltpeter Works in Chile; (iii) the archaeological zone of Chan Chan in Peru; iv) Coro and its Port in Venezuela; and (v) the City of Potosí located in Bolivia. These sites have experienced deterioration and a lack of preservation.

¹¹ 40% of total population in LAC in the 1950s was urban; today, LAC is the second most urbanized region in the world, with over 80% of the population living in urban areas.

Figure 2 World Heritage Cultural Sites in LAC



URBAN RESILIENCE AND CULTURAL HERITAGE (ORIGINS, DEFINITIONS, AND LINKAGES)

Many residential areas in LAC’s historic centers were abandoned during the 20th century. As Figure 3 shows, peri-urbanization is now a common pattern in LAC cities. This process saps the vitality of historic city cores. Businesses follow higher-income residents to the suburbs, leading to lower-income households and informal businesses taking over historic centers and buildings. New residents subdivide historic buildings to make their housing affordable, while other buildings are abandoned once their conditions deteriorate enough.

The preservation of urban heritage in LAC faces several physical vulnerabilities and institutional challenges. Physical heritage decays rapidly, and is further marred by the migration, insecurity, and ownership voids that urbanization can bear. In addition, local populations that improve their quality of life standards may dismiss their physical heritage and associated identities. Manmade hazards such as unsustainable tourism, unchecked urbanization, and poor urban management also pose serious threats to cultural heritage and its promise for resiliency

in LAC. Newer risks like climate change and natural disasters make heritage preservation even more complex and challenging, especially for cities with high hazard vulnerabilities, weak cultural and disaster risk management institutions, and insufficient resources (Bigio et al. 2014).



Figure 3 Center and periphery net migration rate in 17 LAC cities between 2000-2010
Source: (Winchester, 2016)



2.5 CULTURAL HERITAGE EXPOSURE TO NATURAL HAZARDS IN LAC CITIES

Coastal cities in LAC are exposed to increased storm surge, flooding, erosion, and sea level rise that threaten seaside cultural heritage. Other cities in the region face increased precipitation and extreme weather events, often manifesting as floods, landslides, and even melting glaciers (Bigio et al. 2014). Because of their age, antique forms and materials, poor maintenance, and fragility, LAC cities with many heritage assets are typically more vulnerable than more modern cities.

Weak capacity for urban management, planning, and development also increases LAC cities' exposure to climate change and natural disasters. More than 110 million people in LAC live in informal urban settlements that are highly vulnerable to disasters. Approximately 80% of the impacts of disasters in the region are felt in its cities, affecting the poorest populations the most (Watanabe 2012). Due to climate change, natural hazards in LAC are becoming more frequent and intense (Bigio et al. 2014; Irazábal 2010). As a result, heritage sites throughout the region that have stood for hundreds of years are now vulnerable to the challenges that disasters and other climate effects bring. As shown in Figure 4, Latin America and the Caribbean is second only to Asia in terms of the number of natural disasters experienced and the economic damage they cause (World Bank 2017b).

**BECAUSE OF THEIR AGE,
ANTIQUE FORMS AND
MATERIALS, POOR
MAINTENANCE, AND
FRAGILITY, LAC CITIES
WITH MANY HERITAGE
ASSETS ARE TYPICALLY
MORE VULNERABLE
THAN MORE
MODERN CITIES.**

Hurricanes and storms were the main disaster events in Mexico and the Caribbean, while flooding was most prevalent in Central and South America.

Indeed, of the 15 countries most exposed to three or more natural hazards, seven are in LAC. Of the 60 countries most exposed to two or more natural hazards, 15 are in LAC. Central American and Caribbean countries are especially exposed; for example, the Dominican Republic, El Salvador, Guatemala, and Jamaica all have more than 90% of their GDP and population in areas that are especially at risk (World Bank 2012).

Between 1970 and 2011 (See Table 3), the LAC region accounted for 1,801 disaster events—equivalent to 17% of all disasters worldwide (ECLAC 2014). South America witnessed 46% of these events, followed by Central America and Mexico at 31% and the Caribbean at 23%. Meteorological and hydrological hazards represent between 65% and 91% of these disasters. Hurricanes and storms were the main disaster events in Mexico and the Caribbean, while flooding was most prevalent in Central and South America.

Though LAC cultural heritage sites are negatively affected by climate change and severe weather, as well as waning cultural usage, compared to other regions its heritage assets are less subject to the effects of resource extraction (UNESCO 2014). However, 75% of the LAC cultural sites analyzed by UNESCO’s State of Conservation (SOC) Information System are jeopardized by poor management. This includes inadequate affordable housing because of development pressures on historic centers, nonexistent or inadequate property registries and documentation systems, and lack of or insufficient financial resources. In addition, when the tourism industry unfolds in an unsustainable way, affects 29% of cultural heritage sites in LAC, while 21% of sites are impacted by the construction of visitor infrastructure.

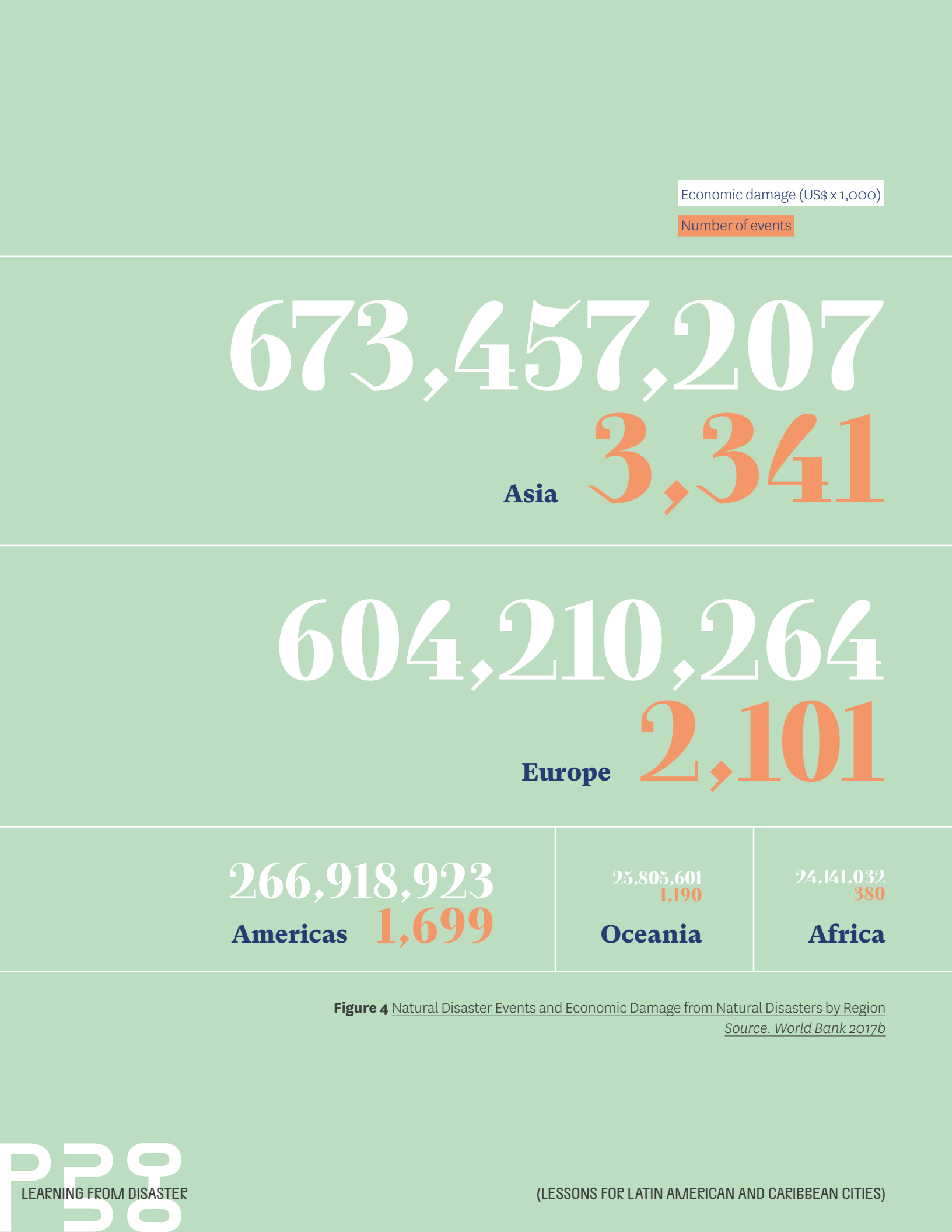


Figure 4 Natural Disaster Events and Economic Damage from Natural Disasters by Region
Source. World Bank 2017b

	HAZARD		CARIBBEAN	CENTRAL AMERICA	MEXICO	SOUTH AMERICA	
	↳ GEOPHYSICAL	Earthquakes	2.4	11.5	12.2	9.8	
		Mass movements	1.2	4.4	5.1	13.4	
		Volcanic eruptions	2.0	5.2	4.1	3.7	
		Subtotal	5.6	21.0	21.3	26.9	
	↳ METEOROLOGICAL AND HYDROLOGICAL	Hurricanes and storms	57.9	23.0	38.1	8.1	
		Flooding	27.6	38.3	27.9	45.9	
		Droughts	4.9	7.1	3.6	5.7	
		Extreme temperatures	0.0	1.4	7.6	5.0	
		Subtotal	90.5	69.7	77.2	64.8	
	↳ BIOLOGICAL	Epidemics and plagues	3.9	9.3	1.5	8.4	
		Total	100.0	100.0	100.0	100.0	



INDEED, OF THE 15 COUNTRIES MOST EXPOSED TO THREE OR MORE NATURAL HAZARDS, SEVEN ARE IN LAC. OF THE 60 COUNTRIES MOST EXPOSED TO TWO OR MORE NATURAL HAZARDS, 15 ARE IN LAC.

Table 3 LAC disasters by region and origin, 1970-2011 (%)
 Source: (ECLAC, 2014)



2.6 CULTURAL HERITAGE MANAGEMENT AND RESILIENCY IN LAC

With the Convention Concerning the Protection of the World Cultural and Natural Heritage in 1972, countries around the world began to commit legislative and institutional resources to cultural heritage. As detailed above, the international community has since developed various guidelines and recommendations for laws, policies, and administrative practices on culture and heritage (Prott 1998). Many countries in LAC have created cultural heritage standards aligned to these international frameworks. Although they vary across the region, such schemes help promote the analysis, guidance, and implementation of cultural heritage safeguards.

Despite contextual differences among the region's country heritage frameworks, many group heritage policies into two types: policies to inventory and monitor heritage assets, and policies to protect and preserve heritage assets. Taking inventory and monitoring builds knowledge, ownership, and appreciation of heritage among local people and strengthens heritage management at the local and national levels. Several countries, including Brazil, Chile, Colombia, Guatemala, and Mexico, have standardized heritage registration systems with definitions and analysis (see Table 4).

The second policy type is for the protection of cultural heritage, through preservation, sustainability, and promotion at both national and local levels. Heritage preservation originally concentrated on buildings and monuments, ignoring the surrounding urban environment and context. The 1964 Venice Charter for the Conservation and Restoration of Monuments and Sites helped move countries to safeguard historic centers too, like those of Mexico City, Barrio de San Telmo in Buenos Aires, and Colonial Lima.

This paradigm shift allowed heritage activities to mature to restoration, conservation, and reconstruction (Gutiérrez Viñuales and Vejo 2009).

Building on UNESCO guidelines, most countries in LAC have created national heritage preservation policy frameworks. In countries such as Brazil, Chile, Guatemala, and Mexico, consortia of national and local governments, the private sector, and universities successfully institutionalized heritage preservation and conservation not only in national legislation but in local initiatives as well. Still, though most Latin American and Caribbean countries have a lead institution or ministry for cultural affairs that aids heritage preservation, only some have a dedicated heritage management department. Where they exist, these units promote heritage and culture, protect and care for heritage sites, and create heritage policies and technical standards.

Though not part of UNESCO's official World Heritage Sites, Santiago is one of the oldest and most historic cities in the region. The city has experienced earthquakes throughout its history, and is now facing increased hazards from climate change.

COUNTRY	LEGISLATION	HERITAGE INVENTORY	LEAD INSTITUTION	
↪ BRAZIL	<i>Decreto Ley Número 25 del 30 de noviembre de 1937</i>	Books of Recognized Cultural Assets (<i>Tombo Books</i>)	Ministry of Culture; Institute of National Historic and Artistic Heritage	
↪ CHILE	<i>Ley Número 17.288 – Ley sobre monumentos nacionales</i>	Museums and National Monuments Registry	National Monuments Council	
↪ COLOMBIA	<i>Resolución 0983 de 2010</i>	National Cultural Heritage Assets Inventory	Ministry of Culture; Subnational Secretaries for Culture	
↪ GUATEMALA	<i>Decreto número 26-97 – Ley Para la Protección del Patrimonio Cultural de la Nación</i>	Cultural Assets Registry	Natural and Cultural Heritage Division	
↪ MÉXICO	<i>Ley Federal sobre Monumentos y Zonas Arqueológicas, Artísticos e Históricos</i>	Historic and Archaeological Sites and Monuments Public Registry	National Institute of Anthropology and History; Monuments and Artistic Sites Public Registry	
	Table 4 Sample National Heritage Legislation and Inventories			

Resilience, however, has yet to be systematized in policy and planning across LAC. Nevertheless, 16 cities in Latin America were part of the 100 Resilient Cities program, which aimed to institutionalize resilience in urban policy and practice.¹² One case worth a special focus is the Resilience Strategy of Santiago de los Caballeros in the Dominican Republic. Though not part of UNESCO’s official World Heritage Sites, Santiago is one of the oldest and most historic cities in the region. The city has experienced earthquakes throughout its history and is now facing increased hazards from climate change. The Resilience Strategy includes the promotion of culture and tourism as one of its pillars, and its goals include the rehabilitation of the Historic Downtown and the development of a Municipal Cultural Agenda that conserves architectural heritage. Santiago’s case highlights the region’s first steps towards linking resilience and cultural heritage to deliver greater opportunities for heritage investments and community and economic development.



Photo by Silva C. 2019. Pexels, consulted 2020. www.unsplash.com

¹² They include: Buenos Aires and Santa Fe in Argentina; Porto Alegre, Rio de Janeiro, and Salvador in Brazil; Santiago in Chile; Cali and Medellin in Colombia; Santiago de los Caballeros in the Dominican Republic; Quito in Ecuador; Ciudad Juárez, Colima, Guadalajara, and Mexico City in Mexico; Panama City in Panama; and Montevideo in Uruguay.



2.7 RESILIENT URBAN CULTURAL HERITAGE AND THE IDB

The IDB has contributed to the integration of resilience in urban development through several endeavors. An important effort in this regard has been the Emerging and Sustainable Cities Program (ESC), which, through a comprehensive approach to the definition of strategic plans, aimed to tackle the main barriers that prevent the sustainable growth of emerging cities in Latin America and the Caribbean. This program, implemented in 71 cities in 26 countries, defined resilience as a key element for city development.

Alongside the ESC, the IDB has been working on studies linking resilience with poverty, urban governance, and housing. One such case is Tegucigalpa, Honduras, where the importance of a bottom-up approach for climate adaptation planning was demonstrated (Stein et al. 2018). Another case in Costa Rica showed how bolstering disaster preparedness improves the governance of resilience efforts, unlike when public capacity is limited to post-disaster response. In Paraguay, through technical cooperation, the IDB is working alongside the government to strengthen the urban resilience of Asuncion's riverbank. The proposed comprehensive solution leverages existing projects, such as the construction of two water treatment plants and sewage lines, with a wetland restoration program and the creation of housing solutions. This holistic program benefits not only the surrounding population but also inhabitants of the whole Asuncion metropolitan area.

A clearer example of an articulated approach to heritage preservation and resilience building is the IDB's Paramaribo Historic Center Revitalization program. Paramaribo's historic inner city illustrates the fusion of Dutch influence with the use of local

techniques and materials, placing it on UNESCO's World Heritage List. However, the city's low-lying location has made it vulnerable to rising sea levels and tropical storms. Coupled with the government's inability to produce comprehensive responses, Suriname's capital is challenged with safeguarding its people and heritage from the hazards of climate change. Through the redevelopment of the city's waterfront, the creation of a city-level adaptation strategy and action plan, and the restoration and adaptation of selected heritage buildings, the Surinamese government, together with the IDB, is producing more integrated responses to strengthen the community's existing adaptive capacity and help areas cope with observed and anticipated effects of climate change.

Currently, the IDB, under its Living Heritage program, is working on a definition of resilient heritage through an action-oriented approach that involves cultural experiences in the processes that preserve, create, and foster heritage. Living Heritage is a multisectoral program aimed to strengthen LAC cities' capacities to promote, preserve, and revitalize urban heritage "as a catalyst for economic, environmental and social progress, and as a means of strengthening cultural identity and sustainable urban development" (Navarrete et al. 2020a, 2). Among its objectives, the program seeks to contribute to the safeguarding and enhancement of urban heritage in Latin America and the Caribbean, and build a community of practice through experience and knowledge production among heritage cities within the region, but also with other cities in Europe or the United States.

The Living Heritage program operates through five key dimensions defined as pillars: *resilience*, based on a historic city's adaptive capabilities; *inclusion*, by creating urban development opportunities; *productiveness*, promoting sustainable ways of economic development; *ecoefficiency*, through the use of existing infrastructure and technologies; and *collaboration* with multiple government actors. Living Heritage stimulates cultural processes and leverages local knowledge to build response capacity and resilience strategies for urban disaster risk management and climate change adaptation that preserve and revitalize local heritage (Navarrete et al. 2020a). In more detail, the resilient heritage pillar:

...develops capacities and articulates effective strategies for disaster risk management and adaptation to climate change, with the revitalization and preservation of heritage (...). To this end, resilient heritage seeks to strengthen and take advantage of local knowledge as capital to increase its capacity to respond and adapt to external shocks, especially regarding the care and use of ecological systems for the well-being of future generations and their cultural and natural heritage. (Navarrete et al. 2020a, 23)

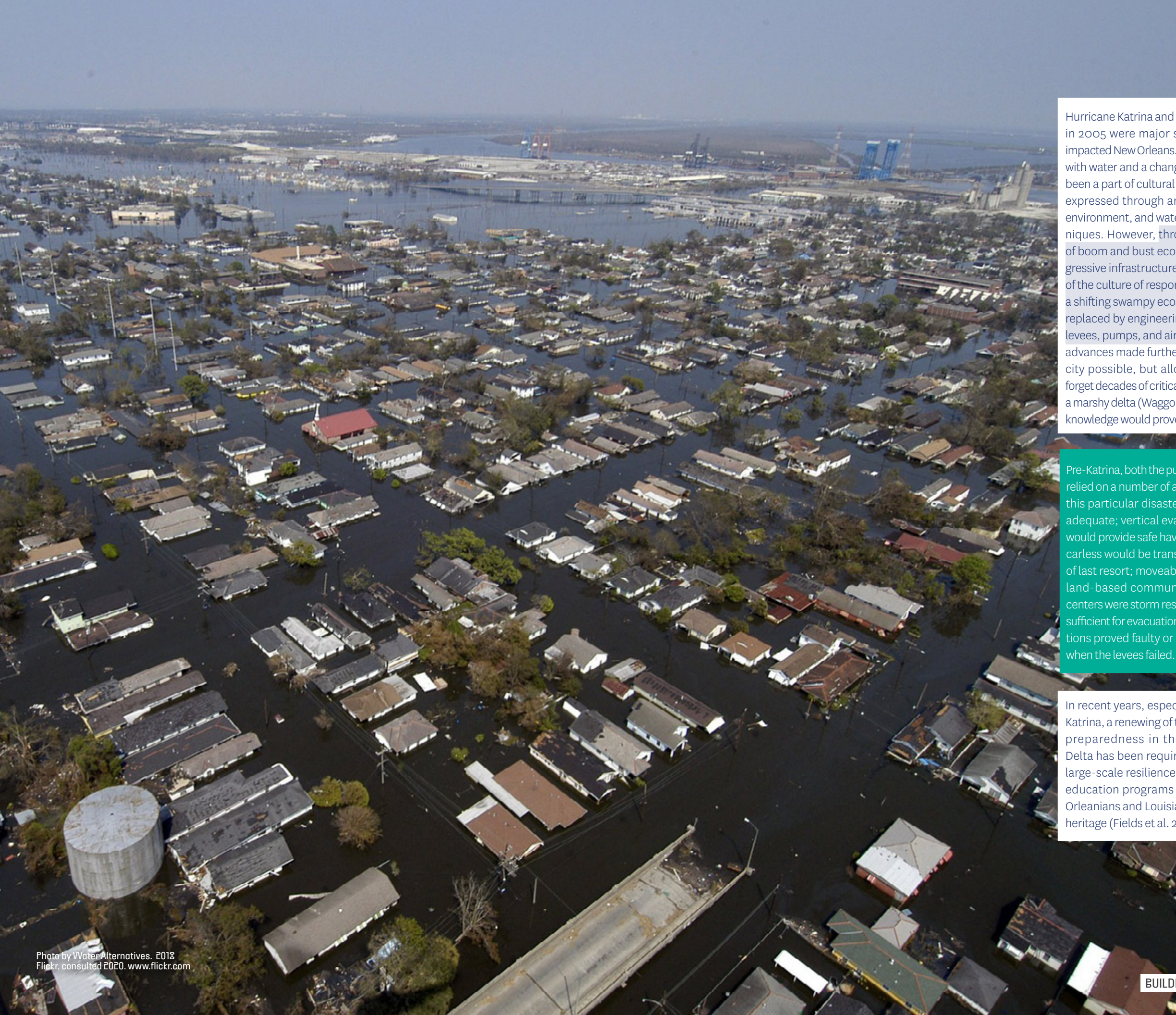
The program adapts several concepts from existing resilience frameworks to heritage contexts. It recognizes both natural and manmade threats affecting historic cities and develops mechanisms to overcome them by incorporating the vulnerabilities and advantages of heritage areas and local identities into revitalization strategies and plans. Currently, the program has been implemented in 10 cities of the region; four cities were developed in 2019 as pilots, namely, Montevideo, Panama City, Buenos Aires, and Ayacucho. The cities in 2020 include Asunción, Trujillo, Arequipa, and Cartagena in Latin America; and Kingston and Speightstown in the Caribbean.



Photo by Vince Gx. 2019. Unsplash, consulted 2020. www.unsplash.com

CASE STUDY:
NEW
ORLEANS,
LOUISIANA

03

An aerial photograph showing a vast area of New Orleans, Louisiana, completely inundated with floodwater. The water is a dark, murky brown color. Numerous houses and buildings are visible, their roofs and upper floors protruding from the water. The houses are mostly single-story with various roof colors like brown, grey, and red. Some trees are also visible, their tops above the water line. In the background, there are some industrial structures and a bridge spanning a larger body of water. The sky is a pale blue with some light clouds.

Hurricane Katrina and its flooding aftermath in 2005 were major shocks that severely impacted New Orleans. For generations, living with water and a changing environment had been a part of cultural heritage in Louisiana, expressed through architecture, the built environment, and water management techniques. However, through three centuries of boom and bust economic cycles and aggressive infrastructure development, much of the culture of response and adaptation to a shifting swampy ecosystem was gradually replaced by engineering advances, such as levees, pumps, and air conditioning.¹³ These advances made further development of the city possible, but allowed Louisianans to forget decades of critical strategies for living in a marshy delta (Waggoner 2012). This loss of knowledge would prove disastrous:

Amid the threat of natural disasters and extreme social conditions, including slavery, oppression, massive immigration, and extractive economic practices and policies, diverse New Orleanians fostered creative cultural practices over centuries that became the heritage we know today. Mardi Gras, second lines, jazz, bounce music, shotgun houses, Bourbon Street, gumbo, po-boys, and étouffée are just part of New Orleans's well-developed, diverse, and recognizable cultural heritage that was cultivated through response, adaptation, resilience, and celebration during major shocks and stresses (Becker et al. 2013). Today, the city's resilience in the wake of disasters like Hurricane Katrina's flooding is largely attributable to its strong and unique cultural heritage (Carrico 2013).

Pre-Katrina, both the public and private sector in New Orleans relied on a number of assumptions that proved ill-suited for this particular disaster: the flood protection system was adequate; vertical evacuations for residents and tourists would provide safe havens for extended periods of time; the carless would be transported to a city-designated shelter of last resort; moveable assets would be secured on-site; land-based communications systems and operational centers were storm resistant; local and state resources were sufficient for evacuation and recovery. Each of these assumptions proved faulty or fatal for the citizens of New Orleans when the levees failed. (Amdal and Swigart 2010)

In recent years, especially since Hurricane Katrina, a renewing of the culture of disaster preparedness in the Mississippi River Delta has been required, thanks in part to large-scale resilience planning efforts and education programs that reconnect New Orleanians and Louisianans to their natural heritage (Fields et al. 2016).

¹³One of the biggest engineering interventions in New Orleans was the creation of the Mississippi River-Gulf Outlet Canal, which let ocean-going vessels sail directly from the Gulf to the city, bypassing the curving Mississippi River. This channel was never utilized as much as expected and ended up acting as a "straw" that allowed storm surge from the Gulf of Mexico to overtop levees in New Orleans's St. Bernard and Orleans Parishes. The Army Corps of Engineers closed it in 2009, recognizing the Canal as a failure and a threat.



3.1 THE DEVELOPMENT OF NEW ORLEANS'S CULTURAL HERITAGE: TANGIBLE, INTANGIBLE, AND NATURAL ELEMENTS

New Orleans's cultural heritage has been written about extensively, and figures prominently in iconic American regionalism. Like many old port cities, the cultural development of New Orleans was mostly unplanned and chaotic, with people from all over the world entering a complex class system. With major waves of immigration from the Caribbean, a large, imported slave population from West Africa at least through the mid-19th century, and the South's largest population of free people of color, New Orleans developed a strong and diverse African American and Caribbean cultural heritage that is celebrated today as unique to New Orleans.

The tangible cultural heritage of New Orleans includes what many associate with the aesthetic character of the city, including unique regional architecture styles and urban development patterns. The French Quarter's Spanish and French Creole architecture, the historic districts, the oldest streetcar lines in the world, and prominent public monuments are just a few examples that contribute to New Orleans's sense of place. The intangible cultural heritage of New Orleans is even more extensive, including countless ephemeral forms of art and expression. These include jazz, Mardi Gras parades and Indian events, social aid and pleasure clubs, second line parades, the legacy of the French Creole language and regional English dialects, and distinctive food. New Orleans hosts more than 130 festivals each year, from the world-famous Jazz and Heritage Festival to Fried Chicken Fest to the Vietnamese New Year's Tet Fest, the city's events regularly showcase its cultural practices and heritage.

However, some of the phenomena we know today as New Orleans's cultural heritage were created in piecemeal, informal, and marginal ways. Most of the city's intangible cultural heritage was forged without official means or formal patronage. Indeed, much

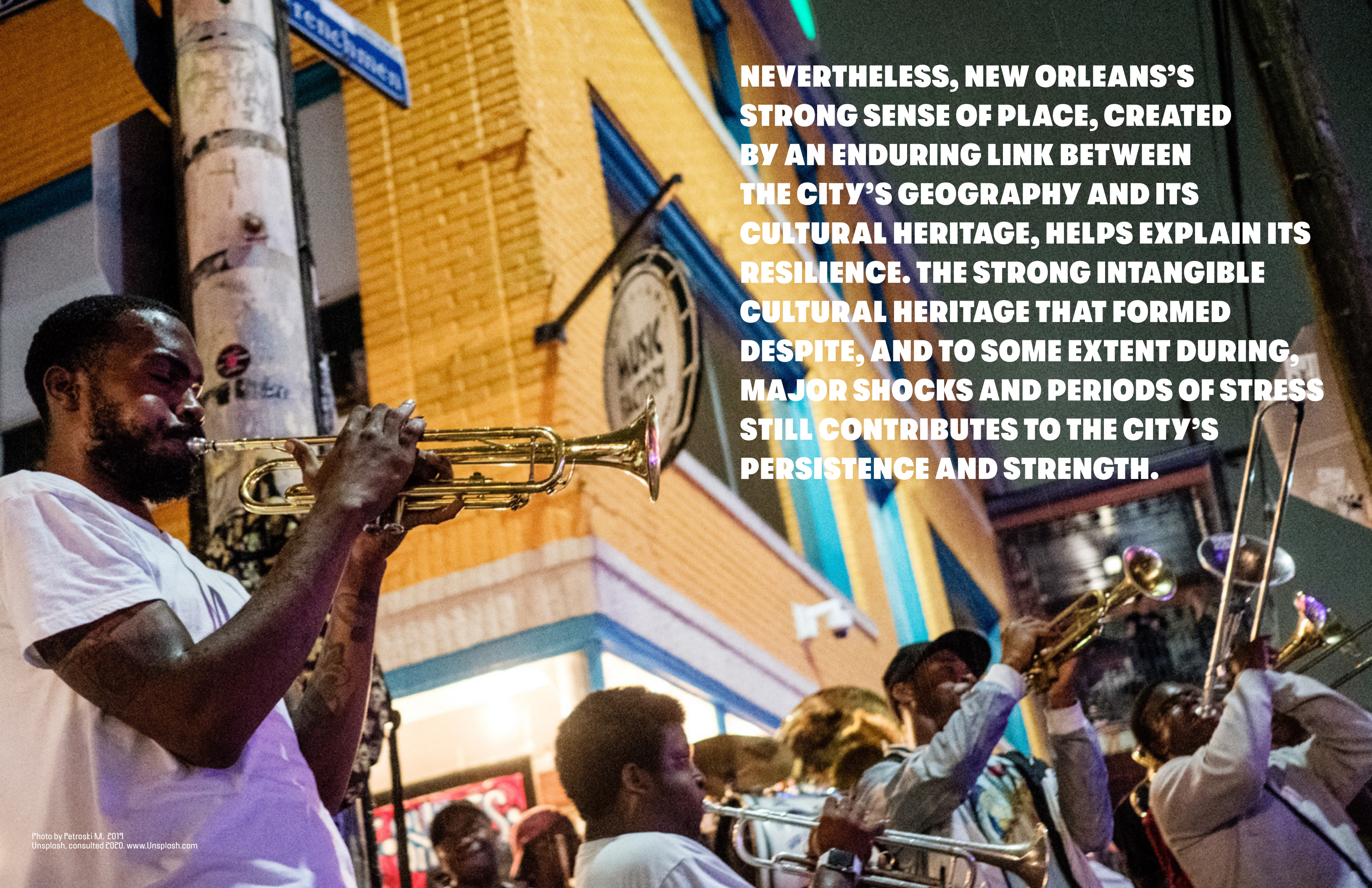
of the expression that is taken for granted as New Orleans's cultural heritage was not formally planned or invested in, but rather made in spite of the systems in place that made them difficult: "These forms [of expression] assert the power of living in the face of dying, abundance in the face of scarcity, control in the face of disempowerment, pride in the face of disrespect" (Rosenstein 2009).

The natural heritage of New Orleans is arguably the city's foundation of both its tangible and intangible culture. Nicknamed the northernmost Caribbean city for cultural and geographic reasons, New Orleans lies within North America's largest river and delta complex, the Mississippi, and at a series of natural and engineered entrances to the Gulf of Mexico. The inland, swampy fresh or brackish waterways known as bayous help constitute the idea of New Orleans as a city on the edge. The land that New Orleans occupies is some of the newest land in the world, having been carried down the Mississippi River as silt and deposited on the edge of the continental shelf for approximately 7,000 years.

Southeast Louisiana's deltaic soils and location on the warm waters of the Gulf of Mexico create conditions that elevate the risks posed by major storms, floods, and unstable ground. As a port city, New Orleans has a long history of resource extractive economies—beginning with slavery, extending to commodities such as cotton, and rising again in oil and gas exploration. Even though hurricanes, fires, and tropical disease outbreaks periodically decimated New Orleans from the 18th through the 20th centuries, the city's importance as a commercial port and cultural icon continued to deepen and grow under French, Spanish, and US control. In the 19th century, it became the largest city in the South and one of the richest in the country. Later, as trade traffic diverted to larger ports and investment went elsewhere, "The Big Easy" experienced a

population decline from its peak in the 1960s. Nevertheless, New Orleans's strong sense of place, created by an enduring link between the city's geography and its cultural heritage, helps explain its resilience. The strong intangible cultural heritage that formed despite, and to some extent during, major shocks and periods of stress still contributes to the city's persistence and strength.

However, some of the phenomena we know today as New Orleans's cultural heritage were created in piecemeal, informal, and marginal ways. Most of the city's intangible cultural heritage was forged without official means or formal patronage.



**NEVERTHELESS, NEW ORLEANS'S
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3.2 HURRICANE KATRINA AND CONTEMPORARY SHOCKS AND STRESSES

Though absent from prominent national and international consideration for much of the latter part of the 20th century, New Orleans was thrust back into the foreground in August 2005 as the massive Hurricane Katrina made a direct hit in Southeast Louisiana. The Hurricane and the resulting infrastructure failures that caused more than 80% of the city to flood are the most well-known shocks in the city's recent history, exposing many of the underlying stresses that the city had been experiencing for generations. But other major shocks since Katrina have continued to serve as reminders of latent risks. Just weeks after Katrina, Hurricane Rita swept through Louisiana. In 2008, Hurricane Ike threatened the Gulf Coast and Hurricane Gustav triggered the mandatory evacuation of New Orleans. In 2012, Hurricane Isaac stalled over New Orleans while power outages plagued the region for more than a week. And in 2019, Hurricane Barry made landfall in Louisiana causing \$600 million in damages including in New Orleans, and multiple heavy rainfalls in the spring and summer unassociated with tropical weather systems also caused widespread street and property flooding in the city.

Hurricanes and related infrastructure failures, including broken levees, pumps, and canals, are not the only shocks that New Orleans and its people have endured. In 2010, BP's Deepwater Horizon oil drilling platform exploded, causing oil to gush from an offshore well for nearly five months into the Gulf of Mexico off Southeast Louisiana. Among its many other effects, the disaster had profound consequences on locals' health and livelihoods, and its long-term ramifications are only beginning to be fully understood. In February 2017, an EF3 tornado touched down in New Orleans East for the first time, introducing yet another hazard type to what New Orleanians may expect in Southeast Louisiana. Other shocks experienced in New Orleans are not merely localized. Though the effects of the 2008 financial crisis on the New Orleans economy were limited because federal post-disaster dollars were then boosting the local economy, the subsequent recession tempered a potential post-Katrina economic boom.

The city's geography also contributes to long-term stresses. No longer benefiting from the silt-recharging deposits of the Mississippi river, the deltaic soils of Greater New Orleans are gradually compacting, causing land subsidence. The shifting and sinking soils regularly create infrastructure problems, including cracking streets and breaking pipes. Some of the drained swamps upon which the city is built lie at more than 10 feet below sea level, surrounded by levees and served by aging drainage pumps. With the combined effects of land subsidence and climate change, Southeast Louisiana is experiencing the highest level of relative sea level rise in the world. These stresses can lead to shocks, especially considering the area's aging water, sewer, energy, and transportation infrastructure. The accompanying collective sense of instability chills development investment, compounding the city's place-based challenges.

Hurricanes and related infrastructure failures, including broken levees, pumps, and canals, are not the only shocks that New Orleans and its people have endured.

The days following Katrina's landfall and subsequent actions in the month after were crucial in defining New Orleans's fate. However, it was an overall shift in the city's and country's approach to rebuilding which provided the city with long-lasting effects, cementing its future. This section explores the factors that led to a shift in disaster preparedness, and the city's overall resilience. Since Hurricane Katrina and the catastroph-

→ INFRASTRUCTURE

ic failure of New Orleans's critical flood protection infrastructure, the city has received massive infrastructure investments. These include the Hurricane and Storm Damage Risk Reduction System—a \$14.5 billion overhaul of the region's storm surge risk reduction system. It raised the height of levees, canal walls, and gates in five Southeast Louisiana parishes, including in New Orleans, significantly shortening the area's surge exposure.

In addition, major drainage infrastructure investments to increase the city's stormwater system capacity have been implemented. The 2013 Greater New Orleans Urban Water Plan was one of the first attempts to address water management as an existential issue for the region. It considered stormwater and groundwater management as critical to the region's urban resilience and laid the groundwork for more comprehensive social and ecological planning processes.

All modes of transportation in post-Katrina New Orleans were either severely damaged or destroyed, underscoring the importance of a resilient transportation system. Transportation resilience is “a system's ability to function before, during and after major disruptions through reliance upon multiple mobility options. The importance of a resilient transportation system becomes more apparent during disasters where multiple options for mobility are necessary for both passenger and goods movement due to the potential loss of one or more modes”

(Amdal and Swigart 2010). In response to Hurricane Katrina, new transportation policies and programs for disaster preparedness and post-disaster recovery were adopted at the federal level, in Louisiana, and in New Orleans (Amdal and Swigart 2010).

Due to large amounts of federal recovery funding directed to the city and state in the years after Katrina, other infrastructure investments, such as public housing redevelopment, public space improvement, and street reconstruction, also took place during this time.

3.3 NEW ORLEANS RESPONSE: IMMEDIATE ANSWERS AND FUTURE PREPAREDNESS

The 2013 Greater New Orleans Urban Water Plan was one of the first attempts to address water management as an existential issue for the region.

“WHEN LOOKING AT ENTREPRENEURIALISM, HOUSING COSTS, AND AVERAGE INCOMES, FOR INSTANCE, ONE CAN FIND IMPROVEMENT. WHEN LOOKING AT POPULATION, STORM PROTECTION, HOUSING AFFORDABILITY, AND INCOME INEQUALITY, HOWEVER, ONE FINDS WORSENING CONDITIONS”



Photo by Bhlr Nico. 2018
Unsplash, consulted 2020. www.Unsplash.com

→ PEOPLE

Soon after Hurricane Katrina’s devastation, countless charities, nonprofit organizations, advocacy groups, and philanthropic institutions pledged money, volunteer labor, development projects, and more to New Orleans. These efforts stabilized the city after the catastrophe, set the pace for recovery and rebuilding for years to come, and demonstrated to the federal government that there was a blueprint for how the city would spend recovery dollars. Relatively few groups, however, pledged planning support, and those that did early on were crippled by many of the classic pitfalls of the top-down decision-making processes often employed after disasters.

Planning immediately after a major disaster is often a fraught and divided undertaking. The most vulnerable people are almost certainly unable to participate or even be evaluated fairly, and coupled with a policy and leadership vacuum, external interests with specialized agendas can quickly gain power. The post-disaster period is also a time of heightened emotions and fears, when misinformation can spread quickly, and consensus can be both rapidly reached and broken apart. The 2006 Bring New Orleans Back plan was the first major post-Katrina proposal, calling for a study into shrinking the city’s footprint. A local newspaper converted the plan’s dashed-line circles—showing potential green spaces on a map—into solid green dots. This new “green dot map” was met with suspicion and opposition, as local communities interpreted it as showing areas to be converted to permanent open spaces (Schwab 2014). In a time of crisis when thousands of families—mostly African American—still could not return home, this plan was perceived as insensitive, reactionary, and racist, barring any further consideration of the plan’s other aspects. Its failure helped energize an alternative, neighborhood-based planning approach (Irazábal and Neville 2007; Neville and Irazábal 2007).

In 2007, the Unified New Orleans Plan (UNOP) attempted to bring together various divided groups after the fiasco of the Bring New Orleans Back plan. UNOP’s major innovation was mass community engagement, including conducting meetings in cities around the

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country to engage those who had not yet been able to return home. This planning process—heavily funded by the Rockefeller Foundation—achieved extraordinary participation rates, produced a detailed vision for New Orleans’s future, and was key to unlocking federal dollars.

Other responses to Katrina were less fruitful. Unequal treatment was characterized in “labor, the design of aid programs, the rebuilding of schools and the allocation of capital.... Instead of uniting all interests in a common agenda, the aftermath of the storm heightened the conflicts of race, class, income levels, and partisan politics” (Dupont 2019). In one example, five years after Katrina, the Lower Ninth Ward neighborhood revealed inconsistent outcomes: “When looking at entrepreneurialism, housing costs, and average incomes, for instance, one can find improvement. When looking at population, storm protection, housing affordability, and income inequality, however, one finds worsening conditions” (Gotham and Greenburg 2014).

Various pre- and post-disaster policy lessons can be drawn from the New Orleans experience. For example, the high ratio of elderly casualties from Katrina indicates that “treating everyone equally before a disaster leads to disproportionate deaths among such disadvantaged populations in the aftermath. This results in a provocative policy suggestion — the development of disaster affirmative action as part of hurricane preparedness activities” (Dupont 2019). Moreover, analysis of spatially targeted tax subsidies as a post-disaster recovery tool, such as the Gulf Opportunity (GO) Zone Act of 2005, presents a cautionary tale. “[A]reas in the GO Zone with the greatest damage received the least amount of bonds to help finance recovery and rebuilding efforts” (Gotham 2013, 305), thus reducing the Act’s effectiveness and reinforcing disincentives for locating business and investment in disaster-hit areas. These lessons can inform policies, plans, and interventions that redress the pitfalls of New Orleans’s past and help avoid the same errors elsewhere, including LAC.

The post-disaster period is also a time of heightened emotions and fears, when misinformation can spread quickly, and consensus can be both rapidly reached and broken apart.

→ INSTITUTIONS AND POLICIES

The practice of historic preservation was reborn in post-Katrina New Orleans. Having suffered relatively minimal damage, the city's historic districts and their cultural assets reclaimed their importance in the search for pathways to recovery. New Orleanians fought to expand historic district designations, implement national preservation programs, and apply culture more in neighborhood revitalization projects. Community groups expanded their outreach and education programs to include disaster recovery, resilience building in historic settings, and other initiatives to promote the city's post-Katrina vitality through its rich cultural heritage.

Hurricane Katrina forced FEMA to reevaluate its disaster response standards and mechanisms. In 2006, Congress passed the Post-Katrina Emergency Management Reform Act (PKEMRA), which clarified the Agency's authority and responsibilities. The Act also required that FEMA develop a national disaster recovery strategy. This led to the creation of the National Disaster Recovery Framework, which enables recovery support to disaster-affected states and territories, emphasizing collaboration in rebuilding local urban character (encompassing social, economic, and environmental aspects) and increasing local resilience. In addition, PKEMRA increased funding for urban search and rescue teams and provided resources to cities to revise evacuation plans and increase

their accessibility, especially to non-English speakers and residents with disabilities. To address the delayed response New Orleans suffered after Katrina, PKEMRA granted FEMA the authority to expedite funding provision for both pre- and post-disaster needs.

FEMA also reassessed its flooding risk databases and mapping standards. Flood home insurance is required for all houses located within FEMA's 100-year floodplain; but the Agency's models did not adequately account for hazards associated with rapid rain accumulation, not to mention infrastructure failures. Associated maps were poorly defined, unintentionally tolerating development in risky areas and leaving households unprotected and ill-informed of flood protection assistance opportunities, like FEMA's National Flood Insurance Program. FEMA has since revised its maps to better identify territorial risks, including magnitudes and timeframes; disseminating these maps has helped home buyers make more informed decisions that include relevant risks and available mitigation options. Furthermore, FEMA reevaluated its technical coastal flood estimates in Louisiana and Mississippi to provide communities and developers with the most accurate flood risk information. It established new Advisory Base Flood Elevations in these states, facilitating reconstruction activities.

→ RESILIENCE PLANNING

New Orleans has utilized several resilience frameworks in its post-Katrina planning.¹⁴ Through the city's experience with Katrina, these frameworks have generated preparedness, response capacity, and hazard mitigation plans for the city. These plans now govern federal pass-through funding and private property investments, such as elevating houses in flood-prone areas.

Using the 100 Resilient Cities City Resilience Framework for guidance, New Orleans researched the many post-Katrina planning processes found among its communities to identify common themes. The city then consulted with stakeholders across the public, private, nonprofit, civil society, and philanthropic sectors to identify short-term actions for long-term resilience. The resulting strategy, Resilient New Orleans, comprised 41 actions that addressed environmental, socioeconomic, and operational resilience together for the first time.

The mayor's office launched Resilient New Orleans on the 10th anniversary of Hurricane Katrina—August 29th, 2015, known locally as K10—symbolizing the pivot from recovery to resilience. New Orleans became the first city in the world with a dedicated city resilience strategy.¹⁵ Resilient New Orleans was awarded the American Planning Association's National Planning Award for a Best Practice in 2016, owing to its comprehensive approach to applied disaster recovery planning.

The new resilience strategy helped New Orleans access funding for redevelopment. Within two years, Resilient New Orleans facilitated more than \$200 million in infrastructure investment and social service delivery. After incubating a resilience team within the New Orleans Redevelopment Authority, the city formally established an Office of Resilience and Sustainability to implement the strategy's 41 actions.

Cities around the world have since leveraged the New Orleans experience to develop their own resilience plans. As of September 2018, 27 official city resilience strategies, using the

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same or similar methods and frameworks as New Orleans, had been issued across the Americas. Thirteen of these 27 are from Latin America.

New Orleans has also developed several resilience tools and platforms. Its Climate Smart-Cities Tool and Adaptation Support Tool help policymakers analyze potential infrastructure interventions according to various climate and stormwater scenarios. Both utilize public data the city has collected on the built environment and urban services.

In addition, New Orleans has achieved an original resilience strategy commitment: the development of a greenhouse gas mitigation plan. In 2017, the city released Climate Action for a Resilient New Orleans, adding climate mitigation to its resilience portfolio to complement its adaptation programs.

Today, these tools are housed within the New Orleans Office of Resilience and Sustainability. Through the Trust for Public Land's national Climate-Smart Cities program and a partnership with Partners for Place, tool development, training, and outreach funding have been secured. Using cutting-edge Geographic Information Systems, New Orleans officials have also been able to map the next steps to progress towards obtaining the goals established in the 2017 Climate Action Plan. As a result, the Gentilly Resilience District was awarded a \$141 million grant through HUD's National Disaster Resilience Competition (NDRC) to implement innovative solutions to reduce flood risk and leverage existing projects to aid in the area's revitalization.¹⁶

¹⁴ [The city itself directly employed DRRM and urban-holistic frameworks, while some civil society and academic institutions have used social-ecological frameworks. The significant amount of recovery funding New Orleans received from FEMA furthered the adoption of DRRM frameworks in its Office of Homeland Security and Emergency Preparedness.](#)

¹⁵ [The City of New York's OneNYC 2050 \(2015\) has also been called the world's first resilience strategy; however, it was conceived without a specific resilience lens. In contrast, Resilient New Orleans was designed as a resilience strategy with an applied framework.](#)

¹⁶ [The Gentilly Resilience District is New Orleans's first Resilience District which seeks to provide solutions to reduce flood risk, slow land subsidence, and foster neighborhood revitalization.](#)

HERITAGE RESILIENCE IN NEW ORLEANS:

LESSONS FOR LAC



The case of New Orleans’s disaster recovery and resilience invites many applications to Latin American and Caribbean city contexts, on account of exposure to similar hazards and several common urban heritage characteristics and influences. Like New Orleans, cities throughout LAC are building community and economic development through the hospitality and tourism industries and should ensure this progress serves residents first.

With urban resilience of growing concern to city managers and residents worldwide, it is necessary to continue expanding its definition, integrating more inputs to respond and adapt to an uncertain future. This report argues that the health and diversity of a city’s cultural heritage can contribute to this task. This process is inherently social; through culture and cultural heritage, individuals can unite as a people to confront various challenges, including those as existential and difficult as climate change. New Orleans can offer many lessons to LAC cities for developing this adaptive capacity through cultural heritage.



Photo by Herrera J. 2017
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The strategic role of local culture for resilience must be rooted in the idea of building stronger communities instead of allowing it to be commodified.

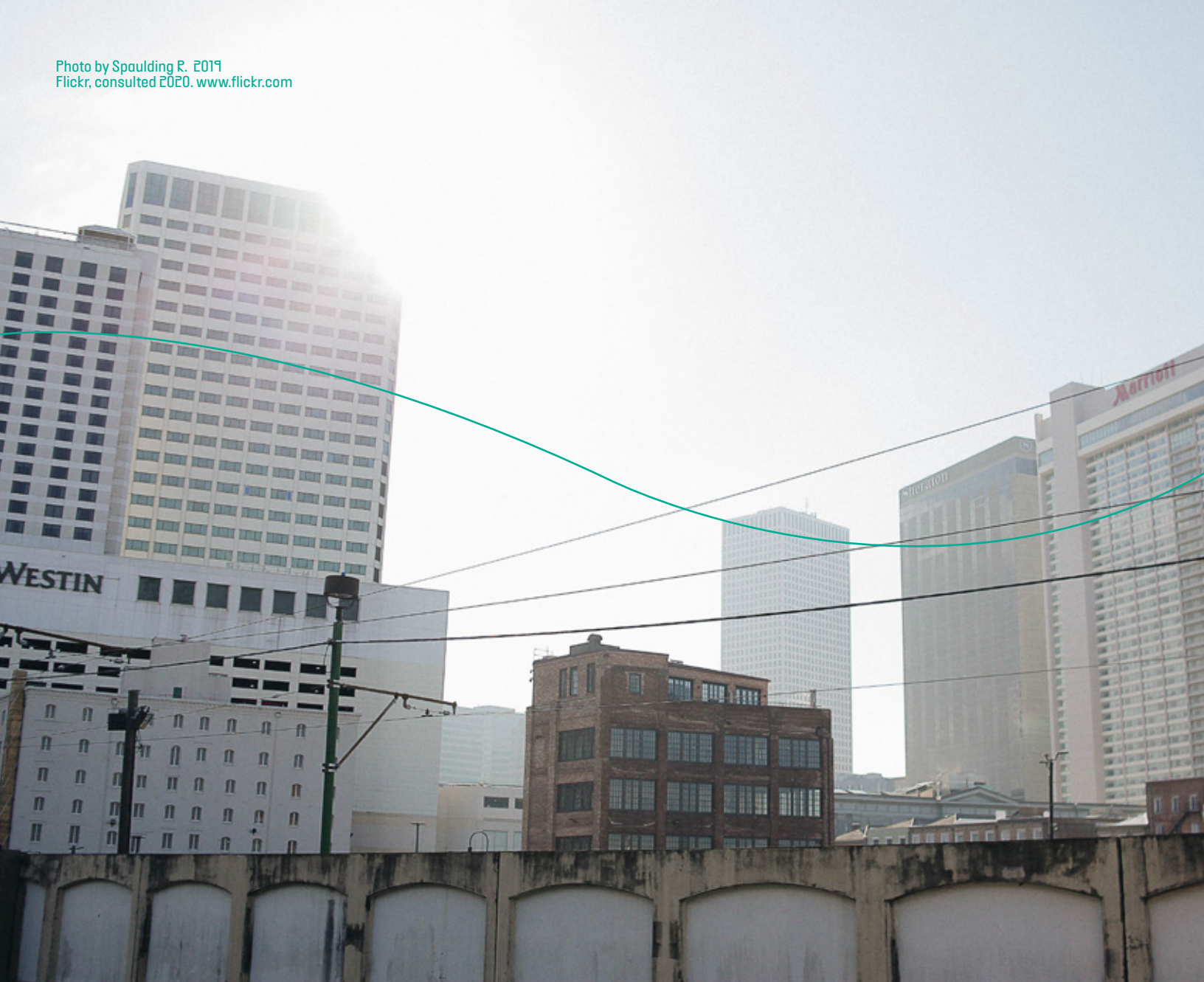
A popular way of managing cultural heritage in cities with large tourism sectors is through the “cultural economy.” This is of such importance in New Orleans that it created a City Office of Cultural Economy in 2010. Through this cultural economy lens, a city can reward those who produce cultural practices, like music, art, and parades. However, this approach can also breed extractive economic arrangements, whereby those who create cultural goods are not compensated as much as those who market the goods (especially when there is little intellectual property protection for the goods). For instance, New Orleans bounce music gained international fame after being featured in hip-hop artist Drake’s 2018 hit “In my feelings”. Despite the global praise for the mix of musical styles, economic benefits were primarily reaped by the recording artist. Indeed, a cultural economy focus can facilitate cultural appropriation, which may exacerbate social divisions and conflict.

Cultural economies also tend to privilege the tastes and interests of tourists rather than locals. And if culture is allowed to be commodified, even community programs intended to ameliorate poverty and inequality can backfire. The Choice Neighborhoods Initiative in New Orleans, a grant program for the transformation of Iberville and Tremé—two culturally rich and historically valuable yet high-poverty, distressed areas—into mixed-income neighborhoods, has been a touchstone of debate on post-Katrina gentrification and the loss of “culture bearers.” Moreover, the New Orleans tourism economy, marked by labor segmentation by race, ethnicity, and gender, maintains rather than mitigates inequality.

Culture can be an important mechanism to trigger economic benefits in historic areas. However, the focus should not be purely based on potential revenues. Development of the cultural economy should be, perhaps paradoxically, driven by both exchangeable

attributes and non-commercial cultural features. While not all aspects of culture, or cultural expressions, can be sufficiently attractive for economic ventures, this does not mean they are not important for protection and enhancement. Culture and local identity played key strategic roles in New Orleans’s resilience process, and so their promotion and related policymaking should aim towards the enhancement of social cohesion.

4.1 THE CONSTRUCTION OF CULTURE-BASED RESILIENCE



CULTURAL HERITAGE EXPRESSES AN INHERENT TENSION BETWEEN ITS PRESERVATION AND CHANGE THAT SHOULD BE GEARED TOWARDS DEVELOPING STRONGER AND SUSTAINABLE COMMUNITIES.

New Orleans has shown the importance of creating spaces, both physical and social, where cultural expressions can continue to develop even as historical heritage is respected and celebrated. Tensions may be found in architectural conservation, for example, with new technologies like photovoltaic cells and storm shutters, despite their ability to improve energy efficiency and protect buildings from extreme conditions. Although these changes can be perceived as hostile towards traditional preservationist approaches, a better understanding of the interconnected relationship between cultural heritage and everyday urban life is warranted. New Orleans illustrates that, for the creation of new urban spaces, it is necessary to carry out a process of continuous, sometimes tense, dialogue for developing stronger communities, better environments, and adaptive urban capacities.

For LAC cities, the concept of preservation cannot be considered without adaptation; especially the adaptation of heritage for new uses that respond to a community's current needs, aspirations, and opportunities. New uses in heritage areas, along with the use of building and infrastructure conservation technologies, play a key role for heritage resilience. These changes in the urban fabric are also linked to the opportunities offered by compact and diverse heritage areas, in which community integration becomes more feasible. Addressing city revitalization processes that involve both old and new residents are also a fundamental aspect of building resilience; projects aimed at local economic development must also ensure housing for all, produce high quality public spaces, and guarantee socially integrated neighborhoods.

4.2 PRESERVATION AND CHANGE FOR RESILIENCE

Involving communities and their cultural practices is critical in emergency response and city resilience building processes.

4.3 RESILIENCE PLANNING AND THE INCLUSION OF COMMUNITIES

While cities may adopt various resilience frameworks as starting points in building disaster preparedness and resilience, creating city-specific resilience plans is key. The success of Resilient New Orleans was rooted in people's experiences and local knowledge. Moreover, Resilient New Orleans was just one part of a collective learning process, as earlier post-Katrina planning attempts did not represent the needs of the population, particularly the most vulnerable, and were thus unsuccessful. Planning for resilience is an ongoing process that must accommodate adjustments over time to adapt and better respond to residents' needs and challenges. Local governments should be willing to embrace such iterative, evolving practices.

While not yet complete, the case of New Orleans furnishes valuable lessons for LAC cities. After Katrina and other disasters, the city endured. The use of resilience frameworks as a basis for the creation of its own, tailored resilience planning instrument illustrates the

importance of a long-term approach. Rather than a smooth and straightforward process, the resilience strategy could not have achieved success without mistakes and pitfalls along the way, via an iterative learning and engagement process with affected, often vulnerable, communities.

The history, culture, and heritage of New Orleans have all been key factors in its reconstruction. While large infrastructure investments were important disaster response instruments after Katrina, this is only one part of the resilience-building process. Whether residents stayed in New Orleans, left, or returned, their willingness—indeed their longing, in many cases—to maintain and regenerate their rich tangible and intangible heritage stimulated the establishment of urban and social resilience in ways that no bureaucracy or construction project ever could. For New Orleanians, the strength of local cultural heritage—imbued with a sense

of place, social cohesion, and cultural diversity—has been critical to achieving resilience in the aftermath of disaster.

An important lesson is in the recognition and understanding of intangible aspects of culture and heritage as effective drivers for emergency response and resilience building. Local cultural practices, accumulated experiences and traditions, and community organization and participation can be considered important aspects for better planning and development of resilience tools. Nevertheless, the idea of “resilience” must not be misused or co-opted, which could “accommodate rather than challenge” development patterns that cause, rather than resolve, climate change and other environmental problems (Béné et al. 2014). Awareness of power structures and politics that influence different people's ability to benefit from resilience programs is fundamental, and special attention must be devoted to poor and marginalized groups, so they are not left behind (Mikulewicz 2017).

Collaboration between government and communities is vital to strengthen and fully tap the potential of intangible cultural heritage and enhance its adaptability.

In New Orleans, the public sector both regulates and promotes the city's cultural heritage. The modern historic preservation movement in the United States was arguably born in the French Quarter of New Orleans in the 1960s. The City regulates construction and renovation of historic structures through the Vieux Carré Commission in the French Quarter and the Historic District Landmarks Commission in other areas around the city. In addition, the Office of Cultural Economy catalogues tangible cultural heritage sites and promotes cultural events. It reports on the economic impact of cultural events and advocates for the fair treatment of cultural workers.

Other collaborative cultural heritage efforts are driven by civil society and nonprofit organizations. Local radio station WWOZ, owned by the New Orleans Jazz and Heritage Foundation, interactively engages listeners on the connection between tangible and intangible heritage with A Closer Walk, a "music map" that pairs historical places of importance in New Orleans music

with multimedia resources. Paper Monuments, a public art and history project that helps residents spark new cultural heritage narratives and symbols, was started in 2017, during a public controversy surrounding the removal of four Jim Crow monuments. Through poster campaigns, public proposals, and storytelling and other events, it invites New Orleanians to reexamine their heritage and imagine new monuments for the city. Other notable groups include the Arts Council of New Orleans, which invests in the city's cultural producers and creative economy, fostering new artistic expressions of cultural heritage. It also partners with the Office of Resilience and Sustainability to promote a culture of climate awareness and adaptation through artistic representations of living with water.

LAC cities can strengthen their preservation and revitalization endeavor insofar as commitment and leadership from governments and institutions are explicit and aligned with inhabitants' needs. Local governments have

close ties with communities and institutional tools to leverage resources, and therefore must play a principal role in leading urban development and resilience processes. Although LAC local governments lack the power of a city such as New Orleans, with an improved capacity to build their own plans and strategies, they can extend their decision-making reach. They can be strategic in their connection to other scales of decision-making, such as national governments or supranational institutions, and achieve more resilient goals for urban and heritage development. Therefore, local leadership should also include different levels of decision-making; civil society and the private sector, as part of their commitment to heritage and resilience, are strategic partners in the establishment of a new and better cooperative relationship.

4.4 THE NEED FOR PUBLIC SUPPORT AND COLLABORATION

**The success
of Resilient
New Orleans
was rooted in
its grounding
in people's
experiences
and local
knowledge.**





HERITAGE AND RESILIENCE:

A SHARED RESPONSIBILITY



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Unsplash, consulted 2020. www.Unsplash.com

The preservation and revitalizations of LAC heritage from a perspective of resilience must be understood as a shared responsibility. Responsible leadership of governments and institutions, along with the commitment of private actors willing to invest in heritage, and empowered communities constitute a necessary triad to produce shared and equitably distributed benefits. As an institutional tool, planning for resilience in heritage areas does not work without strong community sense of belonging (to its place) and social cohesion, all traced back to their tangible and intangible legacies.

This report has argued that planning and frameworks need bridges to local practices to be effectively resilient, because their protection and strengthening are key to ensure future investments in a sustainable and equitable way. For the IDB and other development institutions, understanding the intersections between urban resilience and cultural heritage can potentially contribute to the creation of new investment decision-making criteria, incorporating ways to assess the benefits accrued to communities. These lessons are being increasingly woven into the IDB's project operations, aware that climate change risks and vulnerability diagnostics must be looked at beyond just the built environment, identifying cultural and natural heritage for a better understanding of identified problems. For example, through historical sources, the IDB discovered a strong relationship between Ayacucho's historic center and a river that used to flow through it, identifying it as a potential risk in the rainy season. The program design, therefore, included green infrastructure in public spaces that increased the area's pervious surfaces, reducing its vulnerability.

These lessons and learning processes make space for improvements in a region that still must take further steps towards effective resilience. One promising aspect of municipal investment has been the relative ease with which funding streams can be combined in the name of building urban resilience. For tangible and intangible cultural heritage that have historically been undervalued and underfunded, attracting investments through their combination with other more traditional disaster risk reduction and climate change adaptation strategies can yield more comprehensive and sustainable human, social, and built environment outcomes, and more equitable and resilient communities.



Photo by George C. 2016
Unsplash, consulted 2020. www.unsplash.com



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