



TECHNICAL NOTES

Overall Operational Guidelines for the CURE Framework



TABLE OF CONTENTS

INTRODUCTION	Error! Bookmark not defined.
Background: The CURE Framework	Error! Bookmark not defined.
Culture in Post-Crisis Recovery	6
GUIDELINES	7
Module 1.A: Damage and Needs Assessment: Assessment	12
Module 1.1: Assessing Damage to Tangible Cultural Assets	13
Module 1.2: Assessing Damage to Intangible Cultural Assets	15
Module 1.3: Assessing Damage to Creative and Cultural Industries	16
Module 1.4: Assessing Damage to the Cultural Tourism Sector	17
Module 1.5: Assessing Damage to the Historic Housing Stock and Land Resources	18
Module 1.B: Damage and Needs Assessment: Scoping	18
Module 1.6: Data Collection and Analysis	18
Module 1.7: Asset Mapping	19
Module 1.8: Stakeholder Mapping	20
Module 1.9: Vision Development	21
Module 2: Policy and Strategy	22
Module 2.1: Designing the Planning Process	23
Module 2.2: Regulatory Mechanisms	25
Module 2.3: Civic Engagement	31
Module 3: Financing	33
Module 3.1: Identifying Financial Resources	33
Module 3.2: Management of Land Resources	35
Module 3.3: Land Value Capture	36
Module 3.4: Land Readjustment	37
Module 3.5: City-Led Financing Tools	38
Module 4: Implementation	38

Module 4.1: Institutional Arrangement..... 38

Module 4.2: Risk Management..... 46

Module 4.3: Communications and Engagement Strategy 48

Checklist for Operational Teams..... 50

CONCLUSION..... 51

RESOURCES 52

ANNEX 1 56

FRAMEWORK FOR ASSESSING DAMAGE TO TANGIBLE AND INTANGIBLE CULTURAL PROPERTIES 56

ANNEX 2 63

BUILDING A GEO-DATABASE OF CULTURAL RESOURCES 63

ACKNOWLEDGMENTS

These technical notes complement the *Culture in City Reconstruction and Recovery Position Paper*, which was the product of a joint reflection between the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Bank, by a team led by Sameh Naguib Wahba and Ernesto Ottone R., comprising Ahmed Eiweida, Lazare Eloundou Assomo, Dorine Dubois, Cristina Iamandi, Christianna J. Brotsis, Rana Amirtahmasebi, Yuna Chun, Barbara Mínguez García, Sara García de Ugarte, and Inel Massali.

The three technical notes have been developed under the leadership of Christianna J. Brotsis by Laura Bailey and Robert Wrobel (*Peacebuilding, Recovery, and Prevention in the CURE Framework*), Barbara Mínguez García and James Newman (*Disaster Risk Management in the CURE Framework*), and Rana Amirtahmasebi (*Overall Operational Guidelines for the CURE Framework*).

The technical notes greatly benefited from advice provided by peer reviewers Raja Arshad, Ellen Hamilton, Ingo Wiederhofer, and Mike Turner.

They also benefited from the professional editorial services of Lisa Ferraro Parmelee.

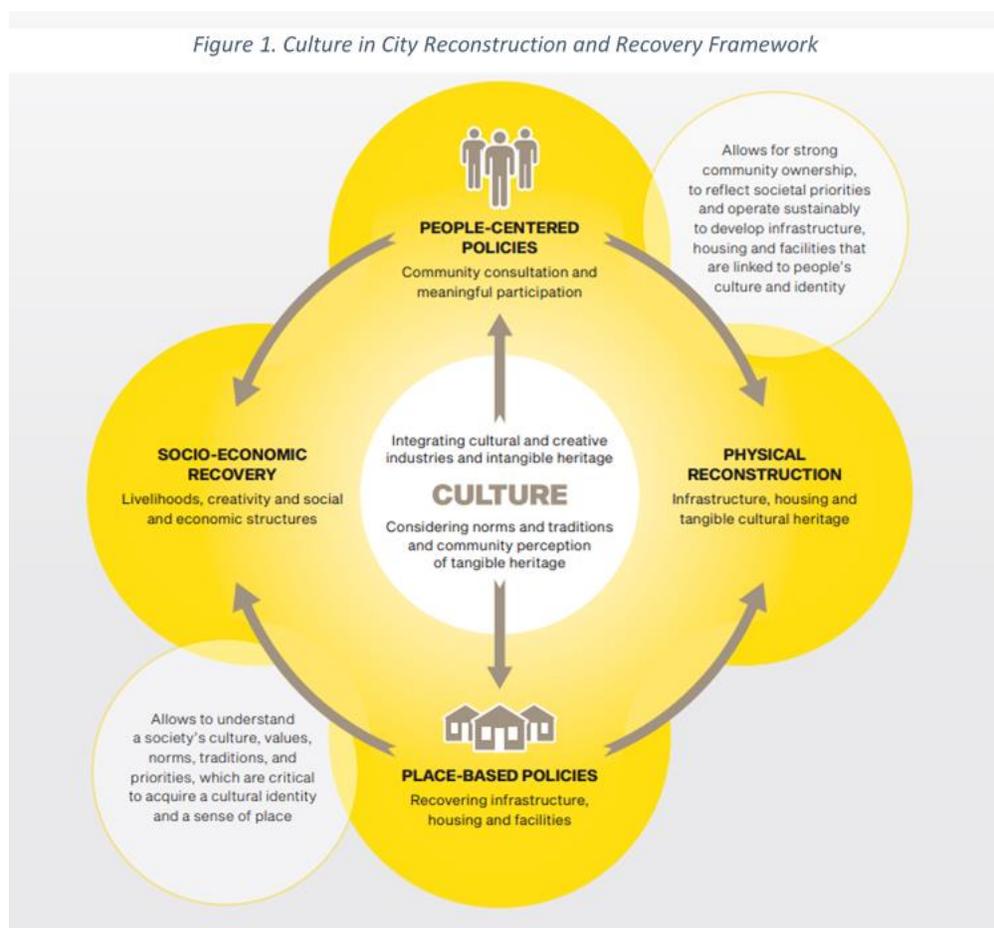
INTRODUCTION

Background: The CURE Framework

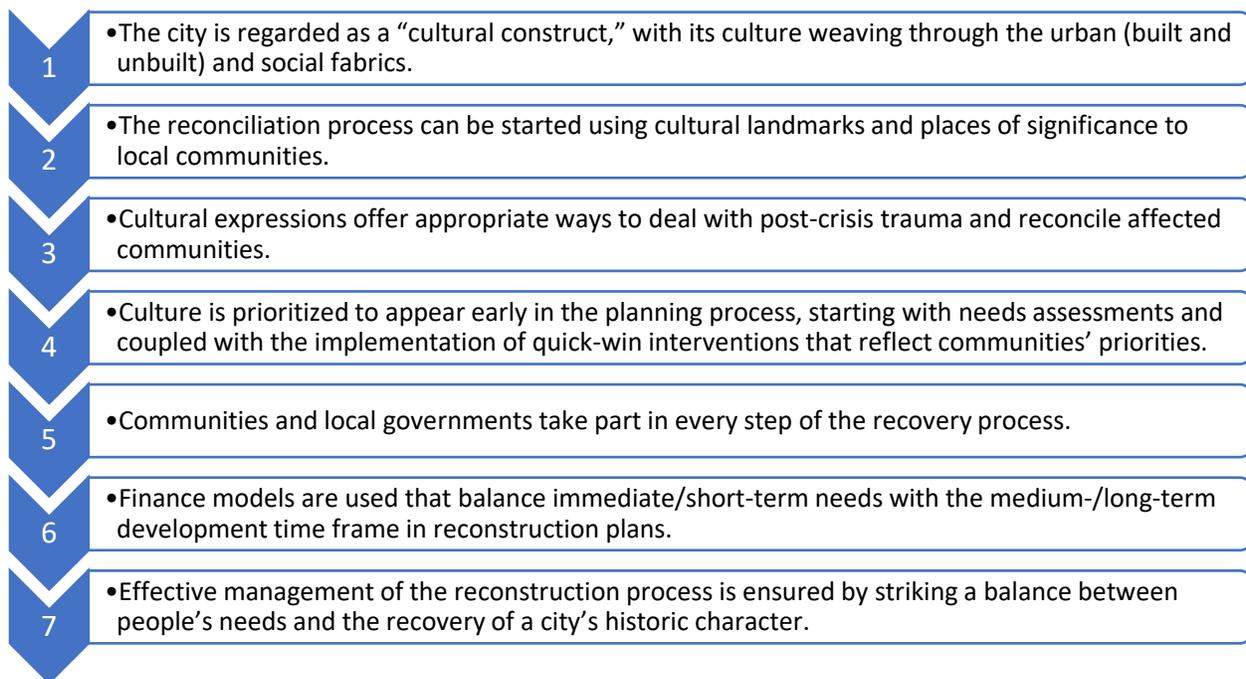
In 2018, the World Bank and the United Nations Educational, Scientific and Cultural Organization (UNESCO) jointly issued a position paper on Culture in City Reconstruction and Recovery (CURE), reflecting the shared commitment of these two organizations to place culture at the forefront of the reconstruction and recovery of cities in post-conflict, post-disaster, and urban distress situations. The paper presented a new approach, the CURE Framework, intended to help practitioners integrate culture and cultural heritage into post-crisis recovery processes. The CURE Framework draws from existing frameworks and tools for reconstruction and recovery in urban settings. It seeks to knit together people-centered and place-based approaches to produce integrated policies that share a common cultural thread (see figure 1). By integrating culture into sustainable urban development policies that address the impact of crises

on urban communities, the CURE Framework will help make cities more inclusive, safe, resilient, and sustainable.

To complement the previous work, three technical notes were developed to provide additional guidance on the nexus of culture, peacebuilding, and disaster risk management. The *Technical Note on Overall Operational Guidance* provides further



elaboration on the guidance and tools introduced in chapter 3 of the CURE position paper, “Implementing the CURE Framework.” The *Technical Note on Peacebuilding and Recovery* adapts the CURE Framework for implementation in fragile and conflict areas, and the *Technical Note on Disaster Risk Management* reviews the role of culture, cultural heritage, and the CURE principles in the context of the disaster risk management (DRM) discipline. The technical notes are meant to be used concomitantly by practitioners working in post-crisis settings. They provide background information, checklists, and entry points based on the relevant CURE guiding principles, of which the framework provides seven:



These principles are applied through the implementation of four phases:

1. **Damage and Needs Assessment and Scoping.** The first phase includes assessment of damage and impacts to tangible and intangible cultural heritage, cultural and creative industries, housing stock and land resources, services and infrastructure, and the tourism sector, as well as the economic losses to the affected population resulting from the interruption of services and use of assets. Building on these damage and needs assessments, the scoping process includes data collection, asset mapping, stakeholder mapping, and the development of a vision for city reconstruction and recovery.
2. **Policy and Strategy.** The second phase covers the design of policies, strategies, and planning processes that translate the damage and needs assessments and the vision into plans and planning regulations, through participatory approaches in which stakeholders and communities are fully engaged.
3. **Financing.** Modalities to finance the reconstruction and recovery process are identified that combine public and private financing, as well as other funding sources, the management of land resources, and the development of financing tools and incentives. Identifying specific sources of funding for cultural heritage aspects of DRM is usually very challenging, and establishing the necessary financing measures to develop and maintain the DRM plans for cultural heritage, including budgeting for emergency situations, is fundamental to this process. Investment in the protection and promotion of cultural heritage has proved profitable. The regeneration of historic centers and cities, including measures to increase resilience, significantly improves living conditions for both inhabitants and visitors. At the same time, it makes cities more appealing and competitive, which enhances prospects for attracting private investments and fostering job creation.

4. **Implementation.** Essential to implementation are setting up effective institutional and governance structures, a risk management strategy, and a communication and engagement strategy.

Culture in Post-Crisis Recovery

Several sets of guidelines are available to lead teams starting a post-crisis reconstruction. Recovery and peacebuilding assessments (RPBAs) were developed by the World Bank, the United Nations, and the European Union under the Joint Declaration on Post-Crisis Assessment and Recovery Planning. RPBAs help national governments “identify, prioritize and sequence recovery and peacebuilding activities; to provide an inclusive process to support political dialogue and participation of stakeholders; and to coordinate international support through a joint exercise and monitoring system.”¹ Post-disaster needs assessments (PDNAs), developed by the European Commission, the United Nations Development Group, and the World Bank and published in 2008, help teams quantify physical damage and consequent economic losses and identify socioeconomic recovery needs, based on information collected through field surveys and interviews with the affected population. PDNAs for different sectors include guidelines specifically designed for assessments of the culture sector in reconstruction and recovery processes.

While RPBAs and PDNAs provide guidance in developing city-level methodology for needs assessment in post-crisis situations, both are meant to be implemented at the national level. In this document, the focus is on creating a blueprint that can be executed on urban and suburban levels, utilizing a historic urban landscape (HUL) approach. To do so, we selectively use some of the elements in the two mentioned methods and alter them as needed for application to post-crisis needs assessment of historic and culturally rich urban areas. We then add material from other published methods and knowledge about World Bank operations to develop a cohesive structure and toolbox for post-crisis rebuilding in historically and culturally rich cities.

The HUL approach acknowledges that a city’s cultural identity is shaped by an intertwining of tangible and intangible culture and environmental values. Formative forces in historic areas include infrastructure, diversity and identity, built environment, cultural practices, geomorphology, hydrology, topography, and societal values, among others. Properly integrated with geographical factors, urban heritage can act as a catalyst for socioeconomic development through tourism, commercial use, and higher land and property values, generating revenues that pay for maintenance, restoration, and rehabilitation.²

In developing these operational guidelines, we also considered the time frame for rebuilding activities. The developers of RPBAs and PDNAs assumed a very short-term window of opportunity of about four to six weeks to assess damage and needs. As they were also aware that rebuilding could take decades, however, they provided actions for a longer time period, based on a “build back better”³ approach. Recent

¹ World Bank, “Recovery and Peace Building Assessments,” brief, last updated February 15, 2017,

<https://www.worldbank.org/en/topic/fragilityconflictviolence/brief/recovery-and-peace-building-assessments>.

² UNESCO and World Heritage Centre, “New Life for Historic Cities: The Historic Urban Landscape Approach Explained,” brochure, UNESCO, July 2, 2013, <https://whc.unesco.org/en/activities/727>.

³ *Build back better* is defined in the CURE Framework as “the use of the recovery, rehabilitation, and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies, and the environment.”

policy debates have moved beyond the “Build Back Better” approach to the “Build to Last” approach which emphasizes a deeper understanding of risk at the outset.

In many countries, historic urban cores are registered in national or local lists of historic places or as World Heritage Sites and, therefore, have site management plans and a wealth of information available about the history and cultural significance of the urban areas. In such cases, the reconstruction team must integrate into their efforts applicable elements of the site management plan that was previously developed. The site management plan usually includes a comprehensive inventory of all heritage objects—movable and immovable—and should contain the details of their locations and the condition they were last in.

GUIDELINES

The operational guidelines that follow are based on the CURE framework and include four modules: damage and needs assessment (consisting of assessment and scoping), policy and strategy, financing, and implementation. While some of these modules and their components can be implemented during conflicts and in the immediate period after natural disasters, others can only be implemented in periods of relative peace and stability after a conflict or disaster has ended. Table 1 summarizes these modules and their application at times of conflict and disaster. A detailed description of all the modules follows the table.

Table 1. Assessment Application by Module (during/post crisis)

Module	Status on the ground	Government Capacity	Prerequisites
Module 1.A: Damage and Needs Assessment			
Module 1.1: Assessing Damage to Tangible Cultural Assets	<input checked="" type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	Medium to high	<ul style="list-style-type: none"> • Assessment of damage to tangible cultural assets can be properly carried out when the disaster or conflict is over, but in situations where recording the remaining heritage assets during the conflict seems important, it may be done with a small local team. • Assessing damage to intangible cultural assets requires the participation of skilled local consultants (architects, historians, and engineers) familiar with the arts and cultural heritage of the city. • The structure and content of cultural properties should be assessed. • Assigning present value to nonreplaceable cultural resources, such as original paintings and documents, is an essential step.
Module 1.2: Assessing Damage to Intangible Cultural Assets	<input checked="" type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	Medium to high	
Module 1.3: Assessing Damage to Creative and Cultural Industries	<input checked="" type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post-natural disaster/conflict	Medium to high	

			<ul style="list-style-type: none"> • It is more difficult to assess damage to intangible heritage in an ongoing conflict. A better scenario would be to develop a database of these assets (including well-known artists/craftspeople) and update it periodically.
<p>Module 1.4: Assessing Damage to the Cultural Tourism Sector</p>	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	High	<ul style="list-style-type: none"> • Conflicts can have a grave negative impact on the tourism industry. • Assessing damage to the tourism industry is more challenging than to other cultural assets because it involves many different sectors and requires more rigorous analysis. The government needs to have a high capacity for analysis or the ability to hire specialized consultants to take on this task.
<p>Module 1.5: Assessing Damage to the Historic Housing Stock and Land Resources</p>	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	Medium to high	<ul style="list-style-type: none"> • Many conflicts affect land ownership. It is very challenging to keep a record of land resources and ownership while a conflict is ongoing. • It is recommended that any records or cadastres from before the conflict or disaster be kept and revised after the conflict or disaster has ended. • Information on housing stock can be obtained post-crisis using satellite imagery, aerial photos, and existing street views. Information on masonry techniques and building materials and construction can be obtained by interviewing local craftspeople. • In rebuilding after a natural disaster, it is important to assess these building and masonry techniques to determine the extent to which they contributed to or prevented losses. • Land values differ from pre- to post-crisis. Creating a database or updating an existing one can be useful in keeping track of changes in land value.
<p>Module 1.B: Damage and Needs Assessment: Scoping</p>			

<p>Module 1.6: Data Collection and Analysis</p>	<p><input type="checkbox"/> During conflict</p> <p><input checked="" type="checkbox"/> Post–natural disaster/conflict</p>	<p>High</p>	<ul style="list-style-type: none"> • Macro- and country-level data should be collected by the central government. • Local and city-level data can be collected by the city government in collaboration with the affected communities. • Micro-level analysis focuses specifically on the historic core and should (as much as possible) include pre- and post-crisis periods to enable comparison and the development of a baseline.
<p>Module 1.7: Asset Mapping</p>	<p><input checked="" type="checkbox"/> During conflict</p> <p><input checked="" type="checkbox"/> Post-natural disaster/conflict</p>	<p>Medium</p>	<ul style="list-style-type: none"> • Asset mapping is best implemented with input from the community • At times of conflict and when a community is displaced, expert interviews can be conducted to generate a basic cultural assets map of the city. • Depending on the availability of funds, data, and technology, asset maps should be used in conjunction with other maps showing socioeconomic attributes, risks/hazards, infrastructure, and so on.
<p>Module 1.8: Stakeholder Mapping</p>	<p><input type="checkbox"/> During conflict</p> <p><input checked="" type="checkbox"/> Post–natural disaster/conflict</p>	<p>Medium</p>	<ul style="list-style-type: none"> • Ideally, stakeholders should be tracked during the conflict, but this is close to impossible. • In the post-crisis period, the community and stakeholders must be mapped to obtain an understanding of how the crisis has shaped or altered community representation and dynamics.
<p>Module 1.9: Vision Development</p>	<p><input type="checkbox"/> During conflict</p> <p><input checked="" type="checkbox"/> Post–natural disaster/conflict</p>	<p>Medium to high</p>	<ul style="list-style-type: none"> • A collective vision can only be developed with the participation of the community after the immediate impacts of disasters or conflict have been brought under control. • The government needs to have the capacity (or to hire consultant with such capacity) to moderate different ideas at a conference to determine the future of the historic core.
<p>Module 2: Policy and Strategy</p>			

<p>Module 2.1: Designing the Planning Process</p>	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	<p>High</p>	<ul style="list-style-type: none"> • Note that the planning process in this module applies to the period after the emergency response has ended and the community has more time to think about long-term impacts of the reconstruction process. • Depending on each country/city governance system, post-crisis reconstruction may be planned at the local or national level. A combined, or “hybrid,” effort at these two levels may also be applicable.
<p>Module 2.2: Regulatory Mechanisms</p>	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	<p>High</p>	<ul style="list-style-type: none"> • Developing different types of regulatory mechanisms (even if they did not exist before the crisis) is a proper way to ensure “build back better” principles are integrated into the rebuilding process. • The development of processes to regulate land use in post-conflict situations could be a point of contention, especially if the source of conflict had roots in the economy or distribution of resources or land.
<p>Module 2.3: Civic Engagement</p>	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	<p>Medium to high</p>	<ul style="list-style-type: none"> • Meaningful participation should be the goal, not mere outreach. • The findings of Module 1.8 (stakeholder mapping) should guide the engagement process. • Civic engagement during conflict is challenging. It is best just to keep track of the displaced and affected populations to start a meaningful civic engagement process afterward.
<p>Module 3: Financing</p>			
<p>Module 3.1: Identifying Financial Resources</p>	<input checked="" type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post–natural disaster/conflict	<p>Medium to high</p>	<ul style="list-style-type: none"> • In managing land resources, special consideration should be given to

			the conflict and post-conflict situations.
Module 3.2: Management of Land Resources		Medium to high	<ul style="list-style-type: none"> Land resources are rarely the sole cause of conflict, but they relate to wider processes of exclusion, discrimination, and economic and social marginalization. During conflict and times of instability, displacement and secondary occupation should be monitored by registering land rights as the population flees, obtaining witness testimonies, comparing before and after satellite imagery, and reviewing other evidence. When displaced communities return, a just system of restitution should be ensured.
Module 3.3: Managing Land in the Times of Conflict		Medium	
Module 3.4: Land Value Capture	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post-natural disaster/conflict	High	<ul style="list-style-type: none"> Use of these financing instruments requires a strong and capable government. For these measures to be effective, the situation post-crisis must have calmed down and basic needs of the community met.
Module 3.5: Land Readjustment			
Module 3.6: City-Led Financing Tools			
Module 4: Implementation			
Module 4.1: Institutional Arrangement	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post-natural disaster/conflict	Medium to high	<ul style="list-style-type: none"> While some of the institutional models for reconstruction can be very complex and require high expertise, in other cases a simple office or task force responsible for reconstruction can start the process.
Module 4.2: Risk Management	<input type="checkbox"/> During conflict <input checked="" type="checkbox"/> Post-natural disaster/conflict	High	<ul style="list-style-type: none"> This module requires high expertise and capacity.
Module 4.3: Communications	<input checked="" type="checkbox"/> During conflict	Medium to high	<ul style="list-style-type: none"> During conflict or an ongoing disaster, opportunities always exist

and Engagement Strategy	<input checked="" type="checkbox"/> Post–natural disaster/conflict		to engage, inform, and consult the community.
-------------------------	--------------------------------------------------------------------	--	-----------------------------------------------

Module 1.A: Damage and Needs Assessment: Assessment

The main objective of needs assessment is to identify and assess damage to different sectors after a crisis. Although years of dealing with disasters and conflicts have left the international community with well-developed and comprehensive damage assessment tools, the intangible nature of some cultural assets and institutions makes needs assessment in the cultural sector challenging and different from the processes in other sectors. Furthermore, cultural resources are nonrenewable, and, in many cases, simply rebuilding a cultural asset is not sufficient to revitalize the way of life associated with it. In such cases, recovery may not mean reconstruction of cultural assets but, rather, regeneration of the ties between the affected population and their cultural resources, which convey a certain way of living.⁴ As a result, needs assessment in the cultural sector has to be conducted with active participation of the affected population and deep understanding of community dynamics and features.

The needs assessment process proposed here is to be conducted on the scale of the city and historic area. The goal is to assess specific damage to tangible and intangible cultural heritage elements. Since the historic area is part of the larger city, however, the assessment must also consider the impacts of crisis on the city as a whole, especially if the historic area was a major part of the central business district or a major tourism center.

In the discussion that follows, we will explain what information must be collected as part of the needs assessment process. Information can be obtained mostly by conducting interviews with individuals in the formal and informal commerce sectors and the cultural tourism establishments and through observational studies, qualitative research, and analysis of institutions and social networks. The team can use the following methods:

- Primary research (participant-based interviews)
- Site surveys
- Secondary literature searches
- Archival research
- Participatory planning methodologies
- Mapping and global positioning system (GPS) logging
- Photogrammetry techniques

In addition to gathering information by these means, the team must develop a specific data profile for each sector that relates to culture. Each profile provides a brief overview of damage and of short-, medium-, and long-term needs and high-priority interventions. This is not an exhaustive sectoral review but a snapshot to guide the reconstruction process.

⁴ World Bank, GFDRR, and UNESCO. PDNA Volume B, Culture.

Also important to consider is that each community defines cultural assets differently. The team must ensure the participation of community members in an effort to develop a comprehensive plan that includes all tangible and intangible cultural assets in the assessment.

The following presents modules of the damage needs assessment of the culture sector in cities with significant historic resources.

Module 1.1: Assessing Damage to Tangible Cultural Assets

UNESCO defines cultural heritage as “the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.”⁵ This definition includes “objects,” “sites,” and “buildings,” in addition to intangible cultural heritage, which ensure cultural diversity of generations. The goal of the damage assessment is to assess specific damage to all cultural resources. Table 2 summarizes these different categories of assets.

Table 2. Categories of Tangible and Intangible Cultural Heritage, UNESCO

Tangible cultural assets	
Movable	<ul style="list-style-type: none"> • Monuments, which have a known architectural or historic value • Buildings, including residential, commercial, and so on • Structures, such as dams, bridges, tunnels, canals, and so on • Sites, such as traditional gardens, battlefields, historic urban landscapes, and archaeological sites • Districts, including whole neighborhoods or campuses; may include a group of buildings that have no significant individual heritage value but collectively shape a significant land use pattern
Immovable	<ul style="list-style-type: none"> • Cultural and historic heritage, such as archaeological collections, artworks, maps, family records, and historic documentation and artifacts housed in libraries, museums, and archives
Intangible cultural heritage	
Experiential and performing arts	Music, dance, ethnic/religious practices, festivals and events, cuisine
Traditional craftsmanship	Clothing, home decor, looms, baskets, and other symbolic items that may have been commercialized
Cultural tourism	Heritage experiences that enable tourists to stay and experience local housing, food, performances, and the environment

⁵ UNESCO, “Tangible Cultural Heritage,” UNESCO Office in Cairo, 2017, www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage/.

Traditional knowledge	Medicine and knowledge and practices concerning nature, religion, and the universe
Oral traditions	Languages, writing, and linguistics

The assessment of tangible cultural assets involves recording damage to structures and their contents and collecting information on the economic value associated with loss of function. Annex 1 (table A1.1) provides a comprehensive list of attributes to account for.

To record losses to immovable tangible cultural assets, the team should assess all damage, ranging from structural damage to damage to surface designs and architectural decorations and ornaments. Based on a tally of these attributes, a team of architects and engineers must determine the types and degrees of damage, using historical documentation or old photographs. The next step is to determine a “replacement value” for the damaged structure. Doing so is best based on a conceptual estimation, because cultural resources are nonrenewable, and their reconstruction does not necessarily preserve the actual historic value of the artisanship and indigenous building techniques used to create them in the first place, especially when such knowledge and skills are not available anymore. Even harder is assigning present value to such nonreplaceable cultural resources as original paintings and documents. Nonetheless, the careful recording of damage to the structure and design features still makes it possible to arrive at an estimated replacement value. Based on Maurato and Maazanti’s economic impact studies, appraisals can be determined through hedonic pricing methods, travel cost methods, and contingent valuation methods (see table 3).

Table 3. Frameworks for Assessment and Appraisal of Economic Losses

Category	Field consultants	Activities
Historic structures and buildings	Architects and engineers, real estate professionals	Consult with heritage artifact appraisal experts. Heritage appraisal through replacement cost valuation: <ul style="list-style-type: none"> ● Hedonic pricing methods: Nonuse heritage values reflected in related market transactions in proximity to a real estate parcel ● Travel cost methods: Proxy of travel expenditures related to the consumption of heritage sites or objects ● Contingent valuation methods: Value ascribed by an individual’s willingness to pay or to accept compensation for loss
Cultural institutions and museums	Antique dealers and experts	Consult with heritage artifact appraisal experts.

Commercial cultural institutions	Cultural tourism experts	Calculate the losses using a simple formula like this: [daily economic revenue] x [days out of business] = potential economic loss from disruption
----------------------------------	--------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------

In the aftermath of crisis and to record losses to the contents of cultural institutions, the team must look for historic sites and for museums, art centers, and libraries that house artifacts, documentation, photographs, and furnishings. The team should also collect information on losses to these movable cultural resources. Common threats to movable artifacts include theft, fire, and losses resulting from wars and explosions. As with the immovable structures, the replacement of these artifacts should be calculated by comparison to the sales of similar historic items in international markets and based on quotes from skilled antique dealers and experts.

Last, the team must determine losses resulting from disruption to cultural properties and institutions. All historic properties have functions. Some that are less architecturally significant are used as residential, commercial, and manufacturing centers. Other, more significant structures or monuments are used as museums or cultural centers catering to domestic or international tourists. Whatever the function, the needs assessment team should estimate losses incurred from when the damaged historic property is out of use. These are calculated in terms of economic value, based on the amount of time the property is nonfunctional, and they may occur in revenue generation, if the property is a tourist destination, or based on loss of function as a housing or commercial unit.

Module 1.2: Assessing Damage to Intangible Cultural Assets

UNESCO asserts that cultural heritage is not limited to monuments or collections of objects but also includes cultural expressions transferred between generations.⁶ UNESCO’s references for intangible assets are as follows:

- (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;
- (b) performing arts;
- (c) social practices, rituals, and festive events;
- (d) knowledge and practices concerning nature and the universe; and
- (e) traditional craftsmanship⁷

As important as it is to assess damage to intangible cultural heritage, it is difficult to record such losses as they happen over time and as disruptions to a way of life. Such destruction is not always visible and can be hard to detect. Within the categories listed above, some losses are easier to assess. Disruption to a festival or performing arts routine, for example, or the loss of a dying dialect is more readily understood than losses to social or religious rituals or indigenous practices.

⁶ Ibid.

⁷ UNESCO, “Text of the Convention for the Safeguarding of the Intangible Cultural Heritage,” 2003, ich.unesco.org/en/convention#art2.

In assessing damage to intangible cultural heritage, the community has to take the lead. UNESCO’s “Ethical Principles for Safeguarding Intangible Cultural Heritage” specifically states that “each community, group or individual should assess the value of its own intangible cultural heritage and this intangible cultural heritage should not be subject to external judgements of value or worth.”⁸ In short, the needs assessment team must involve the community in conversations regarding intangible cultural resources.

Module 1.3: Assessing Damage to Creative and Cultural Industries

Damage to the creative and cultural industries as a result of crisis may occur in both the commercial sector and the manufacturing sector.

Commercial Sector

Damage to commercial enterprises may be in the form of destruction of physical assets or interruption to sales or operation. Intangible cultural industries include heritage arts and crafts unique to the area that can be commercialized. Often the most vulnerable to loss, they are intrinsically tied to a sense of place and community.

To assess losses from damage to a cultural commercial asset, five areas should be considered: the product or service, its market and sales value, the demographics of participants, the size of the enterprise economically, and its governing authority and structure (see table A1.2 in annex 1 for details). Special attention must be paid to determining which skills or intangible knowledge or knowhow (if any) have been lost. Also important to assess is if any schools of crafts and arts or informal training centers were demolished or if any well-known craftspeople were displaced by the crisis. Who were the people practicing these arts, and what do they need to continue pursuing them? The team should also see if any authority previously protected or regulated these economic assets, or if products in any form of arts or culture were sold before the crisis. Was any form of marketing or promotional agency tasked with advertising or promoting the local creative and cultural industries?

Annex 1 (table A1.2) provides a more specific list of items to consider when assessing damage to creative and cultural industries. In addition, the team can try to locate the country’s commerce sector survey and documents belonging to chambers of commerce, if any exist. In countries with well-developed insurance markets, some insurance data may be available for larger enterprises.

Manufacturing Sector

In many cities, the historic urban core is a hub for small-scale manufacturing. Each country has a different method for classifying manufacturing and industrial activity, and the team must review such definitions by the central government. The United Nations also has a categorized list of manufacturing activities.⁹

Damage to the manufacturing sector may affect buildings, equipment, machinery, and raw materials.¹⁰ As in other sectors, it is important not to double count the damage. For its assessment, the team must use

⁸ Ibid.

⁹ United Nations, Department of Economic and Social Affairs, Statistics Division, *Tourism Satellite Account: Recommended Methodological Framework 2008*, Studies in Methods, series F, no. 80, rev 1, 2010, www.oecd.org/cfe/tourism/TSA_EN.pdf. According to the United Nations, the manufacturing sector comprises various individual economic activities and products, including food and beverages, tobacco, textiles, apparel, leather goods, wood and wood products (except furniture), paper products, printing and media reproduction, coke and refined petroleum products, chemicals, pharmaceuticals, rubber and plastic products, other nonmetallic mineral products, basic metals, fabricated metal, computers and electronics, electrical equipment, motor vehicles, other transport equipment, furniture, and repair and installation of machinery and equipment.

¹⁰ World Bank, GFDRR, and UNESCO.2016. Post Disaster Needs Assessment Guidelines (PDNA) Volume B, Culture.

the replacement cost method, which accounts for the necessary funds to rebuild the industry by analyzing the value of its economic losses and its potential cash inflows. Understanding the disaster’s impact on the manufacturing sector is more challenging than for some other sectors if a large number of manufacturing establishments (varying in type or size) exist throughout the historic center.

To measure economic loss, the team first must obtain an understanding of the pre-crisis situation by collecting any available baseline data; annex 1 (table A1.3) specifies attributes of the data needed. Some examples include the number, type, and size of manufacturing units; characteristics of the manufacturing facilities, including building typologies and machinery; data on annual production and equivalent dollar amounts; and information on the destination of the manufactured goods—that is, whether they are for local or domestic consumption or part of the country’s exports.¹¹ By the end of the process, the team is expected to have a directory of manufacturing business pre-crisis that includes typologies, sizes, and gross unit production and sales.

Module 1.4: Assessing Damage to the Cultural Tourism Sector

Disasters or conflicts can have a grave impact on the tourism sector in cities, which in turn reduces the amount of foreign exchange earnings for the city and the country as a whole, especially where tourism contributes a large share of the country’s gross domestic product (GDP). In addition, the tourism sector is highly vulnerable to fear of or misconceptions about potential dangers of disasters. Mexico, for example, lost US\$2.3 billion of its tourism revenue in 2009 due to the swine flu epidemic, even though the epidemic was relatively mild in the tourist areas.¹² For this reason, the tourism sector may take longer than other sectors to recover fully after a crisis, even if the necessary infrastructure and accommodation are rebuilt.

As in manufacturing, it is important in assessing damage to the tourism sector not to double count assets and services that may be included in other sectors of the damage and needs assessment. We must assume, for example, that the damage to roads and the transport network within the historic district is already included under the infrastructure sector, so we do not account for them under cultural tourism, even though they are vital to the attractiveness of the area as a tourist destination.¹³ Also important to remember is that, while most PDNAs assess damage at the country level to account for visa and airport fees, value-added and other types of national taxes, and so on, the goal here is to assess the damage to the tourism sector only at the city level.

Accounting for tourism revenues and subsequent damage assessment is an extremely technical field that involves economists, civil engineers, data analysts, and statisticians. These guidelines are not intended to provide detailed information about the intricacies of accounting for tourism-related activities. Instead, they provide higher-level instructions for including all sectors and assets in the historic area related to assessing damage to economic sectors.

Finally, damage and needs assessment for the tourism sector must include demand-side and supply-side assets.¹⁴ During the recovery process, the two sides correspond with each other—for example, the schedule for rebuilding accommodations on the supply side should correspond with the estimated tourist arrivals on the demand side. To boost demand after crisis, it is important to design marketing or

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ United Nations, *Tourism Satellite Account*.

information campaigns to advertise the destination to the domestic and international community as safe and reliable.

See annex 1 (table A1.4) for a list of attributes to consider when assessing damage to the cultural tourism sector.

Module 1.5: Assessing Damage to the Historic Housing Stock and Land Resources

Housing is one of the most basic and important sectors in the reconstruction of post-crisis cities. The assessment of damage must include formal and informal housing and should be viewed in coordination with thorough assessment of land resources in the historic core. Housing stock and land resources go hand in hand because many housing units in the historic core are built on ambiguously owned land, which may be publicly, privately, or communally owned. Furthermore, the team must count the tenants or informal settlements that may not have legal rights to their land. In assessing damage to the housing sector alone, factors to be considered include characteristics of urban housing, local and national institutions, housing policy, and finance.

See annex 1 (table A1.5) for ideas on how to collect damage information on the housing sector.

Module 1.B: Damage and Needs Assessment: Scoping

After a thorough damage assessment has been conducted, the scoping activities set the stage for starting the rehabilitation and rebuilding process. In the scoping module, the team collects macro- and micro-level data, maps assets and stakeholders, and creates a vision to guide the process through the years and decades to come.

Module 1.6: Data Collection and Analysis

Data collection is essential to measuring progress, creating accountability, and attracting further funding to sustain efforts. Collecting the right data and making the information available early in the planning process enables agencies and stakeholders to make strategic decisions and save time and money as they proceed. Strategies for structuring effective data collection include setting a baseline, identifying macro- and micro-level data, and understanding the distinction between more output- versus more outcome-oriented metrics.

Baseline Data

From the start, baseline assessments should be created to benchmark progress against an existing situation. A data set containing baseline data describes an area as it was before a disaster in terms of, for example, the original condition of the infrastructure and housing. Geographic information system (GIS) databases and remote sensing data sets dating from before the disaster are good sources for spatial baseline data. For socioeconomic attributes, the team should look to the census bureau, humanitarian information centers, household surveys, or community survey data sets. Once baseline data are established, metrics for progress can be set against them to assess the direction of change.

Macro-Level Data

While this document focuses on the historic area only, we would like to emphasize the need for a big-picture framing of the city's overall development pattern and growth dynamics. Only within this larger framework does the needs assessment for the historic core make sense. Within it are gathered cultural data, economic

data, growth dynamics, socioeconomic and demographics analysis, physical analysis, fiscal analysis, political analysis, historical analysis, and so on. The collection of data relevant to these aspects is usually the responsibility of the government agencies, depending on which ones are functional post-crisis.

Micro-Level Data

On the micro level, the aim is to develop a data-rich context for the master planning module for the historic area following a crisis. Micro-level analysis focuses specifically on the historic core. Having baseline data is helpful to understanding the vibrancy and efficiency of the historic urban landscape before the crisis. The collection of these data should focus on natural and cultural assets, creative and cultural industries, economic data, social data, the geography and boundaries of the historic area, growth dynamics, market assessment, obstacles to growth, and so on.

Module 1.7: Asset Mapping

The aim of this module is to identify the main anchors and strengths of the cultural sector in the urban area. The resulting document is mainly a database of assets, with suggested techniques for using technology to record lost or at-risk cultural relics.

In the context of post-crisis reconstruction in a historic urban environment, cultural and relevant noncultural assets should be considered. Together with the cultural assets described above, the historic urban area possesses other assets that build on its historic and geographical characteristics and give the area its cultural vibrancy. These include educational, health, environmental, and other community assets and infrastructure deemed important by the team in consultation with the community.

An inventory of cultural assets (sometimes called a cultural resource map, if presented spatially) is a database compiled from property data and information about each asset. It represents a systematic approach to identifying and classifying a community's cultural heritage and assets¹⁵ and is best created using available technology tools, such as GIS software or other similar but open-source mapping tools. The use of these tools has many benefits. Digital maps of cultural resources are easily superimposed on other maps that present urban data, such as information on hazards, demographics, economic activity, and transportation, which makes the master planning process easier. In the absence of such tools, the team can conduct surveys instead.

It is important to note that this information is the most basic to be collected. Depending on the character of the urban area, levels of damage, and amount of input from the community, more information may be added to the inventory in a spreadsheet format that can later be merged with a mapping platform to run queries and analysis. Much of this information may be obtained through secondary searches through databases and previously developed inventories, especially if the historic property is part of a national or local historic register.

While the use of technology is costly, open-source mapping and database tools can provide a more economical solution. Building an in-depth GIS database with a custom mapping application, for example, could cost more than US\$100,000. But similar databases can be built using an Excel spreadsheet and an

¹⁵ "Cultural Planning" The website of Ministry of Heritage, Sport, Tourism, and Cultural Industries of Ontario.
http://www.mtc.gov.on.ca/en/culture/cul_planning.shtml

open-source mapping platform, such as Carto DB, Open Street Map, or Urban Footprint, at a cost of less than \$20,000. In such cases, most of the expense will be associated with data collection and labor.¹⁶

It is important that a cultural resource map be updated regularly. Several technical models can be used to build a database that can be updated. In one, the “centralized model,” one entity or agency leads the process and has exclusive editing privileges. Other partners are either inactive or may submit edits to the lead agency for incorporating in the database. In this model, the main responsibility is with the lead agency.

A second model, the “shared model,” grants different partners access to a shared software platform. Each partner has direct access to the database and is responsible for updating the information. A city’s cultural heritage organization, for example, could update the building construction database, while the land management agency updates the ownership data. The lead agency’s role in this case is monitoring and problem solving. This model can save a great deal of time for the lead agency and make the data more accessible to other partners.

The third, “open-source model,” allows anyone to access and contribute to parts of the cultural resource map online. In a post-crisis situation, where the involvement of the community in decision making is important, this method could be an efficient way of incorporating the community’s ideas and evaluation of their cultural heritage resources based on their local knowledge. People could, for example, contribute pictures of local assets or identify how certain resources may have changed since the data were last entered. For both shared and open-source models, a system of oversight and monitoring must be in place, and the lead agency must regularly monitor the suggested edits before they are incorporated.¹⁷

b provides details for building a geo-database of cultural resources and on an open-source digital conservation approach and techniques.

Module 1.8: Stakeholder Mapping

Engaging the stakeholders has two steps. The first is to identify them, meaning the team should first be clear on what the “community” is and who represents it. The process should include the stakeholders who are directly affected by the rebuilding process and decisions, such as community leaders and organizations, religious and ethnic groups, the private sector, owners, renters, the informal settlements, youth, and women. In addition, educational and academic institutions, local government officials, policy and planning professionals, and technical experts should be engaged. Once these stakeholders have been identified, the team must then map out the power dynamics, incentives, and relationships among them. The following activities will aid in the identification and mapping process:

1. Create an initial list. Ask who is affected, and who can affect the results of reconstruction.
2. Categorize and prioritize. Determine which stakeholders are more essential and what level of influence they have on one another.
3. Create a diagram or a matrix of these stakeholders.
4. Indicate in the diagram or matrix the relationships among the stakeholders to aid in understanding how these different group interact.

¹⁶ Ibid.

¹⁷ Ibid.

As conflict situations can damage societal ties and bonds and deepen already existing divides, mapping the community afterward is a difficult task that requires special expertise and extensive knowledge of the society. The divides could be even deeper when a displaced community is returning and the urban environment is being rebuilt for its settlement. Hiring local consultants with strong ties to the community will help ensure every group is included and consulted.

Module 1.9: Vision Development

The completion of the activities mentioned above leads to development of a vision for reconstruction and recovery. To be binding and effective, this vision should be developed collectively with the participation of all stakeholders. Usually the team leads the community in carrying out this task after presenting the findings of the needs assessment process. The community's input is collected in a document, usually called a vision plan or a framework plan, which articulates the big-picture ideas, goals, and principles that will guide the project.¹⁸ This short document is conceptual and includes the following elements:

- **Context and rationale.** This section of the vision plan builds on the data collected in the damage and needs assessment process to paint an accurate picture of the post-crisis historic area within the city, region, and country. It outlines the desired future of the historic area and interrelationships among the social, economic, cultural, and physical dimensions of the reconstruction process. It should cover issues and problems, the extent of damage, and a desired and realistic time horizon for the reconstruction efforts.
- **“Build back better” principles.** Although post-crisis communities usually envision an urban future similar to what they had before, the process of developing a vision is a good opportunity for the planning team to introduce bold ideas to build back a better urban environment. This requires fresh thinking that may compete with the demands of the community. Box 1 provides examples of cases in which “build back better” principles were applied to post-crisis reconstruction.
- **Long-term vision for the historic area.** This section of the vision plan does not detail every policy or procedure needed for reconstruction. It is, rather, conceptual and provides a general framework for the reconstruction. The long-term vision should be developed by involving all sectors and levels of community and serve as a consensus builder for the community. All actors should agree on a shared future for the urban area, balancing speed of recovery against the betterment of the urban area and taking advantage of the rebuilding process to build a more resilient, competitive, and livable city.
- **Goal setting.** Goals that act as guiding principles of the reconstruction process are general at conception and finetuned later to produce specific policies and documents. These goals are developed and agreed to by all stakeholders and accompanied by a time frame for implementation. In designing them, the team should lead the community to the understanding that reconstruction is a process. While the community understandably wants reconstruction to happen quickly, the planning team should focus on the best course of action and set goals that will result in a better urban environment. One way to accomplish this is to set the most achievable goals first and turn attention later to those that require more deliberation, funding, or consensus building. A second solution would be to increase the capacity of the planning and implementation

¹⁸ Rana Amirtahmasebi, Mariana Orloff, Sameh Wahba, and Andrew Altman, *Regenerating Urban Land: A Practitioners Guide to Leveraging Private Investment*

agencies, while a third is to create several overlapping pathways for recovery planning and its relevant decision-making process.¹⁹

Box 1. Examples of Building Back Better

The following are cases in which “build back better” principles were applied to post-crisis reconstruction:

- In the aftermath of floods in 1993, the city of Arnold, Missouri, used the post-crisis process to push for an already developed plan for a greenway along the Mississippi and Meramec rivers to be implemented through a grant program for turning flood-prone residential areas into green space, while improving wildlife habitats and creating new recreational opportunities.^a
- Hit by a tornado in 2007, the community in the city of Greenburg, Kansas, and its leaders used the reconstruction process to develop renewable energy and rebuild to Leadership in Energy and Environmental Design (LEED) standards.^b
- In Timbuktu, Mali, conflict in 2012 destroyed fourteen mausoleums that were on the World Heritage List. UNESCO created a plan strongly focused on sustainability and on strengthening institutional and professional capacities for conservation in the long-term reconstruction. After rehabilitation of the damaged mosques was completed, capacity-building workshops established conditions for preservation, conservation, maintenance, and proper management of the cultural heritage. A reconstruction strategy that focused on a historic area reinforced the state of conservation and intervention capacities related to building methods.^c

^a Schwab et al., “Planning for Post-Disaster Recovery and Reconstruction.” PAS Report no. 483/484. 1998. Chicago: American Planning Association.

^b James C. Schwab, ed., “Planning for Post-Disaster Recovery: Next Generation,” Pas Report 576, American Planning Association, 2014, https://www.fema.gov/media-library-data/1425503479190-22edb246b925ba41104b7d38eddc207f/APA_PAS_576.pdf.

^c UNESCO and World Heritage Centre, “New Life for Historic Cities.”

Module 2: Policy and Strategy

Module 2 includes an assessment of existing policies and planning topics related to post-crisis reconstruction. Strategies and processes that translate the damage and needs assessment into a clear vision and plans and planning regulations are recommended below. The aim is to engage the stakeholders through participatory approaches and design an inclusive project cycle in which the whole community is involved and heard. The cycle starts with identifying and engaging stakeholders and developing a vision for reconstruction and moves on to creating guidelines for developing planning regulations and processes.

¹⁹ Laurie A. Johnson and Robert B. Olshansky, *After Great Disasters: How Six Countries Managed Community Recovery*, Policy Focus Report, Lincoln Institute of Land Policy, 2016, www.lincolninst.edu/sites/default/files/pubfiles/after-great-disasters-full_0.pdf.

Module 2.1: Designing the Planning Process

The planning process post-crisis usually takes place in three segments. The first is usually led by the national government together with international entities, such as UN agencies or the World Bank. This phase usually spans several weeks. The second phase is the transition from an emergency to a full-scale reconstruction program, which ideally starts early, while emergency and relief actions are still in progress. The execution of this important phase can determine the fate of reconstruction throughout the project. The third phase is the full-fledged reconstruction program, which includes various components and sequences.²⁰

Post-crisis reconstruction may be planned at the local or national level. Depending on the country's governance system, a combined, or "hybrid," effort at these two levels may also be applicable. It is important to understand how state- versus local-level control affects the coordination, speed, financing, and character of reconstruction. The level of government that ultimately decides and implements the plan depends on several factors. Some countries, like the United States, have a strong local control model, in which the federal government generally defers land use decisions to states or provinces, which defer in turn to local governments at the city and county levels. Other countries, like China, have strong centralized state control and may retain much planning authority at the national level. Both styles of decision making have benefits and drawbacks.

Centralized Planning Recovery Model

In centralized planning, nationally led rebuilding processes may happen faster, with simpler funding models, than at more local levels. The government may decide to relocate whole towns or industries in accordance with risk models or to ensure an equitable distribution of recovery efforts across areas of disparate wealth. It may be able to impose best-practice land use and zoning policies, which may be advantageous to swift recovery from large-scale damage. Western European governments, for instance, have adopted more interventionist policies in response to widespread acute shortages in housing, food, and building materials. The policies have included publicly subsidizing large-scale housing construction. Centralized planning is, however, more likely to be subject to criticism at the local level for being indifferent or insensitive to local desires or for not considering diverse perspectives or being open to considering competing goals.

Case Study: China Earthquake Relief. Following the 2008 Wenchuan Earthquake, the Chinese government established within its cabinet a General Headquarters for Earthquake Relief, which received its authority from the highest ranks of the government. This arrangement was successful in managing a speedy physical reconstruction, but lack of local decision making and community involvement in the recovery process resulted in an uneven and inequitable economic recovery.²¹

Decentralized Planning Recovery Model

In areas where the planning process is decentralized and local control is strong, the quality of land use plans may vary greatly from one jurisdiction to the next, depending on how wealthy communities are and

²⁰ Wolfgang Fengler, Ahya Ihsan, and Kai Kaiser, "Managing Post-Disaster Reconstruction Finance: International Experience in Public Financial Management," Policy Research Working Paper, WPS4475, January 2008, <https://openknowledge.worldbank.org/bitstream/handle/10986/6417/wps4475.pdf?sequence=1&isAllowed=y>.

²¹ Laurie A. Johnson and Robert B. Olshansky, *After Great Disasters: How Six Countries Managed Community Recovery*, Policy Focus Report, Lincoln Institute of Land Policy, 2016, www.lincolninst.edu/sites/default/files/pubfiles/after-great-disasters-full_0.pdf.

their perceptions of the value of planning. Local governments tend also to be more responsive to their communities, allowing greater citizen input and control over their homes, for better or for worse. Local land use planning can be beneficial for learning about and working with the assets of the region, as participants may have a better sense of what makes their areas unique. A locally led process may also present challenges, however, as many public and private agencies and stakeholders, ranging across multiple levels of government, may be involved in the recovery and its coordination.

Case Study: Response to September 11, 2001, Attacks. In contrast to the example of the General Headquarters for Earthquake Relief established in the Chinese cabinet in response to the 2008 Wenchuan Earthquake, the decentralized recovery management model involves various organizations within different levels of government. Decentralized efforts to manage the recovery process and local policymaking are usually supported and coordinated by the national government. This type of recovery management has worked well in India, Indonesia, and the United States, among others.

After the terrorist attacks of 2001, the State and City of New York established the Lower Manhattan Development Corporation in New York City, whose goal was to plan and coordinate the reconstruction and revitalization of Lower Manhattan. Structured as a joint state-city corporation governed by an eight-member board of directors, the organization partnered with the public and private sectors to manage long-term planning for the sites that were destroyed in the attacks. During the recovery process, it also consulted with several advisory bodies representing a range of affected populations (victims, business owners, and downtown residents) on issues of concern to their respective constituencies.²²

A Hybrid Planning Recovery Model

The hybrid model for planning recovery balances local input and national assistance and includes the following characteristics:

- National assistance acts as an overseer to implementation. They can provide simpler and faster funding, add additional personnel and bring greater technical resources to the plans.
- Neighborhood specific, however better planning will also include local expertise and input, and a strong recognition of the individual assets and needs of the affected community. Their inputs are consistently placed on the agenda for implementation
- Locally influential organizations and institutions are recognized and integrated in the planning process. They can provide safe environments and also be mobilizing actors: nonprofits, religious groups, and other influential community leaders
- Integrates the expertise of outside consultants: land use experts, reconstruction engineers, and culture preservationists
- A consistent flow of information and meetings and transparency in a recovery plan will allow citizens and business interests to keep aware of the changes proposed and provide responses that can help direct the pace and direction of planning.

Under the hybrid recovery model, multiple levels of government coordinate and act on recovery plans, while the national government keeps tight control over the coordination and allocation of resources. One example of recovery under a hybrid model was the reconstruction process after the 1995 Hyogo Earthquake in Japan, which destroyed the City of Kobe and the urban corridor of southern Hyogo Prefecture along Osaka Bay. To manage the process, the national government established “restoration

²² The website of Lower Manhattan Development Corporation. <http://www.renewnyc.com>

headquarters” under the prime minister’s office, which included various cabinet ministers. Each ministry had a role in funding and policy execution, and the headquarters maintained an oversight role. At the same time, implementation of the policies was decentralized to local governments. Furthermore, a national advisory council was established that included city planners, scholars, members of the business community, the mayor, and the governor, while on the local level, the city established an earthquake recovery headquarters under the mayor’s supervision, with a twenty-seven-member recovery planning committee of officials and academics from different disciplines who were to develop recovery planning guidelines. This structure evolved later in the planning process, when the city established an earthquake restoration planning council composed of one hundred selected stakeholders and academics, who translated the vision and recovery guidelines into a draft recovery plan.²³

Module 2.2: Regulatory Mechanism

The team should consider developing a mechanism for regulating land uses. Land use as a process is generally meant to refer to laws or procedures controlling who can build or use spaces and where. For the purposes of this report, the term “land use planning” will be used to mean a regulatory approach to determining how urban spaces will be allocated and used, most commonly referring to decisions made by a government body anticipating and guiding development or changing uses within its jurisdiction. A land use planning process is a prioritization framework within which policymakers, citizens, and the government can delineate between acceptable and unacceptable risks and urgent needs that must be solved versus those that can wait, as well as rank the competing priorities of urban space. The process is a responsive one that is open to input and strives for transparency. Some tools for regulating land uses are described below.

Strategic Plans

Strategic (or framework) plans articulate a clear vision for the reconstruction process following a crisis. Broad and comprehensive and based on intensive analyses, they address the interrelationships among the economic, physical, social, and institutional dimensions of any reconstruction program and are intended to paint a “big-picture” idea for the city and define goals and ideals.

In contrast to traditional “comprehensive plans,” strategic plans are conceptual and do not address in depth or detail the elements required to govern the long-range growth of the city.²⁴ Urban strategic planning provides high-level policy guidance for spatial planning processes and for spatial plans to be prepared at various levels. The process guides development in the direction of the strategic priorities identified by all stakeholders through a consultative process.

Strategic planning is a management tool wielded in response to resource and capacity constraints to manage the process of urbanization. In addition to determining the direction of development of a city or urban area, it helps the city respond to fast-moving events and structural risks and to manage change and improve the quality of life.

Far from being a static process, the strategic framework plan must change and adapt to reflect the needs of the city. Inevitably, the process of preparing such plans is iterative and may move forward and backward several times before a final set of decisions is made. Urban strategic planning helps cities and governing

²³ Johnson and Olshansky, *After Great Disasters*.

²⁴ Amirtahmasebi et al., *Regenerating Urban Land*.

bodies determine what type of growth should take place in which areas, how the existing economic life can be preserved and expanded, and how quality of life can be protected and enhanced through physical and programmatic improvements in the built environment and urban services.

Table 4 presents a sample framework, detailing the segments of the urban strategic planning process. Note that such plans can be developed in many different ways and may include different elements.

Table 1. Modules and Stages of the Urban Strategic Planning Process

<p><i>Segment 1: Urban situation analysis</i></p> <ul style="list-style-type: none"> • Stakeholder analysis • Urban situation profiling • Urban situation appraisal • Investment capacity assessment • Consolidated urban diagnosis 	<p><i>Segment 2: Sustainable urban development planning</i></p> <ul style="list-style-type: none"> • Urban consultations • Drafting the strategic urban development plan (SUDP) • Approval and adoption of the SUDP
<p><i>Segment 3: Sustainable action planning</i></p> <ul style="list-style-type: none"> • Drafting action plans • Local resource mobilization • Public-private partnerships 	<p><i>Segment 4: Implementation and management of projects</i></p> <ul style="list-style-type: none"> • Project design • Management and coordination • Monitoring and accounting • Reporting

Source: UN-HABITAT, “An Introduction to Urban Strategic Planning,” 2007.

Specialized Plans

Specialized plans are strategic plans that may be developed to guide policy in an area of specific interest, such as a historic business core, a greenfield area experimenting with sustainable land use policy, or a site that requires retrofitting. Specialized plans may also be developed to outline a process or to respond to specific issues, such as disaster scenarios, and may include plans for agency responses and external assistance.

Master Plans

A master plan is a long-term strategy that builds a connection among buildings, social settings, economic activities, geography, character, and culture to guide future growth in a historic neighborhood. It sets forth local goals, objectives, and policies for reconstruction, community growth, or redevelopment over decades. Conventional spatial master plans prescribe intended outcomes by sector, including land use and development, transportation, water and drainage, open and green spaces, and other infrastructural improvements. While spatial planning is an important part of it, the master plan also includes financial, economic, and social policies and implementation details for how the goals will be achieved among actors. An effective master plan is prescriptive to some degree but allows for flexibility in particular areas through an iterative approach. It provides for broad guidelines but recognizes there are different ways to get to a certain point.

The master plan differs from a zoning ordinance in that the former is a guide for land use in the future, while the latter regulates it in the present. Typically, the master plan is not a binding, legal document, but a zoning ordinance is a law that must be followed by all. The master plan contains land use plans for specific areas, such as the historic urban core, and is a tool used to determine what kind of development should occur and where.

A master plan made in response to a singular crisis should, arguably, be a shorter version of the full-fledged urban plan. At the conclusion of its implementation, an evaluation or report should be produced on the plan's effectiveness in achieving the recovery goals, should provide an opportunity for reflection on future processes, and should make linkages with concurrent planning efforts.

A master plan consists of a number of elements. The spatial master plan is conveyed in words and diagrams, plans, illustrations, and maps, and its authors enlist architects, designers, and engineers for consultation, analysis, and design. It describes the physical and aesthetic qualities of buildings and spaces and the interface between the internal and external sides of urban environments. It may also identify sites for development that include valuable real estate or areas that are candidates for urban regeneration. Urban regeneration is an important aspect of revitalization, as planners look at ways to utilize cultural heritage assets for the purpose of cultural tourism or other economic activities. It may encompass mixed urban functions, such as converting old industrial warehouses into artists' residences. It also acknowledges and celebrates the natural ecology and environmental aspects of the area within which a site is situated, and it may zone out areas that are environmentally significant or protect local flora and fauna.

Effective master plans enable participation from a multitude and diversity of actors, both top-down and bottom-up, and they link national interests to regional and local sector planning. For the purposes of heritage planning, master planning is usually site specific (on a neighborhood scale) and therefore involves more regional and local actors, but, in many instances, it also integrates national and international voices (for example, that of UNESCO). It gives clarity on the roles and implementing actors and builds consensus among different agencies. A master plan may emerge as a form of municipal plan, enabling government at lower levels to revise it and have a stake in revitalization.

Master plans can also designate commercial zones, activities, and incentives. In Denmark, for instance, the Planning Act has special rules for planning investment in shops by retail trade for regenerating existing town center commercial areas. Within a region, the Planning Act limits the size of shops for each type of area (3,500 m² for general shops and 2,000 m² for specialty shops) to provide incentive for the running of local businesses that often embody the town's local character and participation of the local community in the economy. The plan also identifies relevant funders as partners to ensure longer-term financial sustainability.

When considering a recovery plan for a historic urban core, acknowledgment of the area's neighborhood character and the elements that give it its character is crucial. Urban designers frequently cite neighborhood character and "sense of place" as giving an area its distinctive cultural elements. These are not necessarily quantifiable or generalizable elements, but they are essential qualities that help foster a sense of place and memory for a community. Among elements that influence the character of a space are the following:

- Culturally specific commerce, often employing marginalized groups or low-income minorities (street food, beauty salons, markets)
- Culturally significant landmarks and open spaces (public squares utilized by the community for commerce, play, socializing)
- The way the built form relates to the topography or natural features
- The architectural style, materiality, and detailing of buildings (friezes, adobe brick)

- The use and quality of open streets
- The relationship of streets and spaces with respect to the public and private realms
- Landscapes (climate, flora and fauna, water flow, mountains)
- Domestic and wildlife native to a space (street dogs, birds, camels, goats)
- The intergenerational practices or habits of a community (festivals, music, foods)

Table 5 presents a sample table of contents illustrating the framework of a neighborhood master plan.

Table 2. Sample Table of Contents for a Neighborhood Structure Plan

<p><i>1. Introduction</i></p> <p>1.1. Planning Framework and Plan Area</p> <p>1.2. Authorization</p> <p>1.3. Stakeholder Consultation Summary</p> <p>1.4. Amendment Process</p>	<p><i>4. Land Use</i></p> <p>4.1. Context and Approach</p> <p>4.2. Commercial Use and Employment</p> <p>4.3. Residential Use</p> <p>4.4. Mixed Use</p> <p>4.5. Institutional Use</p>
<p><i>2. Neighborhood Development Concept</i></p> <p>2.1. General Plan Context</p> <p>2.2. Neighborhood Vision and Development Concept</p>	<p><i>5. Ecology, Parks, and Amenities</i></p> <p>5.1. Context and Approach</p> <p>5.2. Natural Areas</p> <p>5.3. Parks</p> <p>5.4. Open Space</p> <p>5.5. Urban Agriculture</p>
<p><i>3. Public Realm</i></p> <p>3.1. Context and Approach</p> <p>3.2. Historic and Cultural Resources</p> <p>3.3. All-Weather Design</p> <p>3.4. Landscaping</p> <p>3.5. Focal Points/Town Center</p>	<p><i>6. Infrastructure and Servicing</i></p> <p>6.1. Context and Approach</p> <p>6.2. Sanitary and Stormwater Drainage</p> <p>6.3. Water Distribution</p> <p>6.4. Shallow Utilities</p> <p>6.5. Infrastructure and Land Use Integration</p> <p>6.6. Energy Efficiency</p> <p>6.7. Staging</p>

	<p>7. Transportation</p> <p>7.1. Context and Approach</p> <p>7.2. Active Transportation</p> <p>7.3. Road Network</p> <p>7.4. Transportation and Land Use Integration</p>
--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Source: TOR, Neighborhood Structure Plans, 2014.

Zoning Ordinances

Where land use plans are broad and focused on the future or incremental, zoning and municipal codes are immediate, with specific regulatory controls in effect on every piece of land inside the planning area. Zoning is the legislative process for dividing land into zones for different uses. Zoning codes are subject to a land use plan and defer to the overall goals. If the land use plan designates an area as high risk, for instance, the zoning code will include specifics about how each property within it may be used and set standards for the physical design.

Zoning laws regulate the use of land parcel by parcel and dictate the density and height of structures that may be built, as well as imposing other physical limitations, such as setbacks, frontages, open space, and/or parking requirements. Common elements in a zoning code may include the built form, including setbacks required around buildings, the number of floors, and safety measures or aesthetic considerations, among others. Where the master plan takes a bird’s eye view of a municipal boundary or metropolitan area, the zoning code, in conjunction with other municipal codes, will dictate urban design standards by property and by use.

Some categories of zoning code include Euclidean zoning, performance or impact zoning, incentive zoning, and form-based zoning. For most areas that already use zoning, the codes may be “hybrids,” using a mixture of several forms. These different approaches to zoning shape development differently and allow greater or less flexibility in building, depending on whether the code is designed to regulate permitted types of uses more stringently or regulate the zoning envelope allowed for each parcel.

Building Codes, LEED, and Other Preventive Planning Policies

The International Code Council defines building codes as “collections of laws, regulations, ordinances (or other statutory requirements) adopted by a government legislative authority involved with the physical structure and healthful conditions of buildings and building sites.”²⁵ More simply put, codes are regulations that dictate the what and how of built spaces to achieve desired results. Building codes dictate the form and specifics of buildings—materials used, ingress and egress, safety standards, minimum requirements for the built form—and may include standards regarding inspection and the building process (that is, after certain stages of building, government or licensed inspectors will certify and examine the work). In the case of certain portions of a building, such as elevators, building codes may require an ongoing process of maintenance and inspection to be allowed to remain in operation.

Building codes are among the simplest means to protect citizens and cities against disasters. Any given jurisdiction, however, must consider carefully what its building code will be, and codes can vary wildly in depth and efficacy, depending on who implements them. The so-called “model codes” refer to codes accepted as current standards, which meet or exceed known practices ensuring safe and healthful construction. Model codes represent the cutting-edge minimum standards, a safety “floor” below which experts do not recommend building, and are adopted, modified, and transformed into law by states, local governments, and cities or towns around the world. In some parts of the world, local codes may well exceed these minimums; for instance, the Swiss-developed “Minergie” and the American-based “LEED” (Leadership in Energy and Environmental Design) systems are competing for worldwide market share in building energy-efficient and environmentally sustainable buildings. Both are voluntary certifications that go above and beyond what most jurisdictions require, and both are economically beneficial to the specialized firms and suppliers that can build under their certification.

The counterpoint to these high-achieving localities are those that fall well below the safety floor and are often in nations constrained by poverty and corruption or facing the task of dealing with aged and historic building stock, constructed at a time when codes were simpler or nonexistent. Although an international consensus for best practice in building exists, the implementation of model code is and always will be uneven, as buildings are always in the process of aging out of the model standards, while new technology and new incidents are forever pushing at an emerging front of new safety and design.

Public exposure to groundbreaking products in the new construction market can lead to increased awareness by homeowners and other building owners of how buildings can be improved. It can also lead to more voluntary upgrading of the existing building stock.

The post-disaster city that invests in robust building codes also benefits, as it is able to attract tenants to retrofitted or rebuilt areas, get better insurance rates on new buildings, create new industries in the production of newer building materials and technologies, and avoid stagnation. With building codes, at least, there is no benefit in a “race to the bottom” but, rather, immense gain in leading the pack.

In developing and enforcing building codes in a historic city area, a proper alignment of codes with historic structures should be devised. Because traditional building typologies may not comply with new building codes, another process for preservation and retrofitting can replace the necessary compliance. A team of consultants who are proficient in local building typologies, construction methods, and building materials

²⁵ The International Code Council <https://www.iccsafe.org>

must be engaged to help with this task. Box 2 illustrates how stricter building codes can prevent catastrophes when natural disasters happen.

Box 2. Comparing Disaster Preparation and Response between the 2010 Haiti and New Zealand Earthquakes

A popular pastime of international news agencies in 2010 was comparing the earthquakes that took place in New Zealand and Haiti that year. On September 4, the Canterbury earthquake hit the South Island of New Zealand with a magnitude of 7.1. The initial shock resulted in no fatalities, while 185 deaths were caused by the aftershocks more directly located near the city of Christchurch. Meanwhile, an earthquake of 7.0 magnitude that had hit outside Port-Au-Prince on January 12 and was followed by a series of comparable aftershocks resulted in an estimated death toll ranging from 100,000 to upward of 300,000. The destruction of buildings was estimated at 250,000 residences and 30,000 commercial structures.

Time and again, populations survive crises at higher rates when their governments anticipate and prepare for what is to come. Although external factors, such as time of day and type of ground motion, worked in favor of New Zealand's population, the safety of construction and local government preparation and response played a huge part in the immense difference from the Haiti impact. New Zealand faced regular quakes and had modeled its building codes to protect against high-magnitude disasters, inferring best practices from similar jurisdictions, such as California. The buildings that were damaged in New Zealand had been built before the building codes with robust earthquake standards were in effect. In addition to setting standards, the government was rigorous in following through with code inspections on required materials for the buildings.

Haiti, in contrast, had two problems. The first was failure in practice: the building codes in Haiti were uniformly out of date, so they did not include standards that would ensure buildings were constructed to withstand earthquakes. The second was the inability to finance adequately the resources necessary to meet such standards, leading to cost-cutting measures and lax follow through. Codes were not adhered to by builders or enforced evenly by local governments.

The nation to nation difference in cumulative death tolls between countries that follow earthquake-resistant engineering building codes and those that do not is significant. But the use of these codes is contingent on whether the countries have the wealth and willpower to mandate them.

Module 2.3: Civic Engagement

Engaging communities in post-crisis reconstruction is particularly challenging because of the impact of trauma on the community, which can disrupt community ties and cohesion. Furthermore, the community may be displaced to different emergency or refugee camps or may lose trust in the partner leading the reconstruction or in the international community.

In efforts to engage the community, the team must aim for meaningful participation, not mere outreach. Depending on the geographical distribution of the affected population and the level of existing social capital, the team should explore a variety of participatory methods. Contemporary methods require the

use of technology to facilitate outreach to and engagement with people who have been displaced. It is important to identify key agents in a community—those with significant social trust and influence who can mobilize a group. During the aftermath of the Korean War, for example, churches played a significant role in rebuilding by providing necessary social welfare services, such as elementary and middle school education, assistance to widows, and worship events that helped develop a sense of belonging across communities.

After identifying the stakeholders, the team should determine the type and level of engagement that is the most appropriate, given the nature of the community dynamics, capacity, and social capital after the crisis. A participation spectrum established by the International Association for Public Participation (IAP2) serves as an international standard (see table 6). Along this spectrum, public participation ranges from simply “informing” the community to “consulting,” “involving,” “collaborating with,” and “empowering” it.

In some post-crisis communities that are hard hit by disaster or conflict, the purpose of the stakeholder engagement strategy is simply to *inform* the public about the recovery and reconstruction process and decisions.

In less dire situations, the community can, at the very minimum, act as a *consulting* partner, providing valuable input and support to the decision-making process and, later, the reconstruction process. Civic engagement should leverage local knowledge through key community partner organizations or leaders. To gain an understanding of the local dynamics and capacities (local institutions and client groups, governance structures and power dynamics, social structures and relationships, and geography), the team should hire skilled consultancy firms to conduct context analyses. By enabling it to identify suitable entry points and opportunities to take advantage of the distinctive characteristics of the city or town, such analyses will allow the team to build resilience and avoid creating conflict or exacerbating existing inequalities.²⁶

The process of *involving* the public in the planning process must be clear and realistic for projects that can be implemented using available resources, augmented by local expertise. Stakeholder involvement can be crucial to the success of reconstruction, particularly when developing the vision and setting goals for the preparation of master plans and the implementation of large-scale projects. Communication and cooperation with stakeholders can be key to the success of any project, as a negative perception of stakeholders may result in its implementation being blocked, and the mismanagement of this important relationship may cause controversy and conflicts.

Collaboration is possible with communities that are structured enough to work with the reconstruction team throughout the process. The community’s aspirations and concerns are addressed one by one, and the public input influences the reconstruction process and decisions. In situations where a diverse and large group of stakeholders is present and ready to engage, the reconstruction team works with the community to develop alternative solutions and scenarios and evaluate them.

Finally, the ideal situation on IAP2’s spectrum is that in which the community is *empowered* enough to make decisions about reconstruction. For a community to engage at this level of decision making after a

²⁶ Andrew Meaux and Wale Osofisan, “A Review of Context Analysis Tools for Urban Humanitarian Response,” working paper, International Institute for Environment and Development, November 2016, <https://pubs.iied.org/pdfs/10797IIED.pdf>.

crisis, an already existing network of community leaders and organizations must be in place to act as a liaison with the public entity.

Table 6. IAP2’s Spectrum of Public Engagement, 2014

	Inform	Consult	Involve	Collaborate	Empower
Public Participation Goal	To provide balanced and objective information to help the public understand the problem, alternatives, opportunities, and/or solutions	To obtain public feedback on analysis, alternatives, and/or decisions	To work directly with the public throughout the process to ensure that concerns and aspirations are consistently understood and considered	To partner with the public on each aspect of decision making, including the development of alternatives and the identification of preferred solutions	To place final decision making in the hands of the public
Promise to the Public	We will keep you informed.	We will keep you informed and listen to and acknowledge concerns and aspirations.	We will work with you to ensure your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input has influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Module 3: Financing

Module 3.1: Identifying Financial Resources

The team must develop a post-crisis capital investment plan, which specifies necessary funds for repairs and infrastructure development. In general, local governments need short-term operating budgets and capital investment plans for sound financial management. The post-crisis period is, in fact, a good time for developing a capital investment plan if the city does not have one. The disruption in services caused by the conflict or disaster and the need to repair or build new infrastructure enable the team to engage rapidly with the community and technical teams and identify the needs for long-sought infrastructure improvements in the city and the region. The timing is also good because the city usually has access to more funds than usual for rebuilding and reconstruction and can plan for several complementary projects

at the same time. Furthermore, since capital investment planning requires a financial maturity that many local governments in the private sector may not have, the post-crisis period can be a good time to allow the local government develop such expertise in-house or to use the expertise offered by the central government, donors, or multilateral development banks.

Capital investment plans are a good complement to the reconstruction master plans. They allow planners to attach a “price tag” to their aspirations for the city. If local planners allow for low-density development and sprawl, the price of providing infrastructure will act as an alarming stop sign. Complementing a master plan with a capital investment plan informs the long-term infrastructure decisions and their impact on the sustainability of land use plans.

The following are some strategies for developing investment plans:

- **Ensure flexibility in planning and timeline.** The capital investment plan for post-crisis reconstruction has to be more flexible than traditional ones in terms of time line and planning because of the urgency of the situation and the multiplicity of actors commonly involved after a large conflict or disaster, who may come from the public, private, and nonprofit sectors. The speed of the reconstruction process necessitates measuring progress on a month to month basis instead of annually, as in normal construction projects. In addition, conditions in post-crisis situations change so rapidly that waiting for budget decisions from the central government could create unacceptable delays.²⁷
- **Find the right technical capacity.** Capital investment planning is highly technical and requires collaboration with a skilled team of engineers, policymakers, lawyers, and financial management specialists. In the aftermath of a disaster, the city government may not have the right set of skills in-house to take on the capital investment planning process on its own.
- **Determine the duration and time line of the recovery program.** In normal circumstances, capital investment plans are developed for periods of three to seven years. In post-crisis instances, these periods could be longer or shorter based on the types of projects selected.²⁸
- **Develop a list of potential projects.** Depending on the institutional structure for the recovery process and the parties involved, the team may receive many project proposals. These may have been considered before the crisis, with some on the city’s “to do” list for several years. Crisis usually opens an opportunity for the city to act on plans developed in the years before. If the pool of applicants is large, the team must consider all of them and develop a scoring system to assign priority to projects. The team could, for example, assign a higher score to a project with greater social or economic benefits or to one that is mandated by the central or regional government. Similarly, projects with higher life expectancy or cost savings or revenue-generating attributes are more desirable.

²⁷ Fengler, “Managing Post Disaster Reconstruction Finance.”

²⁸ “Kaganova, “Guidebook on Capital Investment Planning for Local Governments.”

Module 3.2: Management of Land Resources

The ownership of land within the historic core is shared between the public and private sectors. In some cases, other forms of ownership exist, such as communal ownership or endowments. Communal land is usually owned by a community or tribe as a collective asset. Endowment land is dedicated by the owner to charitable purposes, a practice common in the Islamic world. In any case, the post-crisis phase is a good time to develop an inventory of land assets and then determine what policies need to be developed to take best advantage of these assets.

The following are some strategies for managing land resources:

- **Develop a system for land administration.** Developing proper systems of land administration is important to supporting efficient land markets and land use control systems. Especially in the aftermath of a large disaster, various social benefits are associated with a decent land tenure system, such as social inclusion, access to credit, management of land disputes, and poverty alleviation, among many others.²⁹ One first step for the project team is to develop a land cadastre and have a proper valuation of land resources. Note that this task is highly technical, and many cities may not have the right technical expertise to carry it out.
- **Regularize tenure.** In many historic cores, residents may be owners or informal residents and renters. If the historic core and the areas around it have informal residents, regularization of tenure could be an important tool for social development. Land tenure regularization, or “land titling,” has many social, economic, and political impacts, including increases in income and productivity, credit access, housing investment, and child education.
- **Take on land reforms.** To prevent or tame conflicts, a program of land reforms should be implemented to ensure equitable access to land resources. These reforms could be “market assisted” or “government led,” and they would need continued government stability and political consensus to be sustained. The reforms could be formulated on a policy, legal, or institutional level and should be implemented incrementally. Some may include rescinding discriminatory laws, developing ad hoc legislation to address specific challenges (such as population returns, informal settlements, concessions, and so on), or they could involve revamping the land administration policies and developing comprehensive land legislation.³⁰
- **Assemble fragmented land.** The government can use several tools to assemble fragmented land. Creating larger land parcels allows the government to build at a higher density, reducing the cost of infrastructure per unit of housing. To assemble private land parcels, the most effective method is to build consensus among landowners and structure voluntary deals. If the majority of landowners agree to pool or sell their land for redevelopment or urban expansion, the government can use expropriation to oblige the rest to add their land to the pool.
- **Leverage public land.** Many governments have used land sales or long-term leases to engage the private sector and fund infrastructure. Note that land resources are nonrenewable, and they belong to the generations to come. The government can decide to sell the public land through auctions or administratively determined pricing, or through strategic negotiated transaction. Last,

²⁹ Amirtahmasebi et al., *Regenerating Urban Land*.

³⁰ United Nations Interagency Framework Team for Preventive Action, *Land and Conflict: Toolkit and Guidance for Preventing and Managing Land and Natural Resources Conflict*, 2012, https://www.un.org/en/land-natural-resources-conflict/pdfs/GN_Land%20and%20Conflict.pdf.

public land assets can be leveraged for building infrastructure by using it as an in-kind payment to the private sector in return for the delivery of infrastructure. This model requires a robust legal and organizational infrastructure to structure deals with the private sector.

Module 3.3: Managing Land in Times of Conflict

In managing land resources, the conflict and post-conflict situations should receive special consideration. Disputes over land resources are rarely the sole cause of conflict, but they relate to wider processes of exclusion, discrimination, and economic and social marginalization. Land not only is a source of economic stability, it is also linked to the sense of community and identity. Even in the absence of open conflict, land disputes can turn violent when a general condition of insecurity exists. If the country has a proper land administration system, the existing institutions can have a significant impact on taming conflicts and disputes. To manage land resources during and after conflict, these actions are recommended:

- **Monitor land resources during conflict.** In situations where increased conflict or a natural disaster causes a whole ethnic group to leave a city, many leave their land documents behind. Since many developing countries do not operate online land record systems, these paper records may be lost forever. The city or the rebuilding team should monitor displacement and secondary occupation by registering land rights as the population flees, using witness testimonies and before and after satellite imagery and reviewing other evidence. In Timor-Leste, for example, where the 2006 civil unrest displaced 100,000 people, many internally displaced people (IDPs) did not have a formal claim to the property they had fled, and many who returned found squatters in their homes. Working with the government, the UNDP and the United Nations Human Settlements Programme (UN-Habitat) sent teams of enumerators to all major IDP camps and asked a representative of every household to indicate the house from which they had been forced to flee, using a 1:1000-scale aerial photomap. The location was recorded on a map and linked to information about the property, such as its stated condition at the time of displacement, and other relevant socioeconomic data. The government used this information to implement a cash-based return and resettlement program.³¹
- **Restitution and returns.** To encourage the return of IDPs, the team should implement a sound system of restitution. The team must take into account historical injustices (for example, where an ethnic group was never given land rights), the rights of renters and informal settlers, and methods of compensation for the loss of land and property.

Module 3.4: Land Value Capture

Land value capture tools range from simple to complex.³² To use different value capture mechanisms, the city government should have a robust analytical framework for estimating the infrastructure costs of reconstruction projects. Betterment levies, for example, are hard to implement because quantifying the land value increment resulting from infrastructure investments is difficult. Even in countries that record

³¹ Ibid.

³² Amirtahmasebi et al., *Regenerating Urban Land*.

land values, the records commonly account for only two-thirds or less of the observed variation in the prices of land parcels.³³

It is usually easier to estimate impact fees for greenfield projects than for rehabilitation ones. If the reconstruction proposals include infill development, estimating the incremental cost can be more challenging. The use of land capture tools requires structuring a team with a high level of technical savvy. Setting up and negotiating cost of development has to be done with care. Furthermore, since applying an additional levy could be a disincentive for private developers, the use of these tools is only applicable in sites and cities with high market demand, which may not be the case in post-crisis conditions.

Module 3.5: Land Readjustment

The government can use land readjustment schemes to pool or assemble several privately owned land parcels to take on an urban regeneration project. The municipality then prepares a land use plan for the area that includes right of way for public infrastructure and services such as roads and open spaces.

After the project is completed, the municipality returns to each landowner a land parcel that is proportional to the original one. Though smaller than the original, the new parcel has a higher value because it is now serviced urban land. Some strategic land parcels are retained by the municipality to be auctioned or sold at market rates for recovering the cost of its investment in infrastructure and service delivery. The last step is to prepare the land and build the infrastructure.

Land readjustment is an effective tool for allowing local governments to take on regeneration projects through increased land values, while engaging and involving the original residents and landowners as stakeholders. It is also beneficial for the government because a massive upfront investment is not required to buy the land from the owners.

The following are some strategies for carrying out land readjustment:

- **Determine the capacity of institutions and legislation.** This tool needs strong local institutions and a sound legislative framework to be implemented effectively.
- **Obtain the consent of all landowners and tenants.** Obtaining the consent of all existing landowners and tenants for the regeneration project may be challenging, but it will ensure success and sustainability.
- **Get the land valuation system right.** The land readjustment process requires a sound valuation of the land, and it is difficult for the government and landowners to reach agreements on its true value. If there are tenants in the area, respecting their rights and ensuring an equitable process could also be challenging.

³³ Unlocking land values to finance urban infrastructure (English). Trends and policy options ; no. 7. Washington, D.C. : World Bank Group. <http://documents.worldbank.org/curated/en/723411468139800644/Unlocking-land-values-to-finance-urban-infrastructure>

Module 3.6: City-Led Financing Tools

City-led financing tools may be very effective for stimulating the real estate market in the historic core after a disaster or conflict. Unlike other financing tools, they create incentives for the private sector and individual property owners to invest in the historic core and participate in the reconstruction process.

The following are some strategies for using city-led financing tools:

- **Study the legal and regulatory framework to set up sound policy tools.** Policy instruments do not require exchanges of funds between the government and the private sector. These non-fiscal tools can be effectively used in cities that lack the legislative authority or fiscal space to borrow funds. Instead, the regulatory systems of these cities should be studied to gain an understanding of how they can be used to provide incentive to the private sector.
- **Set up a phasing structure to create an attractive investment climate for private sector developers.** The first phase of reconstruction could focus on creating the right investment climate, while the second and later phases set up sound land use policy and municipal regulatory powers to encourage development.
- **Enforce building codes and zoning rules.** These instruments require strong enforcement of land use regulations. The transfer of development rights scheme, for example, could only work if development is restricted in the receiving areas. Similarly, up-zoning will only work if a strong development control is in place to restrict land use or changes to floor area ratio (FAR). Otherwise, the developers will have no incentive to use this tool.

Module 4: Implementation

Module 4.1: Institutional Arrangement

While the discussion under Module 3 provides a high-level understanding of managing recovery and reconstruction after a crisis, historic cities (or historic urban cores within cities) may need a more deeply considered institutional model. Historic cities have experimented with different institutional models to manage the challenges of historic cores effectively. Selecting the appropriate one is key to leveraging the strengths and incentives of different actors in the rehabilitation and conservation of cultural heritage.

Some cities manage the rebuilding process in-house by reshuffling existing offices and agencies within the current urban governance framework. In some cases, the emergency management agency at the central government level manages the process halfway and then hands it off to the local municipality for further implementation. Some cities use existing development corporations or redevelopment agencies, which already have both the necessary skill sets and legal authority for reconstruction and are familiar with the permitting and development processes.³⁴

Below we review the strengths and weaknesses of institutional actors in three categories: the public sector, the private sector, and the community sector. We lay out a blueprint and supporting case studies

³⁴ Laurie A. Johnson, "Planning for Recovery Management," The Planning for Post-Disaster Recovery: Next Generation Briefing Papers, no. 07, American Planning Association, 2014. *Planning.org*, <https://planning-org-uploaded-media.s3.amazonaws.com/document/post-disaster-paper-7-recovery-management.pdf>.

for four institutional management structures: a joint venture between public and private sectors; parallel management; a special task force within the government; and an autonomous development corporation. The discussion explains in some detail what each model entails and the pros and cons of each and presents case studies and general principles for setting up the management structures.

Joint

Venture

Model

A joint venture operating under commercial code is a governance structure that distributes shares to public and private participants, including property owners, and to individual investors. The benefit of a joint venture is that it creates concrete buy-in from stakeholders across all sectors, including the private sector. This increases the size of the field for financing opportunities and imposes a higher expectation for operational excellence to generate new activities for visitors and residents. Simultaneously, a joint venture can include the community sector through the formation of a governing committee.

Shareholders can also be subdivided into ventures with specific funding mandates. Akin to task forces, venture committees may be set up that focus on different areas for investment. One venture, for instance, may focus on all decisions on the financing of cultural heritage spending and on taxes from cultural events, as well as the financing of restoration, preservation, and protection of religious, artistic, and cultural assets and the restoration of monuments, city fixtures, infrastructure, and public spaces. Another venture can be created to focus on the spending on commercial real estate that grants tax incentives to private companies who want to invest in rehabilitating property. As the joint venture structure can risk overburdening the private sector with expectations that are beyond the scope of its business mandates, roles should be clearly delineated from the beginning.

Case Study: Solidere, Beirut, Lebanon. The joint venture model has been used in different regions of the world. One famous example is the case of Solidere in Beirut, Lebanon. The 1975–90 war in Lebanon wrecked the central district of Beirut, where finance, culture, and leisure activities had been conducted for thousands of years. In response to the government’s inability to react to the depth of the destruction or to finance reconstruction, Solidere was formed, as a joint stock company with an innovative legal and institutional framework. Focused on the reconstruction and development of Beirut’s city center, the company allows investors—public and private—to own shares appraised and granted by judicial committees. Solidere’s 36,000 shares are owned mostly by Lebanese citizens, Arab nationals, banks, and international funds, in two broad categories: previous property owners and new investors.³⁵

Case Study: Quito, Ecuador. Another interesting example of this model was implemented in Quito, Ecuador. Quito’s Historic Center Enterprise is 90 percent funded by the public sector and 10 percent by the private sector. It has two stakeholders, the Quito Municipality and the Capiscara Foundation, which make up a governing council that appoints a board of directors comprising members of a third sector, among whom are representatives of sewage, electricity, telecommunications, and gas utilities, academic institutions, community associations, trade unions, government, banks, and the construction industry. The public sector is in charge of the Fund for Saving Cultural Heritage (Fondal), which is funded under a congressional decree through a 3 percent sales tax on tickets to public performances and a 6 percent share of the rent taxes collected by the city. The city can contract with private enterprise for restoration

³⁵ See www.solidere.com/corporate/about.

services to carry out construction projects, make investments, and do business with the private sector.³⁶

Case Study: The Revitalization of Glasgow, Scotland. The revitalization of Glasgow from a rust-belt industrial city into a cultural one is another case that demonstrates the economic impact of public-private partnerships.³⁷ The management consulting firm McKinsey was brought in to produce a redevelopment plan, which called for attracting international companies that would encourage creativity among the local people and institutions to reinvigorate the city center. McKinsey suggested converting old warehouses and factories into lofts and stylish luxury housing and redeveloped art galleries and museums, as well as businesses that provide a link between unemployed Glasgow residents and economic growth sectors.³⁸ Through private funding and economic incentives, Glasgow rebranded itself as a cultural center and has continued to experience associated economic growth.

Parallel

Implementation

Model

In parallel implementation, each sector remains independent, complementing one another as they join forces in the process of cultural rehabilitation. This is a loose model that relies on a highly participatory process. The actors may convene through the establishment of a council, and roles are delineated among them. The advantage of parallel implementation is that it improves coordination with existing sector activities and policies. Moreover, after the project is complete, the staff has an effective strategy to exit from it and return to previous government positions, bringing lessons they can continue integrating into their normal functions. The disadvantage is that such a pluralistic model may dilute political authority and can and will overburden governments with multiple agendas.

Case Study: Edinburgh, Scotland. The World Heritage Site in Edinburgh, which is managed through a management plan and by a steering group, provides a good example of parallel implementation. The members of the steering group include Historic Environment Scotland, the City of Edinburgh Council, and Edinburgh World Heritage. In addition, an oversight group is made up of the convener and vice convener of the planning committee, representatives of the community councils within the site, ICOMOS-UK (the UK national committee of the International Council on Monuments and Sites), the Chamber of Commerce, and the management partners. The oversight group considers the outputs of the steering group and checks whether it and the reports it has provided have met the project objectives. On the central government level, the Department for Culture, Media, and Sport (DCMS) is in charge of managing World Heritage Sites in the United Kingdom to ensure they comply with the World Heritage Convention.

Another local institution, the Edinburgh Urban Design Panel, ensures new buildings are of good quality and that they improve the streetscape and public spaces. Comprising members from a range of organizations, including Architecture and Design Scotland, Edinburgh World Heritage, Historic Environment Scotland, The Cockburn Association, Police Scotland, and the Royal Town Planning Institute, the panel also reviews the policies of the city council that have an impact on urban design. Figure 16 shows the management structure for the World Heritage City of Edinburgh.

³⁶ Fox, Catherine, et al. *Tripartite Partnerships: Recognizing the Third Sector*. 2005, mail.google.com/mail/u/0/#search/alianzas/FMfcgwxwDqfLFhxIVpkxcrcdQWJpvLhpj?projector=1&messagePartId=0.1.

³⁷ Webster et al. *Guide to City Development Strategies*.

³⁸ Ibid.

Dedicated Task Force Model

A dedicated task force can be created to mobilize and organize actors with a focused goal for restoration. Application of this model is most appropriate after a large disaster that requires swift action in a setting where the local government is unstable or has limited resources to facilitate the continuity of projects between transitions. The advantage of a dedicated task force is that it can be highly independent and focused, and its presence simplifies consultation with the government. It also provides a mechanism for resource allocation, procurement, and staffing. Actors may include cultural heritage experts and conservationists, cultural ministries, local and national government officials, and international agencies. The disadvantage of a task force is that it risks duplicating existing efforts, and its exit strategy from the project may be problematic, with the personnel who were brought in to form the task force not integrated effectively back into government arms. If the task force is recreated after every disaster, it does not build on experience within the government and foster continued learning.

Case Study: The Provisional Committee for Cultural Asset Preservation, Seoul, Korea. On December 9, 1952, during the Korean War, the Republic of Korea’s Ministry of Culture and Education introduced the Provisional Committee for the Preservation of National Treasures, Historical and Scenic Sites, and Natural Heritage, whose mission was to survey and promptly restore cultural and natural assets destroyed in the war. The committee consisted of thirty professionals with diverse backgrounds, including experts in archaeology, museology, architecture, history, arts, botany, geology, mineralogy, and literature. Unfortunately, the chaotic circumstances and lack of infrastructure kept the committee’s scope of activity and influence to a minimum, and the surviving record of its meeting minutes mentions its work only briefly. According to the minutes, the committee identified damage to thirty-six cultural and natural sites and devised emergency restoration measures, as well as providing guidance on allocation of the emergency restoration cost in 1953 and 1954.³⁹ Although its work was very limited due to the political and economic instability throughout the period, and its mission was not reflected in Seoul’s postwar development and rebuilding process, the committee represented the government’s initial attempt to protect Korea’s most important national monuments.

Autonomous Development Corporation Model

An autonomous development corporation model features an emerging framework, in which a governmental arm working in a specified zone takes on aspects of a business model but has unique laws and operates independently from the local government. A buffer zone declared around a heritage region has exceptions on building zones, zoning laws, tax incentives, urban design guidelines, and commercial activities and limits, among others. Such a corporation can also be productive for governing cultural heritage zones, because most heritage within cities is concentrated in zones in inner cities. This fact enables the corporation to manage, develop, acquire, and sell land within a more self-contained buffer zone. The autonomous development corporation structure also enables a government entity to operate swiftly and directly toward purposeful implementation of cultural rehabilitation without being overburdened by other governmental obligations, while allowing the private sector to offer its expertise and affording a more entrepreneurial mindset. A challenge presented by an autonomous development corporation is that businesses can feel overregulated by various mandates and policies when they are more accustomed to a market-oriented development mentality.

³⁹ The Cultural Heritage Administration and Cultural Properties Committee.
<http://english.cha.go.kr/cha/idx/SubIndex.do?mn=EN>

Kaganova has outlined several fundamental features of autonomous development corporations, including the following:

- **Explicit social mandates.** As a social enterprise, an autonomous development corporation can maintain explicit social mandates while still acting with the efficiency of a private company, which is reflected in its operations, pricing, and with whom it chooses to partner. A corporation can select partners who may not offer the highest price for the land but will provide the offerings most relevant to maintaining the cultural heritage within a region. Safeguards need to be built into company rules to prevent it from dominating the market.
- **Property ownership and private sector involvement models.** Corporations can also manage, develop, and sell land. The design-build-finance-operate (DBFO) model, utilized by the City of Johannesburg, South Africa, created long-term land lease arrangements for engaging the private sector in delivering market-oriented, mixed-use development on municipal land, with private sector partners selected through requests for proposals (RFPs). The private partner recoups its investment by leasing the real estate.
- **Unique revenue models.** Autonomous development corporations can devise exceptional rules governing how net income (profit) is used. A corporation can, for instance, make special purpose funds available outside its pay-for-property acquisitions to acquire land under governmental ownership for cultural conservation purposes. Revenue can come from sales taxes on cultural tourism or artistic performances.
- **Strong management.** Factors most likely to define success include a viable funding model that provides stable, multiyear funding; control over assets; strong leadership associated with long-term vision; accountability mechanisms; authority to act; long-term planning; and a willingness to harness private sector capabilities.
- **Transparency and ethics.** Autonomous development corporations vary in their openness about business transactions, financial status, and access to land information databases and in their consultation with the local community. Explicit ethics training is provided for staff, and internal audits of compliance are conducted.

Case Study: The Santiago Development Corporation, Chile. Between 1950 and 1970, the city of Santiago experienced rapid growth beyond city boundaries and a decline of its urban center, including abandoned buildings and deteriorated public spaces.⁴⁰ Damage from the earthquake of 1985 worsened the decline. Since the municipality lacked both a strong record of planning and the financial resources to rebuild alone, it developed a “Plan for the Renovation of Santiago.” To determine the direction the plan should take, Santiago’s mayor Jaime Ravinet created a participatory process in 1990 with three components: (1) restoring the residential character of the district; (2) strengthening its commercial, industrial, and service activities; and (3) improving the quality of life by providing better public spaces, redesigning private and public transport, increasing residents’ security, and protecting the environment. The new plan was set in place after 16,000 residents took part in the exercise and voiced their desire to stop the exodus of population and restore the quality of infrastructure and life in Santiago. The plan aimed to attract new residents and activate the housing market under a public-private partnership structure, and it assigned responsibility for this program to a newly formed entity, the Santiago Development Corporation (SDC).

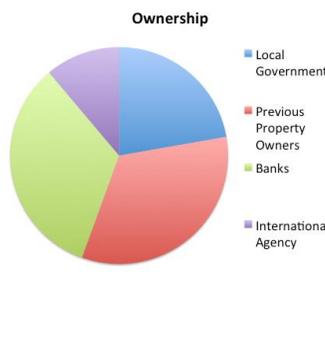
⁴⁰ Fox et al. *Tripartite Partnerships: Recognizing the Third Sector*.

The Santiago Development Corporation had four main goals: (1) to identify available land for redevelopment; (2) to redefine the existing national housing study to fit Santiago’s needs; (3) to demonstrate the existence of large demand for housing in the district; and (4) to collaborate with private developers according to agreements made through a repopulation program. The SDC also created several tangential programs: the repopulation program, an employment agency, a program to provide financing for restoration, training, and health care, and a neighborhood advancement committee. Its several sources of revenue included municipal revenues, property and revenue taxes, municipal licensing fees, and waste collection fees. Because of its unique status, the corporation was also able to tap into a mixture of private and public funding, including a housing subsidy, and more than US\$3 billion in private investments.

The accomplishments of the SDC in boosting the housing market and repopulating the Santiago metropolitan region were significant. Over the years, the housing market has become more autonomous and competitive. Around 10,000 units were developed under collaboration agreements between developers and the SDC from 1990 to 2012. Until 2000, around 40 percent of the housing projects were the result of public-private partnerships (PPPs) between real estate developers with the SDC and the Municipality of Santiago. Since then, however, the housing market in the district of Santiago has started to work autonomously. In addition, the financial outcomes of Santiago’s renovation plan have been significant. The total municipal revenues increased 55.2 percent in 2001–13.

Having the right institutional model is very important to carrying out a sustainable and consistent reconstruction process. In choosing it, the project team must carefully analyze the quality and capacity of each sector in terms of both technical and financial characteristics to design the optimal combination for the best outcome. Table 7 summarizes and compares these models.

Table 7. Comparison of Different Institutional Models

Autonomous development corporation	Joint venture with the private sector	Designated task force	Parallel implementation
			
<p>An autonomous development corporation model features an emerging framework, in which a zone is specified</p>	<p>A joint venture operating under commercial code can be structured with an ownership model that distributes shares to public</p>	<p>A task force can be created to mobilize and organize different actors within a heritage site, including cultural heritage experts and</p>	<p>Private, public, and third sectors remain independent but complement one another as they join</p>

<p>with laws different from those of the rest of the country. This allows regions to set up exceptions to building zones, zoning laws, urban design guidelines, and economic incentives that are specific to a cultural heritage zone.</p>	<p>and private participants, including previous property owners, and individual investors. Decisions on ownership can be made by an appraised judicial committee, and limits on capital ownership can be set (for instance, no entity can own more than 10 percent of an area).</p>	<p>conservationists, members of local and national governments, and representatives of international agencies. An oversight group, elected within the site, can be set up to address the planning and convene with the chamber of commerce and other management partners.</p>	<p>forces in the process of cultural rehabilitation. In this highly participatory process, actors may convene through the establishment of a council, and roles are clearly delineated—for instance, the public and private sectors may be responsible for funds, the private sector for developer work, and the public and third sectors for political governance structures.</p>
<p>Conditions enabling each model</p>			
<p>Governance typically too fragmented to move quickly on funding or decision making after a crisis</p>	<p>Low financing from one entity Strong local private sector buy-in and presence</p>	<p>Local government too unstable to facilitate continuity of project between transitions Large-scale, post-disaster situation that demands swift movement</p>	<p>Institutions with clearly delineated roles that can operate independently</p>
<p>Pros</p>			

<p>Clearly delineated zone, making governance in a region straightforward and clear</p>	<p>Joint venture structure, creating tangible buy-in that allows for private financing and excellence in operations to generate new activities for visitors and residents, while also representing local interests and a commitment to cultural heritage values</p>	<p>Highly independent, focused</p> <p>Provides mechanism for resource allocation, procurement, and staffing</p> <p>Handles complex financial arrangements with international donors</p> <p>Simplifies consultation with government and effectively addresses tasks</p>	<p>Improves coordination with existing sector activities and policies</p> <p>Top executive drawn from outside bureaucratic ranks</p> <p>Effective exit strategy, with staff returning to previous government positions after construction is finished</p>
<p>Cons</p>			
<p>Prone to corruption</p> <p>Potential for risks from lack of local ownership if the project is not well advocated within the community</p>	<p>Risks of overburdening the private sector with expectations beyond the scope of their businesses</p>	<p>Risks of duplicating existing efforts</p> <p>May lack local ownership</p> <p>Expensive; requires premises, facilities, and staff</p> <p>Problematic exit strategy; will probably fight to survive</p> <p>If recreated for each disaster, doesn't build on experience</p>	<p>May lack political authority and will</p> <p>Can weaken ministries and undermine ongoing non-disaster programs</p> <p>Possibility of international agencies not financing backfilling of normal ministry functions</p> <p>Can overburden governments with inadequate capacity to manage large reconstruction program and double agenda (reconstruction and normal programs)</p>

Module 4.2: Risk Management

Even in times of security and peace, urban transformation and rehabilitation programs face major risks. These risks are greater in the reconstruction process following a natural disaster or conflict. Some risks that involve the community and peace building process have been covered in other sections of this guide. This section covers solely those that concern the physical construction and rehabilitation, as well as the risks and mitigations in partnership formation for PPPs (table 8).

Steps to risk management include the following:

1. Understanding the context
2. Identifying the risks
3. Analyzing the magnitude of risk
4. Evaluating the situations
5. Treating the situation
6. Monitoring and evaluation⁴¹

Risk analysis begins by asking, “How big are the risks, which risks are unacceptable, and how do we prioritize them?” In the case of “events”—for instance, natural disasters, war, fire, or theft—risk can be estimated based on the chances of occurrence and the expected loss of value to a heritage site. In quantifying chances of occurrence, the team should explore regional statistical, local, and scientific technical knowledge. For catastrophes, this information can be gathered through facility, site, and collection surveys. Regional statistical sources include climate tables, natural disaster data, and data shared across heritage organizations. Local and common knowledge can be gathered through facility surveys and from the memories of local residents, building documentation, and staff knowledge.

Next, the team should analyze how to prioritize actions or areas based on limited time, resources, and bandwidth. Magnitude of risk can be calculated by adding up the frequency of the event, the projected loss of value in affected property, and the percentage of the value of the collection affected per event. The relative importance of a heritage asset can be calculated as a proportion of the asset or site with the area, but the value of a heritage site can also be appraised through expert consultation.

The last step of the risk management cycle is to create layers of enclosure to reduce or eliminate risks. There are six ways to create enclosure around a heritage site or asset; the first is through tactics of avoidance. If a heritage site is near a tsunami, for instance, or can be affected by flooding or avoid risky practices such as lighting candles or having kitchens near museums. Another example of enclosure is through blocking: general deterioration and damage from rainwater can be blocked by surface painting or by creating curtains and filters to block light, including ultraviolet light. A third is the use of detection measures—assigning guards to patrol a heritage site, installing alarm systems, or having a digital thermometer to monitor temperature levels, among others.

When an incident has occurred, response should involve such actions as, for example, removing sacred sculptures at risk following an earthquake or stabilizing structures at risk of collapse. Long-term recovery may call for the reconstruction of heritage sites destroyed by vandalism or the retrieval of digitized data and knowledge about a heritage site after its destruction. After listing out options, consideration should

⁴¹ Jose Luiz Pedersoli, *A Guide to Risk Management of Cultural Heritage*, International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), 2016, https://www.iccrom.org/wp-content/uploads/Guide-to-Risk-Management_English.pdf.

be given to the extent to which interventions will bring about incremental versus longer-term risk reduction, in accordance with principles of “build back better.” Other considerations include costs, the effectiveness of an option in reducing more than one risk, its feasibility, and whether there are opportunity costs in pursuing one option over another.

Table 8. Suggestions for Risk Management and Mitigation in Forming PPPs

Risk	Mitigation
<p><i>Time and resource execution inefficiencies.</i> The time and resources required to form a partnership are an investment. Inefficient execution and endless meetings without results could disappoint residents and the community, cause delays, and threaten the long-term sustainability of the regeneration project. More specifically, they pose both construction and financial risks, including all potential problems related to the design phase of the reconstruction project, such as building cost overruns and project delays.</p> <p><i>Institutional risks.</i> In areas where political will is weak amid transitional governments, implementation can become especially difficult. The public sector may become overtaxed, without adequate financial resources or talent to execute a plan properly. In addition, the public sector may have unrealistic expectations with regard to what the private sector can execute or provide beyond the scope of its businesses or mandates.</p>	<p><i>Creation of accountability measures.</i> To avoid the inefficiencies that often arise from the bureaucratic process of the public sector, one option is to form a separate entity, independent of the government, to bypass the bureaucracies. In the case of joint ventures between the public and private sectors, special attention must be paid to ensuring the balance between the two is not offset by the private sector’s taking on responsibilities that were initially assumed for the public sector, thereby resulting in inefficiencies. In the institutional framework of such entities, it is best to define clearly each sector’s responsibilities and accountability.</p> <p><i>Cooperative agreements.</i> Agreements should detail rights, roles, and responsibilities explicitly and be legally enforceable.</p> <p><i>Sustainability.</i> It is important to ensure sustainability and account for any risks when an independent separate entity, such as a joint venture or a private company, is commissioned to design, build, and operate a project for a certain period of time and then transfer it to the public sector. The government may not have the capacity to operate the project as efficiently as its private partner. A capacity-building component designed as part of the project can ensure its sustainability when this transfer takes place.</p>
<p><i>Financial risks.</i> Political and financial instabilities can create variability in interest rates and exchange rates, which in turn affect the cash flow and financial sustainability of a reconstruction process. Moreover, the private sector may be putting money into a</p>	<p><i>Incentives for the private sector.</i> The bottom line for the private sector is that its involvement should not increase costs. Therefore, activities to involve the private sector should be seen by the businesses as a</p>

<p>situation that does not provide an immediate or attractive return or presents increased liability from property damage risks. The vulnerable state of a post-disaster zone may make return on investments take longer or be riskier. In addition, without careful transparency and monitoring systems, inappropriate or frivolous spending may occur. A top priority for the partnership is to estimate the investments needed and make allocations based on milestones to be able to mitigate the impacts of a loss of funding.</p>	<p>win-win strategy in the form of profits or positive reputation.</p> <p><i>Tax incentives.</i> Tax reductions provide the most concrete incentives. Local and national governments can offer such incentives as exemptions from property taxes, sales taxes, or rent for income tax purposes or as long-term tax abatement for the renovation of buildings (for example, a 90 percent, five-year abatement for restored properties).</p> <p><i>Reputational incentives.</i> Private sector entities may also derive incentive from how they are perceived and their relationships with the local community from a marketing and public relations perspective. To provide this incentive in tangible form, the government can recognize the corporation through the naming of buildings or the awarding of plaques or by creating marketing paraphernalia or a web and social media presence.</p> <p><i>Reducing property damage risks.</i> The government can make a commitment to combating crime and illicit activity that may damage property investments. Preventive measures, such as cameras or additional security in target areas, can be implemented to reduce the risk of destruction of or vandalism to property.</p>
<p><i>Loss of control over project cycle, community participation, and interest.</i> Consensus building in a pluralistic model can often be challenging. Staying on task and agenda is essential, as is recognizing limits on time and resources. Moreover, a participatory model loses its effectiveness when participation and interest are not evenly distributed. Low involvement by certain interest groups, or overrepresentation by others, may result in disproportionate attention to interests.</p>	<p><i>Citizen councils.</i> A citizen council confers power on its members through the recognition of titles, roles, and legal status. The council may include a judiciary committee, and it should convene regularly so needs can be noted and projects monitored.</p> <p><i>Recognizing and elevating influential individuals or groups.</i> Observing individuals who are key influencers or groups that have significant roles in the community may help to build rapport exponentially.</p>

The choice of tools used to engage community participation depends on what type of participation the team expects. See Module 2.3 for more details.

Tools to inform

If the goal of community engagement is merely to inform the public about the reconstruction process and associated decisions, the team can use public meetings (in person and/or virtual) to connect with the community. In designing the format of such meetings, the team must consider the target community, its level of education and local knowledge, potentially conflicting points of view, and the various languages and dialects spoken. If the level of trust is low, the team might partner with a trusted third-party group or organization to create and distribute the information.⁴²

In post-conflict situations where groups of citizens are scattered in different resettlement areas, the use of mass media, text messaging, and the Internet can ensure access to information for all. Websites and social media tools can be part of the communication strategy for the project. In cases where access to the Internet or online media is limited, the team can use more traditional tools to inform the community; information kiosks and repositories are good ways to reach a wide audience. Where the number of stakeholders is more manageable, press releases and printed material can be distributed onsite.

Tools to consult and collaborate

If the goal of the engagement strategy is to consult with the community, the team should use tools that allow citizens to generate input so they can participate in the decision-making process, share information, and express their opinions.

- **Charrettes.** Intensive workshops to develop a vision or build consensus for a planning or reconstruction project, charrettes are usually organized with the participation of the community and an interdisciplinary team of planners, engineers, policymakers, and local officials. Designing and convening a charrette requires a great deal of technical knowledge to generate correct and realistic choices and scenarios for the project. Traditionally, charrettes have been used to envision projects focused on community change, such as master plans, transit plans, affordable housing development, or urban redevelopment projects.⁴³ But they are also useful for developing a vision and building consensus within a community for reconstruction of an entire neighborhood in a post-crisis situation.
- **Interviews.** In addition to charrettes, the team can use interviews, focus group discussions, community forums, and similar formats to generate public input. Focus groups are small group discussions under the leadership of a technical expert. They can be helpful in identifying the areas of concern within a community that has various ethnic or religious subgroups. While interviews with stakeholders and community members can also be helpful, they are time consuming and, in practice, they can reach only a limited number of community members.

⁴² U.S. Environmental Protection Agency, “Public Participation Guide: Tools to Inform the Public,” August 17, 2017, www.epa.gov/international-cooperation/public-participation-guide-tools-inform-public.

⁴³ Amirtahmasebi et al., *Regenerating Urban Land*.

New technologies can be an immense help in generating input from the community. A wide variety of media tools allow for online interaction between community members and the project team. These tools allow a large number of stakeholders to gain access to and provide input in real time at virtual public meetings through electronic polling devices.

Checklist for Operational Teams

While these guidelines are extensive, they are not exhaustive. They aim to provide a shopping list of items to consider when project teams design a reconstruction process post-crisis. The shortlist below summarizes these guidelines.

1. In assessing damage to the historic and cultural assets, ensure all cultural properties are accounted for. These include properties representing tangible and intangible heritage, in addition to creative and cultural industries, tourism revenues, and historic housing stock and land resources.
2. While assessing damage, collect data on the historic area as well as for the whole city. A baseline is needed to design a “build back better” reconstruction policy.
3. Carefully map all cultural assets and institutions. Apply available and preferably low-cost technology to construct a database that can be updated regularly.
4. Map the stakeholders, including the private sector, community leaders, tribes, different ethnic groups, and the public sector. Decide who constitutes the affected “community.” Once it has been identified, develop an inclusive community engagement strategy.
5. Develop a vision to guide the planning process.
6. Review the regulatory framework of the country and the city to design an inclusive planning framework. Assign responsibilities to national- and local-level institutions.
7. Develop regulatory mechanisms for land use planning:
 - Create a strategic framework to articulate a clear vision and direction for reconstruction.
 - Develop a master plan for the historic core that is cognizant of traditional building typologies, urban patterns, and local construction technology and materials.
 - Create or update zoning ordinances and building codes compatible with the historic core and its specific height and bulk measures, construction materials, and building typologies.
8. Set up the right institutional framework and governance structure for the reconstruction process:
 - For cities with sound legal infrastructure and clear land ownership, set up a joint venture to speed up the recovery process.
 - In the aftermath of a large disaster requiring swift action, and where the local government is unstable or limited in resources and capacity and the private sector is passive, structure an in-house task force.
 - For a city with an eager private sector and active community, use the parallel implementation model to include all stakeholders in one governance structure.

- When the local rules and regulations limit the city government’s ability to act swiftly in managing, developing, acquiring, and selling land resources, structure an autonomous corporation.
9. In creating a financing scheme, use these strategies:
- Build a system for land administration and valuation, regularize tenure, assemble fragmented parcels, and leverage public land assets.
 - Create value capture methods to absorb the incremental creation of value resulting from the reconstruction.
 - Develop the technical capacity of the local institutions in land valuation and calculation of the incremental value gains.
 - Use a system for leveraging the regulatory powers of the city government to provide incentive for private investment.

CONCLUSION

Designing a project cycle and setting up an implementation process and institutions that can carry on reconstruction after a crisis is essential for sustainability and success. This technical note has described all the elements and steps needed for such cases. To carry out the suggested steps, the operations team must first develop a list of knowledgeable experts and consultants who can assist in the technical design and development of project components. Furthermore, the project team can develop and use available country systems so the reconstruction process can also become a process of capacity development. Using the locally available knowledge and wisdom, the team must ensure all stakeholders are identified and engaged, so the rehabilitation process can heal and unite the community around its cultural assets.

RESOURCES

“About.” *Solidere*, www.solidere.com/corporate/about.

Amirtahmasebi, Rana, et al. “Regenerating Urban Land: A Practitioners Guide to Leveraging Private Investment.” *The World Bank*, Feb. 2016, doi:10.1596/978-1-4648-0473-1.

“ArcGIS Online.” *Arcgis.com*, www.arcgis.com/.

“Cultural Planning” The website of Ministry of Heritage, Sport, Tourism, and Cultural Industries of Ontario. http://www.mtc.gov.on.ca/en/culture/cul_planning.shtml

Eloundou, Lazare. “Integrating Culture, Recovery and Reconstruction for Sustainable Urban Development
RECONSTRUCTION AFTER CRISIS: TIMBUKTU’S CASE STUDY.”

Ethics and Intangible Cultural Heritage, ich.unesco.org/en/ethics-and-ich-00866 .

Fengler, Wolfgang, et al. “Managing Post-Disaster Reconstruction Finance.” *Policy Research Working Paper*, vol. 4475, Jan. 2008,
<https://openknowledge.worldbank.org/bitstream/handle/10986/6417/wps4475.pdf?sequence=1&isAllowed=y>.

Fox, Catherine, et al. *Tripartite Partnerships: Recognizing the Third Sector*. 2005,
mail.google.com/mail/u/0/#search/alianzas/FMfcgxwDqfLFhxfVpkxcrcdQWJpvLhpj?projector=1&messagePartId=0.1.

Jha, Abhas K, et al. “Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters.” *The World Bank*, 2010.

Johnson, Laurie A, and Robert B Olshansky. “After Great Disasters: How Six Countries Managed Community Recovery .” *Policy Focus Report, Lincoln Institute of Land Policy*, 2016,
www.lincolninst.edu/sites/default/files/pubfiles/after-great-disasters-full_0.pdf.

- Kaganova, Olga. 2011. “*Guidebook on Capital Investment Planning for Local Governments.*” Urban development series; knowledge papers no. 13. World Bank, Washington, DC. © World Bank.
<https://openknowledge.worldbank.org/handle/10986/17394> License: CC BY 3.0 IGO.”
- “Land and Conflict.” *The United Nations Interagency Framework Team for Preventative Action.*
- McCarthy, Deidre. “Historic Preservation Response Methodology: Based on the Hurricane Katrina Model.” *Cultural Resource GIS Facility. Heritage Documentation Programs,*
<https://www.nps.gov/crgis/HPRM-KatrinaPRINT.pdf>.
- Meaux, Andrew, and Wale Osofisan. “A Review of Context Analysis Tools for Urban Humanitarian Response.” <https://pubs.iied.org/pdfs/10797IIED.pdf>.
- “Old and New Towns of Edinburgh World Heritage Site.” Ewh.org.uk/Managementplan.
- Pedersoli, Jose Luiz. “A Guide to Risk Management of Cultural Heritage.” *ICCROM*, 2016,
https://www.iccrom.org/wp-content/uploads/Guide-to-Risk-Management_English.pdf.
- Peterson, George E..2008. “Unlocking land values to finance urban infrastructure (English)”. Trends and policy options ; no. 7. Washington, D.C. : World Bank Group.
<http://documents.worldbank.org/curated/en/723411468139800644/Unlocking-land-values-to-finance-urban-infrastructure>
- “Planning for Post-Disaster Recovery Briefing Papers.” *The Planning for Post-Disaster Recovery: Next Generation Briefing Papers*, 2004. *Planning.org*, <https://planning-org-uploaded-media.s3.amazonaws.com/document/post-disaster-paper-7-recovery-management.pdf>.
- “Public Participation Guide: Tools to Inform the Public.” *EPA*, Environmental Protection Agency, 17 Aug. 2017, www.epa.gov/international-cooperation/public-participation-guide-tools-inform-public.
- “RECONSTRUCTION AFTER CRISES CASE OF SEOUL: POST-WAR RECONSTRUCTION AND RECOVERY .” *Draft*.

- “Recovery and Peacebuilding Assessments (RPBA): FAQs.” *World Bank*,
www.worldbank.org/en/topic/fragilityconflictviolence/brief/recovery-peacebuilding-assessments-faqs.
- Schwab, James C. “Planning for Post-Disaster Recovery: Next Generation.” *Pas Report 576*,
https://www.fema.gov/media-library-data/1425503479190-22edb246b925ba41104b7d38eddc207f/APA_PAS_576.pdf.
- Schwab et al., “Planning for Post-Disaster Recovery and Reconstruction.” *PAS Report no. 483/484*. 1998.
Chicago: American Planning Association.
- “Tangible Cultural Heritage: United Nations Educational, Scientific and Cultural Organization.” *Tangible Cultural Heritage | United Nations Educational, Scientific and Cultural Organization*, UNESCO Cairo, 2017, www.unesco.org/new/en/cairo/culture/tangible-cultural-heritage/.
- “Text of the Convention for the Safeguarding of the Intangible Cultural Heritage.” *UNESCO*, 2003,
ich.unesco.org/en/convention#art2.
- Tourism Satellite Account: Recommend Methodological Framework*. United Nations: Department of Economic and Social Affairs , 2008, www.oecd.org/cfe/tourism/TSA_EN.pdf .
- “Traditional Craftsmanship.” *UNESCO*, ich.unesco.org/en/traditional-craftsmanship-00057.
- “UNDP PDNA Culture Final.” https://Gfdr.org/Sites/Gfdr/Files/WB_UNDP_PDNA_Culture_FINAL.Pdf,
World Bank / UNDP, 2016.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Centre.
“Historic Urban Landscape Approach Explained.” *UNESCO World Heritage Centre*, 7 Feb. 2013,
whc.unesco.org/en/news/1026/.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). 2013. Online resource.
<https://whc.unesco.org/en/news/1022>. Accessed January 2020.

“UNSD Classifications on Economic Statistics.” *United Nations*, United Nations, 2008,
unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27.

Webster, Douglas R, and Larissa R. Muller. *Guide to City Development Strategies: Improving Urban Performance*. Washington, D.C: Cities Alliance, 2006. Print.

ANNEX 1

FRAMEWORK FOR ASSESSING DAMAGE TO TANGIBLE AND INTANGIBLE CULTURAL PROPERTIES

The tables in this annex provide more detailed information on assessing damage to cultural assets.

Table A1.1. Sample List of Items to Consider When Assessing Damage to Tangible Cultural Assets

Category	Items to record (include GPS-tagged photos)	Examples
Immovable assets, such as monuments, structures, landmarks, buildings, sites, districts	Basic information	<ul style="list-style-type: none"> ● Location/address ● Pre-crisis function (residential, industrial, commercial, cultural, etc.) ● Listing status (World Heritage, national register, local historic preservation office, multiple, etc.) ● Ownership (private, public, communal, etc.)
	Building information	<ul style="list-style-type: none"> ● Style ● Height ● Building type ● Building footprint ● Foundation ● Construction materials ● Roof type ● Decorations ● Architectural and cultural features ● Site and landscape features
	Cultural and historic value	<ul style="list-style-type: none"> ● History ● Explanation of historic or cultural significance
	Damage and degree of damage (major, minor, destroyed, inundated, etc.)	<ul style="list-style-type: none"> ● Damage to foundation ● Damage to design integrity ● Damage to location integrity ● Damage to site and landscape ● Damage to decorations ● Damage to content ● Cause of damage (water, conflict, earthquake, fire, theft, vandalism, etc.)

	Damage to function and access	<ul style="list-style-type: none"> ● Disruption to household and community-based services ● Disruption to community habits and behavior from closure of religious or community centers and institutions and cessation of cultural practices ● Loss of income from closure of sites, museums, performance centers, and cultural centers ● Loss of income and function from limited access to conservation products and specialized equipment required for the preservation of endangered assets^a ● Loss of function and income from disruption to management and decision-making bodies, shortages of skilled human resources, and loss of documentation and tacit knowledge
Movable cultural assets	Library collections and books, artifacts, rare books, manuscripts, family records, maps, historic documents and photographs, museum collections, archives	<ul style="list-style-type: none"> ● Damage to the integrity of resources ● Loss of information and data about resources ● Loss of records ● Loss of management practices ● Damage to archival practices ● Loss of tacit knowledge, management practices, and human resources

^a World Bank, GFDRR, and UNESCO. PDNA Volume B, Culture.

Table A1.2. Sample List of Items to Consider When Assessing Damage to Creative and Cultural Industries (Commercial Sector)

Items to be assessed	Consideration
Products/services	<ul style="list-style-type: none"> ● Life cycle of the product ● Material inputs needed for creation. Account for level of disturbance or halt to supply chain for acquiring material inputs and loss of knowledge and networks around using or acquiring materials. ● Machinery needed for production. Calculate value of machinery, including depreciable life, taking note of production units and any irreplaceable or esoteric machinery used for production, such as looms. ● Skills required to perform service. Note particular hand skills or talents or specific degrees or studies
Market and sales	<ul style="list-style-type: none"> ● Destination of sales. Account for domestic sales and exports. ● Unit economics of a product. Consider revenue, cost, profit margin. ● Revenue. Calculate monthly and annual gross sales and volume and frequency of purchase. ● Distribution channels. Determine where and how products were previously selling (e.g., markets or other stores).
Demographics	<ul style="list-style-type: none"> ● Formal or informal sector. Account for formal and informal enterprises. Accounting for the informal commerce sector is especially important because informal enterprises are not included in national surveys or statistics. It is suggested such assessment be performed by conducting special-sample surveys in temporary shelter camps or resettlement areas post-crisis.

	<ul style="list-style-type: none"> • Marginalization status (lower-income, tribal groups). Determine groups’ annual income, whether previously discriminated against, and whether currently resettled elsewhere. • Age range and gender. Note any cultural assets inherently linked to female or intergenerational social activities (e.g., rural Yazidi women have a matrilineal tattooing tradition).
Size of enterprises	<ul style="list-style-type: none"> • Number of micro-, small, medium, or large enterprises • Annual budget and expenses • Number of employees
Tangible or intangible products	<ul style="list-style-type: none"> • Distinguish between tangible and intangible cultural goods (see table 2 for examples).
Governing or promotion authority	<ul style="list-style-type: none"> • Determine if any authority or governing body existed pre-crisis that took stock of commercial enterprises or promoted or regulated the crafts industry.

Note: Some information is adapted from PDNA Guidelines Volume B (Commerce).

Table A1.3. Sample List of Items to Consider When Assessing Damage to Creative and Cultural Industries (Manufacturing Sector)

Items to be assessed	Consideration
Buildings	<ul style="list-style-type: none"> • In determining damage to buildings that host small-scale manufacturing, it is important not to double count structures that have been assessed in other sectors. Attention must be paid to the typology of structures that host manufacturing businesses, necessary building elements (industrial elevators, loading docks, slop sinks, air filtrations, and so on), and vertical (within one building) and horizontal (spread out through adjacent buildings) integration of manufacturing uses within the historic center.
Production processes and units	<ul style="list-style-type: none"> • Loss of machinery and assets needed to produce products • Disturbances to supply chain and acquisition of material inputs
Employment and livelihoods	<ul style="list-style-type: none"> • Number of people previously employed in the manufacturing sector • Dollar value of the manufactured goods and estimated decline in production • Indirect beneficiaries (families of employees) who are affected
Capacity, decision making, and governance	<ul style="list-style-type: none"> • Knowledge and skill base of the local population. In many cases, historic centers have a traditional manufacturing sector, led by a limited number of “masters.” In a post-crisis situation, the team must determine whether or not institutional knowledge and technical expertise about the manufacturing exists. • Governance, monitoring, and information systems. This applies to the public sector’s capacity to provide oversight and governance over the manufacturing process. • Human, material, and financial resources. The team must determine if institutional knowledge about production cycles and cost structures has

	diminished and if and how the crisis has resulted in any change to production cycles and cost structures.
--	-----------------------------------------------------------------------------------------------------------

Note: Some information is adapted from PDNA Guidelines for Manufacturing.

Table A1.4. Sample List of Items to Consider When Assessing Damage to Cultural Tourism

		Items to be assessed	Consideration
Tourism-related consumption	Services	Tourism-related accommodation	Pre- and post-crisis occupancy rates and bed capacities for all formal or informal tourist accommodations (hotels, bed and breakfasts, hostels, etc.) should be accounted for.
		Food services	The food service sector includes restaurants, catering services, and food vendors (formal and informal).
		Cultural services	A major portion of cultural services consists of intangible heritage services, such as performances, music, dance, classes, and so on.
		Travel services	Include fees for all cultural and natural tour services, transportation services (to and from the airport and within the city), travel agents, and similar services.
		Other tourism-related employment	In accounting for tourism-related jobs (porters, seasonal vendors, hotel staff, etc.), it is important to consider that most are seasonal.
	Fees	Tourism-related taxes or fees	Include visa fees, airport entry fees, accommodation tax, tourist fees, and so on. These fees may be collected by the central government and not the city, but they still have to be counted.
		VAT or similar tax on items for tourist consumption	Value-added tax (VAT) is a consumption-based tax added to a product, usually at the point of sale or any time in the process when value is added to the product. It may be imposed by countries or cities on some or all industries within the tourism sector.
		Entry fees for cultural and natural monuments	Entry fees for cultural and natural sites are usually much higher for foreign visitors than for domestic tourists and the local population. Depending on the country’s legal framework, the fees collected are either sent to the central government or banked in a local fund to be spent on local preservation needs.
	Goods	Goods aside from food and services purchased by visitors for and during their trips	All goods purchased by tourists for their own consumption or otherwise are part of tourism consumption. The whole supply chain of goods, from production to transport to sales, must be considered. The assessment should determine, for example, if the goods are produced in the historic center and are part of the economic ecosystem of the historic urban landscape or are catered directly from the producer to the visitors, or if sales of the

			goods benefit a chain of transport providers and wholesale traders between the producers and the retailers. The assessment also needs to determine if the goods are produced locally or not. ^a
Tourism-related assets		Tourism-related infrastructure	Infrastructure assets differ from cultural and natural (physical) assets in that they were built or bought to be used exclusively by tourists—for example, a road to a cultural monument or sanitation infrastructure may have been built exclusively for the use of visitors. In some cases, such assets may include infrastructure not built specifically for the tourism sector that enhances tourism—for example, a road without tolls or a health facility in the historic area that is occasionally used by tourists. It is important not to double count this type of facility.
		Tourism-related governance mechanisms	While in many cases the private sector operates the tourism industry, the public sector acts as a governance and regulatory body. Since a major crisis negatively affects governance and oversight functions, the PDNA process must include a section on its effects specifically on the governance body of the tourism sector, including the following: ^b <ul style="list-style-type: none"> ● Institutional knowledge and technical expertise ● Human, material, and financial resources, including skilled labor, raw materials for processing, and cost and price structures ● Information management and communications ● Legal authority, monitoring, oversight, and reporting
Tourism production flows		Demand-side decline in tourism arrivals	The decline in tourist arrivals could affect the sector for one or many tourism seasons. The team should look for any baseline data on tourism arrivals and expenditures available from the pre-crisis period. Analysis should include domestic and international tourism arrivals and account for the economic damage during the required rebuilding period. In addition, it should take into account the possibility that tourism flows may not return to normal immediately after rebuilding. It may take time to overcome fear or lack of information among foreign and even domestic tourists. ^b <p>The team should also make note of consumer profiles:</p> <ul style="list-style-type: none"> ● Domestic versus international tourists and relative spending amounts per day ● Demographics, lifestyles, and travel habits ● Barriers to travel entry (e.g., are people of a particular nationality who previously traveled there frequently now unable to do so because of visa restrictions?)
		Branding and reputational loss	Cultural tourism relies heavily on reviews of a place’s novelty, history, accessibility, and safety. Marketing, word of mouth, Internet pages, and social media channels heavily determine the value of cultural tourism. Assessments of reputational loss should

			<p>include research into the current state of the following:</p> <ul style="list-style-type: none"> ● Commercial online pages (Tripadvisor, Lonely Planet, local guides, etc.) ● Other drivers of marketing (influencers, word of mouth, physical ads, referrals, etc.) ● Social media (Instagram, Facebook, other local social network platforms used by primary consumers)
--	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

^a United Nations, *Tourism Satellite Account*.

^b Tourism PDNA.

Table A1.5. Sample List of Items to Consider When Assessing Damage to the Housing Sector

Assessment areas	Considerations
Characteristics of urban housing	
Housing typologies	<ul style="list-style-type: none"> ● Typologies may include one-story detached or semidetached houses, multiple-story detached or semidetached houses, single-story rowhouses, multiple-story rowhouses, apartment buildings, adaptive reuse units within historic structures, historic clustered housing, or courtyard housing.
Size	<ul style="list-style-type: none"> ● Average size of housing per family ● Average number of rooms per household
Construction materials and techniques	<ul style="list-style-type: none"> ● Are the material and techniques used in housing units mostly local or imported? ● Do building codes exist, and are they enforced? ● What is the average cost per unit of housing pre-crisis, as compared to post-crisis housing built with more sustainable materials and based on “build back better” principles? ● What was the construction sector’s capacity pre- and post-crisis? What were construction practices, standards, regulations, and levels of quality assurance?
Occupancy/tenure type	<ul style="list-style-type: none"> ● Assess the proportion of renters to owners. ● If a substantial number of rental units are in the area, examine the rate of absentee owners and landlords. ● Determine the level of informality and the number of informal settlements and renters in the area. ● Assess the monthly value of rentals.
Infrastructure and services	<ul style="list-style-type: none"> ● What type of infrastructure served the housing sector pre-crisis? ● Does additional infrastructure need to be planned?
Housing policy, finance, and institutions	
Institutions	<ul style="list-style-type: none"> ● What institutions are involved in housing? Are they in the public, private, or nonprofit sector? ● What is the hierarchy of institutions involved in the housing sector, ranging from central government to state (regional) and/or local governments? What is the breakdown of responsibilities? ● What are the institutional roles and responsibilities in the housing sector? ● What is the operational capacity of the local government and the construction sector to rebuild the housing units?

National and local housing policy	<ul style="list-style-type: none"> ● What are the major policy and regulatory instruments in production and management of housing and urban settlements? ● Are there any subsidy programs for housing? ● What information is available on losses and damage to the municipality and its capacity to be involved in rebuilding post-crisis?
Land and land use issues	
Land use planning	<ul style="list-style-type: none"> ● Study demolished housing to see if improper land use planning was a factor in excessive damage. In many cases, consolidation of assets and people in disaster-prone areas contributes to more damage and deaths.
Land tenure and records	<ul style="list-style-type: none"> ● Determine different land ownership regimes in the area (public, private, communal, and so on). ● Study government records and develop a land survey to record information on each parcel of land. ● Determine the value of the land to the extent possible.

ANNEX 2

BUILDING A GEO-DATABASE OF CULTURAL RESOURCES

To build a geo-referenced cultural resource inventory for a historic urban area, the team needs first to create the spatial data using global positioning system (GPS) and geographic information system (GIS) technologies. Then the team should link these data to an external database, wherever it is hosted and however it is managed. The next step is to ensure sensitive property and historic information is safeguarded and protected, and the last step is to develop thorough and complete metadata.⁴⁴

GPS technology makes it easier to collect and record spatial data. In the absence of GPS technology, the team sends the surveyors to the field for data collection. They can record the data by hand and on paper maps. With GPS technology in hand, surveyors can capture all the information at once and immediately incorporate it into a GIS database. At a later stage, all data gathered by handheld GPS devices become a shape file in the GIS database. The descriptive information recorded in the field by the surveyors become the “attribute tables” for that data. These data can then be spatially displayed along with other layers of data, such as transport, risk, and demographics, to make analysis easier. GPS allows the team to conduct a digital survey to build a “data dictionary” to include all historic and cultural information about a resource.⁴⁵

The team should include historians, architects, and cultural heritage specialists who will design the survey and data dictionary to determine what type of data should be collected. Then, a GIS specialist builds a digital survey based on these data to be used by surveyors in the field data collection. The collected data would be reverted back to the GIS team to be built into a spatial database of cultural resources. Designing the data dictionary is an important and sensitive step. If designed poorly, necessary information may not all be collected in the field by the surveyors, resulting in missed opportunities for data collection. On the other hand, if a data dictionary is unnecessarily large, it will increase the time spent in the field by the surveyors, resulting in wasted time and collection of data that may not be necessary for a cultural resource map and database.

⁴⁴ See ArcGIS Online, www.arcgis.com.

⁴⁵ Deidre McCarthy, “Historic Preservation Response Methodology: Based on the Hurricane Katrina Model,” Cultural Resource GIS Facility, Heritage Documentation Programs, <https://www.nps.gov/crgis/HPRM-KatrinaPRINT.pdf>.