

TECHNICAL DEEP DIVE ON

RESILIENT

CULTURAL

HERITAGE AND

TOURISM

SUMMARY REPORT



TECHNICAL DEEP DIVE (TDD) ON RESILIENT CULTURAL HERITAGE AND TOURISM (CHT)

APRIL 10–14, 2017

This TDD was jointly organized by the World Bank Disaster Risk Management Hub, Tokyo; the Tokyo Development Learning Center (TDL); and the Culture, Heritage, and Sustainable Tourism (CHST) Knowledge Silo Breaker (KSB) in partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Institute of Disaster Mitigation for Urban Cultural Heritage at Ritsumeikan University (R-DMUCH). The TDD also benefited greatly from contributions by the following: United Nations World Tourism Organization/Regional Support Office for Asia and the Pacific (UNWTO/RSOAP) in Nara; the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan; Kyoto Prefecture; Kyoto City; and 100 Resilient Cities–Toyama.

CONCEPT: THE TECHNICAL DEEP DIVE (TDD)

Technical Deep Dives bring together experts and practitioners through workshops, site visits, peer-to-peer knowledge sharing, and action planning. The objective is to provide specific support to World Bank clients and their projects by addressing thematic topics of high client demand. Typically, reference is drawn from Japan, which offers relevant experience and solutions for a wide range of topics. TDDs offer firsthand knowledge-exchange opportunities and enable developing countries to deepen their knowledge through intensive study tours and peer learning. Client demand is determined through a demand survey conducted by the World Bank. Demand is met by offering participants structured learning before they arrive in Japan, and by providing ongoing support to connect them to technical experts and best practices in close collaboration with the Bank's Communities of Practice (CoPs).

The TDDs have four core elements:

- 1. Challenge objective**, which reflects the demand-driven nature of the program and involves problem solving and technical assistance, including expert consultation and expert visit to client nations
- 2. Knowledge development for operational development**, which involves knowledge exchange, just-in-time assistance, and potential technical assistance for clients and World Bank task teams
- 3. Structured learning**, which is delivered to clients and partners through e-learning courses and a package of selected knowledge-exchange instruments before, during, and after the TDD in Japan
- 4. Application to knowledge networks**, which involves contributing relevant inputs to CoPs to support development of case studies and best-practice lessons and to diffuse knowledge to the broader community

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ABBREVIATIONS

ACA	Agency for Cultural Affairs, Government of Japan
ADB	Asian Development Bank
CHT	cultural heritage and tourism
CoP	Community of Practice
CRO	chief resilience officer
DIG	Disaster Imagination Game
DRM	disaster risk management
EWSS	Environmental Water Supply System (Kyoto)
GFDRR	Global Facility for Disaster Reduction and Recovery
GSURR	Social, Urban, Rural, and Resilience Global Practice
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property
ICOMOS	International Council on Monuments and Sites
ICORP	International Scientific Committee on Risk Preparedness
KSB	Knowledge Silo Breaker
MEXT	Ministry of Education, Culture, Sports, Science and Technology (Japan)
MLIT	Ministry of Land, Infrastructure, Transport and Tourism (Japan)
PPP	public-private partnership
R-DMUCH	Institute of Disaster Mitigation for Urban Cultural Heritage at Ritsumeikan University
SCTH	Saudi Commission for Tourism and National Heritage
SFDRR	Sendai Framework for Disaster Risk Reduction
STCDA	Stone Town Conservation and Development Authority
TDD	Technical Deep Dive
TDLC	World Bank Tokyo Development Learning Center
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISDR	United Nations Office for Disaster Risk Reduction
UNWTO/ RSOAP	United Nations World Tourism Organization / Regional Support Office for Asia and the Pacific



EXECUTIVE SUMMARY

Technical Deep Dive on Resilient Cultural Heritage and Tourism

This Technical Deep Dive (TDD), held in April 2017 in Tokyo and Kyoto, brought together officials from nine developing countries, along with World Bank project teams and key Japanese and international experts. The TDD aimed to inform countries' investments by bringing together experts and practitioners from both disaster risk management (DRM) and cultural

heritage and tourism (CHT) disciplines, and focused primarily on finding solutions to key concerns identified by participants.

The participating countries—Albania, Bhutan, China, Myanmar, Nepal, the Philippines, Saudi Arabia, Tanzania, and Uzbekistan—count a total of 85 World Heritage Sites (cultural, natural, and mixed) plus 193 sites on the Tentative List, so over 278 world-renowned sites in all.¹ They also have more than 11 million people exposed to floods each year and more than 1.5 million people subject to an earthquake of magnitude 6 or above.² With the support of the World Bank, these countries are carrying out projects that together represent more than US\$700 million in government-led investments (see figure below).

Projects Led by TDD - Participating Countries



Participants and their projects came mainly from the field of urban development or DRM. The professionals participating included urban specialists (21 percent), national and

subnational cultural heritage officials (25 percent and 18 percent, respectively), local government leaders (18 percent), and DRM specialists (18 percent).

1 See UNESCO, World Heritage List, <http://whc.unesco.org/en/list>.

2 See the INFORM website at <http://www.inform-index.org/>.



The TDD covered six main themes around the principles of DRM for CHT:

1. FUNDAMENTALS OF DISASTER RISK MANAGEMENT FOR CULTURAL HERITAGE

Basic concepts of DRM for cultural heritage, Japanese systems for protection of cultural heritage (institutions and regulations), and the Sendai Framework for Disaster Risk Reduction as presented by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

2. MANAGEMENT OF CULTURAL HERITAGE SITES: FROM PREPAREDNESS TO POST-DISASTER RECOVERY

DRM strategies and techniques applied to CHT sites, including prevention/mitigation, emergency preparedness, emergency response, and reconstruction/recovery.

3. EARTHQUAKES AND ASSOCIATED SECONDARY HAZARDS AS THEY RELATE TO TRADITIONAL BUILDINGS

Site visits to Kiyomizu-dera Temple and Nijo Castle, Kyoto, with attention to traditional wooden structures' vulnerability to fire after earthquake.

4. HYDROMETEOROLOGICAL HAZARDS, INCLUDING STORMS AND FLOODING

Site visit to Ponto-cho and Kamo River area in Kyoto, and the case of Toyama, one of the cities included in the 100 Resilient Cities program.

5. ENGAGING COMMUNITIES TO PRESERVE CULTURAL HERITAGE

Examples from Kyoto and Sasayama showing the importance of Japan's Preservation Districts for Groups of Traditional Buildings,³ which are groups of buildings or areas designated by the municipalities for special protection measures

6. CONNECTING TO TOURISM: PROMOTION AND PROTECTION OF CULTURAL HERITAGE

Experiences from the United Nations World Tourism Organization/Regional Support Office for Asia and the Pacific (UNWTO/RSOAP), especially regarding risk communication with tourists and sustainable tourism as a development tool.

Action planning:

Participating countries engaged in peer-to-peer learning and articulated takeaways that could be applied to their situations. They presented their cases and implementation plans and discussed them with a panel of experts.

³ ACA, Preservation Districts for Groups of Traditional Buildings: http://www.bunka.go.jp/english/policy/cultural_properties/introduction/historic_buildings/

Key Takeaways

The action planning discussions generated in the following key takeaways:

Common challenges:

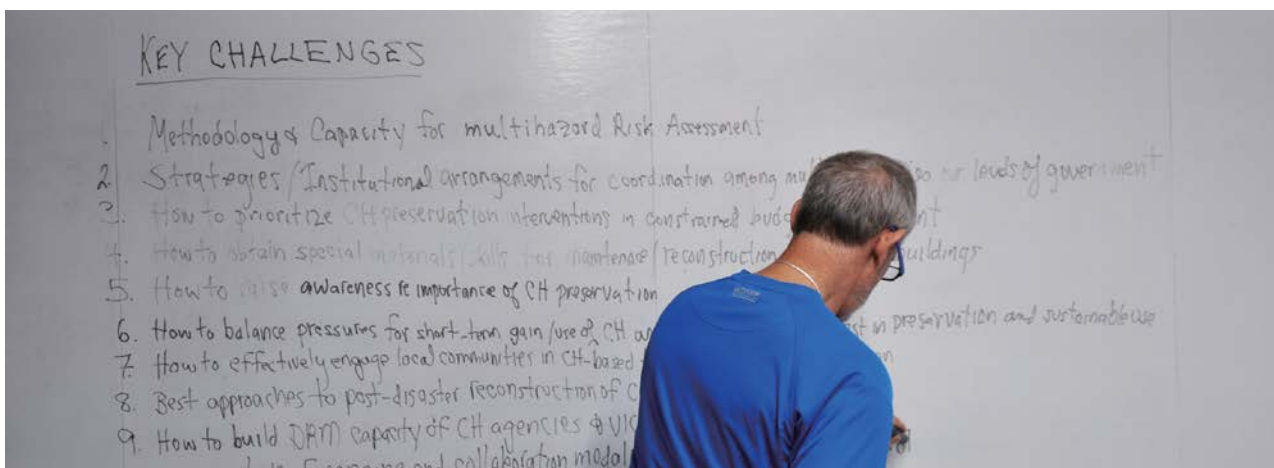
- Limited technical expertise, especially regarding restoration and maintenance of cultural heritage
- Lack of regulatory framework and governance
- Difficulty in engaging communities, creating awareness, and fostering collaboration between stakeholders from different sectors

Identified solutions:

- Promote research and collect data on heritage and hazards, and offer specific trainings for staff involved in protecting cultural heritage against disasters.
- Design guidelines on protecting heritage from disaster risks so that experts and authorities have a solid reference.
- Request technical assistance and capacity building; promote knowledge exchange on resilient CHT.
- Develop pilot projects with the support of the World Bank and international experts.

Key ideas from the Japanese experience:

- Connecting DRM with cultural heritage is fundamental. DRM plans should be included within site management plans, and DRM projects should include cultural heritage components.
- It is important to promote strong institutional organization at national and local levels, foster interaction between cultural heritage and DRM departments, and encourage collaboration with universities, private owners of heritage sites, etc.
- The role of the local communities is key in protecting heritage, creating resilience, and sharing traditional knowledge, which in many cases provides good DRM solutions.



OPENING AND WELCOME



Sameh Wahba

Director of Urban and Territorial Development, World Bank

The goal of this TDD is not only to share knowledge on cultural heritage resilience; more importantly, it is to allow each of the countries participating to work on the financing, planning, and implementation aspects of their cultural heritage-related projects and create detailed action plans that address their specific challenges

This TDD benefits from very important partnerships, including those with the United Nations Educational, Scientific and Cultural Organization (UNESCO), 100 Resilient Cities—Toyama, and the Institute of Disaster Mitigation for Urban Cultural Heritage at Ritsumeikan

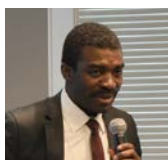
“

Sameh Wahba

*Director of Urban and Territorial Development,
Disaster Risk Management and Resilience, Social, Urban, Rural,
and Resilience Global Practice (GSURR), World Bank*

There is no better place than Japan
for an agenda of resilience,
cultural heritage, and
integration of both.

University (R-DMUCH). These strengthen collaboration to protect cultural heritage and promote sustainable development worldwide.



Lazare Eloundou Assomo

Deputy Director of the Heritage Division
and the World Heritage Centre,
Culture Sector, UNESCO

UNESCO not only aims to preserve cultural heritage, but also tries to promote better cultural understanding and diversity.

The number of cultural heritage assets—both tangible and intangible—has increased more rapidly than vulnerability has decreased, which has led to increased risks.

Culture influences how people interact with the world. Cultural heritage contributes to sustainable recovery from disaster by giving residents hope, identity, and dignity. Resilient cultural heritage is therefore imperative.

Many cultural heritage sites do not incorporate disaster preparedness measures, and on the other hand, disaster risk management (DRM) planning does not always specifically address cultural heritage assets. The key is to connect DRM with CHT and create resilience.

FUNDAMENTALS OF DISASTER RISK MANAGEMENT FOR CULTURAL HERITAGE

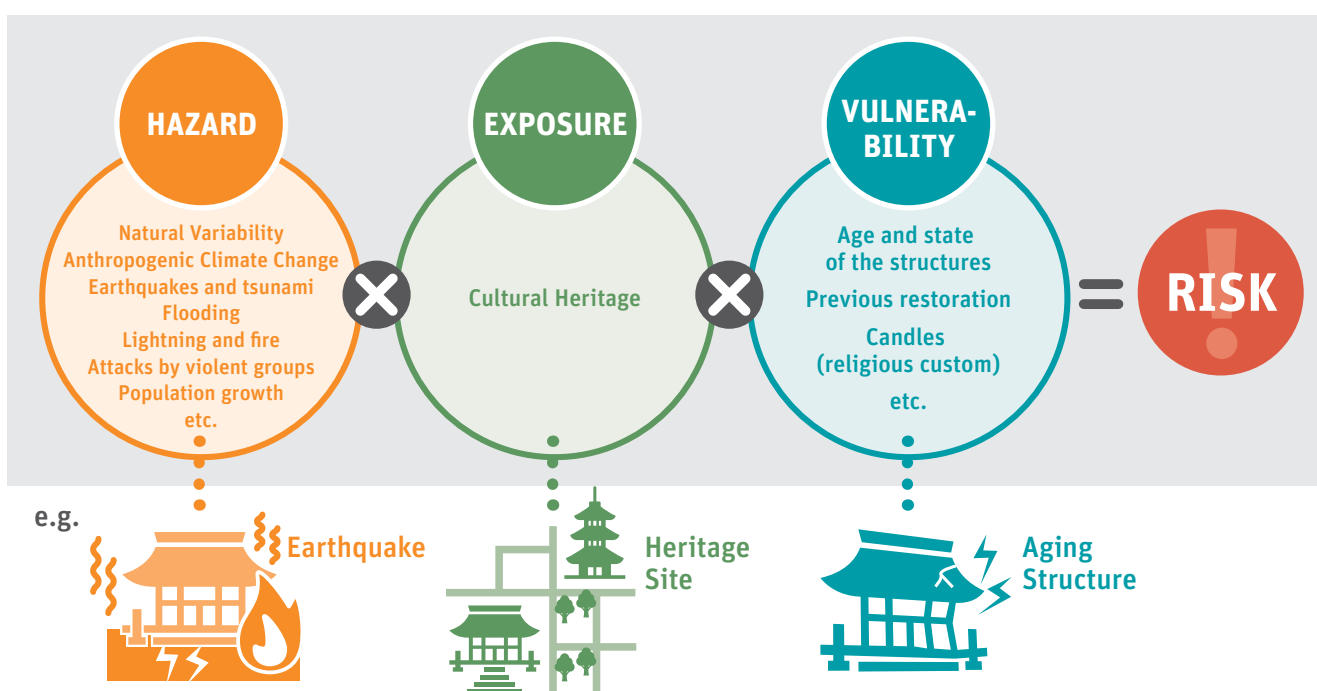
Background on DRM for CHT

Natural hazards, especially those exacerbated by climate change, are becoming more frequent and intense. As a result, historic heritage sites that have survived for hundreds and even thousands of years are now more threatened than ever before. Sites are also increasingly threatened by human-made disasters; for example, violent groups are targeting cultural assets for damage or destruction. Cultural heritage is also threatened by urbanization—an estimated 1 billion people will live in cities by 2030—but this challenge also presents an opportunity to protect and promote culture.

In DRM, risk (R) is calculated as the result of the interaction of one or multiple hazards (H) with a specific exposure (E) having a certain degree of vulnerability (V).

The equation becomes more complex when cultural heritage is the “exposure” because many factors—such as the age and state of the structures, previous restorations, etc.—affect the level of vulnerability. For cultural heritage assets, it is very important to consider the different characteristics of the attributes under assessment—for example, whether the asset is tangible or intangible, movable or immovable, or some combination.

CHT Risk Calculation





Rohit Jigyasu

UNESCO Chair Professor, R-DMUCH

The primary risk to CHT sites is the potential loss of values associated with sites' various attributes. It is crucial to undertake inventories and value assessments of the heritage properties. Some important considerations when applying DRM measures to cultural heritage are these:

- **Heritage may be damaged very differently from new buildings**, as happened in Seoul's old Namdaemun gate in 2008.⁴
- **Previous interventions may make monuments more vulnerable**, as seen in Bagan, Myanmar.⁵
- **Lack of maintenance increases vulnerability**, especially in museums; it is important to organize storage and develop evacuation plans to allow removal of objects from damaged buildings.
- **Multi-hazard approaches must be considered** because the original disaster may trigger other disasters—for instance, the post-earthquake tsunami in Japan in 2011 caused the nuclear accident in Fukushima.

“

Rohit Jigyasu

UNESCO Chair Professor, Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Cultural heritage is
not only for identity but for
knowledge and learning.

- **Emergency management and preparedness plans** should be established in order to manage emergencies and enhance responsiveness.
- **Training people in specific skill sets for rescuing heritage** should be undertaken before disasters occur.
- **Climate change effects** are a big challenge for ancient structures and need to be considered and understood.

⁴ A fire started inside the old Namdaemun gate in the Republic of Korea in 2008; it was not immediately visible, and firefighters had trouble understanding how it spread in such a historic building.

⁵ After the earthquake in Bagan in 2016, experts noted that the most significant damage was mainly caused by poor connections between the ancient buildings and the more recent reconstruction materials, the low quality of the newly added parts, and, in many cases, the lack of appropriate and regular maintenance.

International Agreement: The Sendai Framework for Disaster Risk Reduction

Giovanni Boccardi

Chief of the Emergency Preparedness and Response Unit,
Heritage Division, Culture Sector, UNESCO

To understand the connection between cultural heritage and resilience, it is essential to first recognize the unique role and contribution of culture in reducing disaster risk and fostering resilience: culture reflects natural diversity, mitigates risks through goods and services, connects people, serves as a symbol of identity, is a factor in social stability, communicates risks (creativity is an important component in many situations), and is resource for sustainable socioeconomic development.

Most World Heritage properties are not prepared for disasters. A preliminary assessment of some of the most vulnerable heritage sites found that most managers of heritage sites with high disaster exposure are not prepared to face an adverse event.

“

Giovanni Boccardi

*Chief of the Emergency Preparedness and Response Unit,
Heritage Division, Culture Sector, UNESCO*

The cultural and creative industry is one of the most rapidly growing sectors of the world economy and a highly transformative one in terms of income generation, job creation, and export earnings.

The Sendai Framework for Disaster Risk Reduction calls for “the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.”⁶ This is an unprecedented step in recognizing culture as a key dimension of disaster risk reduction and in acknowledging the need to protect and draw on heritage as an asset for resilience.



6 UNISDR, “Sendai Framework for Disaster Risk Reduction 2015 – 2030,” 12, http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf

Japan's Experience

Japan has a rich cultural heritage and is also highly hazard-prone. The 1995 Kobe Earthquake and the 2011 Great East Japan Earthquake and associated tsunami are two of the worst disasters Japan has experienced—yet it recovered from both while safeguarding its cultural heritage. Through the years, Japan has developed a strong technical expertise in various aspects of DRM for cultural heritage, such as legislation, research and study programs, and national institutions.

System for Protection and Disaster Risk Reduction of Japanese Cultural Heritage

Kumiko Shimotsuma

Senior Specialist for Cultural Properties, Historic Urban Conservation Unit, Agency for Cultural Affairs (ACA), Government of Japan

Dowon Kim

Associate Professor, Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Under the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Agency for Cultural Affairs (ACA) is responsible for cultural heritage.⁷ It spends 44 percent of its US\$930 million total budget on protecting these sites from hazards and other events. ACA's Council for Cultural Affairs includes the Subdivision on Cultural Properties, which investigates and deliberates on important matters affecting the preservation and utilization of cultural properties.⁸ ACA encourages local governments

to comprehensively list the heritage sites in their area and to participate in developing strategies for those sites based on the area's history and culture.

Cultural properties in Japan are classified into six categories: tangible, intangible, folk cultural properties, monuments, landscapes, and groups of traditional buildings.

Japan clearly defines the roles of the national and subnational governments, property owners, and residents of the areas where cultural properties are located.

- After the 2011 Great East Japan Earthquake, the Cultural Property Rescue Project was launched to carry out post-disaster salvaging of cultural properties and affected materials.
- The National Institute for Cultural Heritage⁹ was appointed as the nodal agency for overall cultural heritage; it is funded by ACA and donations.
- DRM initiatives are governed by the Basic Act of Disaster Control Measures (for preparedness and recovery), which provides plans to be developed at all levels of jurisdiction—central, prefectural, and municipal disaster prevention council.

Depending on the owner's financial condition and on the revenue generated by the property, the central government typically offers owners a 50–85 percent subsidy for works to upgrade sites and increase their resilience.



⁷ See the ACA website at <http://www.bunka.go.jp/english/>.

⁸ Law for the Protection of Cultural Property: http://www.unesco.org/culture/natlaws/media/pdf/japan/japan_lawprotectionculturalproperty_engtof.pdf.

⁹ See the National Institute for Cultural Heritage website at <http://www.nich.go.jp/english/>.

The Case of Kyoto

Noriyoshi Tsuruoka

Deputy Director, Cultural Properties Division, Department of Guidance, Kyoto Prefectural Board of Education

Takeyuki Okubo

Director of the Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Kyoto is a historical city whose structures of wood, paper, and mud mortar make it very vulnerable to hazards. Its demographic characteristics compound this vulnerability: it has a higher percentage of people over 65 years and more tourists (50 million per year)—groups that are especially susceptible to the impacts of disasters—than any other Japanese city.

Kyoto has many national treasures and important cultural properties subject to a variety of regulations:

- To repair traditional buildings with acceptance of state subsidy, the owner of the property must contact the Kyoto Prefecture beforehand. The technical staff in the Cultural Properties Division, trained in traditional techniques, oversees planning, management, investigation, and recording of repair work.



- Automatic fire alarm systems are required by the national government. Other equipment, such as firefighting equipment, lightning protection, and camera surveillance and anticrime lighting, are recommended. Owners also proactively conduct training drills.
- A key requirement of DRM for CHT is to keep records of the work done on heritage assets. For instance, Kin-kaku temple was perfectly rebuilt after a fire in 1955, thanks to the available documentation.

Although the wooden structures in Japan last for hundreds of years, new seismic risk assessments indicate the need for reinforcement. Reinforcement would incorporate new technologies and materials without interfering with the original structure, and would keep in mind the circumstances under which the building was built. In this regard, transfer of knowledge and technology methods for future generations is fundamental: Kyoto requires contractors to be registered, and the prefecture chooses them based on expertise. The prefecture also organizes training courses on construction techniques that need to be preserved.

MANAGEMENT OF CULTURAL HERITAGE SITES: FROM PREPAREDNESS TO POST-DISASTER RECOVERY

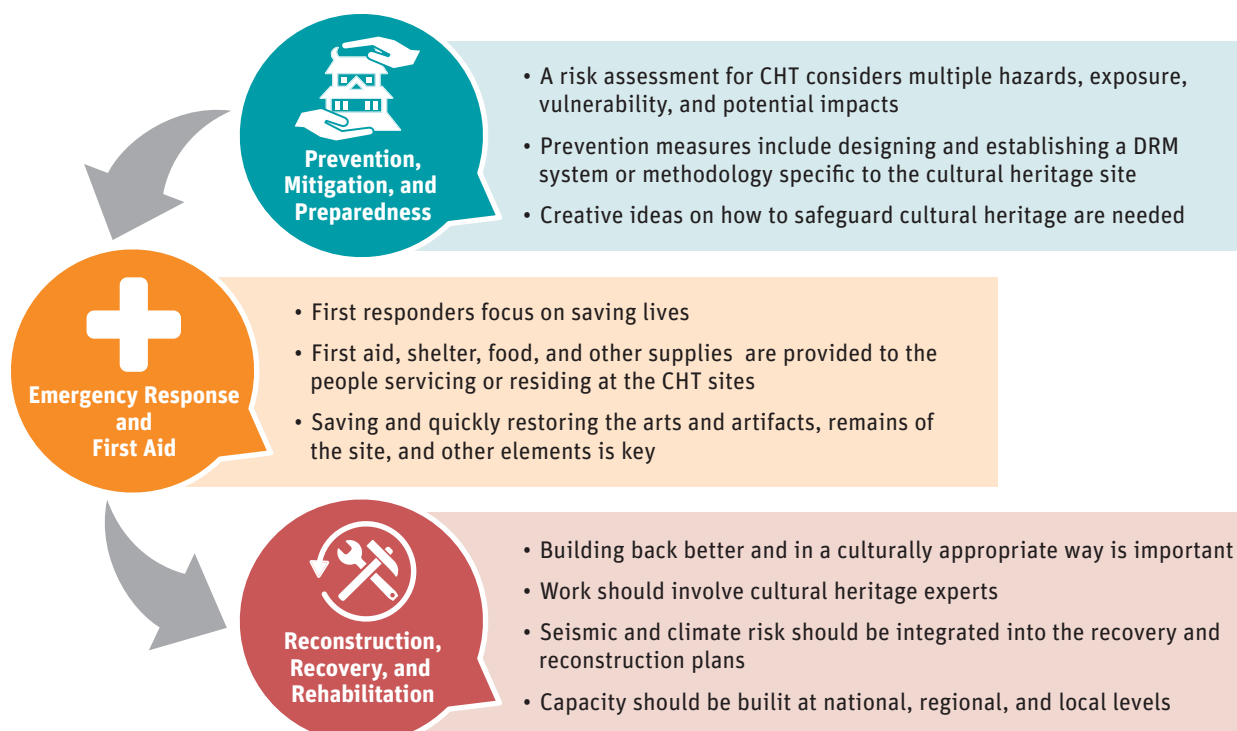
Rohit Jigyasu

President of ICOMOS (International Council on Monuments and Sites) India and ICORP (International Committee on Risk Preparedness); UNESCO Chair Professor, Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Many CHT-focused practitioners distinguish three phases of DRM for CHT: before, during, and after a disaster event (see figure below).



Step-by-Step DRM Process



Key

Cultural heritage needs to be integrated into disaster management policies at various levels of planning, and vice versa—that is, multi-hazard risk management systems also need to be part of cultural heritage sites' management plans.

Site Visit: Kiyomizu-dera Temple Area

Kiyomizu-dera is one of the historic monuments of ancient Kyoto included in the UNESCO World Heritage List.¹⁰ It offers a good example of reinforcement and earthquake-resistant diagnosis for a traditional design. Periodic repairs have been made to the whole temple,

including a complete replacement of the old wood pieces by new ones. The construction uses the traditional Japanese method, including an earthquake-resistant system that prevents the building from collapsing. The measures are mainly internal to avoid visual impact.

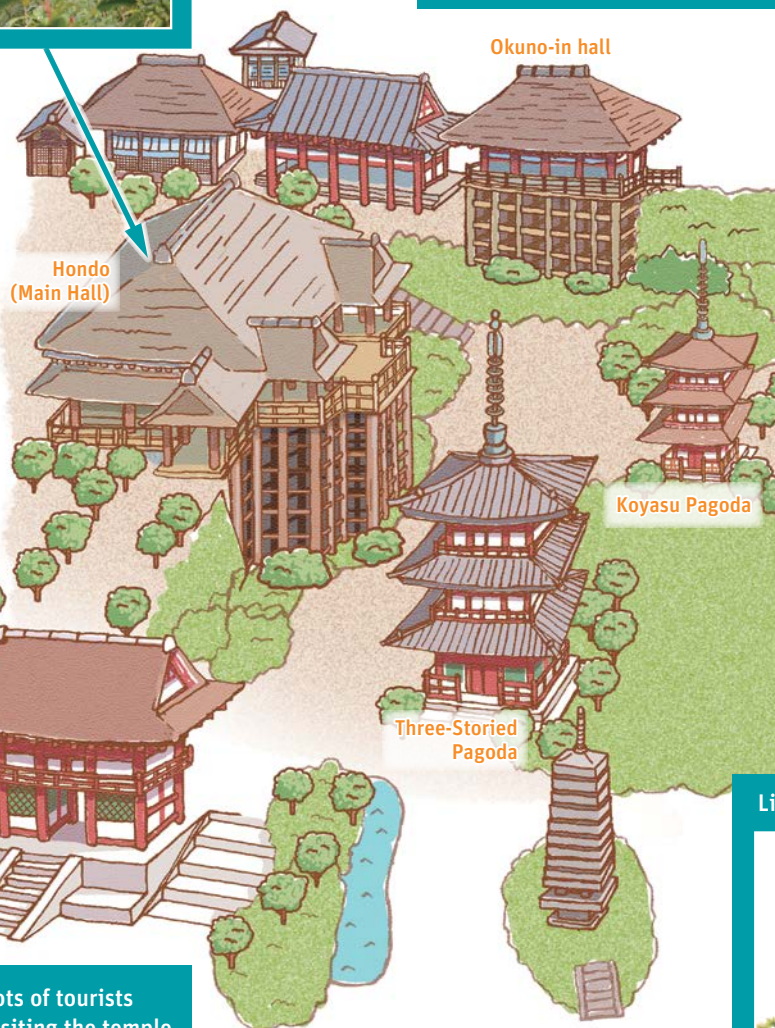
KIYOMIZU - DERA Temple Disaster Prevention Measures



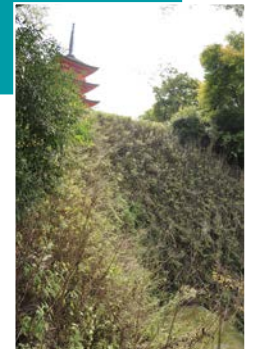
Regular roof retrofitting using traditional techniques and materials



Fire hydrants all around the whole complex



Landslide Risk



Lightning protection



Lots of tourists visiting the temple

¹⁰ The Kyoto monuments are described in UNESCO, "Historic Monuments of Ancient Kyoto (Kyoto, Uji and Otsu Cities)," <http://whc.unesco.org/en/list/688>. Information about Kiyomizu-dera is available on the temple website at <http://www.kiyomizudera.or.jp/en/>.



Over the years, fire has posed a particular threat to the Kiyomizu-dera Temple, which has been rebuilt many times due to fires. In response, the temple owners have installed various disaster prevention measures:

- Firefighting equipment. The water system includes a piping system (composed of two machines to ensure sufficient pressure) that can hold 500 tons of water.
- Fire optic system. Forty surveillance cameras prevent people from entering the temple but also sound an alert in case of fire.
- Lightning prevention system.

The role of the local community is key. Neighbors and store owners are trained and prepared to assist at the temple in case of emergency. Over 70 years ago, the local community and the temple owners put together a protocol for emergencies. Voluntary firefighting teams are trained several times a year in how to use fire-extinguishing equipment. In return for the community's service, the temple has established a water supply system that collects rainwater

and distributes it to the people free of charge. The temple and community organize emergency response drills twice per year. During New Year's there is a special campaign to promote awareness of disaster risk. Community members share their experiences and practical knowledge with the new generations.

Concerning protection and conservation,

- The temple owner is solely responsible for the operation and maintenance of the temple. Since the government categorizes the structure as a national cultural heritage CHT, it extends the support needed to preserve the temple.
- Typically, the temple owner assumes most of the costs, including for replacement of the roof every 40–50 years, which are funded through entrance fees and donations from the visitors.
- Reconstruction follows the standards and criteria set by the government. Consultations with government, Kyoto City, and the Kyoto Community Committee are mandatory before any renewal work.

EARTHQUAKES AND ASSOCIATED SECONDARY HAZARDS AS THEY RELATE TO TRADITIONAL BUILDINGS

Takeyuki Okubo

Director of the Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)



Lying on three major active faults, Kyoto is highly exposed to seismic risk and has suffered frequent earthquakes.

The prevalence of wooden constructions in Kyoto also increases the risk of fires after earthquakes. Following the big earthquake in 1830, for example, there were more than 200 fires documented. Kyoto's historical districts also have narrow streets built on different levels as well as stairs around traditional buildings, which complicates access and increases danger in case of emergency.

The government's resources are limited, and its response could be inadequate in case of disaster. The community should therefore develop its own system and team of first responders to swiftly and efficiently rescue cultural heritage assets.

One of the community efforts is the development of the Environmental Water Supply System (EWSS).¹¹ This system uses an existing natural water source (a small cistern situated at an elevation of 80 meters) and natural gravity for water pressure. The EWSS stores “backup” water in cisterns and has citizen hydrants (for use by residents) placed at strategic positions across the historic district. The community has access to this water for daily use and is also prepared to use it in case of emergency.

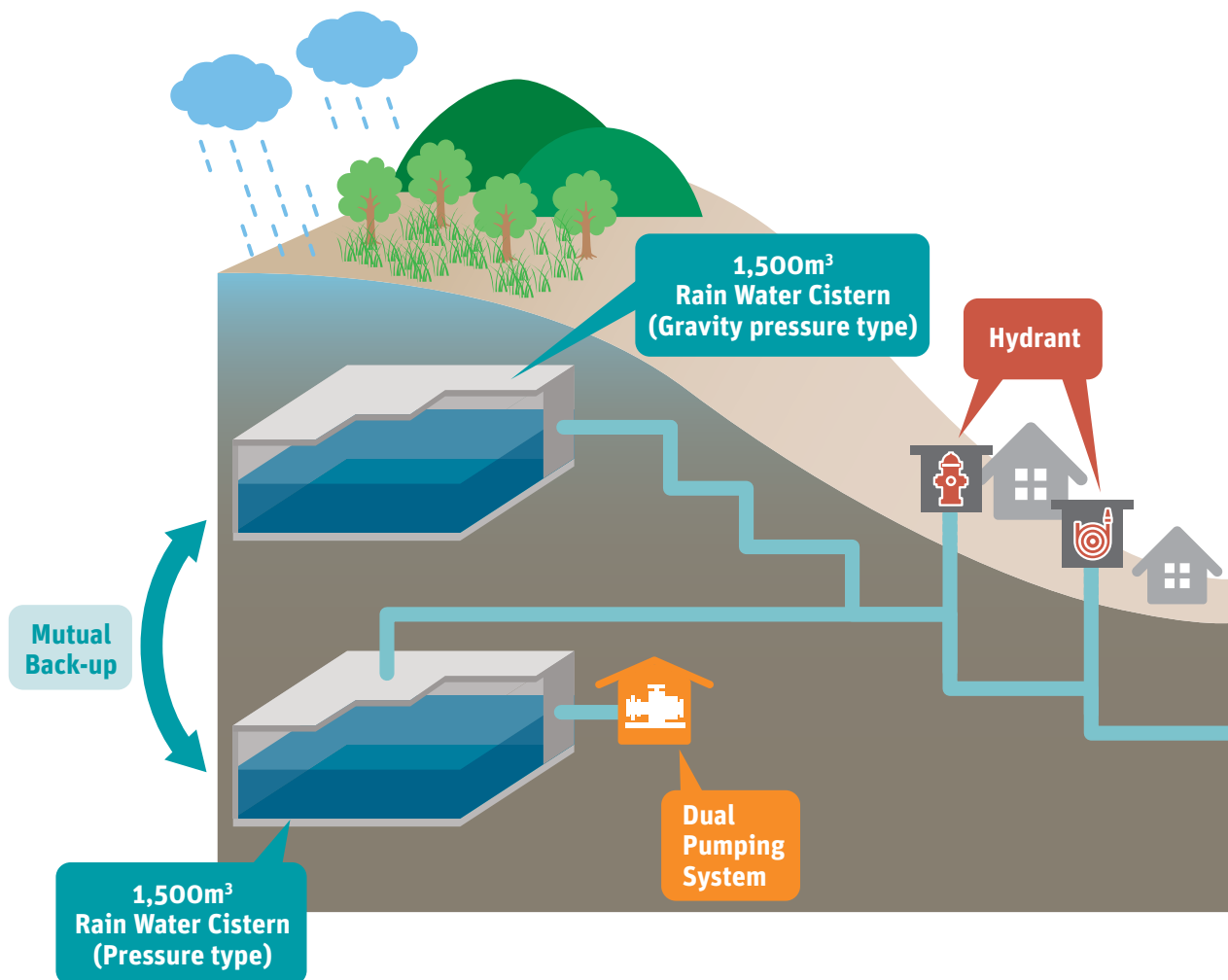


¹¹ See K. Toki and T. Okubo, “Protection of Wooden Cultural Heritage from Earthquake Disaster,” in Proceedings of Meetings on Cultural Heritage Risk Management (Kyoto: World Conference on Disaster Reduction), 94–102.

The EWSS project started in 2006 with the goal of designing a system that uses diverse water resources and that would be effective at any stage of the firefighting process. One of its cisterns is an anti-seismic structure that stores 1,500 tons of rainwater and that includes a dual pumping system, shock-proof piping, and hydrants (see figure below). A second cistern,

constructed in 2009 in the hills of Kiyomizu, is connected to the city water supply network for cross-backup and uses gravity to pressurize the water, without any pumping system. The total cost for the project (US\$10 million) is covered by the funding from national and local governments. The key actor is the Kyoto City Fire Department.

EWSS Project: Comprehensive Structure Design



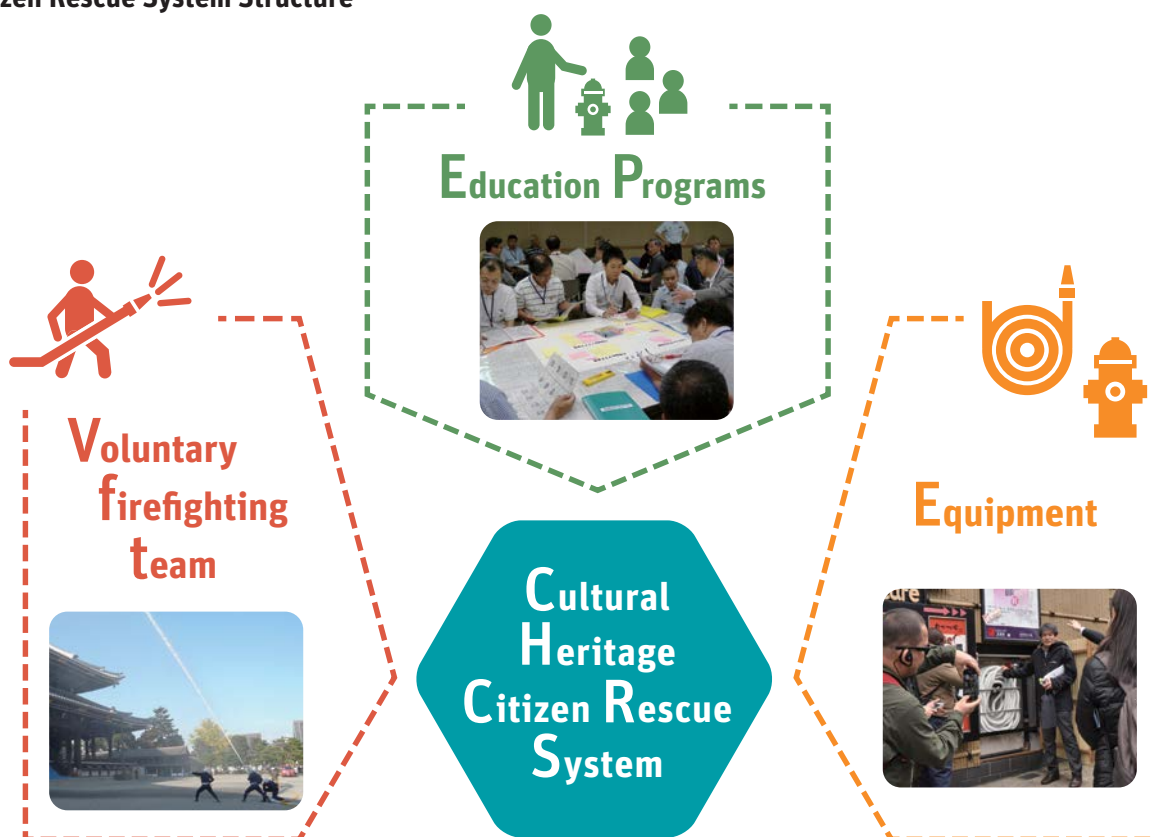
Kimiko Mekata

Assistant Manager, Fire Prevention Division,
Fire Prevention Department, Kyoto City Fire Department

Kyoto City receives 50 million tourists every year. City residents volunteer to coordinate emergency evacuation in case of disaster, and the Cultural Heritage Citizen Rescue system carries out both ordinary and emergency activities.

- Education programs teach citizens to handle fire and fire equipment, organize drills in removal of sensitive cultural properties, etc. Since cultural heritage properties in Japan tend to be made of paper and wood, speed is very important in their rescue.
- Kyoto City provides equipment (valued at up to ¥100,000) for emergency response.
- Each community has a voluntary firefighting team that manages a DRM plan designed to build resilience against multiple risks.

Citizen Rescue System Structure



Tamaki Goto

Director, Culture and Citizen Affairs Bureau,
Cultural Properties Preservation Section, Kyoto City

The government supports construction and installation of water systems for cultural properties. Nijo Castle receives 50 percent of relevant funding from the national government

and 50 percent from Kyoto City. The law regarding fire includes different standards for different sorts of buildings: ordinary buildings need to have enough water stored to last 20 minutes, but cultural heritage properties need enough water to last 50 minutes in case the fire services cannot arrive earlier.

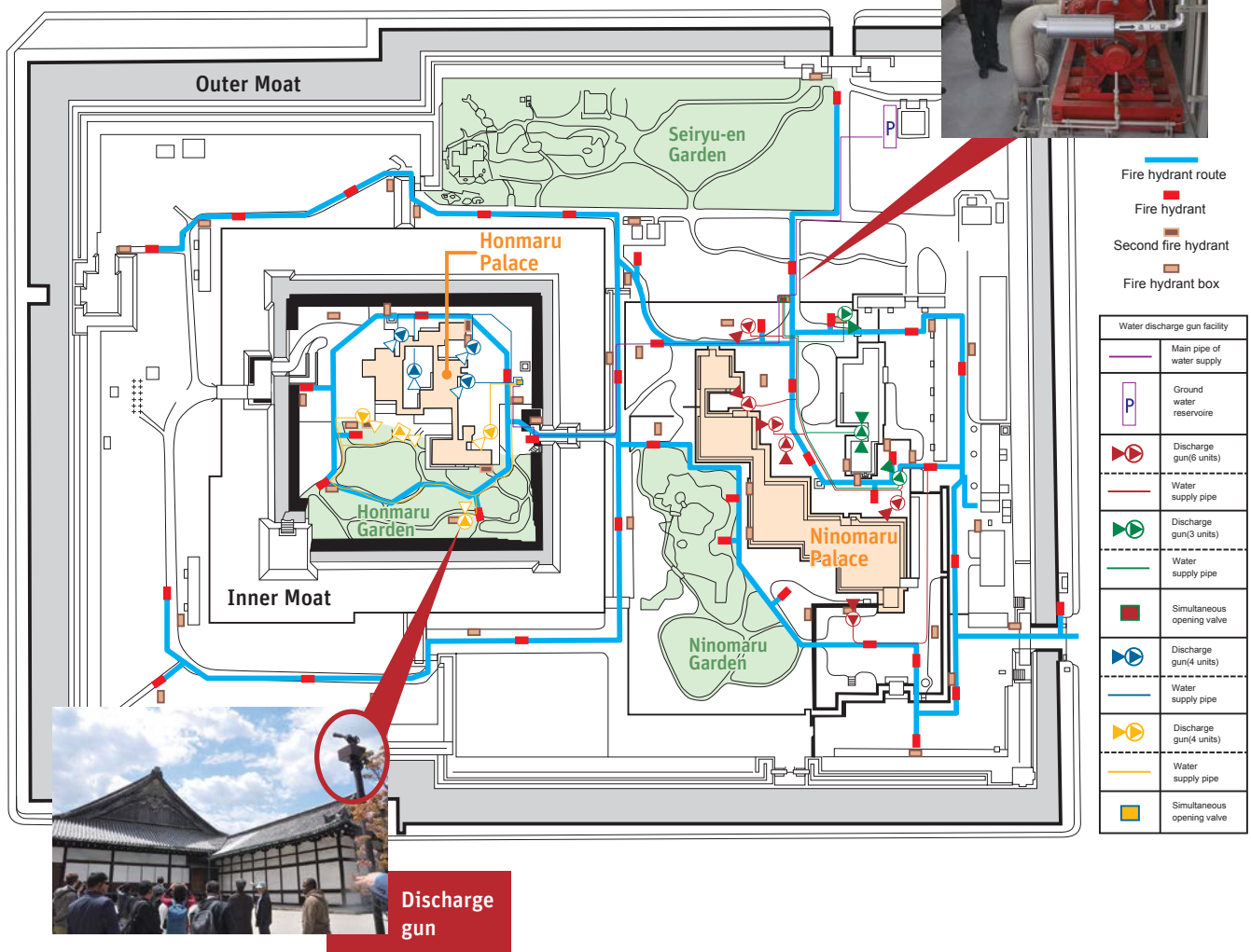
Site Visit: Nijo Castle

Nijo Castle, a World Heritage Site, demonstrates the importance of conservation, protection, and disaster prevention. The original construction in 1603 did not include the Honmaru-goten Palace or the inner moat surrounding it; these were constructed about 20 years after. The castle has undergone several major renovations and has survived several earthquakes and fires. When the emperor moved to Tokyo 150 years ago, Nijo Castle became a detached imperial residence and remained so until 1939. At that time the

ownership was transferred to Kyoto City, which opened it to the public the next year.

Given the many changes occurring over many years, a key challenge in mitigating disaster risk is to decide what buildings should be preserved and how often preservation work should take place. In this regard, the Nijo Castle staff submits a report to the national government indicating their decisions on the castle's preservation and renovation work.

Nijo Castle Fire Response System



As shown above, the castle's water supply system includes 43 fire hydrants plus reservoirs in six different places, making a total of 200 tons of water available; there are an additional

17 hydrant units or discharge guns in the castle area. This system is divided into four areas and organized by color. Only one discharge gun can work at a time.



Establishing foundations for new facilities is difficult because of the archaeological remains of previous periods. New disaster prevention measures ensure that foundations hit as little as possible. Likewise, the water system includes only one pipe to minimize damage to the archaeological remains, and the water facility is designed to blend in with the historic buildings.

Concerning conservation and repair,

- The roof is usually replaced every 30–35 years using traditional Japanese techniques and

traditional materials (wood and bark). The tiles are removed to conduct research, and the restoration and assembly are then carried out per the assessment results.

- The artistic elements are removed and restored separately. The rust is removed from metal objects, and the objects are painted with black ink between the golden parts.
- The conservation of walls entails use of mud, bamboo, and rope to build the core.



HYDROMETEOROLOGICAL HAZARDS, INCLUDING STORMS AND FLOODING

Yoshifumi Satofuka

Professor, Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Japan has experienced an increase in rainfall in the last few years owing to the effects of climate change. There are floods every year, mainly caused by heavy rainfall over rivers. Flash floods, a characteristic type of flood in Japan, disrupt the livelihoods and daily activities of citizens; in 2013, for instance, a typhoon shut down the metro line in Kyoto for four days. A large proportion of Japan is below sea level, including Tokyo, and many Japanese territories are protected by artificial levees. When a levee is breached, floods are severe, and it can take around 40 days for the affected area to recover.

Cultural heritage areas are especially vulnerable to floods, and the sites need to include mitigation measures. Investment in infrastructure for flood reduction in heritage

areas is key, as are urban planning and early warning systems. In many cases, evacuation of heritage assets is not possible, so preparedness is crucial. A good example of cultural heritage adaptation is the Itsukushima Shrine.¹² It was originally designed to avoid damage by waves and storm surges, with wooden plates intentionally set far apart. These kinds of traditional techniques—and the skills needed to carry them out—are key for disaster prevention.

Protection measures to prevent flooding of heritage sites should be designed to avoid any impact on the site's visual appeal. Moreover, even where main structures cannot be evacuated in the event of a flood, protocols should be established for rescuing/evacuating movable heritage. (During the floods in Paris that affected the Louvre Museum, for example, an emergency protocol ensured the evacuation of objects from the museum.)



¹² See UNESCO, <http://whc.unesco.org/en/list/776>.

Joseph Runzo-Inada

Chief Resilience Officer (100 Resilient Cities–Toyama)¹³

Toyama is located between the Sea of Japan and the crest of the northern Japan Alps on an alluvial plain formed by the Jinzu and Joganji Rivers. The city is prone to floods, which are increasing as climate change increases the frequency and intensity of torrential rains.

In 1858, a magnitude 7 earthquake in the mountains above Toyama caused Mt. Otombi and Mt. Kotombi to collapse, damming the Joganji River in the Tateyama Caldera with 410 million cubic meters of debris. The earthquake also generated a large-scale outburst flood and sediment deposition on the Joganji River's alluvial fan. This was one of the largest landslides ever recorded in the history of Japan.

To address its multiple challenges, Toyama City has undertaken different measures:

- A major bend in the Jinzu River, which had caused frequent downtown flooding, was straightened between 1901 and the 1920s.
- Various rainwater catchment methods have been adopted to fit local conditions. Rainwater adjustment ponds have been developed to control the inflow volume and flow of rainwaters into rivers.
- To alleviate future flooding damage in the city center, a 1,069-meter rainwater storage tunnel with a diameter of 5 meters is under construction.
- Flood and inundation hazard maps have been prepared with inputs from national and prefectural governments and in consultation with residents. They help strengthen preventative flood damage measures and promote better voluntary evacuation behavior during flooding.
- A diverse set of flood control measures—construction, IT, and “soft” measures—has also been undertaken for making Toyama City resilient.



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Joseph Runzo-Inada
Chief Resilience Officer
(100 Resilient Cities–Toyama)

People help in preparing hazard maps and that upgrades their capacities. Without people, all solutions are ineffective and nothing will work.

¹³ See 100 Resilient Cities, “Toyama’s Resilience Challenge,” <http://www.100resilientcities.org/cities/entry/toyama#/-/>.

Site Visit: Ponto-Cho and Kamo River Area

The historic district of Ponto-Cho in Kyoto preserves traditional architecture and hosts many tea houses as well as the Kaburenjō Theatre, which functions as a perform and practice hall for *geiko* and *maiko*.

The Town Building Council takes care of the maintenance of this historic district and regulates the installation of firefighting facilities. It is responsible for holding meetings and for giving permission to rehabilitate or otherwise change the buildings. As Ponto-cho is a historical district, the applicable regulations are designed to adapt and preserve the scenic elements. For instance, the allowed gap between buildings in the civil codes is 30–40 cm, while in Ponto-cho it is smaller due to the historic design and limited space. Because this closer spacing of buildings increases the risk of disaster in the area, other measures to mitigate risk—though still protecting the integrity of the place—are fundamental.

For instance, a park created inside the area of narrow streets provides an open space that can help to prevent fires; it also offers an area for



evacuating residents and allows access for the emergency teams. Fire extinguishers are placed on the street and path, and the community periodically holds fire drills.

Together with local residents of Ponto-cho, the city of Kyoto is planning to remove the power poles from the main street; this step will recreate the old-fashioned townscape and at the same time avoid risk of fire by electrical accident.¹⁴

Ponto-cho is situated close to the Kamo River, making it vulnerable to flooding. The water level has been going up every year. In 1935 there was a major flood, which led to reinforcement of the riverbanks. Currently, experts from universities, other institutions, and the municipality of Kyoto are working together to develop an evacuation plan for Ponto-cho. The role of the local community is also key in the development of preparedness measures.



¹⁴ Japan Times, “Kyoto Removing Utility Eyesores to Revive Old-Time Ambiance,” <http://www.japantimes.co.jp/news/2017/02/08/national/kyoto-removing-utility-eyesores-revive-old-time-ambiance/#.WSHetxkrKUK>.

ENGAGING COMMUNITIES TO PRESERVE CULTURAL HERITAGE

Downon Kim

Associate Professor, Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH)

Kyoto is organized through Preservation Districts for Groups of Traditional Buildings. Since local residents are the ones to actually respond to disasters, disaster prevention facilities and citizen education are essential to prevent disaster damages. In general, the role of local communities is key for protecting cultural heritage.

For instance, Kyoto City developed a plan relying on community involvement to engage citizens with the EWSS. The first pilot plan was executed in the Kiyomizu-dera area through a residents' workshop in 2004 and included a Disaster Imagination Game (DIG).

The DIG methodology serves to engage local government and experts, while also helping community members to prepare themselves for future adverse events. It includes many activities, from collecting all available data on the site (related to both cultural heritage and disaster risk), to working directly with the local community (as this is a collaborative project among citizens, experts, and governments). The objective is to establish what kind of risks could affect the cultural heritage site. The DIG includes group classification and map making, selection of cultural assets for protection, drawing of the predicted damage conditions, imaging of firefighting and sheltering, and discussion and brainstorming. Finally, all the data and explanations are located over a map to visualize the situation. The goal is to develop a resilient culture.

The EWSS relies on community engagement and participation throughout its planning

and execution. Consultations with owners of private houses took place at the beginning of the planning process. As a result, residents are responsible for maintenance of the system, but also now have access to the equipment for daily use. They also receive training on how to assist in putting out fires. Since the water for the system comes from rainwater, there is little cost to the population. The local community is thus involved in the protection of its heritage in case of hazard, in direct collaboration with the authorities.

The case of Sasayama is another very good example of a local government interacting with the preservation committee (a key player for organization and engagement) and citizens. Particularly important are the citizens' workshops held in collaboration with the preservation committee, which aim to push citizens to better understand their community's values and disaster risks. These meetings are also paired with training drills, as the residents consider necessary.

Key recommendations for engaging communities include the following:

- Involve the local community in the surveys on heritage sites as part of risk assessments and risk preparedness, giving special attention to how to evacuate and conserve the cultural heritage for the future.
- Organize workshops with the community and local authorities to discuss possible mitigation measures and management plans to protect the heritage.
- Organize evacuation drills and other exercises, such as the DIG, to engage and educate more people on the importance of preserving cultural sites.

CONNECTING TO TOURISM: PROMOTION AND PROTECTION OF CULTURAL HERITAGE

Ariana Luquin

Deputy Manager of Program and Public Relations,
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Regional Support Office for Asia and the Pacific (RSOAP)

Tourism is one of the fastest-growing industries in the world. Annual average growth of 3.3 percent is expected, and international tourist arrivals are forecast to reach 1.8 billion by 2030. This growth means jobs, but also entails a lot of challenges. Tourism must not only address the needs of visitors, industries, and hosts, it must also be sustainable and take full account of its current and future economic, social, and environmental impacts.

Tourism is becoming a tool to promote cultural identity: travelers nowadays are very well informed through various channels—destination marketing and promotion, online applications, social media, etc.—even before they begin their travels. They are also aware of safety and security concerns.

Tourists are especially vulnerable to disasters because they are not familiar with the territory, hazards, evacuation measures, etc. To address



15 UNWTO, “UNWTO/UNESCO World Conference on Tourism and Culture” Cambodia, 2015.

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Culture can do without tourism,
but tourism cannot do
without culture.¹⁵

this situation, *The UNWTO Toolbox for Crisis Communication in Tourism* was developed. It includes step-by-step protocols, checklists, sample templates configured by type of crisis and media categories, guidelines for measuring effectiveness, a list of best practices, and a special chapter on the use of social media in times of crisis. This toolbox serves as a practical guide that helps travel and tourism stakeholders effectively address the challenges generated by crises.

The UN General Assembly designated 2017 as the International Year of Sustainable Tourism for Development, recognizing sustainable tourism as a key tool for poverty reduction, protection of the environment, improvement of quality of life, and promotion of sustainable development.

Ahmed Eiweida

Lead Urban Specialist (GSURR), World Bank

Responding to disasters is not an everyday task for the tourism sector, but managing the large number of visitors is. Tourism can itself become a hazard if it is not properly managed and the site is not properly prepared for visitors. It is important to identify the capacity of the site and to include tourists when developing a management plan.

Kyoto is a perfect textbook for sustainable tourism. As Kyoto is doing, cities must diffuse the vast number of tourists by leading them to satellite sites around the main city. This approach sees tourists as opportunities, not as hazards.

How can we ensure sustainable tourism, cultural heritage conservation, and site management?

- Look for regional equality and encourage tourists to travel to other less popular and less known sites by connecting different areas in the same region.

- Include cultural heritage protection in developing countries as a key to creating resilience.



UNESCO-WB PARTNERSHIP

This TDD was included as part of the renewed partnership between the World Bank—through the Social, Urban, Rural, and Resilience Global Practice (GSURR)—and UNESCO, which was strengthened with the signature of a Memorandum of Understanding (MOU) in July 2017¹.

In the framework of this MOU, the World Bank Culture, Heritage, and Sustainable Tourism (CHST) Knowledge Silo Breaker (KSB) Core Team and UNESCO-Culture Sector Team, are currently collaborating in the preparation of a white paper titled: “Culture, Recovery and Reconstruction: Sustainable development policies to address the impact of conflicts, disasters and crises in cities”. The objective is to develop a framework and operational guidance for Governments task teams

and practitioners during the planning, financing and implementation process of post-disaster and post-conflict urban reconstruction and recovery.

Additional joint activities included the Seoul TDD on Cultural Heritage, Sustainable Tourism and Urban Regeneration, developed on November 27 - December 1, 2017, in Seoul, South Korea; and the World Bank-UNESCO Networking Event on Culture, Reconstruction and Recovery at the 9th World Urban Forum (WUF9) in Kuala Lumpur, Malaysia, on February 10, 2018. Likewise, in May 17, 2018, a co-organized session titled: The Future of Preserving the Past: Understanding and Communicating Risk to Cultural Heritage through a Disaster Imagination Game², will take place as part of the 2018 Understanding Risk Forum (UR2018) in Mexico City.



¹ <http://www.worldbank.org/en/news/press-release/2017/07/13/unesco-and-world-bank-collaborate-on-culture-urban-development-and-resilience>

² <https://understandrisk.org/event-session/the-future-of-preserving-the-past/>

CLIENTS PROFILES AND ACTION PLANS

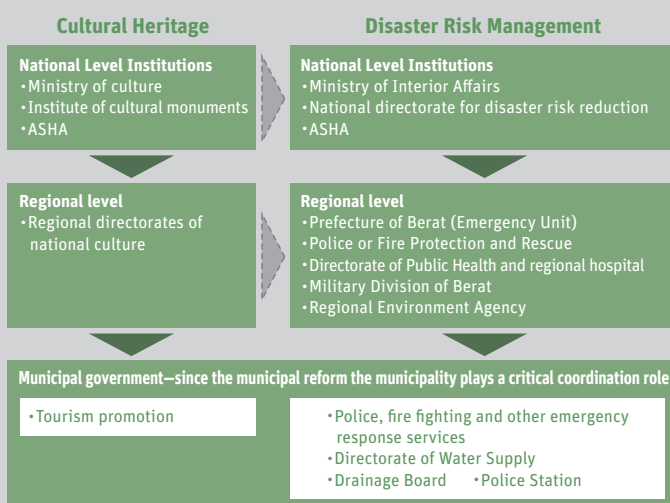
Albania

Cultural Heritage and Hazards



- Berat & Gjirokastra historic cities
 - Architecture: Fortifications, Byzantine churches, mosques, vernacular
 - Coexistence of various religions and cultural traditions
 - Artisans (artistic, craft values)
- Earthquakes, fires, floods, rockfall, landslides

Institutions



Challenges

- Lack of technical expertise to design and implement advanced cultural heritage resilience initiatives
- Lack of funding
- Improper restoration work (reducing resilience and cultural value of sites)
- Abandonment of historic buildings, resulting in lack of maintenance
- Difficulty raising local communities' awareness of the value of cultural assets and of the need to preserve them community
- Difficulty engaging community in general, not only in relation to DRM and cultural heritage issues
- Lack of awareness on part of public decision makers about the risks faced by cultural heritage sites



Approaches

- Technical outsourced assistance: Engineering capabilities related to slope stabilization, fire response, and other DRM-related areas that require specialized expertise
- Identification of additional sources of revenue generation and financing; partnerships with private sector and NGOs
- Building awareness among business and local communities about the value of cultural heritage--through roundtables, information sharing, and revision of cultural heritage law in case owners abandon historic buildings
- Promotion of citizen engagement: Collaborative creation of strategies by community groups
- Promotion by municipal leaders of projects addressing risks to cultural heritage assets

Implementation Plan

1. Create a database with detailed information on risks posed to cultural heritage properties.
2. Develop initiatives to engage the community through
 - a) Creation of community groups to address specific cultural heritage risks and issues
 - b) Community mapping exercise for cultural heritage risks and response
 - c) Trainings and drills with the community in disaster risk management
3. Develop a full-scale project for stabilization of slopes against rockfall in Berat utilizing the opportunity provided by the World Bank project.
4. Seek technical and financial assistance from national and international institutions for
 - a) Multi-risk hazard mapping for heritage sites
 - b) Slope stabilization technical solutions
 - c) Technical solution for upgrading fire prevention systems

Bhutan

Cultural Heritage and Hazards



- Traditional rammed earth and masonry buildings
 - Dzongs
 - Monasteries and stupas
 - Traditional villages
- Earthquakes, fires, floods, windstorms, landslides

Institutions

- Division for Conservation of Heritage Sites, Department of Culture, Ministry of Home and Cultural Affairs
- Engineering Adaptation & Risk Reduction Division, Department of Disaster Management, Ministry of Works and Human Settlement
- Local governments

Challenges

- Absence of guidelines/methodology for risk assessment of nationally important cultural heritage sites—both pre- and post-disaster situations
- Very limited awareness among stakeholders
- Limited research on traditional construction materials and technology
- Difficulty developing and integrating appropriate disaster-resilient measures in traditional buildings
- Difficulty building technical expertise and monitoring systems (both for monitoring of heritage buildings to study the cause of issues and monitoring during implementation of the conservation works)

Approaches

- Develop a process for identifying and mitigating risk: Based on lessons learned, Bhutan would like to formulate a guideline for restoration of heritage sites at national level and a preparedness plan for a pilot site.
- Promote community involvement as an important part of the process for making a viable DRM plan; raising awareness among all relevant stakeholders, including communities, will be part of the effort to formulate the guideline.

Implementation Plan

1. Pilot project: Risk assessment for one of the nationally important cultural heritage sites can be carried out. This assessment will determine what can be done in the short, medium, and long term to enhance the resilience of the heritage site.
2. Following the risk assessment, an awareness campaign can be carried out; all relevant stakeholders should be invited to participate in discussions and site visits.



China

Cultural Heritage and Hazards

- Jingzhou Historic City
- Wall of Jingzhou
- Jinan Town of Chu Kingdom (one of the six great heritage sites of China)
- Yin Town
- Floods, fires, frail infrastructure in historical districts

Institutions

- State Administration of Cultural Heritage (SACH): Conservation of cultural heritage assets, law enforcement, and inspection work
- Ministry of Housing and Urban-Rural Development (MOHURD): Overall planning work; management of historical buildings, and specific protection scopes
- Ministry of Water Resources (Yangtze River Water Resources Commission in Jingzhou): Responsible for flood damage
- Ministry of Public Security (Fire Bureau): Responsible for fire hazards

Challenges



- Lack of technical expertise to design and implement advanced cultural heritage resilience initiatives
- Lack of funding
- Improper restoration work (reducing resilience and cultural value of sites)
- Abandonment of historic buildings, resulting in lack of maintenance
- Difficulty raising local communities' awareness of the value of cultural assets and of the need to preserve them community
- Difficulty engaging community in general, not only in relation to DRM and cultural heritage issues
- Lack of awareness on part of public decision makers about the risks faced by cultural heritage sites

Approaches

- Raise the awareness of the public and promote community participation through education and training. Disputes over the property rights of traditional residential buildings should be further resolved.
- Further strengthen the study of traditional architecture and traditional construction methods. Cooperate with the architecture experts and universities of Japan about the Tang Dynasty's traditional construction techniques.
- The local government already has the legislative power concerning cultural heritage. Now Jingzhou has enacted local regulation about CHT (Regulations on Conservation of Jingzhou Historic Town). Institutions will be coordinated and an expert pool will be established in accordance with the local laws.



Implementation Plan

1. Write a special report on the experience and knowledge gotten from this learning activity and share it with relevant management departments and research institutes.
2. Prepare annual work plans to establish a coordinating institution before June; then invite experts to go to Jingzhou in September.
3. Carry out many community trainings over the year.
4. Invite World Bank experts in public participation, legal aspects, and historical architecture, especially the experts in cultural heritage restoration and conservation of Japan.
5. Draw on Ritsumeikan University's research achievements in DRM and historical building restoration.

Myanmar

Cultural Heritage and Hazards



- Yangon City: 189 colonial buildings, numerous listed heritage buildings
- Bagan: Over 4,000 pagodas, temples, monasteries, and ancient infrastructure from the 10th to 14th centuries
- Mrauk-U, Pyu, Innwa, Amaprupura, Sagaing, Mingun, Mandalay, Badah-lin Cave, etc.
- Earthquakes, floods, fires, cyclones, conflicts

Institutions

- Myanmar Cultural Heritage Preservation, Restoration and Conservation Central Committee
- Ministry of Religious Affairs and Culture
- Department of Archaeology in each region/state
- National Disaster Risk Management Committee: Chairperson is vice president; secretary is Ministry of Social Welfare, Relief and Resettlement; all ministries are members

Challenges

- Various DRM plans under Myanmar Action Plan on DRM
- Weak coordination among departments, including development partners
- Limited resources, both technical and financial

Approaches

- Strengthen national policies
 - National Guidelines and Classification Policies on cultural heritage
 - Link between tourism management plan and site management plan on disaster risk reduction
 - Need to consider surrounding environment as well as cultural heritage
- Enhance coordination and promote participatory approach at all levels
- Build capacity
 - Technology for firefighting, flood protection, retrofitting, slope protection, and lightning protection
 - Knowledge and awareness of DRM, including cultural heritage, from the operation level to policy-making level
- Adapt approaches to Myanmar context
 - Fire preparedness plan at cultural heritage site in Yangon
 - Flood management in upgrading of new technology
 - Earthquake risk assessment for buildings near the site to be retrofitted
 - Security system
 - Learning Hub on DRM

Implementation Plan

- Seek technical assistance for retrofitting policies and guidelines and building database.
- Apply lessons in current DRM project implementation (retrofitting of heritage buildings, drainage improvement system).
- Use Japanese heritage classification model in Yangon.
- Seek technical assistance for DRM plan on cultural heritage sites.
- Build capacity in DRM (training at least three in each department at technical level).
- Conduct peer learning exchange program.
- Introduce resilient DRM Learning Hub in Myanmar.



Nepal

Cultural Heritage and Hazards



- Seven protected monument zones in Kathmandu Valley (World Heritage Sites); two natural heritage sites plus six on the Tentative List
- Thousands of temples, shrines, gumbas, and other monuments
- Hundreds of thousands of privately owned traditional houses with cultural heritage significance
- Earthquakes, flood, landslides/land erosion, fires/ lightning

Institutions

- Major CHT assets: Department of Archaeology
- DRM gap: Home Ministry, Local Development Ministry, municipalities, guthi (trusts), and National Reconstruction Authority

Challenges

- Reconstruction of privately owned traditional houses
- Reconstruction of World Heritage Site monuments with originality, authenticity, and integrity
- Community engagement, funds management (for repairs, maintenance, retrofitting, risk management, site improvement)
- Skilled laborers and artisans; traditional materials
- Coordination between stakeholders
- Monitoring of construction activities
- Normal reconstruction vs. cultural heritage reconstruction

Implementation Plan

- Get technical support from Ritsumeikan University for DRM plan for Patan Historical City Center.
- Request Tokyo Hub support for studies on Japanese experience (e.g., for fire prevention in Nijo Castle).
- Develop Detailed Guideline for Reconstruction; draft of Reconstruction Principles is ready.
- Prepare a pilot Integrated Master Plan for Changu Narayan Temple (World Heritage Monument Zone), including financial plan for repair, restoration, risk identification, and risk management.
- Carry out policy revision, develop legal framework, and roll out system for private house reconstruction (incentive package for privately owned important cultural heritage buildings).

Approaches

- Systematic management of funds for cultural heritage preservation and disaster risk management: The government needs to prepare bylaws for revenue collection and fund disbursement for preservation, site improvement, and risk management.
- Case by case: Investment in risk identification, risk management, cultural heritage site improvement, and community engagement is needed.



The Philippines

Cultural Heritage and Hazards



- Tangible and intangible heritage assets
- Historic cities
- Seismic risks, soil liquefaction, typhoons, fires, floods, urbanization
- Climate change and human-induced risks to the environment, which require mechanisms to mitigate their impact on communities, tangible heritage, and biodiversity

Institutions

- National agencies: Department of Tourism, National Commission on Culture and the Arts (National Museum, National Historical Commission), provincial governments, Regional Development Councils, city and municipal governments
- DRM: National Disaster Risk Reduction and Management Council; provinces, cities, and municipalities

Challenges



- Governance: Regulatory framework and implementation
- Common methodology for multi-hazard vulnerability assessment for cultural heritage assets
- Coordination between national agencies and local government units
- Risk transfer mechanism (risk financing and insurance, funding for projects)

Approaches

- Planning and programming
 - Implement multi-hazard vulnerability assessment
 - Carry out historical and cultural mapping
 - Review laws, rules, and regulations within the framework
- Integration of conservation and DRM
 - Use DRM as framework for conservation guidelines, programs, and plans

Implementation Plan

- Review existing plans and programs within the context of a DRM heritage conservation framework.
- Activate stakeholders, community support, and advocacy for the framework.
- Gain needed support for technical assistance/deployment of experts to integrate DRM in conservation plans and urban heritage. Pilot implementation of projects/capability building/institutional building.

Saudi Arabia

Cultural Heritage and Hazards



- Important archaeological sites
- Four World Heritage Sites (Al-Hijr or Madâin Sâlih; At-Turaif District in ad-Dir'iyah; Historic Jeddah; and Rock Art in the Ha'il Region)
- 1,800 built heritage properties (Masmak Palace, Khuzam Palace, Nassif House, etc.)
- Historic city centers
- Natural and man-made hazards: Floods, sand storms, demolitions

Institutions

- Saudi Commission for Tourism and National Heritage (SCTH)
- Regional Tourism Development Councils
- SCTH branches
- Built heritage offices within major municipalities (Amanat)
- General Authority for Meteorology and Environment Protection
- Saudi Civil Defense
- Regions and municipalities
- Saudi Standards, Metrology and Quality Organization

Challenges

- Abandonment and degradation of heritage areas; disappearance of traditional building skills
- Conflict of interests (between SCTH, owners, potential investors)
- Limited community involvement



Approaches

- Strategies/institutional arrangements for coordination among multiple agencies or levels of government
- Effective engagement of local communities in heritage-based tourism and preservation
- DRM capacity building among cultural heritage agencies, and vice versa

Implementation Plan

- Arrange a workshop on resilient cultural heritage during the upcoming National Built Heritage Forum.
- Develop a strategic framework and detailed action plan for integrating DRM and CHT.
- Elaborate and pilot guidelines for the preparation of DRM plans for cultural heritage properties.

Tanzania

Cultural Heritage and Hazards



- Stone Town of Zanzibar (World Heritage Site)
- Historic monuments and cultural festivals
- Collapsing of heritage buildings; development pressure; insufficient public awareness about the importance of preserving cultural heritage; fires and soil erosion along the coast; vandalism

Institutions

- Stone Town Conservation and Development Authority (STCDA)
- Department of Archives, Museum and Antiquities; Department of Urban and Rural Planning
- Zanzibar Commission for Disaster Control and Management (under the Vice President's Office)

Challenges

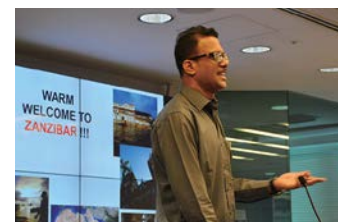
- Governance and institutional strengthening
 - Clear guidelines for disaster risk management
 - Increased community engagement in decision making
 - Capacity building of the cultural heritage team
 - Enforcement of the rules and regulations
- Technical constraints
 - Scarcity of conservation materials
 - Scarcity of technical skills in conservation
- Diversification of finance

Approaches

- Financial contribution to and community engagement with the cultural heritage site
- Committed management of and technological application to resilient cultural heritage
- Sustainable financial and human resources in cultural heritage
- Adaptation of these methods through stakeholder involvement; mobilization of proper resources for cultural heritage sustainability

Implementation Plan

- Develop design guidelines for heritage building maintenance, restoration, rehabilitation, alteration, demolition, new construction, and DRM; seek technical assistance to explore available technologies and design options.
- Increase government and community awareness and engagement.
 - STCDA and ZSTHS (Zanzibar Stone Town Heritage Society) will organize public awareness events.
 - Stakeholders will closely collaborate with the Commission of Tourism.
 - Seek support for bilateral or twinning arrangement to exchange experiences and practices.
- Explore options to increase financial sources to conserve the heritage site.
 - Start dialogue with Zanzibar Housing Corporation for potential revolving fund for rehabilitation of historic building
 - Develop heritage-site open spaces for touristic and local activities.



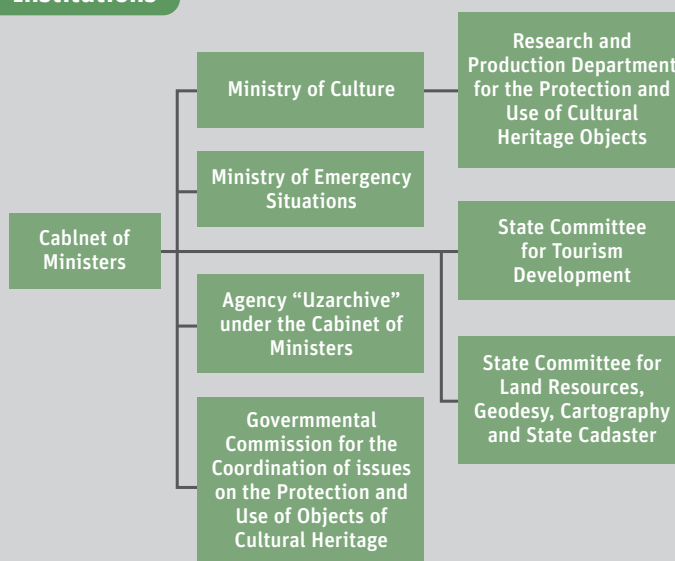
Uzbekistan

Cultural Heritage and Hazards



- More than 20 historic cities (four UNESCO Heritage Cities)
- More than 10 natural landscapes (1 included on UNESCO World Heritage List)
- More than 7,000 cultural heritage assets
- Earthquakes, floods, extreme weather impacts, aging cultural heritage assets with inadequate conservation measures, unplanned development

Institutions



Challenges

- Coordinating with relevant agencies involved in resilient cultural heritage
- Raising awareness of / enhancing skills for incorporation of resilient cultural heritage into sustainable tourism development
- Working within regulatory framework that is inadequate for integrating tourism development in cultural heritage

Approaches

- Cultural heritage management plan
- Community involvement, disaster preparedness for CHT sites
- Advocacy for emergency contingency fund
- Consistent conservation/ restoration efforts to avoid major damage

Implementation Plan

- Foster knowledge exchange with other countries (such as Japan) on the importance of integrating DRM into CHT.
- Explore training by mobilizing experts to build awareness of resilient CHT among larger stakeholders in Uzbekistan.
- Facilitate discussion between Ministry of Culture, State Committee for Tourism Development (SCTD), and Ministry of Emergency Situations as well as with international donors (urban team in Tashkent).

Priority areas	Short-term action	Medium-term action	Long-term action
Institution building	TDD follow-up on training; knowledge exchange to enhance different approaches to resilient CHT	Specific guidelines and policies on CHT management plans at national level	Implementation of guidelines and policies
Integrated planning	Coordination between various agencies involved in this sphere; establishment of technical working group	Inventory of cultural assets; risk assessment of all CHT; advocacy for emergency heritage fund	Strategic planning and prioritizing of investments based on risk assessment findings; implementation of the project
Linkages with government programs	Informing the linkages of proposed actions to government's national programs, benefits of CHT in boosting local economy	Analytical work to underpin the impact on development	

Annex 1. Bibliography and Resources

I. Key International Resources on Disaster Risk Management for Cultural Heritage and Sustainable Tourism

1. Managing Disaster Risks for World Heritage

By International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM); International Council on Monuments and Sites, International Committee on Risk Preparedness (ICOMOS-ICORP); International Union for the Conservation of Nature (IUCN); and United Nations Educational, Scientific and Cultural Organization (UNESCO) | 2010
http://www.preventionweb.net/files/14614_188562e1.pdf

A DRM-focused report produced as part of the World Heritage Resource Manual Series; provides focused guidance for heritage protection authorities, local governments, site managers, and local communities on implementing the identification and preservation process.

2. “World Heritage and Tourism in a Changing Climate—Executive Summary and Recommendations” (pp. 9–32)

By United Nations Environment Programme (UNEP), Nairobi, Kenya; the United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris, France; and the Union of Concerned Scientists, Cambridge, MA | 2016
<http://www.preventionweb.net/publications/view/49009>

Handbook examining the relationship between World Heritage Sites and tourism; also explores how climate change will pose new challenges

and exacerbate existing problems caused by unplanned tourist development and uncontrolled or poorly managed visitor access.

3. Heritage and Resilience: Issues and Opportunities for Reducing Disaster Risks (chapters 2 and 3, pp. 14–29)

By International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM); International Council on Monuments and Sites, International Committee on Risk Preparedness (ICOMOS-ICORP); Marsh–United Kingdom; United Nations Educational, Scientific and Cultural Organization (UNESCO); United Nations Office for Disaster Risk Reduction (UNISDR) | 2013
<http://www.preventionweb.net/publications/view/33189>

Background paper prepared for the 4th Session of the Global Platform for Disaster Risk Reduction (2013); shows how heritage can be better protected from disasters while contributing to the resilience of societies.

II. DRM for Cultural Heritage and Sustainable Tourism in International Development Support

4. “Cultural Heritage Conservation”

By J. E. Duyne Barenstein. Chapter 11 of *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*, edited by A. K. Jha et al., 173–79, World Bank and Global Facility for Disaster Reduction and Recovery (GFDRR) | 2010

<https://www.gfdr.org/sites/gfdr/files/publication/SaferHomesStrongerCommunitites.pdf>

Practical guide for protecting and conserving communities' cultural heritage, especially traditional housing, as an integral part of post-disaster recovery programs.

5. “Disaster Preparedness for Cultural Heritage”

By C. Johnnides. EAP DRM Knowledge Notes, Working Paper Series No. 14. World Bank | 2009
<http://documents.worldbank.org/curated/en/768121468038327540/pdf/529500BRIOREVI10BOX353820B01PUBLIC1.pdf>

Working paper on basic principles of disaster preparedness for cultural heritage, based on experience in the East Asia and Pacific region.

6. “Cultural Heritage”

By Government of Nepal National Planning Commission. In Nepal Earthquake 2015 Post Disaster Needs Assessment—vol. B: Sector Reports, pp. 65–75, Singha Durbar, Kathmandu | 2015
<http://un.org.np/sites/default/files/PDNA-volume-B.pdf>

Government-led Post-Disaster Needs Assessment, supported by various development partners, with section on cultural heritage assets; includes damage, losses, and recovery needs and strategy after the 2015 earthquakes.

III. Capturing Elements of the Japanese Experience

7. “Disaster Risk Management of Cultural Heritage Based on the Experience of the Great Hanshin Earthquake”

By Y. Murakami. Cultural Heritage Protection Cooperation Office, Asia-Pacific Cultural Centre for UNESCO (ACCU Nara Office) | 2011
<http://www.nara.accu.or.jp/elearning/2011/risk.pdf>

Case study on lessons learned from the 1995 Kobe Earthquake, the damages to cultural heritage, and the measures taken to develop disaster risk management plans in the sector.

8. “Cultural Heritage and Preservation”

Chapter 35 of Learning from Megadisasters, edited by F. Ranghieri, and M. Ishiwatari, 323–29, World Bank | 2014
<http://45.55.174.20/documents/360>

Case study of lessons learned from the Great East Japan Earthquake and associated tsunami on March 11, 2011; describes how various organizations rescued and preserved a wide range of historical records and cultural properties damaged by the tsunami waves and earthquake tremors.

Additional Resources

1. UNISDR video: “HFA Success Stories—Japan's Cultural Heritage Preservation”
<https://www.youtube.com/watch?v=OKeqR-uyHM8>
2. R-DMUCH video: “International Training Course, 2006–2014”
<https://www.youtube.com/watch?v=nFvMOXhEBkY>
3. “UNESCO’s Response to Protect Culture in Crises #UNITE4HERITAGE”
https://en.unesco.org/sites/default/files/2016_clt_emergency_brochure_en_light.pdf
4. “Disaster Risk Management of Cultural Heritage in Urban Areas—An Interactive Training Guide”
http://www.r-dmuch.jp/en/project/itc/training_guide/index.html
5. “A Guide to Risk Management of Cultural Heritage—ICCROM 2016”
http://www.iccrom.org/wp-content/uploads/Guide-to-Risk-Management_English.pdf
6. “The ABC Method: A Risk Management Approach to the Preservation of Cultural Heritage”
http://canada.pch.gc.ca/DAMAssetPub/DAM-PCH2-Museology-PreservConserv/STAGING/texte-text/risk_Manual_2016_1486742306045_eng.pdf
7. “Reducing Disaster Risk at World Heritage Properties—UNESCO”
<http://whc.unesco.org/en/disaster-risk-reduction>
8. “Protecting Cultural Heritage in Times of Conflict (ICCROM)”
http://www.iccrom.org/ifrcdn/pdf/ICCROM_18_ProtectingHeritageConflict_en.pdf
9. “Integrating Traditional Knowledge Systems & Concern for Cultural & Natural Heritage into Risk Management Strategies”
<http://whc.unesco.org/uploads/events/documents/event-538-1.pdf>
10. “Disaster Risk Management for the Historic City of Patan, Nepal—R-DMUCH”
http://www.r-dmuch.jp/en/project/dl_files/report/2012+03+KTM+Final+Report.pdf

UNESCO:

- World Heritage Education Program:
<http://whc.unesco.org/en/wheducation/>
- World Heritage in Young Hands kit:
<http://whc.unesco.org/en/educationkit/#downloadkit>
- Manual for development management plan for World Heritage Sites:
<http://whc.unesco.org/en/managing-cultural-world-heritage/>
- Best practices in managing World Heritage:
<http://whc.unesco.org/en/recognition-of-best-practices/>
- Learning with Intangible Cultural Heritage for a Sustainable Future:
http://www.unescobkk.org/fileadmin/user_upload/culture/ICH_ESD/Integration_of_ICH_UNEDOC.pdf
- UNESCO project on traditional children's games:
http://www.unescobkk.org/culture/ich/children-games/?utm_medium=ema
- Operational Directives for the 2003 Convention on Safeguarding Intangible Cultural Heritage:
http://www.unesco.org/culture/ich/doc/src/ICH-Operational_Directives-6.GA-PDF-EN.pdf
- World Heritage and Sustainable Development:
<http://whc.unesco.org/en/sustainable-development/>

UNWTO:

- Sustainable Tourism for Development Guide:
<http://www.e-unwto.org/doi/book/10.18111/9789284415496>
- Toolbox for Crisis Communication in Tourism:
<http://www.e-unwto.org/doi/pdf/10.18111/9789284413652>
- ASEAN Crisis Communication Manual:
http://www.asean.org/storage/2016/01/publications/ASEAN_Tourism_Crisis_Communication-2015.pdf

Annex 2. TDD Agenda

DAY 1. Monday, April 10 - Tokyo

9:00 am	<p>Welcome and opening remarks – Moderator: Dan Levine, Senior Officer, Tokyo Development Learning Center (TDLC)</p> <ul style="list-style-type: none"> • Sameh Wahba, Director of Urban and Territorial Development, Disaster Risk Management, and Resilience (World Bank) • Lazare Eloundou Assomo, Deputy Director of the Heritage Division and the World Heritage Centre, Culture Sector (UNESCO) 	11:30 am	<p>Client Presentation #1 (3)</p> <ol style="list-style-type: none"> 1. Philippines – Reducing Vulnerability to Natural Disasters 2. China – Hubei Jingzhou Historic Town Conservation 3. Albania – Integrated Urban and Tourism Promotion <p>Q&A and discussion</p> <ul style="list-style-type: none"> • Participants, UNESCO team, Toyama CRO and officials
9:45 am	<p>Meet your colleagues: Cultural bingo</p> <ul style="list-style-type: none"> • Jay Newman, Disaster Risk Management Specialist, DRM Hub, Tokyo; GFDRR (World Bank) 	12:00 pm	<p>Client Engagement Exercise: Institutional Mapping</p>
10:00 am	<p>Introduction to the Technical Deep Dive</p> <ul style="list-style-type: none"> • Phil Karp, Lead Knowledge Management Specialist (World Bank) 	1:30 pm	<p>Management of Cultural Sites: From Preparedness to Post-Disaster Recovery</p> <ul style="list-style-type: none"> • Rohit Jigyasu (R-DMUCH / ICOMOS)
10:05 am	<p>Learning objectives and client profiles</p> <ul style="list-style-type: none"> • Haruka Imoto, Knowledge Management Analyst (World Bank) • Barbara Minguez Garcia, Cultural Heritage and DRM Consultant (World Bank) • Jay Newman (World Bank) 	2:00 pm	<p>Q&A and discussion</p> <ul style="list-style-type: none"> • Participants, UNESCO team, Toyama CRO and officials
10:30 am	<p>Fundamentals of Disaster Risk Management for Cultural Heritage</p> <ul style="list-style-type: none"> • Rohit Jigyasu, Professor at Ritsumeikan University (R-DMUCH) and President of ICOMOS India • Dowon Kim, Assistant Professor at Ritsumeikan University (R-DMUCH) 	2:30 pm	<p>Client Presentation #2 (2)</p> <ol style="list-style-type: none"> 4. Myanmar – Southeast Asia DRM 5. Tanzania – Zanzibar Urban Services <p>Q&A and discussion</p> <ul style="list-style-type: none"> • Participants, UNESCO team, Toyama CRO and officials
11:00 am	<p>Q&A and discussion</p> <ul style="list-style-type: none"> • Participants, UNESCO team, Toyama chief resilience officer (CRO) and officials 	3:15 pm	<p>Client Engagement Exercise: Challenges of Risk Management</p>
		3:45 pm	<p>Introduction to Action Planning</p> <ul style="list-style-type: none"> • Phil Karp (World Bank)

DAY 2. Tuesday, April 11 - Kyoto

1:00 pm | **Recap from Day 1 and Introduction to Day 2**

- Jay Newman and Barbara Miguez Garcia (World Bank)

1:10 pm | **Introduction and Welcome – R-DMUCH Ritsumeikan University**

- Takeyuki Okubo, Professor at Ritsumeikan University (R-DMUCH)
- Noriyoshi Tsuruoka, Deputy Director, Cultural Properties Division, Department of Guidance, Kyoto Prefectural Board of Education

1:45 pm | **Earthquakes and secondary hazards (focus on fire): Impact on traditional buildings and livelihoods**

- Takeyuki Okubo (R-DMUCH)

2:15 pm | **Q&A and discussion**

- Participants, UNESCO team, Toyama CRO and officials

2:40 pm | **Client Engagement Exercise: Heritage at Risk**

3:15 pm | **Storms and secondary hazards (focus on floods): Climate change adaptation for heritage and impact to livelihood**

- Yoshifumi Satofuka, Professor at Ritsumeikan University (R-DMUCH)

3:45 pm | **Q&A and discussion**

- Participants, UNESCO team, Toyama CRO and officials

4:15 pm | **Client Presentation #3 (2 + CRO)**

6. Nepal – Earthquake Housing Reconstruction

7. Bhutan – Improving Resilience to Seismic Risk

8. Talk from Joseph Runzo-Inada, Chief Resilience Officer (Toyama CRO)

4:45 pm | **Q&A and discussion**

- Participants, UNESCO team, Toyama CRO and officials

Day 2 Wrap-Up and Introduction for Day 3

- Phil Karp and Haruka Imoto (World Bank)

DAY 3. Wednesday, April 12 - Kyoto

8:30
am

Site Visit 1: Kiyomizu Temple

- Takeyuki Okubo (R-DMUCH) and Mr. Mori (Kiyomizu Temple)

Q&A and discussion

- Participants, UNESCO team, Toyama CRO and officials



12:00
pm

Site Visit 2: Ponto-Cho and Kamo River area

- Dowon Kim (R-DMUCH)

Q&A and discussion

- Participants, UNESCO team, Toyama CRO and officials



3:00
pm

Stocktaking from visits

- Jay Newman and Barbara Miguez Garcia (World Bank)
- Rohit Jigyasu and Dowon Kim (R-DMUCH)

3:45
pm

Community involvement in historic cities and towns to preserve cultural heritage

- Dowon Kim (R-DMUCH)

Q&A and discussion

- Participants, UNESCO team, Toyama CRO and officials

4:15
pm

4:45
pm

Client Presentation #4 (2)

- 9. Uzbekistan – Medium-size Cities' Integrated Urban and Territorial Development
- 10. Saudi Arabia – Heritage-Led Urban Regeneration

Q&A and discussion

- Participants, UNESCO team, Toyama CRO and officials

5:15
pm

Implementing the Culture- and Heritage-Related Provisions in the Sendai Framework for Disaster Risk Reduction

- Giovanni Boccardi, Chief of the Emergency Preparedness and Response Unit, Culture Sector (UNESCO)

Q&A and discussion

- Participants, UNESCO team, Toyama CRO and officials

6:00
pm

Kodaiji Temple – Night Visit

DAY 4. Thursday, April 13 - Kyoto

9:30
am

Site Visit 3: Nijyo Castle

Kyoto City Nakagyo Fire Station

- Hiroyuki Fujita, Chief Resilience Officer for Kyoto
- Tamaki Goto, Director, Culture and Citizen Affairs Bureau, Cultural Properties Preservation Section, Kyoto City
- Kimiko Mekata, Assistant Manager, Fire Prevention Division, Fire Prevention Department, Kyoto City Fire Department

10:30 – 10:50 Q&A and discussion

11:00 – 12:00 Guided site visit in Nijyo Castle



1:30
pm

Resilient Historic Cities for Tourism Improvement

- Ariana Luquin, Deputy Manager of Program and Public Relations, UNWTO Regional Support Office for Asia and the Pacific

2:00
pm

Panel discussion – Moderator:

- Carmen Nonay, Practice Manager (World Bank)
Sameh Wahba (World Bank)
Ariana Luquin (UNWTO Regional Support Office for Asia and the Pacific)
Ahmed Eiweida (World Bank)
Guiller Asido (Philippines, Tourism Infrastructure and Enterprise Zone Authority)

2:30
pm

Peer Assist Session

- Phil Karp (World Bank)

4:00 –
5:30
pm

Work on Action Plans

5:30
pm

Day 4 Wrap-Up

- Jay Newman and Barbara Minguez Garcia (World Bank)

DAY 5. Friday, April 14 - Tokyo

9:30
am

Preparation of Action Plan

11:00
am

Action Plan Presentations - followed by comments from expert panel

Moderator:

- Dan Levine (World Bank)
- Sameh Wahba (World Bank)
- Phil Karp (World Bank)
- Rohit Jigyasu (R-DMUCH / ICOMOS)
- Dorine Dubois (UNESCO)

3:00
pm

Closing Remarks

- World Bank team

Kumiko Shimotsuma, Dr. of Engineering, Senior Specialist for Cultural Properties, Historic Urban Conservation Unit, Architecture Division, Cultural Properties Department, Agency for Cultural Affairs, Government of Japan

Annex 3. Speakers and Collaborators

Information is as of the time of the TDD. With a few exceptions, the list follows the order in which people spoke.



Daniel A. Levine

Senior Operations Officer / Team Lead, TDLC, World Bank

Dan manages the Tokyo-based operations and staff of the TDLC. He has over 12 years of experience with the World Bank and International Finance Corporation covering finance and private sector development, knowledge and portfolio management, jobs and growth, and most recently infrastructure and urban development. Within the World Bank Group, Dan has developed a reputation for the application of knowledge in direct support of lending and analytical operations. In the private sector, Dan worked in government affairs, private equity, and management consulting. As a Wolcott Fellow, Dan obtained an MBA from the George Washington University.



Sameh Naguib Wahba

Director, GSURR, World Bank

An Egyptian national, Sameh is Director for Urban and Territorial Development, Disaster Risk Management and Resilience at the World Bank's Social, Urban, Rural, and Resilience Global Practice, based in Washington, DC. He oversees the formulation of Bank strategy and the design and delivery of all Bank lending, technical assistance, policy advisory activities, and partnerships at the global level. Prior to joining the Bank in 2004, he worked at the Institute of Housing and Urban Development Studies in Rotterdam and at the Harvard Center for Urban Development Studies. He holds a PhD and master's in urban planning from Harvard University, and a BSc and MSc in architectural engineering from Cairo University. Most recently, he coauthored the Bank's flagship publication *Regenerating Urban Land: A Practitioner's Guide to Leveraging Private Investment*.



Lazare Eloundou Assomo

Deputy Director of the Heritage Division and the World Heritage Centre, Culture Sector, UNESCO

Lazare is trained as an architect, conservator and town planner specializing in earthen architecture and cultural heritage. Until October 2016, he was UNESCO Head of Office and Representative in Mali and mainly responsible for coordinating UNESCO's actions to protect Mali's cultural heritage and ancient manuscripts. It is in this capacity that he successfully coordinated the rapid reconstruction of the mausoleums in Timbuktu that were destroyed by violent extremist groups, in close cooperation with MINUSMA (the peacekeeping mission in Mali). He is the author of the book *African World Heritage: A Remarkable Diversity*, which was recently published by UNESCO.



Carmen Nonay

Practice Manager, GSURR, World Bank

Carmen is the first Practice Manager for the Partnerships and Resource Mobilization unit, created within GSURR in 2015. Carmen leads a global team whose task is to develop for GSURR new external financial and knowledge partnerships—such as the TDLC—while aligning these relationships with the corporate, regional, and country strategies of the World Bank Group. She has been working with the Bank since 1997. Earlier, she was the Manager for the Global Partnership on Output-Based Aid (GPOBA), where she designed the strategy for this program’s transformation from a grant-providing, trust-funded partnership into a Center of Expertise. Prior to joining the Bank, Carmen worked in project finance in Nittetsu Shoji, the trading company of Nippon Steel, in both Japan and the United States.



Philip Eugene Karp

Lead Knowledge Management Specialist, GSURR, World Bank

In his current role, Mr. Karp is responsible for developing and supporting implementation of various components of the practice's knowledge, learning, and innovation work, including South-South knowledge exchange, Communities of Practice, and knowledge networks and partnerships, along with associated training and capacity building for World Bank staff and clients. He has more than 20 years of experience in the fields of knowledge, learning, and advisory services, with emphasis on practitioner-to-practitioner and South-South knowledge exchange. Mr. Karp holds graduate degrees in economics and public policy from the University of California–Berkeley.



Vibhu Jain

Urban Development and Disaster Risk Management Consultant, World Bank

Vibhu holds a master’s degree in urban regional planning and public policy. She has worked with the World Bank since 2012, first on urban development projects in the New Delhi office and now on DRM and infrastructure public-private partnerships (PPPs) in the Tokyo office. Before joining the Bank, she worked with PricewaterhouseCoopers Ltd. and Deloitte Touche Tohmatsu. Much of her work has been on infrastructure sector projects, including solid waste management and transport, with a focus on project design, PPP transaction advisory, and implementation support. Currently, she works on integrated flood risk management, hydrometeorology, geohazard risks, and other related aspects of DRM. She also works on PPP in infrastructure and resilient infrastructure PPPs in Tokyo.



Haruka Imoto

Knowledge Management Analyst,
TDLC, World Bank

As a knowledge management analyst, Haruka leads Technical Deep Dive modalities and implementation. After receiving dual master's degrees in public policy and administration from the London School of Economics and Political Sciences and L'Institut d'Etudes Politiques de Paris, Haruka worked together with cities in Europe, Japan, and Asia to promote sustainable urban policy and project implementation. She worked closely with European municipalities and the European Commission in the sustainable transportation sector. She then joined the Institute for Global Environmental Strategies as a policy researcher on low carbon and resilient cities. She was also active in communicating local municipalities' climate actions in the international arena, including UNFCCC/COP.



Barbara Minguez Garcia

Cultural Heritage and DRM
Consultant, GSURR, World Bank

Barbara holds an international doctorate in classical archaeology from University Rovira i Virgili of Tarragona; her thesis work was carried out in Rome (with an Italian government research grant), where she also collaborated with the Ancient Topography Department of the University of Rome La Sapienza. She participated in the UNESCO Chair Programme on Cultural Heritage and Risk Management, International Training Course (ITC) on Disaster Risk Management of Cultural Heritage, and she is conducting research in this area. Before joining the World Bank in 2013, she worked at the Cultural Offices of the Embassy of Spain in Washington, DC, and the Spanish consulate in New York, NY. She has collaborated with the U.S. National Parks Service on different projects, including the Spanish Colonial Missions of the Southwest Travel Itinerary.



Rohit Jigyasu

President of ICOMOS India and
ICORP, Professor, R-DMUCH,
Ritsumeikan University

Rohit Jigyasu is a conservation architect and risk management professional from India, currently working as UNESCO Chair professor at the Institute for Disaster Mitigation of Urban Cultural Heritage at Ritsumeikan University, Kyoto, Japan; as Senior Advisor at the Indian Institute for Human Settlements (IIHS); and as Trustee of the Indian Historic Cities Network Foundation (IHCN-F). He has been the elected President of ICOMOS India since 2014 and ICOMOS International Scientific Committee on Risk Preparedness (ICORP) since 2010. Rohit has served as the Elected Member of the Executive Committee of ICOMOS since 2011. After undertaking his post-graduate degree in architectural conservation from the School of Planning and Architecture in New Delhi, Rohit obtained his doctoral degree from the Norwegian University of Science and Technology, Trondheim, Norway. He is on the editorial board of Journal of Cultural Heritage Management and Sustainable Development and Disaster Prevention and Management and has contributed to several international publications.



Dowon Kim

Associate Professor, R-DMUCH,
Ritsumeikan University

Dowon is an associate professor at the Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH), Kyoto. He is a national committee member of JP-ICOMOS and an expert member of ICOMOS-ICORP. Recently, his research has focused on community involvement in DRM in Japanese traditional districts and the core zone of the World Heritage Site of Patan, Nepal; and on disaster mitigation measures to relax restriction of building controls in heritage districts. He received his doctoral degree in March 2014 with a thesis on "Conservation of the Honganji Water Pipelines in Kyoto Planning of Fire Fighting Water Supply System Utilizing Historical Water Service."



Takeyuki Okubo

Director of R-DMUCH, Ritsumeikan
University

Takeyuki is a professor at the Graduate School and College of Science and Engineering, Ritsumeikan University, and the director of the Institute of Disaster Mitigation for Urban Cultural Heritage (<http://www.rits-dmuch.jp/en/index.html>). He is also a member of ICORP and JP-ICOMOS, an officer of the nonprofit Protection of Cultural Heritage from Disaster, and the chairman of its Technical Committee. His background in civil engineering, architecture, and global environmental engineering informs his current research interests in urban design for disaster mitigation and architectural design to promote the utilization of traditional knowledge and wooden materials. His recent work, undertaken in partnership with colleagues Professor Rohit Jigyasu and Professor Kenzo Toki, is the UNESCO Chair International Training Course on disaster risk management for cultural heritage and historic cities, which has been held every year since 2006.



Noriyoshi Tsuruoka

Deputy Director of Construction
Department, Cultural Properties
Division, Department of Guidance,
Kyoto Prefectural Board of
Education

A constructional engineer by training, Noriyoshi has conducted research, conservation, and disaster prevention activities for national treasures, important cultural properties, and other historical buildings and sites. He has provided engineering guidance for disaster prevention and seismic countermeasures for important cultural properties and buildings. He was actively involved in the reconstruction efforts following the Great Hanshin Awaji Earthquake and in the reconstruction of cultural properties in Jakarta, Indonesia.



Yoshifumi Satofuka

Professor, R-DMUCH, Ritsumeikan University

Yoshifumi is affiliated with the Research Organization of Science and Technology/ Frontier Research Center for Natural Disaster Mitigation, Ritsumeikan University, and also teaches at the College of Science and Engineering/ Department of Civil Engineering. He holds a PhD in Engineering and worked as a Research Associate with Disaster Prevention Research Institute Kyoto University in the past.



Joseph Runzo-Inada

Chief Resilience Officer, Office of Strategic Planning and Resilience, Toyama City

Dr. Joseph Runzo-Inada is the Rockefeller Chief Resilience Officer for Toyama, Japan. Previously he was the Mayor's Senior Policy Adviser, the first American to serve as a senior policy adviser for a major Japanese city. In his Vice Mayor-level role as CRO, he is head of Toyama's Office of Strategic Planning and Resilience and oversees the 30-year resilience plan for the city. Educated at the University of California-Irvine, University of Michigan, and Harvard University, he is the author of 10 books and is a documentary filmmaker. He has lectured in over 27 countries on five continents, is the recipient of seven awards from the U.S. National Endowment for the Humanities, and was elected a Life Member of Cambridge University's Clare Hall College.



Giovanni Boccardi

Chief, Emergency Preparedness and Response Unit, Culture Sector, UNESCO

In his current role, Mr. Boccardi is responsible for coordinating and supporting actions to assist UNESCO Member States in preparing and responding to crises related to conflicts or natural disasters. He graduated from the University of Rome (Italy) with a degree in architecture and obtained a master's degree in built environment from the University College of London (UK). He has worked for UNESCO in different positions since 1994, both in the field (Uzbekistan and Jordan) and at headquarters, where he acted as Chief of Regional Unit at the World Heritage Centre (first for Arab States, then for Asia and the Pacific) between 2001 and 2011, and as Focal Point for Sustainable Development, Disaster Risk Reduction and Capacity Building, until 2014.



Tamaki Goto

Director, Nijo Castle Office, Culture and Citizens Affairs Bureau, Kyoto City

Tamaki Goto has worked on conservation and repair of cultural heritage sites and facilities as an engineer for 40 years. He has been in his current position since 2009 and is in charge of the conservation and repair of Nijo Castle.



Kimiko Mekata

Assistant Manager, Fire Prevention Division, Fire Prevention Department, Kyoto City Fire Department

Kimiko Mekata has worked for the Kyoto City Fire Department since 1993 and has held her current position since April 2017. She is in charge of operations for fire and disaster prevention for cultural heritage.



Hiroyuki Fujita

Chief Resilience Officer, Kyoto

Mr. Hiroyuki Fujita is the Chief Resilience Officer for Kyoto, Japan since April, 2017. After graduated from Kyoto University, he started to work for Kyoto City Office in 1979. After his 30-year career in education administration, he became a Director General of Ukyo Ward, which is the largest administrative ward in Kyoto city with the popular tourist areas such as Saga Arashi-Yama and 4 World Heritages, and he served as a liaison between city government and city residents, demonstrating great leadership skills from 2010 to 2013. Also, during his tenure of deputy mayor from April, 2013 to March, 2017, he made a great commitment to city's governance and prosperity in taking in charge of disaster prevention, crisis management, local community vitalization, public health and welfare, education, culture, sports, water supply and sewage, and international relations. Now, as CRO, he is working hard to develop Resilience Strategy that would be suitable for Kyoto – a city with rich historic, cultural and artistic resources.



Ariana Luquin Sanchez

Program and Public Relation,
UNWTO Regional Support Office for
Asia and Pacific

In her current role, Ariana works to support and promote the tourism practices of 28 UNWTO member states in the Asia Pacific region; some of her work includes sustainable tourism research, publication editing, and conference planning. Prior to relocating to Japan, she worked for a destination management organization in Santa Barbara, California, where she handled member relations and a tourism awareness program for residents and hospitality frontline staff. She received a master's degree in tourism administration from the George Washington University, with a focus on sustainable tourism development. Her previous experience includes over 10 years of customer and visitor service as well as career guidance for college students.



Ahmed Abdelrahman Eiweida

Lead Urban Specialist, East Asia and
Pacific Urban & DRM, World Bank

Ahmed has 27 years of professional experience, 17 of them with the World Bank. He joined the Bank in 2000 as a Young Professional; worked in 15 countries; and managed and led preparation of several innovative urban, water, and urban transport operations, including urban policy reform strategies/ notes, reimbursable advisory services, and trust funds. Ahmed holds a PhD in urban development (human geography) and an MSc in environmental management from the University of Glasgow, UK. Before assuming his current position, he was the Program Leader of Sustainable Development in the South Caucasus Region (Georgia, Armenia, and Azerbaijan), based in the Tbilisi Country Office.



Sheila Jagannathan

Lead & Program Manager, Open
Learning Campus, World Bank

Sheila has worked for more than 28 years in private and public sector organizations designing and managing distance learning programs and knowledge products in the United States, East Asia, China, the Middle East and North Africa, and more recently in Africa and South Asia. Her experience is at the intersection of technology and learning. Prior to joining the World Bank in 2011, she worked in the private sector in the United States, providing advisory services on distance learning and knowledge management for key clients such as the Department of Defense, Boeing, and CitiBank. In India, she led the work on e-learning targeted toward public sector organizations at Computer Maintenance Corporation, which was later merged with the TATA group. She has a master's degree, and certificates of advanced graduate study in educational media and technology from Boston University.



Yuko Okazawa

Operations Officer, TDLC, World Bank

After receiving a master's degree in civil engineering at the University of Tokyo, Yuko launched her career as an urban planning consultant at ALMEC Corporation, based in Vietnam, before joining the Bank. Some major projects she undertook include urban development master plan projects, technical assistance in nurturing collaboration in the urban development stream between cities in Japan and developing countries, formulation of urban planning and management manuals for training courses targeted at planning authorities in client countries, and transport planning projects. She recently earned her second master's degree, in planning, growth, and regeneration, at the Department of Land Economy, University of Cambridge.



Bich Hanh Duong

Chief of Culture Unit, UNESCO Bangkok

Ms. Hanh is an anthropologist with extensive knowledge and experience in Southeast Asia and international development. She has a strong commitment to gender equality, cultural diversity, and human rights, and has been involved in social research and program management in the areas of heritage preservation and community development since 1994. In 2009, Ms. Hanh joined UNESCO to manage the Culture program in the Hanoi office. In May 2016 she moved to UNESCO's Bangkok office to lead the Culture unit there, covering the Mekong cluster countries and coordinating a number of regional projects in Southeast Asia and Asia Pacific, and working to promote the ratification and implementation of UNESCO's six cultural Conventions. Ms. Hanh is especially interested in promoting the role of culture and cultural heritage, both tangible and intangible, in sustainable development, and in ensuring that local communities both participate in and benefit from the protection of their own heritage.



Dorine Dubois

Coordinator, Culture and Development, Executive Office, Culture Sector, UNESCO

Ms. Dubois is responsible for the coordination of the UNESCO Culture and Development initiatives and for cooperation with the United Nations, international organizations, and external partners by the Executive Office of the Assistant Director-General for Culture of UNESCO. Specializing in international and European law and political studies (College of Europe, Belgium), Ms. Dubois began her career in 2000 at UNESCO, External Relations Sector; worked at the European Commission, Directorate General for Justice and Home Affairs; and joined UNESCO again in 2003 as a Liaison Officer in the Office of the Deputy Assistant Director-General for External Relations. She then worked for six years as the Executive Officer of the Bureau of the Budget, where she coordinated the negotiations for a harmonized budgetary policy within the UN. In 2010, Ms. Dubois joined the Executive Office of the Assistant Director-General for Culture. She has led the team in charge of the UNESCO Global Report on Culture for Sustainable Urban Development. In addition, from 2015 to 2017, Ms. Dubois has been the Special Assistant of H. E. Mr. Simataa, President of the General Conference of UNESCO, and notably advises him on the framework of UNESCO's current governance reform.



Keiichi Kobayashi

Chief, Office of Strategic Planning and Resilience, Toyama City

Keiichi Kobayashi joined the Toyama City office in 2005, and has been assigned to Child Welfare, Commerce & Labor, Planning & Coordination. He currently works at the Office of Strategic Planning and Resilience. He is engaged in developing a resilience strategy and managing a tourism working group for the strategy.



Toshiyuki Yamazoe

Senior Advisor for International Business Relations, Toyama City

Mr. Yamazoe is a member of the Office of Strategic Planning and Resilience, which oversees Toyama's engagement in the Rockefeller Foundation 100 Resilient Cities Program. Before coming to Toyama, Mr. Yamazoe had a distinguished career with the prominent Japanese firm Mitsui & Co., Ltd. Serving in various directorship and managerial positions in the areas of ICT, health insurance, technology, and electronics as well as at the Mitsui Global Strategic Studies Institute, he has worked in more than 50 countries around the world and spent 12 years in the New York offices of Mitsui & Co. (USA), Inc.



Kumiko Shimotsuma

Dr. of Engineering, Senior Specialist for Cultural Properties, Historic Urban Conservation Unit, Architecture Division, Cultural Properties Department, Agency for Cultural Affairs, Government of Japan

Kumiko completed her doctorate at Tokyo University in the field of urban planning. Since 1994, she has worked for the Japanese Agency for Cultural Affairs as a professional staff member, and has been engaged in built heritage conservation, particularly promotion of conservation in use and risk preparedness. In her career at ACA, she was seconded to the UNESCO World Heritage Centre, UNESCO Bangkok, and ICCROM. She acted as a chief Japanese translator of "Risk Preparedness: A Management Manual for World Cultural Heritage," published by ICCROM, UNESCO, and ICOMOS. She also acted as chief of the Japanese project team for organizing the International Expert Meeting on Cultural Heritage and Disaster Resilient Communities within the Framework of the Third WCDRR, which was held by UNESCO, ICCROM, ACA, and the National Institute for Cultural Heritage in Tokyo and Sendai in March 2015.

Annex 4. List of Participants

Albania



James (Jay) P. Newman

DRM Specialist, DRM Hub, Tokyo, GFDRR, World Bank

Jay leads the Hub's Knowledge Program, as well as its engagements on urban resilience. Since joining the World Bank in 2013, he has worked at GFDRR, serving as focal point for urban resilience and regional portfolios in South Asia and East Asia Pacific. He contributed to the development of the City Strength Diagnostic, and has supported World Bank projects and technical assistance in India, Nepal, South Africa, and Vietnam. Prior to joining GFDRR, he worked for the City of Baltimore, contributing to the city's 10-Year Financial Plan and CitiStat performance management program, and also serving as acting deputy procurement agent. He holds a master's degree in applied economics and public policy jointly from Georgetown University and Universidad Alberto Hurtado in Santiago, Chile.



Zamira Rami

Mayor, Municipality of Gjirokaster

Zamira Rami was born in Gjirokaster on August 11, 1973. She has degrees in mathematics and finance from the University "Eqrem Cabej" of Gjirokaster in Albania. From 1998 to 2013 she was a professor in the Department of Informatics at the University of Gjirokaster. From 2013 to 2015, she was Prefect in the Institution of the Prefecture of Gjirokaster. Since 2015, she has held the position of Mayor in the Municipality of Gjirokaster in Albania.



Marius Qytyku

Specialist of Cultural Heritage and Arts, Department of Culture and Tourism, Municipality of Berat

I have studied cultural heritage management and English language and culture. Currently I work in the municipality of Berat with a focus on the protection and promotion of cultural heritage, dealing specifically with disaster preparedness in cultural heritage, documentation, and restoration of cultural heritage and community development.

Bhutan



Dmitry Sivaev

Urban Development Specialist,
GSURR, World Bank

Dmitry works in the Eastern Europe and Central Asia region. He is also a core member of the team behind the World Bank flagship report *Competitive Cities for Jobs and Growth* and the author of three related background papers. Dmitry has lead World Bank teams in studies of city competitiveness in Georgia and the Philippines and has consulted in cities in Kenya, South Africa, and Malaysia on issues of economic policy. He is the author of a diagnostic methodology for city competitiveness that is widely used by World Bank teams. Currently Dmitry also works on tourism development in Georgia and regional development in Poland and Russia. Prior to joining the World Bank, Dmitry was a researcher at Centre for Cities, a London-based think tank that focuses on promoting economic growth in UK cities. There he focused on spatial analysis of economic activity, issues of innovation, and small and medium enterprise development in cities. He also previously worked for the Institute for Urban Economics in Moscow.

Dmitry holds an MSc in urban economic development from University College London and a specialist degree in economics and finance from the Higher School of Economics, Moscow.



Jigme Choden

Civil (Conservation) Engineer,
Department of Culture, Division of
Conservation of Heritage Sites

Jigme Choden is a civil engineer and has worked in the Division of Conservation of Heritage Sites, a government agency in Bhutan, since January 2014. She served as the focal person when the division organized an international workshop (“Resolving Structural Issues Related to Traditional Bhutanese Buildings, Especially Dzongs”) and published its proceeding. She is currently working on disaster-resilient structural design of Wangduephodrang Dzong (fortress), which incorporates modern interventions while maintaining the architectural and structural integrity of traditional construction techniques and materials. She enjoys a good hike and has a master of engineering degree in civil engineering and architecture from University of Southampton, UK.



Sonam Tenzin

Project Coordinator, Department of
Culture, Division of Conservation of
Heritage Sites

Sonam Tenzin works in the Division for Conservation of Heritage Sites, Department of Culture, Ministry of Home and Cultural Affairs. Currently he works as Project Coordinator for all the conservation and new dzong construction projects executed by the division in various districts.

China



Dechen Tshering

Disaster Risk Management Specialist, GSURR, World Bank

Dechen Tshering works as a Disaster Risk Management Specialist in the Bhutan Country Office. She worked on conservation of heritage sites before joining the World Bank. She holds a master's degree in analysis of historical monuments.



Zhifeng Fu

Vice Mayor, Jingzhou Municipal Government

Mr. Zhifeng Fu has been the Vice Mayor of Jingzhou Municipal Government in Hubei Province of China since April 2016. He is mainly responsible for leading work on environmental protection, housing and urban-rural development, land resources management, urban-rural planning, urban governance, housing fund management, civil air defense, and seismologic work of Jingzhou Municipality. He is also the Director of the Project Management Office for the World Bank-financed project in Jingzhou (Hubei Jingzhou Historic Town Conservation Project), which is currently at an early stage of implementation. Prior to his present assignment, from 2004 to 2016, Mr. Zhifeng Fu worked in Wuhan, the capital city of Hubei Province, for the Wuhan Municipal Government. Before that, he worked for the Jiang'an District of Wuhan as the Deputy District Chief (from 2011 to 2014), and he also worked at the Wuhan Metro Group Co., Ltd. (2007 to 2011). From 2004 to 2007, he worked for Wuhan Municipal Housing & Urban-Rural Development Commission as the Deputy Director of the Quality Supervision Station for Urban Infrastructure Works. Prior to becoming a civil servant, Mr. Zhifeng Fu worked at China University of Geosciences as a college teacher. He holds a doctoral degree in engineering from China University of Geosciences, where he completed his undergraduate study, graduate study, and doctoral study successively from 1996 to 2004.



Ting Wang

Chief Planner, Jingzhou Municipal Urban & Rural Planning Bureau

Mr. Ting Wang has been the Chief Planner of the Jingzhou Municipal Urban-Rural Planning Bureau in Hubei Province of China since 2012. He is mainly responsible for leading the preparation and management of various legal urban-rural plans and plans of villages and towns, conducting poverty relief work, and organizing the review of legal plans. Prior to his present assignment, he worked in Shenzhen Municipal Urban Planning & Land Resources Commission, Guangdong Province of China, doing urban planning and design work. He holds a doctoral degree in urban planning and design from Huazhong University of Science and Technology.

Myanmar



Guangming Yan

Senior Urban Specialist, GSURR,
World Bank

Guangming Yan is a senior urban development specialist in the World Bank's Social, Urban, Rural, and Resilience Global Practice. His areas of specialization include sustainable urbanization, infrastructure investment, cultural heritage conservation and sustainable tourism development, agglomeration economies, municipal finance, spatial planning, and brownfield redevelopment. He has managed a series of urban development and cultural heritage conservation projects in China, including Zhejiang Urban Environment Project, Guizhou Cultural and Natural Heritage Protection Project, Hubei Jingzhou Historic Town Conservation Project, and Shandong Confucius and Mencius Cultural Heritage Conservation and Development Project.



Kyaw Khaing

Lecturer, Department of
Archaeology and National Museum,
Ministry of Religious Affairs and
Culture

Mr. Kyaw Khaing completed an MSc degree from Yangon University with a specialization in geology. Since then, he has served as a valued lecturer in the Department of Archaeology and National Museum, with a particular focus on scientific topics and prehistoric and historical archaeology.

In addition to teaching, he serves as a member of the exploration and archaeological excavation team under the instruction of the Department of Archaeology and National Museum. He also works on the Cultural Heritage Management Staff writing for the Cultural Heritage Management plan of heritage sites. In the effort to nominate three Pyu cities (as World Heritage Sites in Myanmar) for disaster risk management, he was a member of the DRM team. He attended many workshops on disaster risk management and worked on the risk management plan of three Pyu cities. He is currently working on the cultural management and disaster risk management plan of Bagan because his department is preparing to nominate the ancient city of Bagan for inclusion as a World Heritage Site.



Hnin Ei Win

Section Head Engineer, Engineering
Department (Building), Yangon City
Development Committee

Ms. Hnin Ei Win has worked for about 14 years in government service as a civil engineer and since 2003 has worked under the Yangon City Development Committee (YCDC). Recently, she has taken the role of construction project manager for projects under YCDC. She is also coordinating with the World Bank team for component 3 of the World Bank Myanmar SEA DRM Project as a sub-working group leader. She obtained her MSc (construction management) at Yangon Technological University and her BE (civil) at Yangon Technological University.

Nepal



Khin Aye Yee

Operations Officer, GSURR, World Bank

Khin Aye Yee is Operations Officer at World Bank Myanmar working with the Social, Urban, Rural, and Resilience Global Practice. Previously, she worked as Operations Analyst for the Country Management Unit and Social Protection and Labor Global Practice. Before joining the World Bank, she worked as a Child Protection Officer at UNICEF for more than 10 years and contributed to child law review and child protection policy development in Myanmar. She holds a graduate degree from Yangon University in international relations and a master's degree from Chulalongkorn University, Thailand, in Southeast Asian studies.



Bishnu Lamichhane

Section Officer, National Reconstruction Authority

Work Experience

- Section officer in National Reconstruction Authority from February 4, 2016, to date
- Section officer in Ministry of Urban Development from January 16, 2012, to February 3, 2014
- Section officer in Ministry of Finance from February 4, 2014, to February 3, 2016

Academic Qualifications: MA, LLB



Damodar Gautam

Chief Archaeological Officer, Department of Archaeology, Government of Nepal

Employment

- Regional Museum, Pokhara (Chief), May 1997 to October 2001
- National Art Museum, Bhaktapur (Acting Chief), November 2001 to October 2002
- Regional Museum, Dhankuta (Chief), December 2003 to December 2005
- National Art Museum, Bhaktapur (Chief), January 2006 to January 2008
- Gorkha Museum, Gorkha, Nepal (Chief), February 2008 to March 2010
- Chief Archaeological Officer, Department of Archaeology, Ramshah Path, Kathmandu, Nepal, from April 7, 2010, to date

Academic Qualifications: Master's degree in Nepalese history, culture, and archaeology from Tribhuvan University, Kathmandu, Nepal, 1994

The Philippines



Avani Dixit

DRM Specialist, GSURR, World Bank

Avani Dixit currently works as Disaster Risk Management Specialist at the World Bank Nepal. He has varied experience over the past 10 years working at multinational organizations, both at headquarters and country level, on disaster risk reduction and climate change adaptation. Currently he has a key role in coordination, partnership management, project management, and resource mobilization for the Earthquake Housing Reconstruction Project (EHRP), a US\$200 million loan project with the government of Nepal. Mainly he provides technical, policy, and strategic advice to the National Reconstruction Authority and government ministries and departments on recovery and reconstruction, and identifies strategic areas of support and intervention for technical assistance. Prior to joining the World Bank, he worked for the United Nations in Nepal (for five years) and Geneva (for three years). His duties included providing technical and policy advice on disaster and climate risk management to government ministries and departments; formulating multi-year, multi-million-dollar projects with in-depth understanding of disaster risk reduction and climate change impacts; establishing baselines, indicators, targets, and milestones and preparing project work plans and budgets; managing program implementation; supervising project staffs and consultants; preparing timely project reports and managing audits; and providing technical inputs and financial oversight.



Guiller Asido

Chief Operating Officer, Office of the Chief Operating Officer, Tourism Infrastructure and Enterprise Zone Authority

Guiller Asido is a lawyer by profession and has been a public servant for more than 20 years. He has been involved in several tourism infrastructure projects over the last three years, and has served in various capacities in the Tourism Infrastructure and Enterprise Zone Authority. He holds the following degrees: bachelor of arts, bachelor of laws, and master of laws (cum laude) from the University of Santo Tomas.



Anthony Rafols Damalerio

Provincial Disaster Risk Reduction and Management Office, Office of the Governor, Provincial Government of Bohol

Anthony Rafols Damalerio has been the Provincial Disaster and Risk Reduction Management Officer since April 5, 2016. Before assuming his current job, he was Executive Assistant IV (from June 1, 2015, to April 4, 2016) and Executive Assistant III (from June 1, 2010, to May 30, 2015); from 2010 to the present, he served in the Office of the Governor and Head-Constituency Services Section (CSS) as Officer-in-Charge Local Government Affairs (LGA). He was also Provincial Disaster and Risk Reduction Management Officer (Designate) during 2010–2013.

He holds a master's degree in public administration from the University of the Visayas Graduate School (May 2014, Cebu City) and a bachelor of science in biology from Velez College (F. Ramos Street, Cebu City, 1998).

Saudi Arabia



Lesley Jeanne Yu Cordero

Senior DRM Specialist, GSURR,
World Bank

Lesley Y. Cordero is currently a Senior Disaster Risk Management Specialist at the World Bank Office in the Philippines. She has also been involved in DRM projects in Myanmar and Fiji. A public servant for five years, Lesley served as an Undersecretary at the Office of the President of the Republic of the Philippines. She was an Undersecretary at the Office of the Presidential Assistant for Rehabilitation and Recovery, mandated to integrate the reconstruction efforts of government for Typhoon Haiyan (Yolanda). She also put together the Typhoon Bopha (Pablo) Rehabilitation and Recovery Plan for the affected areas in Mindanao. She coordinated post-conflict projects through the Sajahatra Bangsamoro initiative, a program that provided basic health, education, and livelihood services in the conflict areas in Mindanao. Lesley also served as Undersecretary at the Presidential Communications Operations Office, tasked to prepare strategic communications plans and policies for the Office of the President. In 2001, she graduated magna cum laude with a bachelor of philosophy degree from University of San Carlos; in 2005, she received her juris doctor of laws degree from the Ateneo de Manila University School of Law.



Adnan Abdullah Al Jaber

General Manager, National Urban
Heritage Center, Saudi Commission
for Tourism and National Heritage

Adnan Abdullah Al Jaber is responsible for the protection and documentation of heritage sites in Saudi Arabia at the Saudi Commission for Tourism and National Heritage. He has 20 years of experience. He holds a bachelor's degree and a master's degree in city and regional planning, and a PhD in mapping and GIS. He is interested in adaptation/reuse of heritage cultural sites, GIS applications, VR, and tourism development.



Hazem Mohamed Kamaleldin Abdelfattah

Urban Development Specialist,
GSURR, World Bank

Hazem Abdelfattah is an Urban Development Specialist at the Middle East and North Africa (MENA) Unit within the Social, Urban, Rural, and Resilience Global Practice of the World Bank. He is stationed at the Bank's regional office in Riyadh. With 16 years of experience in the MENA region and beyond, he has worked on several countries: Arab Republic of Egypt, Republic of Yemen, Saudi Arabia, Iraq, Libya, Lebanon, Tunisia, Kuwait, Bahrain, and China. His main areas of expertise include urban planning and management, land and housing, local/community development, climate change and risk reduction, and sustainable tourism and cultural heritage.

Tanzania



Mohammed Badruddin Mussa

Head of Heritage and Landscape, Urban and Rural Planning, Commission of Lands, Zanzibar

I am Mohammed Badruddin Mussa, a planner in the Department of Urban and Rural Planning–Commission of Lands in Zanzibar, working as Head of the Heritage and Landscape unit. Before assuming this position, I worked at Stone Town Conservation and Development Authority (a guardian of the World Heritage Site) for more than 20 years (1992–2012) as Head of the Conservation and Planning section. During that period (2010), I attended a course on Conservation of Built Heritage given by ICCROM in Rome, Italy. As Head of the Heritage and Landscape unit, I am responsible for all culture and heritage promotion and planning in all Local Area Plans and the Master Plan of Zanzibar City.



Mussa Awesu Bakar

Conservation Engineer, Implementation and Control Department, Stone Town Conservation and Development Authority

I hold a bachelor's degree in civil engineering and work with Stone Town Conservation and Development Authority as a Conservation Engineer. Having 12 years of experience, I am attached to some big projects in our site, such as construction of a seawall and Mizingani Road, installation of CCTV cameras, installation of fiber wire, and construction of fish landing and market facilities at Malindi, a project that is supported by the Japanese government.



Gyongshim An

Senior Urban Specialist, GSURR, World Bank

Gyongshim An joined the World Bank's Africa Urban and DRM Unit in August 2015 as Senior Urban Specialist, and is based in Washington, DC. Gyongshim has worked on urban sector issues for over 14 years in various public and private organizations. At the Asian Development Bank (ADB), she worked as senior urban development specialist for over seven years (from 2006 to 2013) and led urban and water sector lending and nonlending operations in South and East Asian countries, such as India, Nepal, Sri Lanka, and China. She identified, developed, designed, formulated, and implemented loans and technical assistance projects for urban planning, water, wastewater, solid waste, urban transport, and urban lake and river rehabilitation. Prior to joining ADB, she was with Veolia, where she worked on developing and negotiating public-private partnership projects for water infrastructure. After her term at ADB, she rejoined Veolia as Senior Vice President to design and restructure its municipal markets strategy and business in developing countries

Uzbekistan



Utkirjon Shokirjonovich Kholbadalov

Chief Specialist, Information and Analytical Department for Tourism Development, State Committee of the Republic of Uzbekistan for Tourism Development

Mr. Utkirjon Kholbadalov is a Chief Specialist of the Information and Analytical Department for Tourism Development at the State Committee of the Republic of Uzbekistan for Tourism Development. He is responsible for developing tourism development programs at national and regional level, monitoring the development programs and analyzing their efficiency, identifying the most important problematic issues in tourism development, and constructing recommendations and proposals geared toward resolving them. Mr. Utkirjon Kholbadalov graduated with honors and received his BSc in economics from Termez State University. He did his master's study at OYA Graduate School of Business at University Utara Malaysia and received a master of science in international accounting.



Manjusha Rai

Urban Specialist, GSURR, World Bank

Manjusha Rai is currently supporting the urban team in Uzbekistan as Urban Specialist based out of Tashkent. She has more than 15 years of experience in development issues, including integrated urban development, urban resilience, disaster risk reduction, cultural heritage, and community planning. She started working for the World Bank in 2013. Before that, she worked for the Asian Disaster Preparedness Centre, UN-HABITAT, Asian Coalition for Housing Rights, and the Royal Government of Bhutan. She is an urban planner and a trained architect with a degree from Indian Institute of Technology (IIT), India, and has a postgraduate degree in international housing and social change from the London School of Economics and Political Science, UK.

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The World Bank Disaster Risk Management Hub, Tokyo supports developing countries to mainstream DRM in national development planning and investment programs. As part of the Global Facility for Disaster Reduction and Recovery and in coordination with the World Bank Tokyo Office, the DRM Hub provides technical assistance grants and connects Japanese and global DRM expertise and solutions with World Bank teams and government officials. Over 37 countries have benefited from the Hub's technical assistance, knowledge, and capacity building activities. The DRM Hub was established in 2014 through the Japan-World Bank Program for Mainstreaming DRM in Developing Countries – a partnership between Japan's Ministry of Finance and the World Bank.