

# Uzbekistan

## Resilient Cultural Heritage and Sustainable Tourism Development





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# Abbreviations and acronyms

<b>CHST</b>	Cultural Heritage and Sustainable Tourism
<b>COVID</b>	Coronavirus Disease
<b>CURE</b>	Culture in City Reconstruction and Recovery
<b>DRM</b>	Disaster Risk Management
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery
<b>GIS</b>	geographic information system
<b>GOU</b>	Government of Uzbekistan
<b>GDP</b>	Gross Domestic Product
<b>ICCROM</b>	International Centre for the Study of the Preservation and Restoration of Cultural Property
<b>ICOMOS</b>	International Council on Monuments and Sites
<b>ICORP</b>	International Scientific Committee on Risk Preparedness
<b>ICT</b>	information and communication technology
<b>MSCIUDP</b>	Medium-Size Cities Integrated Urban Development Project
<b>NGO</b>	nongovernmental organizations
<b>OUV</b>	Outstanding Universal Value
<b>R-DMUCH</b>	Institute of Disaster Mitigation for Urban Cultural Heritage at Ritsumeikan University, Kyoto, Japan
<b>SCTD</b>	State Committee for Tourism Development of the Republic of Uzbekistan
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNWTO</b>	United Nations World Tourism Organization
<b>WH</b>	World Heritage
<b>WHO</b>	United Nations World Health Organization





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# Preface

Severe shocks and stresses cause loss of life, disrupt livelihoods, push people into poverty, and threaten cultural properties and practices. Since late 2019, the COVID-19 pandemic has infected millions, killed hundreds of thousands, and left the global economy highly disrupted. In fact, the World Bank currently estimates that 40–60 million people could be pushed into extreme poverty as a result of COVID-19.<sup>1</sup> While many sectors have been affected, tourism, which accounts for more than 10 percent of global GDP, has emerged as one of the worst hit. The United Nations World Tourism Organization (UNWTO) has estimated that during the first quarter of 2020 international tourist arrivals decreased by more than twenty percent—nearly 67 million fewer international arrivals. As of the writing of this report, the UNWTO estimates declines of more than fifty percent in international arrivals in 2020, which could affect between 100 to 120 million tourism jobs.<sup>2</sup>

In Uzbekistan, authorities instituted strong health and social distancing measures in March to contain local transmission of COVID-19, with national and international flights being cancelled. This has resulted in more than 1,500 tour operators and 1,200 hotels suspending their activities and affected the income of more than 250,000 people, including guides, artisans, and professionals working at architectural monuments, spa facilities, catering facilities, and transport facilities.<sup>3</sup> However, leaders and policy makers must also find opportunities in these moments to make investments and reforms that can drive sustainable development, such as investments in risk identification, risk reduction, and emergency preparedness and response. For cultural

heritage, both tangible (e.g., sites and structures) and intangible (e.g., traditions and practices), this experience may provide an opportunity to strengthen protection and resilience.

There are many options to support cultural heritage and tourism professionals to cope with the current crisis and begin to consider integrating resilience into the response and recovery from this pandemic. Through its *COVID-19: Putting People First* portal, the UNWTO is assessing impacts, monitoring the situation across the globe, and providing support and resources to countries.<sup>4</sup> The United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the *Culture & COVID-19: Impact and Response Tracker* to provide an overview of immediate impact and examples of adaptation from around the world; and it is monitoring World Heritage (WH) Sites closures.<sup>5</sup> The International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), through the initiative *Heritage in Times of COVID*<sup>6</sup> as part of its *First Aid and Resilience to Cultural Heritage in Times of Crisis Program*, is providing resources, webinars, and support to professionals from the cultural field worldwide. The World Bank is currently supporting the development of the tourism sector in over forty destinations across the world, including Uzbekistan, affected by the COVID-19 outbreak at different degrees,<sup>7</sup> and working with partners to provide reliable information and data on the evolution and potential scenarios and lessons learned from past crises that affected tourism.<sup>8</sup>

Uzbekistan has long demonstrated a commitment to strengthen the resilience of its cultural heritage and develop sustainable tourism. As part of its strategy to further develop the country and its tourism industry

<sup>1</sup> [blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest](https://blogs.worldbank.org/opendata/impact-covid-19-coronavirus-global-poverty-why-sub-saharan-africa-might-be-region-hardest)

<sup>2</sup> [unwto.org/tourism-covid-19](https://unwto.org/tourism-covid-19) and [unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism](https://unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism)

<sup>3</sup> [un.int/uzbekistan/news/tourism-and-public-asset-management-projects-presented](https://un.int/uzbekistan/news/tourism-and-public-asset-management-projects-presented)

<sup>4</sup> [unwto.org/news/unwto-releases-a-covid-19-technical-assistance-package-for-tourism-recovery](https://unwto.org/news/unwto-releases-a-covid-19-technical-assistance-package-for-tourism-recovery)

<sup>5</sup> [en.unesco.org/news/culture-covid-19-impact-and-response-tracker](https://en.unesco.org/news/culture-covid-19-impact-and-response-tracker) and [en.unesco.org/covid19/cultureresponse/monitoring-world-heritage-site-closures](https://en.unesco.org/covid19/cultureresponse/monitoring-world-heritage-site-closures)

<sup>6</sup> [iccrom.org/heritage-times-covid](https://iccrom.org/heritage-times-covid)

<sup>7</sup> [openknowledge.worldbank.org/bitstream/handle/10986/33480/WBG-Support-for-Tourism-Clients-and-Destinations-During-the-COVID-19-Crisis.pdf?sequence=1&isAllowed=y](https://openknowledge.worldbank.org/bitstream/handle/10986/33480/WBG-Support-for-Tourism-Clients-and-Destinations-During-the-COVID-19-Crisis.pdf?sequence=1&isAllowed=y)

<sup>8</sup> [blogs.worldbank.org/voices/we-cant-travel-we-can-take-measures-preserve-jobs-tourism-industry?deliveryName=DM57356](https://blogs.worldbank.org/voices/we-cant-travel-we-can-take-measures-preserve-jobs-tourism-industry?deliveryName=DM57356)

along the historic Great Silk Road, Uzbekistan has been supporting activities to strengthen the resilience of their historic cities and cultural heritage sites. The *Sustainable Tourism Development along the Silk Road Workshop*,<sup>9</sup> which took place in Khiva on October 6–7, 2017, and was supported by the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), brought together representatives from the Central Asia countries to discuss challenges, collaborative actions, and opportunities for future partnerships, emphasizing the necessity of developing risk assessments and strengthening preparedness and emergency response, to ensure the safety and protection of communities and visitors, as well as heritage sites.

Uzbekistan is located in a hazard-prone region, and it has suffered the impacts of natural events. In 1966, a 5.1 magnitude earthquake, at a depth of 3–8 kilometers (1.9–5.0 miles) under Tashkent, destroyed the Uzbek capital, including a unique 600-year-old mosque, among many of the other city's historic buildings.

Aiming to strengthen Uzbekistan's capacity to integrate disaster risk management (DRM) into historic cities, cultural heritage sites, and sustainable tourism development plans, the Government of Uzbekistan (GOU) through the State Committee for Tourism Development

(SCTD), and with the support of the World Bank, GFDRR, and the United Nations World Tourism Organization (UNWTO) Silk Road Office, organized the *Workshop on Resilient Cultural Heritage and Sustainable Tourism Development*, held in Bukhara on August 13–17, 2018.

The outputs of this workshop supported the Uzbekistan Medium-Size Cities Integrated Urban Development Project (MSCIUDP).<sup>10</sup> Currently under implementation, this project is improving urban infrastructure, public spaces, and access to services, and strengthening institutional capacity.<sup>11</sup>

This report reflects the main achievements from the *Resilient Cultural Heritage and Sustainable Tourism Development* workshop, including observations and potential recommendations, which may be applicable to some of the current situations in heritage sites, caused by the COVID crisis that is affecting Uzbekistan and many other countries worldwide.<sup>12</sup> Developing and reinforcing effective sites management plans, including situation analysis, risk assessments, and development of preparedness and response measures, contribute toward increasing the protection of local communities and future visitors and cultural heritage assets, and help the development of resilient and sustainable tourism.

<sup>9</sup> [worldbank.org/en/news/feature/2017/10/31/central-asia-tourism-a-driver-for-development](http://worldbank.org/en/news/feature/2017/10/31/central-asia-tourism-a-driver-for-development)

<sup>10</sup> [projects.worldbank.org/en/projects-operations/project-detail/P162929](http://projects.worldbank.org/en/projects-operations/project-detail/P162929)

<sup>11</sup> [worldbank.org/en/news/press-release/2018/12/18/cities-in-uzbekistan-to-gain-better-municipal-services-and-urban-infrastructure](http://worldbank.org/en/news/press-release/2018/12/18/cities-in-uzbekistan-to-gain-better-municipal-services-and-urban-infrastructure)

<sup>12</sup> Additional information regarding the World Bank support to Uzbekistan in terms of COVID-19 response can be found at: [worldbank.org/en/news/press-release/2020/04/30/uzbekistans-covid-19-response-gets-additional-financial-boost-from-world-bank](http://worldbank.org/en/news/press-release/2020/04/30/uzbekistans-covid-19-response-gets-additional-financial-boost-from-world-bank) and [worldbank.org/en/news/press-release/2020/04/24/uzbekistan-to-receive-world-bank-emergency-financing-to-combat-covid-19](http://worldbank.org/en/news/press-release/2020/04/24/uzbekistan-to-receive-world-bank-emergency-financing-to-combat-covid-19)



# Executive Summary

*“If we bring our work together here today into action, this will be our great victory.”*

—Ilkhom Usmanhodjaev, Director of the Center for Geotechnical Studies of the Survey Institute Qishloqqureilishlojiha LLC

Uzbekistan’s rich cultural heritage and growing tourism sectors face significant threats from natural and man-made hazards, including earthquakes, climate change-induced events, lack of proper heritage management and conservation, and recently even the effects of the COVID-19 pandemic. The country is aware of the necessity of strengthening measures and increasing capacity to promote their sustainable growth and resilient management.

A first step to increase resilience on heritage and tourism starts by connecting those sectors with the disaster risk management (DRM) discipline. In Uzbekistan, efforts to do so were set in place through the **Workshop on Resilient Cultural Heritage and Sustainable Tourism Development**, held in Bukhara on August 13–17, 2018. The workshop was organized by the Government of Uzbekistan (GOU) through the State Committee for Tourism Development (SCTD), and with the support of the World Bank, GFDRR, and the United Nations World Tourism Organization (UNWTO) Silk Road Office. Their aim was to support the capacity of crucial stakeholders involved in the management of the country’s cultural heritage and tourism sectors.

The workshop’s participants developed key outputs to inform potential guidelines to increase the resilience of cultural sites by integrating DRM practices into both the conservation plans of the sites and the development of methodologies to promote sustainable tourism management plans.

This report captures those key findings from the workshop’s three working groups, focused on: (1) Capacity

Building, (2) Risk Identification and Emergency Preparedness, and (3) Enhancement of Site Management Improvement. The objectives of each group were to identify the crucial challenges and gaps in cultural heritage site management capacity and knowledge, and to propose solutions, principles, and practical options for addressing these issues.

## Main achievements and potential application to the current situation:

### Working Group 1—Capacity Building

The first group identified the gaps in capacity that are present within the agencies and organizations tasked with assessing cultural heritage and tourism site vulnerabilities, managing and addressing risks and challenges at cultural heritage sites, and developing training and staff learning for sustainable site management.

### Key Findings

- Uzbekistan has significant national capacity in structural engineering, architecture, cultural heritage management, and tourism development. However, the current frameworks used to manage these resources do not allow for easy cross-collaboration (for example, engineers from the Ministry of Construction do not have a clear way to build a working relationship with site managers from the Ministry of Culture or the SCTD).
- There is a sizable opportunity to weave in new capacity building trainings for the individuals who work in the

areas of tourism, cultural heritage, and DRM (for example, by teaching teams what sustainable practices are in the tourism sector and how to implement them).

- The Uzbekistan tourism sector needs proactive strategy development that focuses on standardizing the frameworks of short-, medium-, and long-term projects. To be effective, this strategy needs to be implemented in a way that is coordinated across local, regional, and national levels.
- Uzbekistan currently maintains a high capacity for attracting foreign and domestic investments, but additional strategies are needed to effectively leverage these investments for growth.

### Working Group 2—Risk Identification and Emergency Preparedness

The second group identified the need to solidify the principles and practices to develop effective cultural heritage risk assessments, data sharing, risk mitigation, and emergency preparedness. These principles and practices include proactive identification of risk to cultural heritage sites, frequent communication with the local communities and their involvement in the activities to protect sites, and establishment of measures to sustainably absorb increases in tourism.

#### Key Findings: Measures for Risk Identification

- Develop a systematic disaster risk identification and assessment tool to evaluate the potential impact of disasters. Test the tool through case studies to improve it and use it extensively in heritage sites.
- Develop a heritage impact assessment tool to evaluate the impact of tourism to cultural heritage sites and the surrounding community areas. Test the tool through case studies and document results to improve it.
- Develop and implement integrated systems that regularly monitor potential disaster risks to cultural heritage sites.

#### Key Findings: Measures for Emergency Preparedness

- Assess the existing capacities of individuals and institutions to manage disaster risks to cultural heritage sites and determine where capacities could be increased.
- Formulate and implement mitigation and preparedness strategies to reduce disaster risks at cultural heritage sites.

- Develop an appropriate regulatory framework for DRM of cultural heritage sites.
- Solidify cooperation between agencies and stakeholders from the heritage, tourism management, and DRM sectors to encourage responsible information sharing and coordinated growth of sustainable disaster risk mitigation practices.
- Integrate disaster risk reduction measures into sustainable management systems of heritage sites.
- Develop adequate financial mechanisms to fund the needed conservation and tourism management activities at cultural heritage sites.
- Create qualified specialist positions for the management of cultural heritage sites.

### Working Group 3—Enhancement of Site Management Improvement

The third group identified the major challenges and proposed solutions for effective site management in Uzbekistan. This group focused on how to effectively implement management plans, how to improve national legislation to promote effective cultural heritage management, and how to successfully coordinate different agencies at the local, regional, and national levels.

#### Key Findings

- To address the challenge of inadequate legislation, some actions can include amending applicable legislation and developing normative legal acts.
- The challenge of inadequate communication can be tackled by encouraging cooperation between ministries and agencies, establishing a permanent communication system, and engaging communities in best practice conservation techniques.
- Deficiencies in infrastructure will need to be addressed by establishing an infrastructure of the site that allows both an efficient flow of tourists and sanitary maintenance.
- Site conservation suffers from a poor approach to conservation, protection, and restoration of cultural heritage sites; a proposed solution is to develop and implement best practices in this area.
- Monitoring and reporting are currently deficient; a proposed solution is to create a continuous monitoring and reporting system.
- Disaster preparedness is currently inadequate, and guidelines for what to do in the event of a disaster

have not been elaborated. A proposed solution is to design and implement a standard set of guidelines for all cultural heritage sites.

- Access to appropriate finance/funding is not available. A proposed solution is to activate mechanisms that will fund forthcoming conservation and DRM projects at all cultural heritage sites.
- Tourism presents a challenge because of the current deficiencies in the law and legislative documents, and the inability to control the flow of foreign and local tourists; a proposed solution is to develop and systematically implement a tourism management plan.

### Overall Recommendations applicable to the COVID crisis

Consolidating the key findings from all three working groups, it is possible to summarize their recommendations into three main categories: enhancing institutional capacity, developing pilot projects, and improving staff-level capacity, all which are very relevant to the current crisis caused by COVID-19.

#### 1. Enhancing institutional capacity to ensure resilient and safe cultural heritage and sustainable tourism.

Increase the ability of institutions and agencies to contribute to the establishment of sustainable and safe cultural heritage sites, prioritizing people, both residents and visitors, by encouraging the following:

- Carrying capacity of cultural heritage sites in terms of the site infrastructure (for example, the number of ways for visitors to enter the site, security equipment in place) and management (such as the amount of clear signage, measures to keep hygienic practices);
- Seeking financing and private sector engagement models to fund situations analysis, conservation, and tourism activities;
- Balancing conservation needs of historic city centers with the development needs of periphery areas, fostering communication between sectors;
- Promoting use of guidelines and codes developed by the Ministry of Culture, as informed by the Ministry of Construction; and
- Completing a targeted assessment of the risks to people, cultural heritage, and tourism assets in Uzbekistan to allow additional national- or regional-level understanding of potential losses and impacts on tourism and the economy to clarify and spur needed prioritization and investment.

#### 2. Developing pilot projects that foster a cross-collaboration of working methods among cultural heritage, tourism, and DRM sectors.

Encourage cross-sectoral cooperation and empower stakeholders by developing pilot initiatives aiming to contribute to a comprehensive management plan at a specific city or site, ensuring collaboration between sectors, including and combining different factors such as:

- Heritage values identification and prioritization;
- Structural assessments;
- Safety and security in heritage sites;
- Conservation principles/strategies for historic buildings and movable heritage;
- Regulations and guidelines for new developments in both the core and the buffer zone of heritage sites;
- Regulations and guidelines for adaptive reuse and tourism management;
- Disaster risks assessments; and
- Closure and reopening of heritage sites to visitors.

#### 3. Improving staff-level capacity building to promote the development of resilient cultural heritage and sustainable tourism.

Improve the capacity of heritage- and tourism-related staff, to identify risks, secure sites, assist people, and so forth by organizing and developing trainings, and increasing resources and shared knowledge by:

- Developing/updating cultural heritage and tourism inventories in line with other systems (for example, geographic information systems (GIS) mapping and open source approaches);
- Conducting and communicating risk assessment to cultural heritage and tourism site stakeholders, communication campaigns;
- Establishing emergency preparedness and response procedures for heritage sites; developing drills involving different stakeholders and the local community;
- Implementing appropriate building/restoration techniques, including the engagement of local craftspeople, fostering intangible heritage use and value; and
- Instituting methods for involving community, the private sector, nongovernmental organizations (NGOs, such as religious bodies and cultural experts), academia, scientists, and apprenticeship programs when evaluating the risks facing a cultural heritage site, and planning for the site's resilience.





# Introduction

Uzbekistan has been strengthening its commitment to increase the resilience of its cultural heritage during the last years. As part of the country's strategy to promote their sustainable growth through its tourism industry, several initiatives to strengthen the resilience of their historic cities and cultural heritage sites, particularly the ones along the Great Silk Road, have been taking place involving several stakeholders. Now that the country and the whole world are facing the COVID-19 pandemic crisis, the learnings and findings in terms of creating resilience are more relevant than ever. In April 2017, representatives from the Uzbekistan State Committee for Tourism Development (SCTD) traveled to Japan to participate in the *Technical Deep Dive on Resilient Cultural Heritage and Tourism* organized by the World Bank Disaster Risk Management (DRM) Hub in Tokyo and the Tokyo Development Learning Center. As a follow-up, the Government of Uzbekistan (GOU) requested the World Bank's technical support to enhance its capacity for incorporating resilient cultural heritage into sustainable tourism development planning.

The *Sustainable Tourism Development along the Silk Road Workshop*, which took place in Khiva on October 6–7, 2017, and was supported by the World Bank and the Global Facility for Disaster Reduction and Recovery (GFDRR), brought together representatives from Central Asia countries to discuss challenges, collaborative actions, and opportunities for future partnerships, emphasizing the necessity of developing risk assessments and strengthening preparedness and emergency response to ensure the safety and protection of communities and visitors, as well as heritage sites.

One year later, the SCTD, together with the World Bank, GFDRR, and the United Nations World Tourism Organization (UNWTO) Silk Road Office in Uzbekistan, organized the ***Workshop on Resilient Cultural Heritage and Sustainable Tourism Development***, held in Bukhara, Uzbekistan, on August 13–17, 2018.

The outputs of this workshop supported the Uzbekistan Medium-Size Cities Integrated Urban Development Proj-

ect (MSCIUDP), which is structured around three components, including (i) improvement of urban services and enhancement of public urban spaces; (ii) institutional strengthening and capacity building; and (iii) implementation support. The second component includes the development of activities targeting cities and local government agencies, including subcomponents on sustainable tourism development and cooperation with the private sector, which may benefit from learning to improve the connection between tourism, cultural heritage, and DRM, to increase resilience and safety in those cities.

This report summarizes the development of the workshop and reflects the main results achieved by the participants, including observations and potential recommendations, aiming to serve as a baseline for further initiatives to strengthen the resilience of cultural heritage and sustainable tourism in Uzbekistan, in the framework of the COVID-19 crisis.

## Objective and workshop organization

The workshop focused on building the capacity of stakeholders involved in managing cultural heritage sites and tourism sectors, aiming to develop guidelines for increasing the resilience of cultural sites by integrating DRM practices into both the conservation plans of the sites and the development of methodologies to ensure sustainable management as touristic sites.

The participants of the workshop, who were from different backgrounds, formed three multidisciplinary groups to work together and identify the key challenges and gaps in knowledge and practice, and to propose solutions, principles, and practical options and opportunities for addressing those issues.

The three working groups focused on:

- 1. Capacity Building:** identifying the gaps in capacity that are present within the agencies and organizations tasked with assessing cultural heritage and tourism site vulnerabilities, managing and addressing risks and challenges at cultural heritage sites, and developing training and staff learning for sustainable site management.

**2. Risk Identification and Emergency Preparedness:**

identifying the principles and practices to develop effective cultural heritage site risk assessments, data sharing, and emergency preparedness and response. These principles and practices include proactive identification of risk to cultural heritage sites, frequent communication with local communities and relevant stakeholders to involve them in the initiatives to protect their sites, and measures to sustainably absorb increases in tourism.

**3. Enhancement of Site Management Improvement:**

identifying the major challenges to effective site management in Uzbekistan and proposed solutions. They focused on how to effectively implement management plans, how to improve national legislation to promote effective cultural heritage management, and how to successfully coordinate different agencies at the local, regional, and national levels.

Throughout the workshop, the participants from the GOU increased their capacity and awareness to connect cultural heritage with DRM, and presented the workshop results to the Vice Chairman of the SCTD and *hokimiyats* of the Bukhara region and city.

## Background and context

Uzbekistan is the largest country in Central Asia, located in the heart of the ancient Great Silk Road. Although the country has demonstrated persistent growth over the last decades, Uzbekistan's tourism sector remains positioned for further expansion. In 2016, the total contribution of the Travel & Tourism sector to the national GDP represented just 3.1 percent (6,203 billion Uzbek som), which was well below the world average of 10.2 percent (according to the World Travel & Tourism Council). Also that year, the Travel & Tourism industry provided just 2.7 percent (445,000 jobs) of the nation's total employment, again well below the world average Travel & Tourism employment contribution of 9.6 percent.

As Uzbekistan aims to bolster its tourism sector, a focus on safeguarding timeless treasures—the cultural assets underlying this tourism—would enhance the experience of tourists. Uzbekistan is highly exposed to earthquakes and floods, making DRM and resilience

thinking critical elements to ensure the preservation of cultural heritage and historic cities such as Bukhara, Khiva, and Samarkand WH Sites, and to boost the tourism sector. In addition to natural hazards, resilience to economic disasters—such as local and global market fluctuations—is also critical. Considering the government's recent priority of increasing revenue from the tourism sector, it is crucial to sustainably protect and develop the cultural sites that attract international tourists.

To address this concern, Uzbekistan aims to integrate DRM techniques and principles into a sustainable tourism plan that places the development of resilient cultural heritage sites at its core. This plan will guide the tourism sector through its next development phase. The strategic planning, coordination, and management surrounding the country's numerous natural and cultural heritage and tourism assets provide the most pressing opportunities to support the long-term resilience of the country's tourism sector.

### Threats to Cultural Heritage and Sustainable Tourism in Uzbekistan

One of the key achievements from the workshop was an increase of awareness among the participants about the risks that the Uzbek cultural heritage and tourism sector is facing. The participants jointly identified the critical hazards and threats to cultural heritage and sustainable tourism in Uzbekistan. The first agreed step was to understand that risk is a product of hazards, exposure, and vulnerability, and that this concept has specific implications for cultural heritage and tourism sites, as shown in Figure 1.

Uzbekistan is rated as having a high level of hazard for the following conditions:<sup>13</sup>

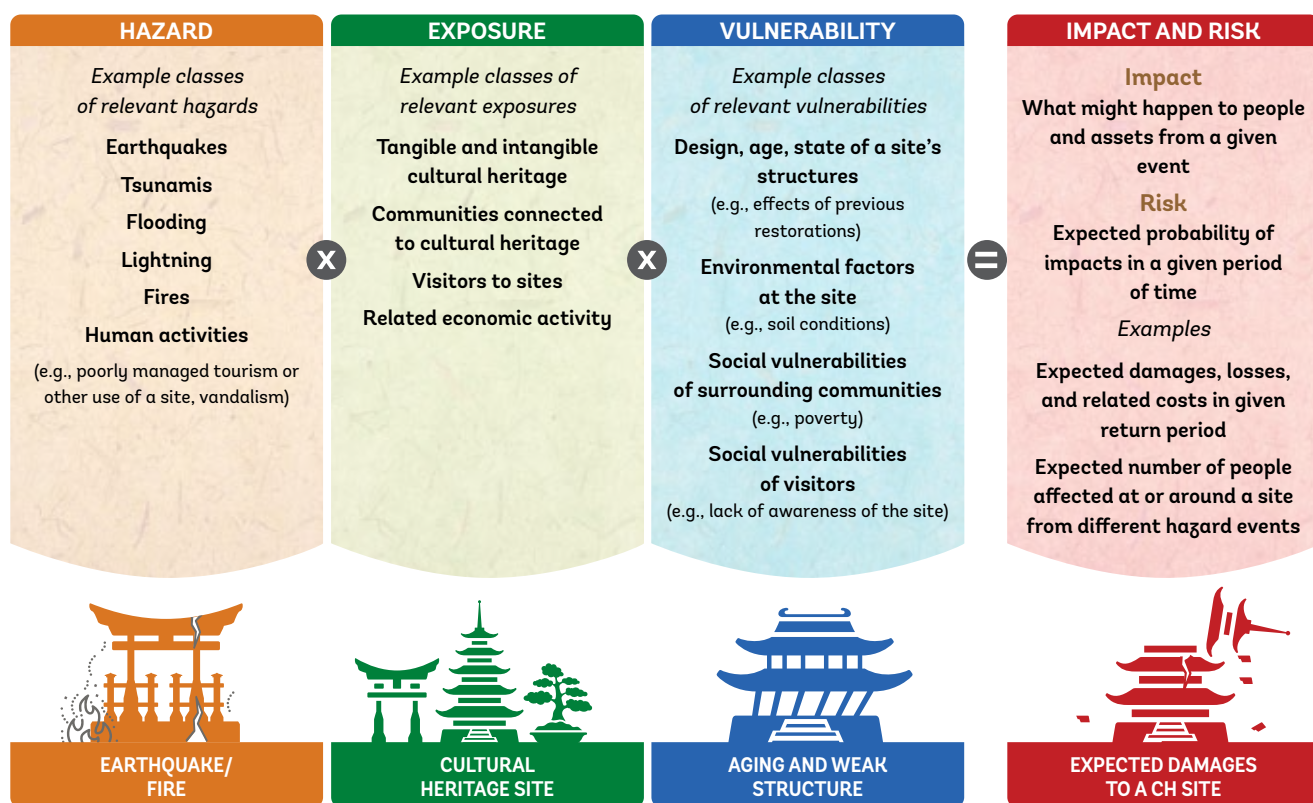
- River flood
- Urban flood
- Earthquake
- Landslide
- Water scarcity
- Extreme heat
- Wildfire

Uzbekistan has an average of US\$2 billion in affected

<sup>13</sup> ThinkHazard! is a web-based tool enabling users to quickly and robustly assess the level of river flood, earthquake, drought, cyclone, coastal flood, tsunami, volcano, and landslide hazards. This is available through the Global Facility for Disaster Reduction and Recovery (GFDRR) at [thinkhazard.org](http://thinkhazard.org).

FIGURE 1

Risk identification for cultural heritage



Source: GFDRR. 2020. *Resilient Cultural Heritage: Learning from the Japanese Experience*. [gfdrr.org/en/publication/resilient-cultural-heritage-learning-japanese-experience](https://www.gfdrr.org/en/publication/resilient-cultural-heritage-learning-japanese-experience)

gross domestic product (GDP) per year from earthquakes, and nearly 30 percent of Uzbekistan’s economy could be affected should a very strong earthquake occur.<sup>14</sup> Such a disaster could severely disrupt the tourism industry and destroy treasured cultural heritage assets, which are a source of national pride and an attraction for tourism in the country. Climate-related hazards also appear poised to affect cultural heritage and sustainable tourism in Uzbekistan, with 30 years of increasing rainfall and variability of precipitation resulting in uncertain impacts for cultural heritage and sustainable tourism sites<sup>15</sup> (see Figure 2).

Exposure and vulnerability of people, their livelihoods, and the underlying cultural heritage sites appear to be increasing as a result of a combination of development around major sites, unmanaged tourism growth, lack of maintenance and management of many sites, and

inadequate infrastructure to meet the needs of visitors. This vulnerability is connected to the underlying coordination issues among key ministries and levels of government in terms of cultural heritage and sustainable tourism management and conservation. However, in order to properly understand the current situation to take action for improvement, a holistic and quantifiable analysis of the risks to Uzbekistan’s cultural heritage and tourism sectors should be developed at the regional level. Likewise, the GOU may wish to consider a rapid national assessment to quantify potential losses and help to prioritize further action.

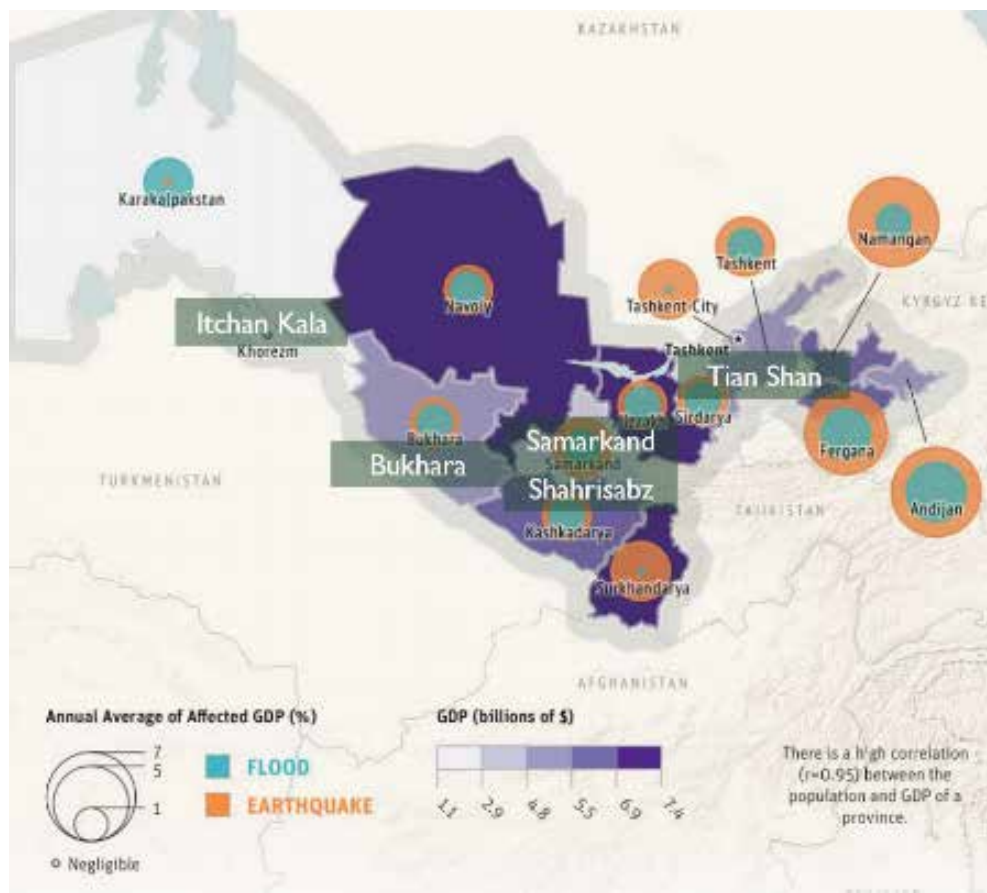
<sup>14</sup> World Bank. 2017. *Europe and Central Asia: Country Risk Profiles for Floods and Earthquakes* (English). Washington, DC: World Bank Group. [documents.worldbank.org/curated/en/958801481798204368/Europe-and-Central-Asia-Country-risk-profiles-for-floods-and-earthquakes](https://documents.worldbank.org/curated/en/958801481798204368/Europe-and-Central-Asia-Country-risk-profiles-for-floods-and-earthquakes)

<sup>15</sup> USAID. 2018. *Climate Risk Profile: Central Asia*. Fact Sheet. March 2018. [reliefweb.int/sites/reliefweb.int/files/resources/2018-April-30\\_USAID\\_CadmusCISF\\_Climate-Risk-Profile-Central-Asia.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/2018-April-30_USAID_CadmusCISF_Climate-Risk-Profile-Central-Asia.pdf)

**FIGURE 2**

**Uzbekistan Flood and Earthquake Risk at UNESCO World Heritage Sites**

Source: World Bank. 2017. *Europe and Central Asia: Country Risk Profiles for Floods and Earthquakes*. documents.worldbank.org/curated/en/958801481798204368/Europe-and-Central-Asia-Country-risk-profiles-for-floods-and-earthquakes; authors' elaboration.



# Working Group Reports

The workshop's three working groups (*Capacity Building, Risk Identification and Emergency Preparedness, and Enhancement of Site Management Improvement*) were comprised of officials from a variety of expertise backgrounds and included the State Committee for Tourism Development (SCTD), the Ministry of Culture, the Ministry of Construction, the Ministry of Emergency Situations, local administrations (hokimiyats), and local institutions. Among the participants were also staff from the UNWTO Silk Road Office in Uzbekistan and UNESCO Uzbekistan, as well as

invited experts from Ritsumeikan University in Kyoto, Japan, and the International Council on Monuments and Sites–International Scientific Committee for Risk Preparedness (ICOMOS–ICORP), and the World Bank/GFDRR team.

Each working group was also informed by the assessment and observations of four different site visits in Bukhara: the complex of *Gaukushon*, the *Rashid Caravan Saray*, the *Domlo Hasan*—currently restored and used as a hotel, and the two madrasas, *Ulugbek* and *Abdulazizhon*.

## Working Group 1—Capacity Building



### Team Members

Manjusha Rai, World Bank Urban Development Specialist; Maysara Naberaeva, Head of the Regional State Inspectorate of Samarkand and Jizzakh Regions, Ministry of Culture; Kuanyshbek Sharipov, Head of the Regional State Inspectorate of the Republic of Karakalpakstan, Ministry of Culture; Firdavs Naberaev; Jahangir Khalilov, Head of the Regional State Inspectorate of Kashkadarya Region, Ministry of Culture; Lola Muhutova, Head of Department for Conservation and Restoration of Applied Arts, Hunarmand Foundation; Gulmirza Karajanov; Akhtam Ahmedov; and Abdurashid Karimov.

### Assessment of current capacity for CHST

This group focused on assessing the following current capacities and efforts for the sustainability of cultural heritage and sustainable tourism (CHST) development in Uzbekistan:

- Uzbekistan has significant national capacity in structural engineering, architecture, cultural heritage management, and tourism development. However, the current frameworks used to manage these resources do not allow for easy cross-collaboration (for example, engineers from the Ministry of Construction do not

have a clear way to build a working relationship with site managers from the Ministry of Culture or the SCTD).

- There is a sizable opportunity to weave in new capacity building trainings for the individuals who work in the areas of tourism, cultural heritage, and DRM (for example, teaching teams what sustainable practices are in the tourism sector, and how to implement them).
- The Uzbekistan tourism sector has the opportunity to develop a proactive strategy that focuses on standardizing the frameworks of short-, medium-, and long-term projects. To be effective, this strategy needs to be implemented in a way that is coordinated across local, regional, and national levels.
- Uzbekistan currently maintains a high capacity for attracting foreign and domestic investments, but additional strategies could effectively leverage these investments for growth. This is particularly relevant due to the ongoing COVID-19 crisis.

### Identification of capacity gaps

Table 1 presents the issues underlying the high-level assessments, along with proposed solutions and the institutions or parties responsible for their implementation.

Table 1: Capacity Gaps: Identified Issues and Proposed Solutions

Identified Issues	Proposed Solutions	Institutions Responsible for Implementation
<b>Current legislation does not provide sufficient operational framework for protecting cultural heritage sites</b>	<ul style="list-style-type: none"> <li>• Establish an ongoing interdepartmental working group</li> <li>• Analyze current legislation related to CHST management</li> <li>• Analyze best practices in the field of CHST management, taking into account UNESCO recommendations</li> <li>• Develop site manager training to increase capacity in CHST management</li> <li>• Develop a national program for training, seminars, and education courses on the legal protection of cultural heritage sites for state and local authorities, specialists, architects, and educational institutions</li> <li>• Develop a set of guidelines about the protection and use of cultural heritage sites</li> </ul>	Ministry of Culture, SCTD, Ministry of Construction, Science Academy, Ministry of Foreign Affairs, Ministry of Justice, Ministry of Economic Development and Poverty Reduction (former Ministry of Economy)
<b>Urban planning lacks a CHST perspective in preparation or implementation because there is a shortage of trained cultural heritage specialists</b>	<ul style="list-style-type: none"> <li>• Introduce necessary education programs in higher educational institutions and professional development of architects and other specialists</li> <li>• Integrate student exchange programs with foreign universities in areas of sustainable tourism development, protection, and use of cultural heritage sites</li> </ul>	Ministry of Construction, institutions of higher education, Ministry of Culture, Ministry of Foreign Affairs
<b>Risk assessment practices, DRM specialists, and information and communication technology and techniques (ICT) are underutilized at cultural heritage sites</b>	<ul style="list-style-type: none"> <li>• Develop a targeted training program for DRM and CHST</li> <li>• Include international specialists when developing conservation plans for cultural heritage sites</li> <li>• Implement international best practices for cultural heritage sites</li> </ul>	Ministry of Culture, SCTD, Ministry of Construction, design institutions, Ministry of Emergency Situations, Science Academy
<b>Lack of qualified specialists (craftsmen, hereditary masters, appropriate technology, data and inventory, etc.) in cultural heritage conservation</b>	<ul style="list-style-type: none"> <li>• Promote scientific and industrial restoration workshops</li> <li>• Present the draft resolution <i>On the Establishment of Scientific and Industrial Restoration Workshops, and the Strengthening of Their Material and Technical Bases</i> to the Cabinet of Ministers</li> <li>• Continue to develop the practice of making traditional handicrafts</li> </ul>	Ministry of Culture, Hunarmand Foundation
<b>Emergency preparedness and response plans are lacking</b>	<ul style="list-style-type: none"> <li>• Identify professional training programs that instruct individuals on how to develop evacuation plans, use signs, develop warning systems, manage equipment, and enact drills</li> </ul>	Ministry of Culture, Ministry of Foreign Affairs, Ministry of Emergency Situations, hokimiyats

Table 1: Capacity Gaps: Identified Issues and Proposed Solutions (cont.)

Identified Issues	Proposed Solutions	Institutions Responsible for Implementation
<b>Local tourism professionals are not aware of innovative tourism practices at the national level</b>	<ul style="list-style-type: none"> <li>• Develop a cultural tourism strategy that integrates protection and promotion of cultural heritage</li> <li>• Develop guidelines for an adapted reuse of cultural heritage sites (new assignments)</li> <li>• Study cultural heritage sites' capacity (volume capacity, throughput) with the consideration of their protection and tourists' safety</li> <li>• Create infrastructure at cultural heritage sites that allows for the retention and continuation of traditions</li> <li>• Further develop and promote pilgrimage, gastronomic tourism, extreme tourism, ethno-tourism, ecotourism, organizing festivals and conferences</li> </ul>	Ministry of Culture, SCTD, Ministry of Construction, Ministry of Emergency Situations, Science Academy, Ministry of Economic Development and Poverty Reduction (former Ministry of Economy), Ministry of Finance, JSC Uzbekistan Airways (former National Air Company), Ministry of Physical Culture and Sport
<b>Cultural heritage sites are not adequately resilient to natural and man-made induced risks</b>	<ul style="list-style-type: none"> <li>• Embed resilient practices and principles in the master plans of cities and inhabited areas and in the master plans of local, regional, and national heritage sites</li> </ul> <p><i>Note:</i> <i>This recommendation is taken up by Working Group 3.</i></p>	Cabinet of Ministers, Ministry of Construction, Ministry of Culture, SCTD, Ministry of Emergency Situations, Ministry of Economic Development and Poverty Reduction (former Ministry of Economy), Ministry of Finance
<b>Cultural heritage specialists and citizens are largely unaware of identification and management risks at cultural heritage sites</b>	<ul style="list-style-type: none"> <li>• Pilot targeted capacity building programs for site managers about risk identification and management</li> </ul>	SCTD, Ministry of Culture, Ministry of Emergency Situations, Ministry of Foreign Affairs, and relevant international organizations



## Working Group 2—Risk Identification and Emergency Preparedness



### Team Members

Barbara Minguez Garcia, World Bank Cultural Heritage and Disaster Risk Management Consultant; Abdullo M. Nurmatov, Ministry of Emergency Situations of the Republic of Uzbekistan; Kahramon Rustamov Zh, Science Academy of the Republic of Uzbekistan; Ilkhom I. Usmanhodjaev, Director of the Center for Geotechnical Studies under Qishloqqurilishloyiha LLC; Ildar R. Menaliev, Head of the Technical Inspection of Buildings and Structures Department at SUE UzGASHKLITI; Shokhista A. Mamatkulova, Cultural Heritage Sites Surveillance Inspector for the Surkhandarya Region; Alisher I. Ismoilov, Cultural Heritage Sites Surveillance Inspector for the Khorezm Region; Kamol M. Rigoev, First Deputy Head of the Department of Emergency Situations in the Bukhara Region; A. A. Muhamedov, Head of Cultural Heritage Sites Surveillance Inspectorate for Tashkent City, Tashkent and Syrdarya Regions; J. M. Al-laberganov, Khiva City Architect.

### Summary of main principles identified

The second group worked on the identification and elaboration of key principles and practices to develop cultural heritage site risk assessments, data sharing,

and emergency preparedness measures. These principles and practices include proactive identification of risk to cultural heritage sites, involvement and frequent communication with local communities at the sites, and measures to sustainably absorb increases in tourism. The main principles (see Table 2) inform actions to improve the risk identification and emergency preparedness of cultural heritage sites, including:

#### Risk Identification:

- Develop systematic disaster risk identification and assessments to evaluate the potential impact of disasters, either from natural hazards or man-made actions.
- Develop heritage impact assessments to evaluate the impact of tourism and urban development in cultural heritage sites and surrounding areas.
- Develop and implement integrated monitoring systems that regularly control potential disaster risks to cultural heritage sites.

#### Mitigation and Emergency Preparedness:

- Assess the existing capacities of individuals and in-

stitutions to manage disaster risks to cultural heritage sites and determine where capacities could be increased to ensure effective management systems.

- Formulate and implement risk mitigation and preparedness strategies to reduce disaster risks at cultural heritage sites, and build capacity.
- Develop an appropriate regulatory framework for DRM of cultural heritage sites.
- Solidify cooperation between agencies and stakeholders from the heritage, tourism management, and DRM

sectors to encourage responsible information sharing and coordinate growth of sustainable disaster risk mitigation practices.

- Integrate disaster risk reduction measures into sustainable management systems of heritage sites.
- Develop adequate financial mechanisms to fund conservation and tourism management strategies and activities at cultural heritage sites.
- Create qualified specialist positions for the management of cultural heritage sites.

Table 2: Summary of proposed actions for risk identification and emergency preparedness for cultural heritage sites

Principle	Proposed Action	Goal
<b>Risk Identification</b>		
<b>Disaster risk identification and assessment</b>	<ul style="list-style-type: none"> <li>● Evaluate potential impact of disasters</li> <li>● Evaluate cultural heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>● Provide clear understanding of potential disaster impacts</li> </ul>
<b>Heritage impact assessment</b>	<ul style="list-style-type: none"> <li>● Evaluate impact of tourism and urban development on cultural heritage sites</li> <li>● Evaluate impact of tourism on local community surrounding cultural heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>● Provide a basis for data collection</li> <li>● Ensure shared information</li> </ul>
<b>Integrated monitoring system</b>	<ul style="list-style-type: none"> <li>● Develop and implement systems that monitor potential disaster risks on a regular basis</li> </ul>	<ul style="list-style-type: none"> <li>● Ensure that risks are frequently monitored</li> </ul>
<b>Risk Mitigation and Emergency Preparedness</b>		
<b>Capacity assessment</b>	<ul style="list-style-type: none"> <li>● Assess existing capacity of individuals to manage disaster risk</li> <li>● Assess existing capacity of institutions to manage disaster risk</li> </ul>	<ul style="list-style-type: none"> <li>● Identify opportunities to boost capacity</li> <li>● Foster learning exchanges</li> </ul>
<b>Mitigation and preparedness strategies</b>	<ul style="list-style-type: none"> <li>● Formulate strategies to reduce disaster risks at cultural heritage sites</li> <li>● Implement those strategies</li> </ul>	<ul style="list-style-type: none"> <li>● Build capacity of stakeholders and institutions</li> </ul>
<b>Regulatory framework</b>	<ul style="list-style-type: none"> <li>● Develop an appropriate regulatory framework for DRM</li> </ul>	<ul style="list-style-type: none"> <li>● Establish effective regulations</li> </ul>
<b>Cooperation</b>	<ul style="list-style-type: none"> <li>● Strengthen collaborative relationships between agencies and stakeholders from the heritage, tourism management, and DRM sectors</li> </ul>	<ul style="list-style-type: none"> <li>● Encourage responsible information sharing and knowledge exchange</li> <li>● Encourage coordinated growth of sustainable disaster risk mitigation practices</li> </ul>
<b>Disaster risk reduction measures</b>	<ul style="list-style-type: none"> <li>● Integrate disaster risk reduction measures into sustainable management systems of heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>● Enhance resilience and sustainability of site management</li> <li>● Ensure safety</li> </ul>
<b>Financial mechanisms</b>	<ul style="list-style-type: none"> <li>● Develop adequate financing for resilient heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>● Fund resilient conservation and tourism management activities</li> </ul>
<b>Specialized professionals</b>	<ul style="list-style-type: none"> <li>● Create qualified specialist positions to work on DRM in heritage sites</li> </ul>	<ul style="list-style-type: none"> <li>● Ensure professional management of cultural heritage sites</li> </ul>

### In-depth analysis to identify and manage risk

A proper **identification and assessment of disaster risk at CHST sites include** the evaluation of existing risk management capacity, the comparison of risks versus capacity, the identification of shortcomings and gaps, and the design of measures to eliminate them.

- A comprehensive assessment to determine the risk on cultural heritage sites includes assessing:
  - Technical condition of cultural heritage sites
  - Architectural (archeological) assets
  - Biological damage caused to cultural heritage sites
  - Possible impact of hazardous natural phenomena
  - Man-made impacts
  - Fire safety condition

Such an assessment was conducted by the Ministry of Construction on the Kalyan minaret and mosque in Bukhara and can be found in Annex III of this report.

- A capacity assessment to handle risk in cultural heritage sites includes:
  - Analysis of law enforcement practice
  - Analysis of the current system's effectiveness in terms of DRM at cultural heritage sites
  - Assessment of climatic, geographic, and socioeconomic conditions that have a positive or negative impact on current DRM systems at cultural heritage sites
- An integrated, comprehensive system that regularly monitors potential disaster risks for cultural heritage site would:
- Foster continuous monitoring of cultural heritage site status and the interaction and information exchange between executors, supervising authorities, and local communities
- Include a disaster risk monitoring system embedded within the Unified System for Monitoring and Forecasting Emergencies in the Republic of Uzbekistan
- Engage public controllers from local authorities and other NGOs

- Be managed by a department for the sustainability of cultural heritage sites and development of tourism under the Ministry of Culture

Effective measures for **risk mitigation and emergency preparedness** are part of the mechanism to ensure the sustainable functioning of DRM for CHST. A comprehensive program to ensure such measures are implemented would include:

- Preservation and safe and sustainable use of cultural heritage sites, and establishment of a stable buffer zone in accordance with UNESCO recommendations
- Establishment of a sustainable and effective state system for cultural heritage sites management, with emphasis on risk mitigation and preparedness
- Effective financing system to ensure funds for reconstruction and restoration works at cultural heritage sites
- Creation of an educational system to prepare highly qualified specialists in the field of cultural heritage site management, including restoration, reconstruction, and conservation
- Improvement of the regulatory basis to be more in line with international best practices and UNESCO recommendations
- Coordination of activities to mitigate risks and increase resilience in cultural heritage sites, to assess the effectiveness of activities and their adjustment, ensure interaction of interested ministries and departments, and ensure conformity with the recommendations of UNESCO. To be developed across three levels:
  - The national level, through the Ministry of Culture, the Ministry of Emergency Situations, the UNESCO Office in Uzbekistan, and ICOMOS
  - The regional level, through the Council of Ministers of the Republic of Karakalpakstan, regional and Tashkent city *hokimiyats*, and regional subdivisions of the Ministry of Culture and the Ministry of Emergency Situations
  - The site level, through the Cultural Heritage Inspectorate of the regional subdivisions of the Ministry of Culture

## Working Group 3—Enhancement of Site Management Improvement



### Team Members

Junko Mukai, Architectural Heritage Consultant; Dowon Kim, Associate Professor, DMUCH; Mirtolib Mirzahidov, UNWTO Silk Road Office under the SCTD; Shermat Sherimbetov, Central Office on Cultural Heritage; Alisher Khusanov, Fergana and Namangan Region Cultural Heritage Inspectorate; Behzod Umarov, Head of the Regional State Inspectorate of the Andijan Region; Sanjar Allayarov, Communications Officer, UNESCO; and Aʒiʒ Muhammedov, Tashkent City *hokimiyat*.

### Identified obstacles

The third working group identified the following as the largest challenges to enhancing and implementing risk-informed site management in Uzbekistan:

- Legislation: deficiencies in law and policy documents
- Communication: Institutional silos and issues
- Infrastructure: technical infrastructure deficiencies
- Site conservation: absence of correct approach on conservation, protection, and restoration of cultural heritage sites

- Monitoring and reporting: deficiencies in the system of periodic and constant monitoring of repair and restoration works
- Disaster protection: lack of clear and detailed guidelines for cultural heritage protection in the case of disasters
- Financing: access to appropriate finance/funding
- Tourism: remaining gaps in law and legislative documents, and insufficient ability to control the flow of foreign and local tourists

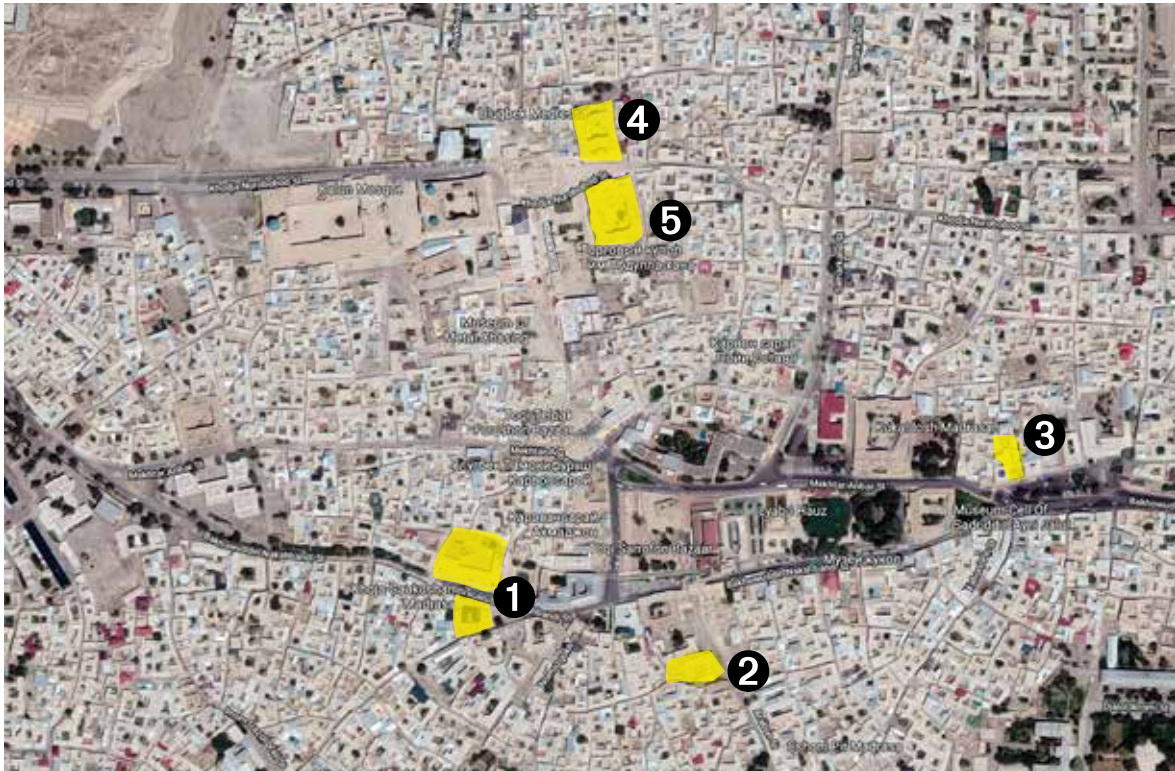
### Proposed solutions

Table 3 summarizes the findings from the working group 3, including the obstacles or challenge areas, and the proposed solutions, as well as potential timelines for implementing these solutions, and the respective institutions responsible.

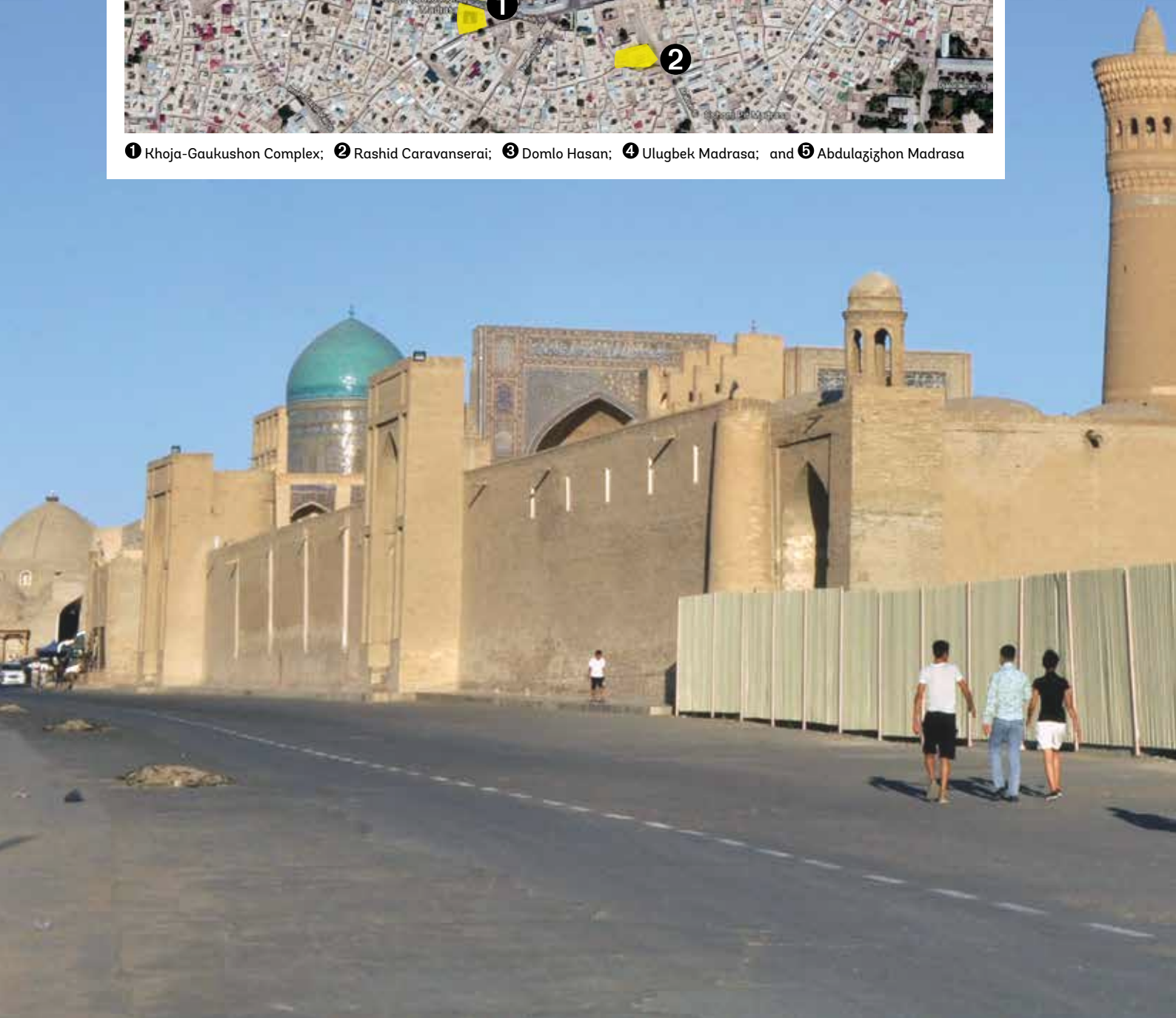
Table 3: Site Management Enhancement: Challenges and Proposed Solutions

Challenge Area	Proposed Solutions	Potential Timeline	Institutions Responsible for Implementation
<b>Legislation</b>	<ul style="list-style-type: none"> <li>Amend applicable provisions of current legislation and develop normative legal acts</li> </ul>	Within four months	Ministry of Culture
<b>Communication</b>	<ul style="list-style-type: none"> <li>Resolve institutional issues regarding the cooperation with ministries and agencies</li> <li>Establish a permanent communications system between these ministries and agencies</li> <li>Engage communities in best practice conservation techniques of cultural heritage</li> </ul>	Constant	Ministry of Culture, Ministry of Construction, Ministry of Internal Affairs, Ministry of Emergency Situations, local administrations
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>Establish infrastructure (roads, drainage systems, wastewater transfer, gas, power, and water supply) that allows for an efficient flow of tourists and a sanitary maintenance of the site</li> </ul>	Within three to four years	Ministry of Culture, Ministry of Construction, local administrations
<b>Site conservation</b>	<ul style="list-style-type: none"> <li>Develop and implement a site maintenance approach based on international best practices of conservation, protection, and restoration of cultural heritage sites</li> </ul>	Within one to two years	Ministry of Culture, Ministry of Construction, Science Academy, Ministry of Higher Education, Ministry of Foreign Affairs
<b>Monitoring and reporting</b>	<ul style="list-style-type: none"> <li>Create a systematic and continuous monitoring and reporting system that provides information on repair and restoration activities</li> </ul>	Within one year	Ministry of Culture, local administration
<b>Disaster protection</b>	<ul style="list-style-type: none"> <li>Design and implement a standard set of guidelines for all cultural heritage protection in the case of disasters</li> </ul>	Within one to two years	Ministry of Culture, Ministry of Internal Affairs, Ministry of Emergency Situations, Ministry of Health, Ministry of Higher Education, international organizations and NGOs
<b>Financing</b>	<ul style="list-style-type: none"> <li>Activate financial mechanisms that will fund forthcoming conservation and disaster risk management projects at cultural heritage sites</li> </ul>	Within one year	Ministry of Finance, Ministry of Culture, Ministry of Economic Development and Poverty Reduction (former Ministry of Economy), Ministry of Investments and Foreign Trade (former State Investment Committee), Ministry of Foreign Affairs, local administrations
<b>Tourism</b>	<ul style="list-style-type: none"> <li>Develop and systematically implement a tourism management plan</li> </ul>	Within one year	SCTD, Ministry of Culture, relevant ministries and agencies

**View of Bukhara Workshop Site Visit locations:**



**1** Khoja-Gaukushon Complex; **2** Rashid Caravanserai; **3** Domlo Hasan; **4** Ulugbek Madrasa; and **5** Abdalazhgon Madrasa



# Site Visits



## Khoja-Gaukushon Complex



Interior of Gaukushon Madrasa (left), and view of the Madrasa and Mosque Minaret (right).



View of the square at the Gaukushon Complex

*Sixteenth century.* This complex principally includes a madrasa, a mosque, and a public square. Some of the rooms at the madrasa are rented by craft vendors, and there are plans to build a hostel in the madrasa as well, although permission to do so is still pending. Within the entire complex, there is no drainage system, and to date there has not been an assessment made on the internal walls. The mosque is expected to be reconstructed so it can be used as a set of spaces to rent out to shop owners and to become coffee houses.



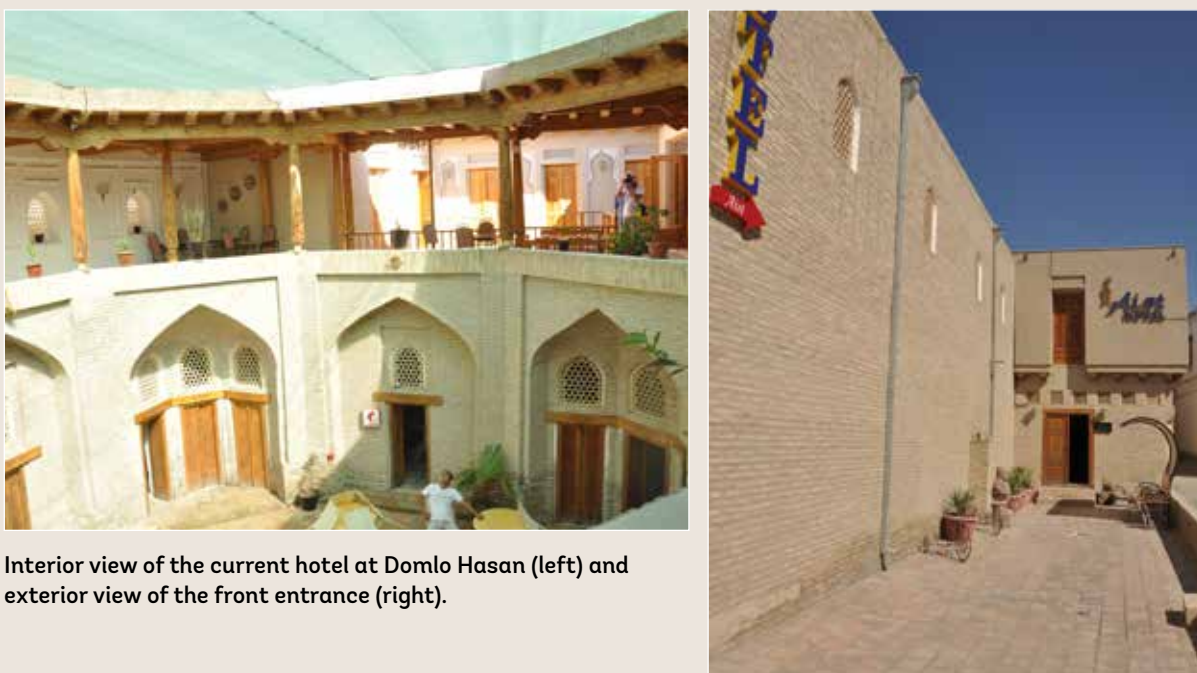
## Rashid Caravanserai



Interior view of Rashid Caravan Saray.

*Eighteenth century.* This site presents significant problems due to its lack of conservation. This site is slated to be reconstructed as a hotel.

## Domlo Hasan



Interior view of the current hotel at Domlo Hasan (left) and exterior view of the front entrance (right).

*Nineteenth century.* This structure has been restored and adapted into its current use as a hotel. The floor was removed so that new systems could be installed. The floor was reinserted in its original form after the systems' installation. The top of the building is made with new bricks, while the lower parts of the building structures are made with the original bricks.

## Ulugbek Madrasa

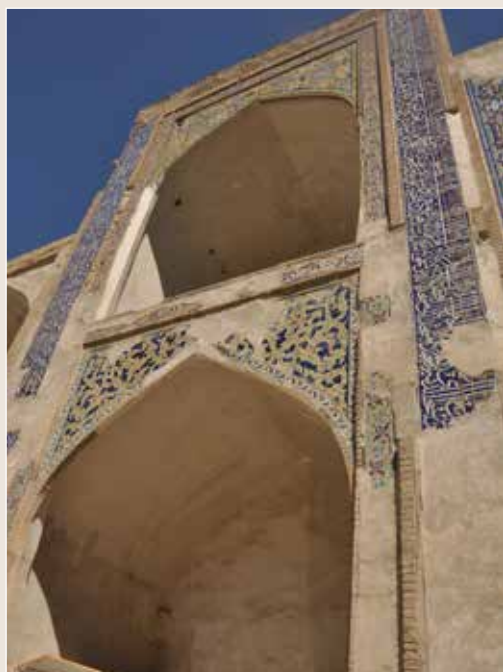


Interior and details (top), and facade of the Ulugbek Madrasa.

*Fifteenth century.* The Ulugbek Madrasa building presents a myriad of conservation issues. Some of the visible cracks are the result of the M7.0 earthquake in 1976. According to the local community, some discoloration of the bricks is caused by a past explosion of Russian bombs.

A drainage system made up of piping is present; this includes water reservoirs under the pavement. This system is intended to be connected in the future to a drainage system being built for the Ark site. Furthermore, wooden beams included in the walls are intended to absorb rainwater and prevent water from seeping into the walls, and the wood inside the walls protects against any adverse effects of humidity.

## Abdulazizhon Madrasa

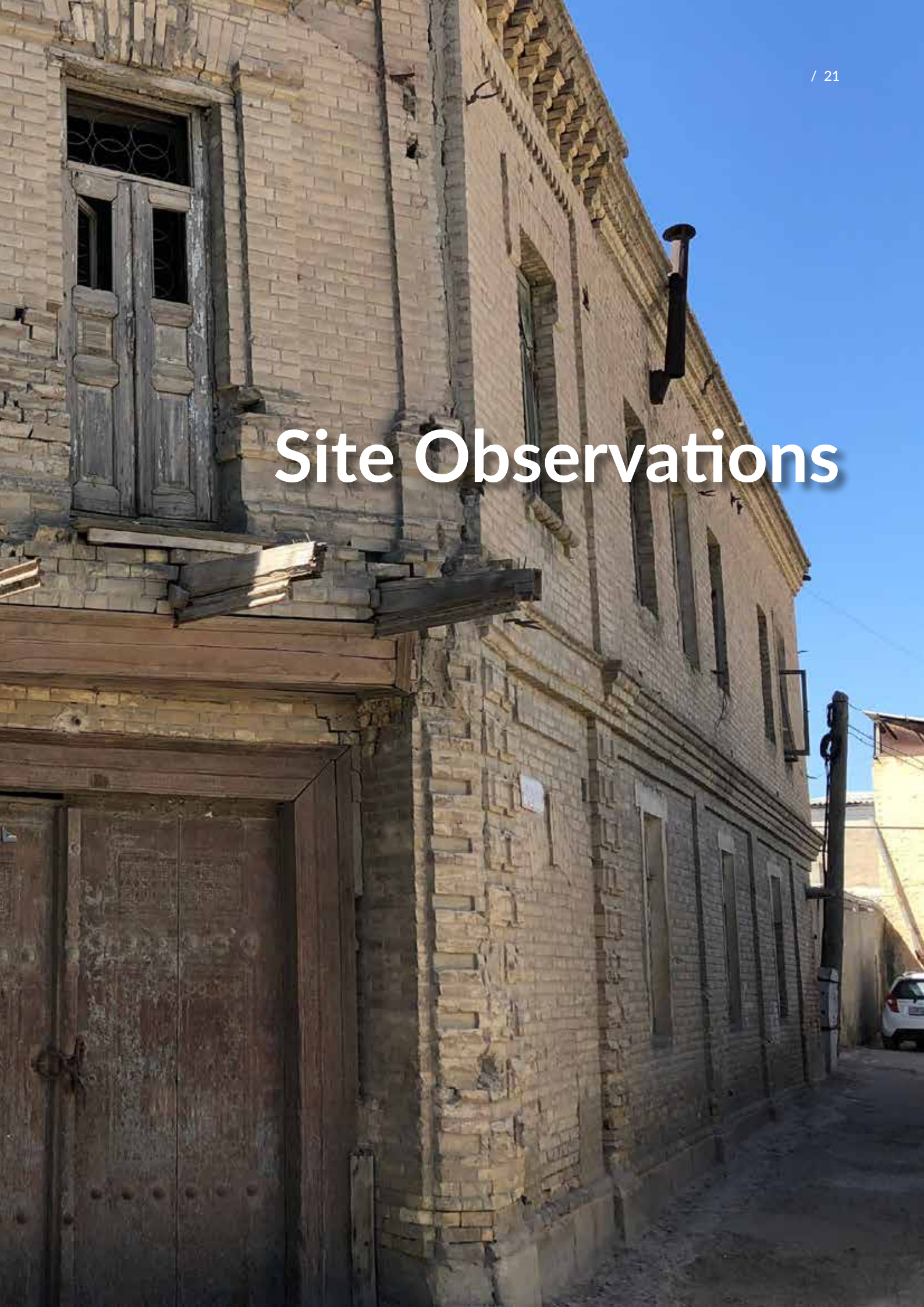


Detail and external view of the Abdulazizhon Madrasa (top and left), and interior detail (right).

*Seventeenth century.* The roof of this structure is plain and flat with no slope for rainwater drainage. As a result, rainwater accumulates on the roof or seeps into the structure. Although a drainage system was working before the 1920s, the twentieth century Russian invasion destroyed it.



# Site Observations



## Site Vulnerability



Turki Jandi Mausoleum.



Caravanserai.



Abdulazizhon Madrasa.



Designated sites throughout the city face serious structural vulnerabilities and other site management challenges, including general neglect, lack of a budget, and/or lack of an operating model. The scope of this issue across Bukhara and the country is not known, but is believed to be widespread.

## Development Projects



The city of Bukhara implemented a redevelopment project in an area adjacent to the Poi Kalan and Ark sites. Such efforts appear to have been considered with a focus on tourism development, but may present an opportunity for additional management and cultural heritage conservation efforts and review.



View of the area adjacent to the Poi Kalan and Ark sites.

## Preparedness Efforts



Ark Fortress Museum.



Kalon Masjidi: Visitor-friendly signage is desirable

Some DRM preparedness features, such as basic fire protection, have been integrated into sites. However, museums and related artifacts remain at risk to fire and earthquakes, as well as possible general deterioration. Authorities have placed limited signage and guidance on evacuation routes and locations, which could also place tourists at potential risk in case of a major disaster event.





## Immediate Needs

The three working groups agreed that the most time-sensitive actions are those regarding the direct management of risks currently threatening Uzbekistan's CHST assets. The five most important actions are outlined below:

1. **Identify the risks that local priority cultural heritage sites currently face, as well as the current risks of loss for national cultural heritage assets.** Develop technical assessments of priority sites for structural stability and related emergency action plans, together with risk assessments, to evaluate and take action on local cultural heritage sites. And conduct a rapid national-level assessment to determine the potential losses to the country's CHST assets in case of critical scenario events.
2. **Plan, design, and execute methods for conservation, regular maintenance, and appropriate restoration of CHST sites.** Restoration/conservation efforts should be planned ahead and executed instead of engaged in as troubleshooting and ad hoc reactions. There is a chance to base these efforts on priority needs determined by a preliminary assessment of all cultural heritage assets, and subsequently to put in place certain mechanisms intended to facilitate the site's sustainability. Such mechanisms may include better seismic resilience, flood protection/drainage, erosion control/slope stabilization, structural reinforcement, and other measures appropriate to local cultural heritage site conditions that have a minimal impact on heritage values.
3. **Develop preparedness plans and emergency drills for sites and people that involve local communities and agencies on the local, regional, and national levels.** DRM plans and emergency drills should be developed and executed by local site management authorities and local stakeholders, in close coordination with local first responders, the Ministry of Construction, SCTD, and the Ministry of Emergency Situations. Furthermore, the plans and drills need to consider the participation of local communities to understand the risks on the site and to determine the roles/emergency responses of the local community on the disaster situation.

#### 4. Enhance the institutional capacity for resilient cultural heritage by making changes in policy. These changes include:

- i. Coordinating efforts and exchanging information for consistency at all levels (national, regional, and local);
- ii. Reviewing existing policies and guidelines to integrate DRM, cultural heritage, and tourism—thus formulating an integrated strategy;
- iii. Developing an inclusive approach for strategies and roadmaps involving the community, the private sector, NGOs (religious bodies and cultural experts), academia, scientists, and so on;
- iv. Mainstreaming cultural heritage aspects into comprehensive tourism strategies and the overall vision; these documents should reflect the current carrying capacity of sites in terms of infrastructure to ensure a balance between historic center and periphery areas; and
- v. Ensuring that restoration works follow strict guidelines and codes developed by the Ministry of Culture in technical cooperation with the Ministry of Construction.

Enforcement of proper guidelines would be another issue. Policies and legislation are needed to conserve historic cities and manage periphery areas (or buffer zones), and for disaster risk management of cultural heritage at the national level.

5. **Provide trainings for the staff of ministries of culture, tourism, construction, and emergency services/DRM using international best practice approaches and techniques for conservation, risk assessment, heritage impact assessment, tourism management, and emergency preparedness.** There is an opportunity to establish training methods and courses that use the most current cultural heritage site management information, DRM principles, and communication technology (GIS mapping, for instance). Additionally, there is an opportunity to train professionals on the appropriate technology for conservation and adaptive approaches for cultural heritage buildings/sites.

## Additional Options for Managing Risk

In pursuing the five overarching recommendations for time-sensitive actions listed above, the workshop participants brainstormed other options that the GOU may wish to employ.

### Management plan for heritage sites and cities

- The GOU may wish to encourage the formulation, implementation, and review of a management plan for heritage sites/cities that would include: development of an inventory and database system for all heritage components in the historic city, keeping in mind their usability for management as well as for emergency response and post-disaster recovery;
- Heritage value identification and conservation principles/strategies of historic city and heritage buildings;
- Plan and strategy for adaptive reuse of heritage buildings and sites;
- Set periodic risk assessments of heritage considering vulnerabilities and cultural values, with the subsequent application of methods for their mitigation (e.g., a regular monitoring system). This would require: (i) condition assessment (based on structural and non-structural as well as geotechnical investigations); (ii) risk map for CHST prepared using GIS; and (iii) heritage impact assessment extended to any proposed development project inside the historic city.
- Establish site development plan and regulations within historic city and periphery areas;
- Institute a mechanism for communication and coordination between local authorities, ministries of culture, tourism, and DRM, and all relevant stakeholders;
- Ensure that visitor/tourism management and DRM are part of the overall management plan of the historic city; and
- Develop emergency preparedness and response procedures for saving people's lives as well as heritage during emergency situations.

In the process of developing a management plan, the following themes should be considered:

### Provisions of the Existing Heritage Act

The exercise of developing management plans for heritage sites provides practical ideas for provisions that could be added into existing legislation. According to the workshop participants from the culture sector, the existing Act for

cultural heritage concerns only the protection of monuments. This means that the concept of a *historic city* is not reflected in the national laws, despite having more than 20 historic cities in the country and 4 cities listed as UNESCO World Heritage (WH) Sites. The Outstanding Universal Value (OUV) of these *historic cities* includes their urban layout, as buildings have had a profound influence on the evolution and planning of towns in Central Asia. Although the Ministry of Culture has recently prepared bylaws to address this issue, an amendment to the Act itself would provide the necessary legal backup to regulate the development surrounding the historic cities and adequately manage the disaster risks they currently face. In the process of making such an amendment, a national conference could be organized to collect case studies and discuss the country's conservation principles among heritage professionals. Regulating development work in and around heritage sites is a very challenging task for which the empowerment of heritage managers is critical. However, this alone would not be enough for sufficient monitoring. To secure support from the municipality, the existing city master plan needs to integrate heritage conservation and management into its legal framework.

### Tourism Management

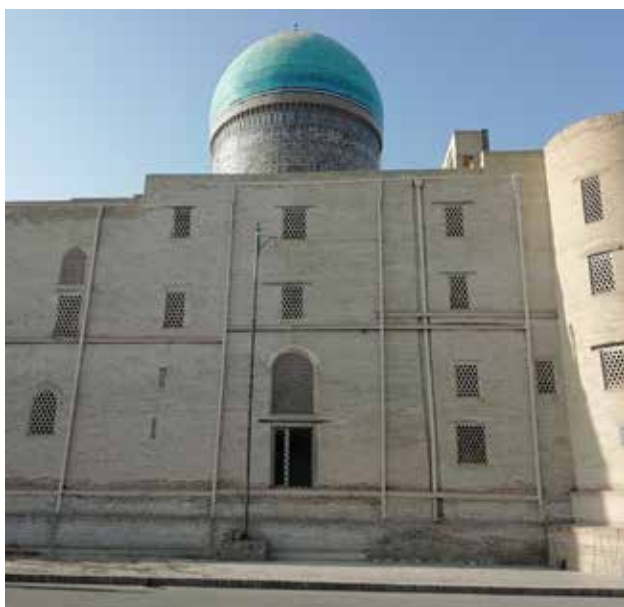
To date, insufficient measures have been introduced to manage tourist flows or to secure financial returns from tourists, which could then be invested into the better maintenance and management of heritage sites, to increase their resilience. Different schemes that have minimal negative impact on heritage values should be considered: charging an entrance fee to the historic city, offering additional paid guided tours, or employing more tourist-friendly signage and maps.

### Structural Issues

The current structural condition of many buildings is poor. Most often this is because walls and domes sustain cracks due to the salinity of underground moisture. One solution is to employ local master craftsmen who have the knowledge to confront these particular challenges and restore the historic buildings to stronger structural condition. Additional solutions include applying modern materials (such as steel sections to support a wall that is bulging out, bitumen sheets to prevent walls from groundwater entry, etc.) to retrofit a site. This is the key measure for the seismic resilience of the building, and further studies of appropriate measures need to be con-

tinued. Guidelines should be publicized to maintain a high quality of conservation and restoration work.

It is important to prioritize the restoration needs of heritage sites because not only are they a popular point of attraction for many visitors, but the damage to these sites is widespread. Understanding a site's cultural value is crucial when developing its management plan.



Wall of Miriarab Madrasasi supported with steel section.



Water prevention layer between bricks.

### Adaptive Reuse

Adapting a cultural heritage site so that it becomes used for a new purpose is a meaningful way to keep the site active. However, stricter regulations are necessary throughout this process of adaption and reuse to avoid spoiling the value of the heritage. For example, in cases where heritage sites become spaces for craft shops, with vendors renting the heritage buildings and sites, some vendors respect the delicacy of the walls when choosing how to showcase goods on the walls while others do not.



Ulugbek Madrasasi, heritage wall covered by souvenirs

### Development of sustainable tourism guidelines

The GOU has a chance to develop sustainable tourism management guidelines for each heritage city that consider the following:

- Visitor-carrying capacity of heritage sites to protect the safety of visitors as well as to avoid negative impacts on heritage values;
- Financial models needed to ensure the sustainability of heritage sites/cities;
- Design and layout of tourism infrastructure and services (including signage) that has minimal impact on the heritage values. To that end, any retrofitting of heritage buildings should be based on a clear risk assessment, and heritage values assessments should be undertaken following duly established procedures that would ensure vulnerability reduction with minimal impact on the heritage values;
- Adaptive reuse of heritage buildings/sites that considers economic sustainability as well as protection of heritage values;
- Tourism development programs that ensure benefits to local communities to avoid the threat of gentrification; and
- Pilot projects that demonstrate an integrated approach for managing heritage sites through conservation, tourism management, and disaster risk management. Such pilot projects can then serve as good practices.

### Potential taskforce for resilient CHST

As a final recommendation, the GOU may wish to support the formulation of a **national technical working group** involving some of the workshop participants and additional relevant officials as a platform for cross-sectorial cooperation. The working group members could share with each other all the existing laws, policies, and programs concerning cultural heritage, tourism, and DRM. The group could sort out the points of contradiction, overlapping, or loopholes in the legislative and institutional framework, and identify areas of cooperation.

Workshop participants noted potential opportunities to:

- Conserve and protect irreplaceable heritage (on which tourism is based);

- Increase tourism at the same time that safeguards tourists and local communities;
- Engage related businesses and connect with the private sector for heritage protection;
- Increase land value as a result of mainstreaming resilient heritage resources;
- Bolster economic growth as a result of fostering resilient CHST; and
- Consider options to connect these efforts to the World Bank, UNESCO, and partners' support.



# Conclusions

The workshop confirmed there is a need for a coherent and integrated approach to cultural heritage, tourism, and disaster risk management. This should include a comprehensive strategy that is coordinated at the local, regional, and national levels to better understand the tourist flow, the cultural heritage values, and vulnerabilities—and therefore to identify the investments needed. The main recommendations achieved from the workshop findings would include:

**Enhancing institutional capacity to ensure resilient cultural heritage and sustainable tourism.** Coordination efforts and information exchange should be enhanced for consistency and efficiency, at both the policy and operational levels. This could include further in-depth review and consolidation of policies and guidelines to integrate DRM, cultural heritage, and tourism effectively through the formulation of an integrated strategy and/or national technical working group as a platform for cross-sectorial cooperation.

Likewise, to increase the ability of institutions to create sustainable and resilient cultural heritage sites, the following could be encouraged:

- Carrying capacity of cultural heritage sites in terms of the site infrastructure (for example, the number of ways for visitors to enter the site) and management (such as the amount of clear signage);
- Financing and private sector engagement models that would fund both conservation and tourism activities;
- Conservation needs of historic city centers versus the development needs of periphery areas;
- Guidelines and codes developed by the Ministry of Culture, as informed by the Ministry of Construction; and
- Importance of completing a targeted assessment of the risks to cultural heritage and tourism assets in Uzbekistan to allow additional national- or regional-level understanding of potential losses and impacts on tourism and the economy to clarify and spur needed prioritization and investment.

**Developing pilot projects** aiming to standardize an effective mechanism **based on cross-collaboration**

**among cultural heritage, tourism, and disaster risk management sectors.** To encourage cross-sectorial cooperation and empower stakeholders, pilot project(s) that aim to develop and execute a comprehensive management plan at a specific city or site could demonstrate the value of such an approach. Such efforts should include:

- Heritage value identification and prioritization;
- Structural assessments;
- Conservation principles/strategies for historic buildings and movable heritage;
- Regulations and guidelines for new development in both the core and the buffer zone of heritage sites;
- Regulations and guidelines for adaptive reuse and tourism management; and
- Disaster risk assessments.

**Improving staff-level capacity building to promote the development of resilient cultural heritage and sustainable tourism.** Increase the capacity of heritage- and tourism-related staff to identify risks, secure sites, assist people, and so forth. The GOU could require the organization and development of training and increase resources and shared knowledge through the following:

- Developing/updating cultural heritage and tourism inventories in line with other systems (for example, geographic information systems (GIS) mapping and open source approaches);
- Conducting and communicating risk assessment to cultural heritage and tourism site stakeholders, communication campaigns, etc.;
- Establishing emergency preparedness and response procedures for heritage sites;
- Implementing appropriate building/restoration techniques, including the engagement of local craftspeople, fostering intangible heritage use and value; and
- Instituting methods for involving community, the private sector, nongovernmental organizations (NGOs, such as religious bodies and cultural experts), academia, scientists, and apprenticeship programs when evaluating the risks facing a cultural heritage site, and planning for the site's resilience.

### Further opportunities to strengthen resilience of CHST

Culture and cultural heritage are an engine for post-crisis social recovery. As stated in the World Bank–UNESCO Culture in City Reconstruction and Recovery (CURE) Framework: *From cultural heritage to cultural and creative industries, from sustainable tourism to cultural institutions, culture enables and drives the social, environmental, and economic dimensions of sustainable development. It is a crucial factor for social cohesion and poverty alleviation and supports transversal issues such as education, urban development, and gender equality to enable the full achievement of development outcomes. It has become clear that culture can no longer be a dividend of development, but is rather a prerequisite to its achievement.*<sup>16</sup> Cultural heritage assets, both tangible and intangible, play an essential role for societies. Their protection and conservation are therefore critical to help local communities in times of crises.

At the same time, CHST plays an important role for disaster risk reduction and preparedness, and the Sendai Framework<sup>17</sup> calls for the need to protect and draw on cultural tangible and intangible heritage as an asset for resilience. In particular, the framework calls for: (i) the integration of a cultural perspective in all policies and practices, (ii) the understanding of the cultural heritage impacts, as appropriate, in the context of event-specific hazard-exposure and vulnerability information; (iii) the protection of cultural institutions and other sites of historical, cultural heritage, and religious interest; and (iv) the use of traditional, indigenous, and local knowledge and practices to complement scientific knowledge in disaster risk assessment.<sup>18</sup>

Therefore, the integration of CHST and DRM, through fostering collaboration between specialists from each sector and implementing activities to strengthen this connection, is critical to protect assets.

The COVID-19 crisis is creating additional challenges and stresses to the protection and conservation of CHST, increasing the risk of looting and the effects of lack of maintenance, in addition to the losses of revenues at many sites. Alternative solutions, however, to try to retain visitors and prepare for reopening are being developed through virtual tours in many museums and heritage sites.<sup>19</sup> UNWTO is also promoting the idea of discovering new cultures while respecting the current impossibility of traveling through the campaign *Stay Home Today, #TravelTomorrow*.<sup>20</sup>

New technological options are allowing governments, site managers, and other interested parties to develop and deploy new systems to protect CHST sites and assets. Several institutions are supporting the digitization of endangered cultural heritage sites with three-dimensional modeling, which allows improved understanding of the underlying sites, opportunities for targeted conservation, and greater engagement with people, including potential tourists from around the world<sup>21</sup>. Specific technical options include higher-cost laser scanners, which allow high-resolution point cloud data, and lower-cost photogrammetry options, which tend to produce lower-resolution data, but may be more easily integrated with some functionalities. Many site managers are also considering new options for tourist management, including human trajectory data for WH sites, such as Machu Picchu, to improve visitor engagement and reduce wear-and-tear on sites. Such simulations provide insight about how to coordinate social distancing amongst visitors. Consequently, the tool contributed to maximize the number of visitors, contributing to secure the economic sustainability of WH enterprises. Furthermore, open mapping options, such as OpenStreetMap, are allowing the creation of low-cost open data infrastructure for GIS, which can improve CHST asset management.

<sup>16</sup> [openknowledge.worldbank.org/bitstream/handle/10986/30733/9789231002885.pdf?sequence=11&isAllowed=y](https://openknowledge.worldbank.org/bitstream/handle/10986/30733/9789231002885.pdf?sequence=11&isAllowed=y)

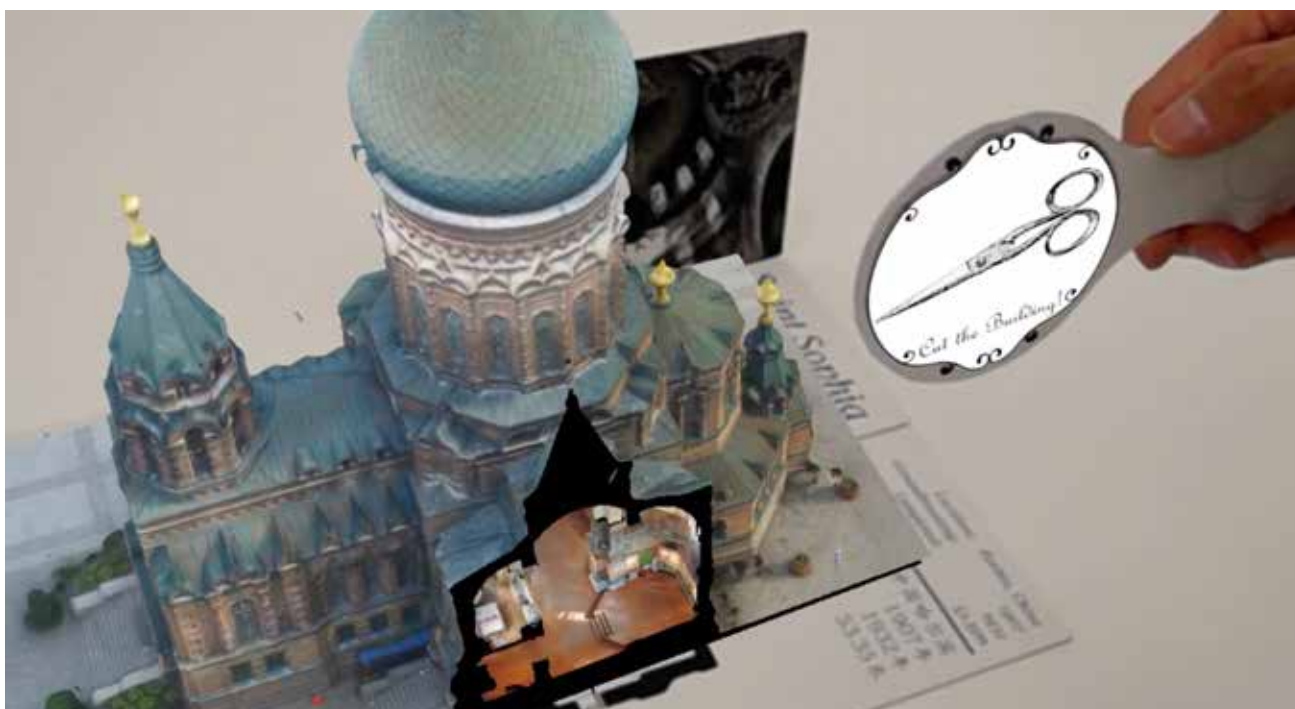
<sup>17</sup> [undrr.org/implementing-sendai-framework/what-sf](https://undrr.org/implementing-sendai-framework/what-sf)

<sup>18</sup> [documents.worldbank.org/curated/en/108261583387634581/pdf/Disaster-Risk-Management-in-the-Culture-in-City-Reconstruction-and-Recovery-CURE-Framework-Technical-Note.pdf](https://documents.worldbank.org/curated/en/108261583387634581/pdf/Disaster-Risk-Management-in-the-Culture-in-City-Reconstruction-and-Recovery-CURE-Framework-Technical-Note.pdf)

<sup>19</sup> In Uzbekistan: [tourstouzbekistan.com/en/virtual-tours.html](https://tourstouzbekistan.com/en/virtual-tours.html)

<sup>20</sup> [unwto.org/news/stay-home-today-traveltomorrow](https://unwto.org/news/stay-home-today-traveltomorrow)

<sup>21</sup> Some examples include ICONEM, which has developed 3D models for several endangered heritage sites: [iconem.com/en/](https://iconem.com/en/); and the 3D model of Shitthaung Pahto, Mrauk-U, Myanmar by 3XVIVR Productions: [historyview.org/library/shitthaung/](https://historyview.org/library/shitthaung/)



Augmented Reality (AR) Mail from Harbin, St. Sophia Cathedral<sup>22</sup>



Example of human trajectory tracking data and applications at Machu Picchu, Peru (P. Gonzalez Rojas)<sup>23</sup>

Looking into the future, new, upcoming opportunities would need to connect resilient cultural heritage with ICT, to further increase both physical and economic resilience, and support sustainable tourism.

<sup>22</sup> [amailfromharbin.netlify.app/](http://amailfromharbin.netlify.app/)

<sup>23</sup> [youtube.com/watch?v=EdJeV6E4H3U](https://youtube.com/watch?v=EdJeV6E4H3U)

## References and resources

### WORLD BANK

- Urban and Disaster Risk Management Responses to COVID-19: [pubdocs.worldbank.org/en/575581589235414090/World-Bank-Urban-DRM-COVID-19-Responses.pdf](https://pubdocs.worldbank.org/en/575581589235414090/World-Bank-Urban-DRM-COVID-19-Responses.pdf) (Urban, Disaster Risk Management, Resilience and Land (GPURL) April 3, 2020
- Culture in City Reconstruction and Recovery (CURE) Framework: [openknowledge.worldbank.org/bitstream/handle/10986/30733/9789231002885.pdf?sequence=11&isAllowed=y](https://openknowledge.worldbank.org/bitstream/handle/10986/30733/9789231002885.pdf?sequence=11&isAllowed=y)
- Disaster Risk Management in the CURE Framework, Technical Note: [documents.worldbank.org/curated/en/108261583387634581/pdf/Disaster-Risk-Management-in-the-Culture-in-City-Reconstruction-and-Recovery-CURE-Framework-Technical-Note.pdf](https://documents.worldbank.org/curated/en/108261583387634581/pdf/Disaster-Risk-Management-in-the-Culture-in-City-Reconstruction-and-Recovery-CURE-Framework-Technical-Note.pdf)
- Resilient Cultural Heritage: Learning from the Japanese Experience: [gfdrr.org/en/publication/resilient-cultural-heritage-learning-japanese-experience](https://gfdrr.org/en/publication/resilient-cultural-heritage-learning-japanese-experience)

### UNESCO

- Culture & COVID-19: Impact and Response: [en.unesco.org/news/culture-covid-19-impact-and-response-tracker](https://en.unesco.org/news/culture-covid-19-impact-and-response-tracker)
- Monitoring World Heritage site closures: <https://en.unesco.org/covid19/cultureresponse/monitoring-world-heritage-site-closures>

### UNWTO

- COVID-19: Putting People First: [unwto.org/tourism-covid-19](https://unwto.org/tourism-covid-19)
- Global Guidelines to Reopen Tourism:
  - [unwto.org/news/unwto-launches-global-guidelines-to-restart-tourism](https://unwto.org/news/unwto-launches-global-guidelines-to-restart-tourism)
  - [webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-05/UNWTO-Global-Guidelines-to-Restart-Tourism.pdf](https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2020-05/UNWTO-Global-Guidelines-to-Restart-Tourism.pdf)

### ICCROM

- First Aid and Resilience to Cultural Heritage in Times of Crisis:
  - Handbook: [iccrom.org/sites/default/files/2018-10/fac\\_handbook\\_print\\_oct-2018\\_final.pdf](https://iccrom.org/sites/default/files/2018-10/fac_handbook_print_oct-2018_final.pdf)
  - Toolkit: [iccrom.org/sites/default/files/2018-10/fac\\_toolkit\\_print\\_oct-2018\\_final.pdf](https://iccrom.org/sites/default/files/2018-10/fac_toolkit_print_oct-2018_final.pdf)
- Heritage in Times of COVID: [iccrom.org/heritage-times-covid](https://iccrom.org/heritage-times-covid)



# Annexes



## Annex I—Detailed Workshop Agenda

### Workshop on Resilient Cultural Heritage and Sustainable Tourism Development in Uzbekistan

Bukhara, August 13–17, 2018

Time	Session	Speaker/Lead
<b>Monday, August 13, 2018, 9:00 a.m.–6:00 p.m.</b>		
9:00	Registration	
9:30	Welcome and Introduction to the Workshop	<b>SCTD/GOU &amp; World Bank Representative</b>
10:00	- <b>Introduction to DRM for CHT:</b> What does emergency preparedness and response include for cultural heritage sites? (15 min) • Discussion (15 min)	<b>James Newman</b> DRM Specialist, Team Leader, Resilient Cultural Heritage and Tourism Knowledge Program, GFDRR, World Bank
10:30	<b>Uzbekistan's Challenges and Goals to Achieving Resilient Cultural Heritage and Tourism:</b> What hazards and vulnerabilities put Uzbekistan's heritage and tourism at risk? What are the challenges? What would Resilient CHT in Uzbekistan look like? (15 min) • Discussion (15 min)	<b>Mirtolib Mirgahidov</b> Director of Unitary Enterprise, UNWTO Silk Road Office under SCTD  <b>Kahramon Rustamov</b> Director of Republican Centre for Combatting Termites
11:00	<b>Coffee/Tea Break</b>	
11:30	<b>Overview of Cultural Heritage Management in Uzbekistan:</b> Overall introduction to MOC's assets and practices at country and regional levels (10 min) • Questions (5 min)	<b>Kamola Akilova</b> Deputy Minister of Culture Ministry of Culture
11:45	<b>Overview of DRM Institutions and Practice:</b> Overall introduction to DRM, including key risks, agencies involved, and plans. Brief explanation of any ministry engagement of DRM at CHT sites to date. (10 min) • Questions (5 min)	<b>Abdullo Nurmatov</b> Head of Department Ministry of Emergency Situations
12:00	<b>The New Ministry of Construction and Its Context with Resilient CHT:</b> What are the MOC's mandates and plans (e.g., licensing, information for urban construction, etc.)? How does it engage the resilient CHT agenda in terms of CH, tourism development, and DRM? (10 min) • Questions (5 min)	<b>Ildar Minaliev</b> Head of Technical Inspection Department UzGASHKLITI LLC Ministry of Construction
12:15	<b>Discussions and questions</b>	
1:00	<b>Lunch Break</b>	
2:00	<b>Review of Morning Session</b>	Facilitated by SCTD/GOU and the World Bank
2:30	<b>The Role of Local Administrations in Resilient CHT:</b> How does local government support the resilient CHT agenda in terms of CH, tourism development, and DRM? Biggest challenges? Best examples? (10 min) • Questions (5 min)	<b>Botir Shahriyrov</b> Deputy Governor of Bukhara region on Tourism
2:45	<b>Engaging the Private Sector to Enhance Resilience for Culture and Tourism:</b> Current observations and efforts by the Chamber (10 min) • Questions (5 min)	<b>Ilhom Bafoev</b> Head of Bukhara Regional Department of Chamber of Commerce and Industry

## Annex I—Detailed Workshop Agenda (cont.)

Time	Session	Speaker/Lead
3:00	<b>How to Preserve and Protect CHT before, during, and after a Disaster:</b> Current practice and opportunities, including how to engage the community effectively (10 min) • Questions (5 min)	<b>Lola Muhutova</b> Head of Department for Conservation and Restoration of Applied Arts Hunarmand Foundation
3:15	<i>Coffee/Tea Break</i>	
4:00	Discussion and consensus on format/content of Outputs of this Workshop	Facilitated by SCTD/GOU and the World Bank
5:00	Wrap-up/Summary/Decisions from Day 1	
<b>Tuesday, August 14, 2018, 8:00 a.m.–6:00 p.m.</b>		
8:00	Bukhara Site Visits	SCTD/GOU
1:00	<i>Lunch Break</i>	
2:00	Site Visit Review and Discussion	Facilitated by SCTD/GOU and the World Bank
3:00	<b>TOPIC 1: Making Site Management Plans Work</b> Table Exercises and Guideline/Output Development by GOU Working Groups Working Groups Report Back	<b>Junko Mukai</b> Heritage Architect Consultant
4:30	Discussion on Compilation Process for Outputs from Each Topic	Facilitated by SCTD/GOU and the World Bank
5:00	Wrap-Up/Summary/Decisions from Day 2	Facilitated by SCTD/GOU and the World Bank
<b>Wednesday, August 15, 2018, 9:00 a.m.–6:00 p.m.</b>		
9:00	Recap of Days 1–2 and Introduction to Importance of Day 3 Working Session and Outputs Expected	Facilitated by SCTD/GOU and the World Bank
9:30	<b>TOPIC 2: Community Engagement Models for More Resilient CHT Management and Opportunities</b> Table Exercises and Guideline/Output Development by GOU Working Groups Working Groups Report Back	<b>Dowon Kim</b> Associate Professor at DMUCH, Ritsumeikan University
11:00	<i>Coffee/Tea Break</i>	
11:30	<i>Report Back on Progress and Status of Draft Document/Output</i>	Working Groups
12:30	<b>Working Together to Develop Guidelines for Resilient Cultural Heritage and Tourism: An Example from Bhutan</b>	<b>Barbara Minguez Garcia</b> DRM and CH Consultant, World Bank, GFDRR
1:00	<i>Lunch Break</i>	
2:00	<b>TOPIC 3: Institutional Frameworks</b> Table Exercises and Guideline/Output Development by GOU Working Groups	<b>Professor Rohit Jigyasu</b> Conservation & Risk Management Consultant; UNESCO Chair Professor, R-DMUCH; Vice President, International Council on Monuments and Sites—ICOMOS
3:00	<i>Coffee/Tea Break</i>	
3:30	Working Groups Report Back (Continued)	Facilitated by SCTD/GOU and the World Bank
4:00	Working Groups Complete Compilation of Outputs Produced from Topics 1–3	Facilitated by SCTD/GOU and the World Bank
5:00	Wrap-Up/Summary/Decisions from Day 3 and Planning for Days 4–5	Facilitated by SCTD/GOU and the World Bank

## Annex I—Detailed Workshop Agenda (cont.)

Time	Session	Speaker/Lead
<b>Thursday, August 16, 2018, 9:00 a.m.–6:00 p.m.</b>		
9:00	Introduction to Days 4–5	
10:00	Working Groups Complete Development and Compilation of Agreed Outputs, Working with each Expert on Demand	Facilitated by SCTD/GOU and the World Bank
5:00	Wrap-Up/Summary/Decisions from Day 4	
6:00	Final Workshop Dinner in Bukhara	
<b>Friday, August 17, 2018, 9:00 a.m.–5:00 p.m.</b>		
9:00	Introduction to Final Day	
10:00	Working Groups Develop Presentations on the Outputs, Working with Each Expert on Demand	Facilitated by SCTD/GOU and the World Bank
2:00	Final Pitch Sessions by each Working Group to Expert Panel	
4:00	Wrap-up/Summary/Decisions from Day 5	

## Annex II—List of Participants

### Workshop on Resilient Cultural Heritage and Sustainable Tourism Development

Bukhara, August 13–17, 2018

Organization	Participant
Ministry of Construction <i>(including 2 representatives of design and survey organizations licensed to carry out design and survey works on cultural heritage sites)</i>	Ilkhom Usmanhodjaev, Director of the Center for Geotechnical Studies under Survey Institute, Qishloqqurilishloyiha LLC
	Ildar Menaliev, Head of the Technical Inspection Department of UZGASHKLITI LLC
Ministry of Culture (main scientific and production directorate for the protection and use of cultural heritage sites)	Shermatjon Sherimbetov, Head of the Department for Identification, Accounting and Maintenance of Cultural and Archaeological Heritage Sites Cadastre
	Alisher Ismailov, Head of the Regional State Inspectorate of Khorezm Region
	Maysara Naberaeva, Head of the Regional State Inspectorate of Samarkand and Jizzakh Regions
	Jahangir Khalilov, Head of the Regional State Inspectorate of Kashkadarya Region
	Sukhrob Babaev, Head of the Regional State Inspectorate of Bukhara and Navoi Regions
	Alisher Khusanov, Head of the Regional State Inspectorate of Fergana and Namangan Regions
	Kuanyshebek Sharipov, Head of the Regional State Inspectorate of the Republic of Karakalpakstan
	Shokhista Mamatkulova, Head of the Regional State Inspectorate of Surkhandarya Region
	Behzod Umarov, Head of the Regional State Inspectorate of Andijan Region
	Akbar Mukhamedov, Head of the Regional State Inspectorate of Tashkent city, Tashkent and Syrdarya Regions
Ministry of Emergency Situations	Abdullo Nurmatov, Head of Directorate
	Kamol Rizoev, First Deputy Head of the Department of Emergency Situations of Bukhara Region
SCTD	Abdulaʼiz Akkulov, Deputy Chairman of SCTD
	Mirtolib Mirzahidov, Director of UE, UNWTO Silk Road Office
	Furkat Hodjaev, Head of Bukhara Regional Department for Tourism Development
	Mirzo Ulugbek Barakaev, staff member of Bukhara Regional Department for Tourism Development
	Jahongir Saidov, staff member of Bukhara Regional Department for Tourism Development
Uzhydromet	Mirzaolim Murtagaev, Head of Bukhara Regional Administration
Republican Center for Combating Termites under the Institute of Gene Pool of Flora and Fauna of the Science Academy of Uzbekistan	Kahramon Rustamov, Director of the Republican Center for Combating Termites

## Annex II—List of Participants (cont.)

Organization	Participant
Chamber of Commerce and Industry	Ilkhom Bafoev, Head of Bukhara Regional Department of Chamber of Commerce and Industry
Hunarmand Foundation	Lola Muhutova, Head of the Department for Preservation and Restoration of Applied Arts
Council of Ministers of the Republic of Karakalpakstan	Azat Matikov, Head of the Construction Secretariat of the Council of Ministers of the Republic of Karakalpakstan
Bukhara region hokimiyat	Botir Shahriyrov, Deputy Governor of Bukhara Region for Tourism
Surkhandarya region hokimiyat	Sharofiddin Kodirov, Head of the Secretariat of Surkhandarya Region hokimiyat
Fergana region hokimiyat	Abdurashit Karimov, responsible officer of the Fergana Regional hokimiyat
Khorezm region hokimiyat	Bahrom Allanaazarov, Head of the Construction Secretariat of Khorezm Region hokimiyat
Azim	Head of the Tourism Development Secretariat of Bukhara region hokimiyat
Bukhara city hokimiyat	Karim Kamolov, Governor of Bukhara city
	Kahramon Dustov, Deputy City Governor for Construction
Kagon city hokimiyat	Alisher Aminov, Deputy City Governor for Construction
Kogon district hokimiyat	Azim Turaev, Deputy District Governor for Construction
Romitan district hokimiyat	Adig Bakaev, Deputy District Governor for Construction
Gijduvan district hokimiyat	Bahriddin Ergashev, Deputy District Governor for Construction
Shofikon district hokimiyat	Faygulla Mirzaev, Deputy District Governor for Construction
Vobkent district hokimiyat	Sultonmurod Teshae, Deputy District Governor for Construction
UNESCO	Sanjar Allayarov, Communications Officer
The World Bank Team	James Newman, Disaster Risk Management Specialist, World Bank
	Barbara Minguez Garcia, Disaster Risk Management and Cultural Heritage Specialist, Consultant
	Manjusha Rai, Urban Specialist, Consultant, Tashkent
	Rohit Jigyasu, Professor at the UNESCO Chair Programme on Cultural Heritage and Risk Management at R-DMUCH, President of ICOMOS/ICORP
	Dowon Kim, Associate Prof. at R-DMUCH
	Junko Mukai, Disaster Risk Management of Cultural Heritage Specialist, Consultant

## Annex III—Ministry of Construction Assessment Reports

The workshop participants from the Ministry of Construction—specifically from the Center for Geotechnical Studies of the Survey Institute Qishloqqurilishloyiha LLC and the Technical Inspection Department of UzGashkliti LLC—provided additional technical information on the work they are currently developing, including:

- A comprehensive investigation of the construction of the Kalyan minaret and mosque complex in Bukhara
- A technical survey of the entrance (arch) and exhibition gallery at the Alisher Navoi National Park and Monument in Tashkent
- Information about instruments for a nondestructive technical inspection of buildings and construction

The assessment of the Kalyan minaret is particularly relevant for this report because it serves as a strong example of the technical work that needs to be carried on at a heritage site in order to understand its risk profile and conservation needs. A brief summary of the work developed by the Ministry of Construction, along with some key information, is presented below.

Central Asia maintains a rich history of cultural treasures, principally displayed through their buildings. Through until the ninth century, walls and arches of buildings and structures in the region were constructed from ordinary clay or adobe bricks. Following the conquest of Alexander the Great, the monumental and applied arts were greatly influenced by the Hellenistic tradition. With accession of Central Asia to the Arab Caliphate in the eighth century and the adoption of a new religion—Islam—the culture was influenced yet again. Buildings for various purposes—such as caravanserai, mausoleums, mosques, and madrasas—began to conform to specific architectural types. Together these monumental buildings provide a complete picture of the engineering, design, planning, and decorative features of the construction and architecture of that era.

Considering the significance of Uzbekistan’s cultural heritage, the Cabinet of Ministers of the Republic of Uzbekistan approved special Decree No. 49 of March 23, 2010, “On State program on research, conservation, restoration and adaptation to modern use of the cultural heritage properties of Bukhara until 2020.” Experts carried out studies and monitored the technical condition of the country’s architectural monuments. The aim of these studies was not only to monitor the technical condition of architectural structures and identify defects, but also to define the reasons and character of deformations, while taking into account the

area’s dynamic influences, hydrogeological conditions, and environmental impacts.

One of the many historical monuments included in the UNESCO World Heritage List as part of the Historic Centre of Bukhara is the Kalyan minaret.

- For the assessment and analysis of the technical conditions of the structures of the Kalyan minaret and mosque in Bukhara, the following activities were undertaken:
  - Geotechnical study of the foundation soil
  - Geophysical surveys using the SIR-3000 system, consisting of an application of the radar method for the subsurface sounding of underground space
  - Detailed technical examination with nondestructive tools for testing and technical diagnostics of structures for identifying defects, damage, and deformations of the site
  - Evaluation of the physical and mechanical characteristics of the site structures (chemical composition of the mortar and brick, adhesion of the mortar to the brick, etc.)
  - Identification of characteristics of damages and defects arising from the production, construction, and installation works and the use of buildings
  - Recommendations for the elimination of defects, based on the results of the technical survey
  - Conclusion about the technical condition of the building

### Kalyan Minaret

Because of their unique silhouettes and originality, minarets play an exceptional role in the architectural ensembles of the ancient cities of Uzbekistan. They were erected near mosques and madrasas as part of the buildings' complexes. The typical minaret in Uzbekistan has a round column extending to its base, a brick tower with a steep spiral staircase inside, and is topped with an arch lantern.

One of the most impressive examples of this type of Central Asian tower is the Kalyan minaret, which for more than eight centuries served as the core of the largest architectural ensembles of Bukhara. It later served as a model for other minarets in the city of Vabkent (in 1196–97) and the minaret at the Khoja Kalon mosque in Bukhara (sixteenth century). According to historical information, the Kalyan minaret was built in 1127 during the reign of Arslan Khan (1102–30), as evidenced by the inscriptions on the carved terracotta tiles, which contain the date of construction and the name of its builder, Bako.

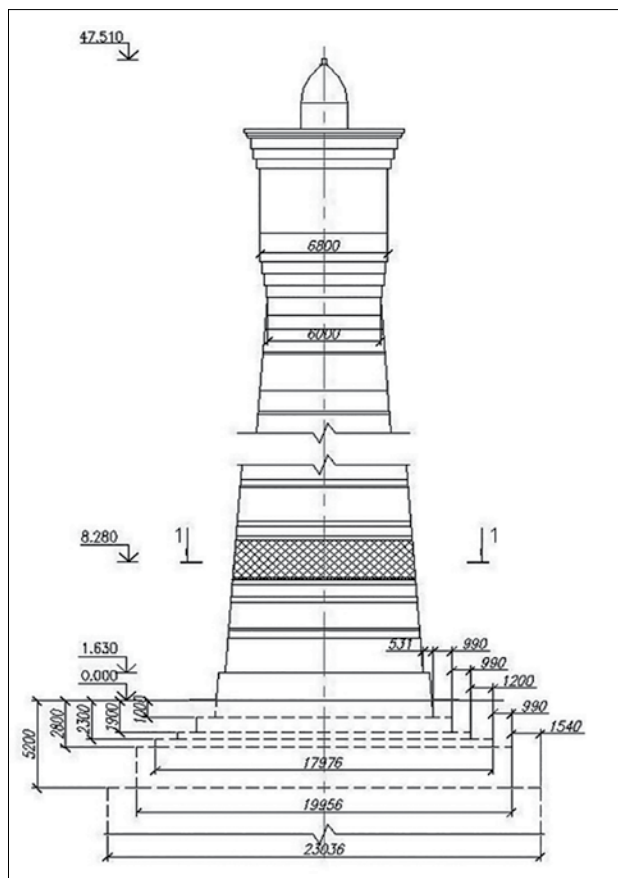


General view of the complex of the mosque and the Kalyan minaret. Photo credit: Ministry of Construction.

This giant vertical pillar, built of burnt brick, gives a vivid picture of the shape of Central Asian minarets—round, with a diameter of 10.5 meters at the bottom and 5.7 meters at the top. Its total height is 47.5 meters, but its multi-meter foundation is hidden deep in the earth under centuries-old layers. However, according to the research of K.S. Kryukov, the depth of the foundation would be about 12 meters.

A 16-arch lantern rotunda is arranged above the minaret's trunk, resting on rows of masonry and decorated in the form of a stalactite cornice. The roof is laid out

in burnt bricks made from a clay and gypsum mix. The minaret is connected to the roof of the Kalyan mosque by a bridge, which contains a steep narrow spiral brick staircase with 105 steps.



The size and depth of the foundations of the minaret. Source: Ministry of Construction.

The front surface of the minaret is covered with a relief pattern of bricks, broken into 10 ornamental belts, none of them repeating another. From the results of the scanning conducted through the inner and outer walls of the ladder, the wall thickness is 750 millimeters. Also, according to the ground-penetrating radar scattering signal, it can be hypothetically assumed that each stair module is supported on the frame from the central axis to the outer wall of the minaret. Further, there is filler, apparently, of unsettled local soil compaction.

Stalactites are formed by a set of cut-shaped baked bricks without the use of terracotta elements, which again shows the versatility of the construction materials and ingenuity of old masters. The overall design of the decorative finish on the minaret with almost all elements in the texture of burnt brick is a continuation and development of more ancient architectural and artistic techniques applied to the mausoleum of the Samanids.





The arch lantern rotunda of the Kalyan minaret. Photo credit: Ministry of Construction.

The survey revealed the following numerous inclined and vertical cracks and defects in the body of the minaret:

- Vertical cracks above the minaret's entrance door with an opening width of 1.0–3.0 millimeters
- Vertical cracks above and below the lighting windows of the minaret with an opening width of 1.0–3.0 millimeters

- Chipped bricks and a detachment of the plaster layer and destruction of the concrete floor in the inner part of the minaret's entrance
- Vertical cracks with the opening width of 1.0–3.0 millimeters and unevenness of wooden surfaces, due to long exploitation, is observed in some parts of the steps
- Chipped brickwork and cracks with an opening width of 1.0–5.0 millimeters at the arch vaults of the stairs
- Delamination of the plaster layer at openings of the rotunda
- At elevations more than 35.75–37.75 meters from the ground level, the reinforcement of the inner trunk of the minaret, by means of U-sections with bolt assemblies, was carried out during the reconstruction work

This is an example of a technical study available for the development of strategies of conservation and restoration of monuments and historic buildings.





