

Environmental Risk Assessment and Mitigation on Cultural Heritage assets in Central Asia

ERAMCA

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Deliverable D1.2

Identification of focal areas in capacity building for Environmental risk assessment and conservation policies for Cultural Heritage in Central Asia

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1. Introduction

The Task 1.2 includes the definition of focal areas to promote capacity building in Cultural Heritage environmental risk assessment (e.g., resources, technology, infrastructure, environment and policy, financing, economic and social impacts). This report plays an important role in the identification of keynote speakers and in preparation of the agenda of the Strategy Forum Workshop.

The Strategy Forum Workshop will be organised with all project partners and stakeholder at the conference hall of TTPU in September, 2020. Keynote speakers will participate in the Strategy Forum Workshop with position papers of their identified focal areas.

By considering the prepared position papers and debriefing of the Strategy Forum Workshop, a Strategic Education Agenda will be prepared that sets the assessment of skills and competences requirements, the overall approach to capacity building for Cultural Heritage environmental risk assessment and conservation strategies. The agenda addresses an action plan for capacity building on Cultural Heritage protection in Central Asia. This report is prepared through literature review and interviewing with chief specialists of Stakeholders which was identified in Task 1.1.

2. Government's road map for cultural heritage conservation

Main strategies of Cultural Heritage conservation were pointed out in Decree of the Cabinet of Ministers of the Republic of Uzbekistan on "Preservation and Utilization of Culture Heritage Properties" (N: 265 in March 30, 2019) <https://lex.uz/ru/docs/4274003> and law of republic of Tajikistan on "Protection and Utilization of historical and cultural heritages" (N:377 in May 17, 2017). http://base.spinform.ru/show_doc.fwx?rgn=97674

According to these documents, one of the main strategies are: strengthening the capacity of young teachers to develop conservation and restoration projects by using advanced technologies considering internationally accepted concepts of conservation, prepare an electronic and cadastral document to all cultural heritages by using modern techniques, systematic monitoring of urban transformation in traditional urban fabrics of world heritage cities, assessing the condition of cultural heritage monuments which is not in heritage list of government, establishing the conservation and restoration schools.

3. Main issues and focal areas of Uzbekistan and Tajikistan

Historic cities of Uzbekistan and Tajikistan with its famous and traditional architectural ensembles, archaeological sites and traditional urban fabric are considered as a unique world heritage property. The traditional urban fabric and monuments have been suffered largely due to rapid urban transformation and environmental impacts. Most of the monuments are located within urban areas and are considered as integral part of the urban fabric.

Authenticity and integrity of historic urban fabrics are well preserved in Sughd, Khatlon, Gorno-Badakhshan Regions in Tajikistan. Bukhara, Samarkand and Khiva are world heritage sites in Uzbekistan. Rapid development has been damaged traditional elements of historic urban fabric as well as traditional houses. These changes have been mainly caused by the owners and local authorities looking for better comfort and quality of life without considering traditional urban fabric rules. <https://www.isprs-ann-photogramm-remote-sens-spatial-inf-sci.net/IV-2-W2/311/2017/isprs-annals-IV-2-W2-311-2017.pdf>

Main environmental issue in almost all historical cities is a salt attack to foundations or underground facilities of historic and residential buildings. Salt attack is result of high groundwater table. Groundwater table is high almost in all historic urban areas and this is mainly due to mismanagement and inappropriate functioning of sewage and water supply systems.

Due to these environmental impacts, historic urban fabric has lost many of its traditional houses and monuments. Moreover, the rest of the buildings including residential buildings are become seismically unsafe. People who live in traditional houses and local authorities do not have necessary knowledge and expertise to restore and retrofit them. In 1990s, Tashkent Research Institute of Restoration was abolished and after that masters and specialists are diminished.

The traditional urban fabric is an essential part of the significance of the historic city. This means that the demolition of traditional housing areas should be avoided and measures should be taken to encourage their sustainable development and rehabilitation as part of the whole.

Another issue is that the most of the traditional houses with high heritage value were not documented and consequently they were not included in to the national protected heritage list. Stakeholders did not know about the existence of these traditional houses. Some of the cultural heritages were documented during the Soviet Union period and they were on paper document format. These documents have been unfortunately irretrievably lost.

<http://madaniyat.uz/post/view/3954>

Major conservation issues with traditional architectural ensembles and unique monuments are various inappropriate restoration and planning activities. Additionally, these monuments are under continuous impact of salt attack due to high groundwater table, mismanagement of urban drainage water and introduction of modern municipal services.

More over the seismic safety of these architectural ensembles and unique monuments has not been assessed. This is in part due to lack of the appropriate assessment models and strategy. The assessment of seismic safety of these unique architectural monuments is very important because they are under continuous environmental impact. Due to the climate change an increasing mean precipitation rate and wind speed are forecasted. Archeologically excavated remains are being demolished because of precipitation, wind erosion and landslide effects.

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Considering above mentioned road map's strategies, environmental and anthropogenic issues of Uzbekistan and Tajikistan, capacity of following focal areas must be trained.

Table 1. Focal areas

N:	Focal areas	Issue need to be addressed
1	Hydrogeology and Hydro- and Geotechnics?	Mitigation of salt attack and groundwater impact to foundations of heritage assets. Drainage water system management. Assessment and prevention of leaking of sewage and water supply system i.e. infrastructure problems in general.
2	Earthquake and Structural Engineering	Seismic safety assessment and retrofitting techniques of historical monuments and traditional houses. Regulations and standards?
3	Restoration	Restoration of historical heritage and traditional houses based on national and international conservation laws. Development of structural restoration projects.
4	Urban planning	Conservation of traditional urban fabric and development of systematic monitoring tools. Establishment of Buffer zones for monuments. Assessment of environmental and economic and social impacts.
5	Geomatics	Creation of electronic documentation of historical heritage, residential buildings and archaeological remaining. Establishment of geodatabase for traditional urban fabric for the purpose of monitoring of urban development.

Table 1 was prepared by interviewing and discussion with specialists and university professors named in table 2. These specialists are considered as chief specialists in field of conservation and preservation of historical assets with long experience. Therefore, they were selected tentatively as keynote speakers and they are willing to participate to Strategy Forum Workshop with position papers. Keynote speakers from Tajikistan also will be invited to participate Strategy Forum Workshop.

Table 2. Tentative list of keynote speakers from Uzbekistan

No.	Full name	Organization	Contact information
1	Shermatjon Sherimbetov	Principal Department for Preservation and Utilization of Cultural Objects of the Ministry of Culture of the Republic of Uzbekistan in Tashkent office	No website sherimbetov@mail.ru
2	Maysara Naberaeva	Samarkand Regional State Inspection on Preservation and Utilization of Historical and Cultural Properties	No website
3	Mavlyuda Yusupova	National Institute of Fine Art and Design Republic of Uzbekistan	http://mrdi.uz/?lang=en m.a.yusupova@gmail.com
4	Suhrob Babaev	IICAS in Uzbekistan	http://www.unesco-iicas.org/ suhbabayev@mail.ru
5	Abdusafi Rahmonov	Restoration and research department of cultural heritages in Tashkent office	No website Merosuz@mail.ru
6	Anvar Yuvmitov	Institute of Mechanics and Seismic Stability of Structures of the Academy of Sciences of Republic of Uzbekistan	http://instmech.uz/en/ anvar.sayfullaevich@mail.ru
7	Shermanov Utkir	Department of Geo-inform Cadastre	http://www.geoinform.uz/ shermanov.utkir@mail.ru
8	Sanjar Allayarov	UNESCO office in Tashkent	https://en.unesco.org/fieldoffice/tashkent s.allayarov@unesco.org
9	Tahir Mamatmusaev	Department of History and Theory of Architecture of TACI	http://taqi.uz/en/departments/1337-department-of-history-and-theory-of-architecture.html devon@taqi.uz

Table 3. Tentative list of keynote speakers from Tajikistan

No.	Full name	Organization	Contact information
1	Jafar Niyazov	Head of Climatology and Glaciology Lab. Institute of Water Problems, Hydropower and Ecology, Academy of Sciences, Republic of Tajikistan	https://anrt.tj/en/research-institutes/division-of-physical-mathematical-chemical-geological-and-technical-sciences/institute-of-water-problems-hydropower-engineering-and-ecology jaafar579@gmail.com
2	Rustam Samatovich Mukimov	Professor at Technical University named after acad. M. Osimi	http://ttu.tj/ru/main/ https://sites.google.com/view/mukimovrustams/mukimovr@mail.ru