TRAINING GUIDE

FOR POST CONFLICT RECOVERY OF CULTURAL HERITAGE BASED ON ICCROM-UNESCO CAPACITY BUILDING PROJECT IN MOSUL, IRAQ

unesco

#ReviveTheSpiritOfMosul

بالشراكة مع دولة الإمارات العربية المتحدة
In partnership with the United Arab Emirates

ICCROM

TABLE OF CONTENTS

In Partnership with

Published by:

United Nations Educational, Scientific and Cultural Organization
7 Place de Fontenoy, 75352 Paris 07 SP, France
United Nations Educational, Scientific and Cultural Organization, Iraq Office
UN Compound, International Zone, Baghdad, Iraq
E-mail: iraqoffice@unesco.org

International Centre for the Study of the Preservation and Restoration of Cultural Property
Via di San Michele 13, Rome, Italy
Email: iccrom@iccrom.org

© UNESCO, ICCROM, 2024
All rights reserved

OVERVIEW
ICCROM-UNESCO CAPACITY BUILDING FOR HOLISTIC, SUSTAINABLE, AND RESILIENT RECOVERY OF MOSUL

BACKGROUND

The city of Mosul, meaning "The Linking Point" in Arabic, is the home to a wealth of cultural and religious diversity. With significant shrines dedicated to the three monotheistic religions, and other outstanding historical buildings and sites, the city's heritage and importance transcends millennia. However, the strategic location that has made Mosul a cultural crossroads throughout history also made it a target for ISIS. In June 2014, Mosul became the largest city to fall to the terrorist organization. The damage to the city's cultural heritage and surrounding areas during the conflicts have been devastating. In the aftermath of these horrific events of the recent past, the resolve of the people of Mosul to restore their city is strong. Several projects grouped under UNESCO's initiative Revive the Spirit of Mosul have been developed on the road to recover the rich heritage.

Under this umbrella, ICCROM developed its Heritage Recovery Programme in Mosul, a capacity building programme organized in partnership with UNESCO and the University of Mosul and with the financial support of the Government of the United Arab Emirates and the European Union. With the goal of fostering community reconciliation through the recovery of the environment and rehabilitation of the city's heritage sites. The goal is to strengthen and domesticate knowledge and expertise of the conservation and management of cultural heritage and awareness of its importance among the diverse local experts and community groups in Mosul, especially targeting young people. Moreover, in doing so, to equip professionals and craftspeople with skills that can ensure long-term livelihood opportunities within the multi-year recovery and reconstruction framework for the Old City of Mosul.

The specific objectives of the projects are training young professionals in Mosul in planning and implementation of holistic heritage recovery processes and developing their skills to ensure long-term livelihood opportunities; upgrade the skills of young craftspeople in Mosul and ensure they acquire new knowledge to support the ongoing reconstruction processes and raise the awareness of local communities of the importance of heritage and

its diversity, and of the achievements of the project.

The curriculum is designed around the core principles of heritage recovery, namely:

- **Holistic recovery:** mainstreaming the tangible and intangible heritage belonging to various sections of the community in the overall recovery process
- **Sustainable recovery:** ensuring that recovery; process is social, economically and institutionally sustainable and does not create dependencies on external actors in the long run;
- **Resilient recovery:** enabling heritage as means of reducing vulnerability, building Peace and reconciliation and enhancing coping capacity following the concept of 'building back better'

The programme consists of two tracks designed to strengthen the skills of local heritage professionals and craftspeople through training and hands-on technical practice.

The first track, Building Capacity for Professional Development, trains young building professionals who have a background in architecture and civil engineering. Through this programme they develop valuable skills in value assessment, context analysis, documentation, damage and risk assessment, structural stabilization, recovery planning, as well as adaptive reuse and infrastructure up grading. The second track, Building Crafts Revival and Upgrading, developed in the spirit of "building back better" and giving craft workers the opportunity to enhance their skills while contributing to restoration efforts. The training takes into consideration the ground realities for ensuring sustainability. To achieve this, the programme establishes links with the building industry to ensure the availability of traditional materials, and recycling of usable materials from the rubble.

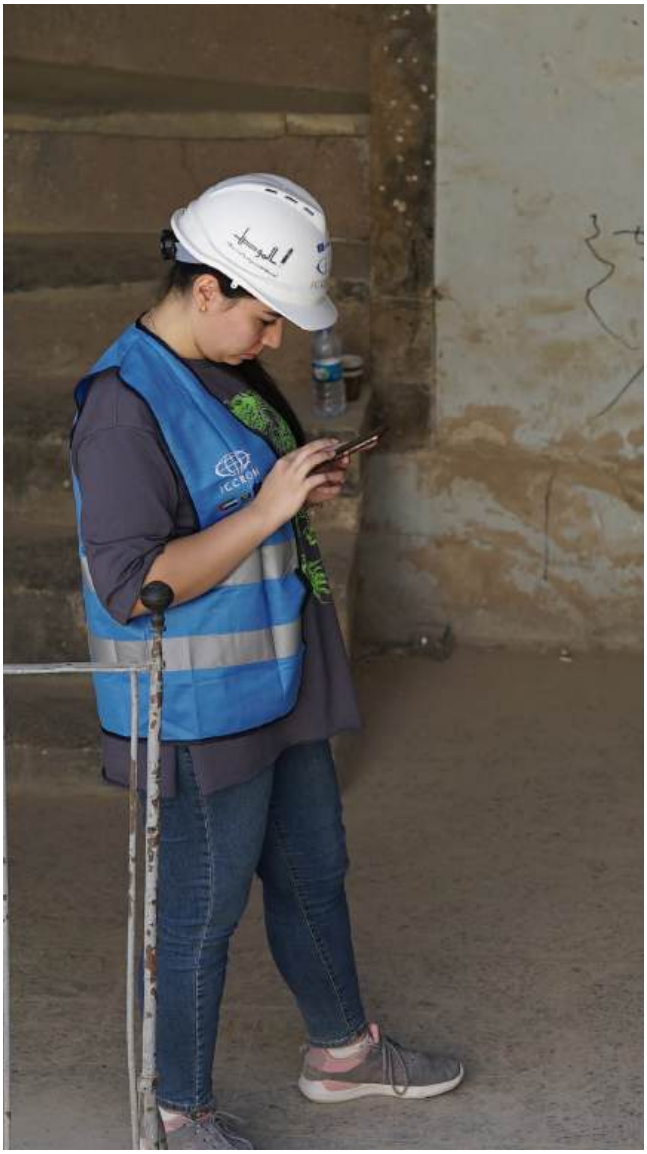
THE NEED
FOR CAPACITY BUILDING

Capacity building is paramount in post-conflict heritage recovery efforts because it provides necessary tools, skills and methodologies for developing, implementing and monitoring recovery projects. In such contexts, numerous challenges exist, and capacity building serves as the keystone to address them effectively, including but not limited to:

- To develop a skilled workforce to contribute towards recovery
- To provide livelihood opportunities to local people
- To protect, restore, rehabilitate and reuse cultural heritage
- To use recovery as an opportunity to build back better
- To develop a curriculum on heritage conservation and management based in local academic institution
- Many conflict-affected areas lack local expertise in heritage recovery. Capacity building addresses this issue through training and knowledge-sharing, enabling local participation in heritage recovery efforts.
- Efficiently managing limited resources presents a significant challenge. Capacity building pass on essential resource management skills, emphasizing sustainability for long-term conversation.
- Community engagement is crucial. Capacity building empowers communities to actively shape decisions and take responsibility for their heritage, thus driving the recovery process.
- Conflict-related loss of historical records complicates documentation. Capacity building trains professionals in digital preservation techniques, safeguarding heritage knowledge for the future.
- Weak legal and management frameworks require improvement. Capacity building educates stakeholders on the importance of these frameworks and equips them with advocacy skills.
- Capacity building fosters international collaboration and enhances access to funding by expanding networks and financial resources.

In conclusion, capacity building is essential for the successful recovery of built heritage in post-conflict settings, empowering communities, professionals, and organizations to address numerous challenges and preserve their invaluable heritage.

OBJECTIVES
OFF THE TRAINING GUIDE



THE TRAINING GUIDE IS DESIGNED TO SUPPORT THE FOLLOWING OBJECTIVES:

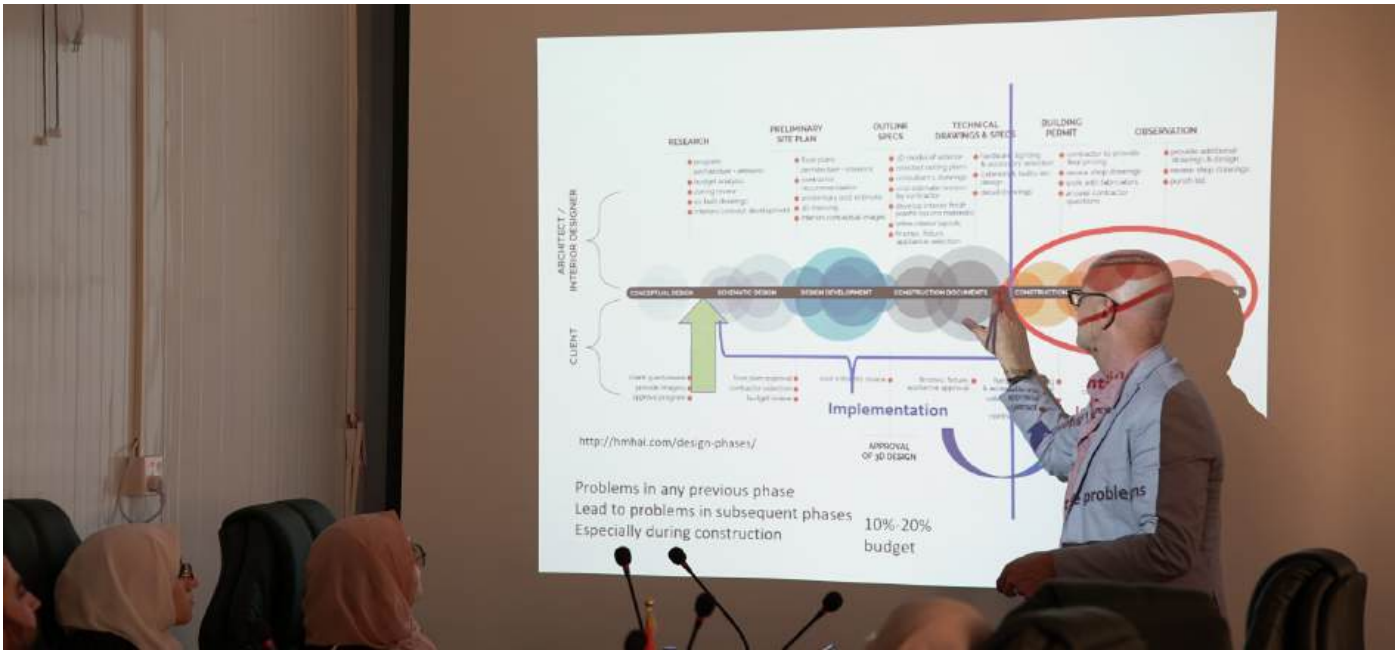
- To strengthen the capacity of local institutions, organizations, and professionals involved in heritage recovery, enabling them to independently plan and execute recovery projects.
- Knowledge Transfer: Reflecting on ICCROM's experience in Mosul for utilization in other contexts.
- Provide a framework for conducting capacity-building projects in post-conflict contexts.
- To provide resource persons with an in-depth understanding of the specific challenges, risks, and opportunities associated with capacity building for heritage recovery in post-conflict settings.
- To provide a variety of pedagogical approaches to help train individuals in designing various courses
- To provide pedagogical tools for teaching and conducting field and classroom exercises including, reading materials and case studies.

TARGET AUDIENCE
OF THE TRAINING GUIDE

The training guide can be utilized in many ways by institutions responsible for oranizing training programmes. It can also be useful for individual trainers.

The target audiences of the training programmes include the following:

- Resource persons and heritage professionals from concerned local and international heritage organizations
- Academic institutions
- Local government authorities
- International aid and development agencies
- Project managers and planners involved in recovery projects
- Students and researchers
- Policy makers
- Professionals and relevant disciplines



HOW
TO USE THE TRAINING GUIDE

THIS GUIDE, TAILORED FOR CAPACITY BUILDING IN HERITAGE RECOVERY WITHIN POST-CONFLICT CONTEXTS, OFFERS STEP-BY-STEP INSTRUCTIONS TO MAXIMIZE ITS UTILITY.

First, users are encouraged to familiarize themselves with the guide's structure. It comprises seven modules covering key aspects of heritage recovery, from foundational concepts to practical implementation. Each module is strategically designed to build on the knowledge acquired in previous sections, ensuring a coherent learning experience. However, the training guide offers flexibility to the user by allowing the course structure to accommodate a variety of knowledge levels among heritage professionals. For the novice, the orientation module provides introductory exposure to terminology and concepts. For a more advanced participant, this module may not be necessary.

This will be first. Next, users are encouraged to define their learning objectives and identify their target audiences. By tailoring the content to meet specific needs, this guide can be customized for a wide range of stakeholders and course durations, including local institutions, professionals, and organizations engaged in post-conflict heritage recovery.

Then specific modules will be introduced.

The design of the guide's modules allows users to tailor their training approach, whether it's through self-paced study, formal workshops, or collaborative group learning. It accommodates a diverse array of teaching and learning methods.

Throughout the guide, users will find numerous practical exercises in the field, case studies, real-world examples, and classroom exercises for interactive learning. These resources facilitate hands-on learning, enabling users to apply acquired knowledge to real post-conflict scenarios effectively.

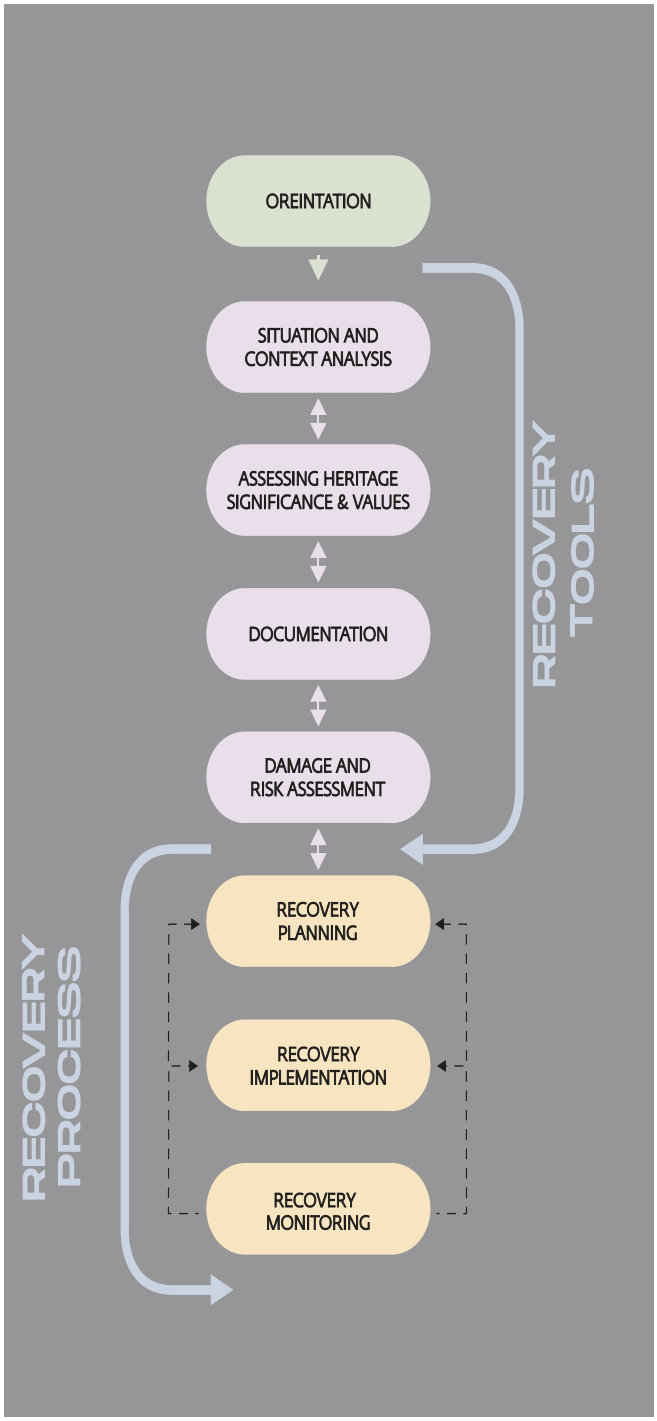
COURSE STRUCTURE
OF THE TRAINING GUIDE

THE COURSE IS STRUCTURED INTO SEVEN MODULES WITH INDIVIDUAL TOPICS UNIQUE TO EACH MODULE.

The first module, Orientation, focuses on heritage preservation vocabulary and concepts, and provides a general understanding of cultural heritage and common language between the trainers and the trainees.

The second through fifth modules, which include Situation and Context Analysis, Assessing Heritage Significance and Values, Documentation, and Damage and Risk Assessment, fall under the broader category of Fundamental Recovery Tools and Expertise. These four modules provide participants with the necessary knowledge and skills for heritage recovery. All tools and knowledge provided in these modules are connected with each other. The final two modules, Recovery Planning and Recovery Implementation and Monitoring, tackle the recovery process for heritage in post-conflict situations. They introduce recovery planning at a macro level (city and neighborhood levels) and introduce technical and management perspectives of the recovery process at a micro level (building levels). The recovery process should be understood as cyclic process of planning, implementation and monitoring.

Diagram of Recovery Tools and Process



ORIENTATION

TOPIC 1 Introduction to Basic Terminologies and Basic Understanding of Culture
TOPIC 2 Introduction to the Key Principles and Approaches of Cultural Heritage Conservation and Management
TOPIC 3 Overview of the Cultural Heritage of Place
TOPIC 4 Introduction to Heritage Recovery

FUNDAMENTAL RECOVERY TOOLS

SITUATION & CONTEXT ANALYSIS

TOPIC 1 Introduction to the International Legal and Policy Documents and Their Applications in the Local Context
TOPIC 2 Understanding the Local Context
TOPIC 3 Conflict Analysis and Its Application to Heritage Recovery
TOPIC 4 Stakeholders, Rightsholders, and Actors Mapping and Analysis
TOPIC 5 Peacebuilding Through Heritage Recovery

ASSESSING HERITAGE SIGNIFICANCE & VALUES

TOPIC 1 Introduction to Heritage Significance and Values and Their Qualifiers
TOPIC 2 Methodology for Identifying, Assessing, and Mapping Heritage Values and Attributes
TOPIC 3 Collection and Analysis of Information Sources
TOPIC 4 Linking Value Assessment to Different Steps in Heritage Recovery
TOPIC 5 Significance of Tangible and Intangible Heritage

DOCUMENTATION

TOPIC 1 Introduction to Documentation
TOPIC 2 Guiding Principles of Documentation
TOPIC 3.1 Methods and Tools for Documentation – City and Neighborhood
TOPIC 3.2 Methods and Tools for Documentation – Building Level
TOPIC 4 Monitoring and Reporting in Documentation
TOPIC 5 Application of Documentation in Heritage Recovery
TOPIC 6 Data Management and Recording Techniques

DAMAGE & RISK ASSESSMENT

TOPIC 1 Identification of Structural Elements and Analyzing Their Behavior and Design
TOPIC 2 The Application of Numerical Modeling and the Distinct Element Method for Analyzing Heritage Structures
TOPIC 3 Typologies of Hazards Affecting Built Cultural Heritage
TOPIC 4 Understanding and Analysis of Structural Damages of Heritage Buildings
TOPIC 5 Monitoring and Reporting Damages
TOPIC 6 Assessing and Managing Risks
TOPIC 7 Identification and Treatment of Different Types of Damages at the Material Level First Aid and Shoring
TOPIC 8 Stabilization Designs for Damaged Structures

RECOVERY PROCESS

RECOVERY PLANNING

TOPIC 1	Introduction to Recovery Planning and Guiding Documents
TOPIC 2	Peacebuilding and Memory Processing in Post-Conflict Recovery Planning
TOPIC 3	Planning Principles for Recovery
TOPIC 4	Financial Aspects of Heritage Recovery
TOPIC 5.1	Recovery Planning - City Level & Neighborhood
TOPIC 5.2	Recovery Planning - Building Level

RECOVERY IMPLEMENTATION AND MONITORING

TOPIC 1	Introduction to Recovery Interventions
TOPIC 2	Basic Intervention Considerations
TOPIC 3	Typologies and Levels of Interventions
TOPIC 4	Designing and Implementation of Stabilization Interventions for Heritage Building
TOPIC 5	Safety and Security Measures
TOPIC 6	Stakeholder and Community Engagement
TOPIC 7	Site Management
TOPIC 8	Post Completion Management and Consideration
TOPIC 9	Monitoring and Reporting for Recovery Implementations

TRAINING PEDAGOGY

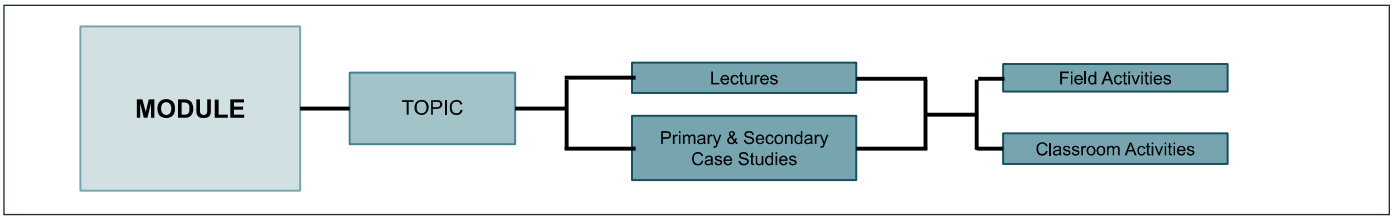


Diagram of Pedagogical Approaches

The course structure can be designed in such a manner that the theoretical principles and approaches are communicated through introductory lectures and presentations, supplemented with site visits to various locations in order to understand issues and initiatives on the ground and then finally culminate in workshops where the participants are actively involved in classroom or field based exercises facilitated by the instructors that are intended to help reinforce the contents of the lectures.

Case studies are at the core of the pedagogical approach of this course. They ensure that participants are familiarised with each stage of the recovery process cycle and are eventually capable of undertaking cultural heritage rehabilitation. While international and local case studies are presented as examples of heritage recovery, a longitudinal case study, located in the area of study, is used as a tool to practice the skill set being taught during each module and linkages between them.

This guide provides different teaching formats: integrating lectures with site studies, workshops and participant presentations using case examples. In each module, the subject matter may be introduced through one or more introductory lectures, which may also include secondary case examples illustrating certain principles approaches and/or actions. This may be followed by one or more case studies and site visits which form the basis of a participant workshop or activity. Follow up discussions on the case study or workshops are helpful in revisiting the core content delivered through the lectures and illustrated through exemplary practices.

THE TRAINING MODULES INCLUDE A RANGE OF PEDAGOGICAL APPROACHES.

• **Lectures** - Face-to-face and online

• **International case studies** - These case studies aimed to broaden participants' perspectives to other contexts and assist in clarifying the teaching topics and objectives.

• **Local case studies** - utilized during the training, such as Al-Nuri Mosque, and Al-Saa'a and Al-Tahera churches, and traditional houses in Mosul.These cases were employed for specific teaching topics and objectives, such as value assessment.

• **Primary/Longitudinal case studies** (in Mosul project were the Prayer House and Amin Effendi House) - These served as the primary case studies for practical exercises throughout the course modules, ranging from situation and context analysis to recovery planning, implementation and monitoring. The key purpose of using such case studies was to interconnect the training modules through one case study, acting as a unifying thread for connecting the course topics and modules through participants' group presentations, and facilitated discussions, at the end of each module.

ORIENTATION
MODULE 1

LEARNING OBJECTIVES

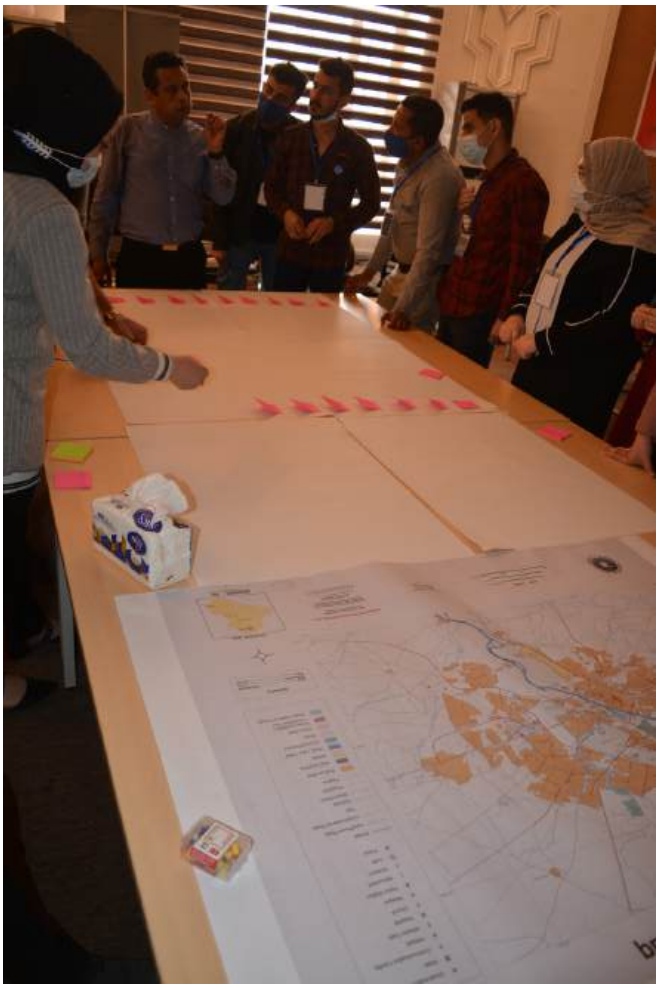
- Basic understanding of relevant terminologies and concepts of culture and heritage.
- Overview of tangible and intangible heritage, and creative cultural industries.
- Overview of the architectural, urban, and archaeological heritage.
- Analyzing architectural typologies and urban morphology.
- Definition and scope of heritage recovery.
- Introduction to various approaches and processes for heritage recovery.

TOPICS

TOPIC 1	Introduction of basic understanding of Culture and heritage, and relevant terminologies
TOPIC 2	Introduction to the Key Principles and Approaches of Cultural Heritage Conservation and Management
TOPIC 3	Overview of the Cultural Heritage of Place
TOPIC 4	Introduction to Heritage Recovery

RELATED TOPICS

Module 3 - Topic 4	Linking Value Assessment to Different Stages of Heritage
Module 3 - Topic 3	Collection and analysis of Information Sources
Module 3 - Topic 5	Significance of Tangible & Intangible Heritage
Module 4 - Topic 2	Guiding Principles of Documentation
Module 4 - Topic 5	Application of Documentation in Heritage Recovery
Module 6 - Topic 1	Introduction to Recovery Planning and Guiding Documents
Module 6 - Topic 3	Planning Principles of Recovery
Module 6 - Topic 5.1	Recovery Planning (City Level and Neighborhood)
Module 6 - Topic 5.2	Recovery Planning (Building Level)
Module 7 - Topic 3	Typology and Levels of Interventions



TRAINING STRATEGIES

Lectures Topics

Lectures in this module are designed for participants who are new to the concepts and terminologies relating to urban heritage conservation. Topics can include:

- History of the local or regional area of study.
- Urban planning and significant architectural features of the area of study.
- Basics of various conservation principles and practices including doctrinal texts and recommendations.
- Legal frameworks in heritage conservation, both locally and internationally.
- Introducing different types of interventions including preventive conservation, restoration, adaptation, rehabilitation, reconstruction, and reproduction.

LECTURES
(USED IN MOSUL TRAINING)

"Introduction to the conservation of historic urban landscapes"
Presented by: Jukka Jokilehto

This lecture introduced the participants to UNESCO's approach to managing historic urban landscapes as a holistic process by integrating the goals of urban heritage conservation and those of social and economic development. The Historic Urban Landscape approach moves beyond the preservation of the physical environment and focuses on the entire human environment with all of its tangible and intangible dimensions.

"Architectural Features in Old Mosul"
Presented by: Dr. Emad Hani-Al-Allaf

This lecture introduced the architectural heritage of Mosul. By developing an understanding of what elements are unique to the area, participants gained insights into their interrelationships and their impact on the city's urban fabric.

Site Visits

Visiting local heritage sites can help the participant visually understand the urban planning and architectural features that are introduced in the lectures. The site visits to archeological sites in areas of past conflict provide the opportunity to explain the site's importance, the history of excavations, and the destruction suffered at the site due to the conflict.

Classroom Exercises

Classroom activities provide the opportunity to bring together what the participant's have heard from the lectures and seen from the site visits. Exercises that encourage observations, mapping, and analyzing elements within a city enhance the participant's spatial awareness and promote a holistic perspective on urban design by considering the physical and social dimensions to the city.

Case Studies

Presenting international case studies on post conflict recovery of heritage recovery can illustrate how other regions have chosen to address heritage recovery in a post-conflict context. The case studies offer the opportunity to not only show successful solutions, but also highlight possible failures in addressing the topic.

SECONDARY CASE STUDY
(USED IN MOSUL TRAINING)

"Case Studies on Heritage Recovery in a Post-conflict Context" - presented by Ammra Hadzimuhamedovic
The case study of Mostar Bridge in Bosnia was presented to illustrate how heritage recovery has been approached in the international community in a post-conflict context. UNESCO's desire to rebuild the bridge opened up conversations among heritage professionals as to the debate over authenticity and whether the bridge should be preserved as a memorial, rebuilt with modern materials, or be replicated to resemble the original design. It also opened up conversations about where the Mostar people wanted a rebuilt bridge to resemble the original. The overall objective of the case study is to introduce the complex issues that heritage can have throughout all the phases of recovery.

Old Bridge Area of the Old City of Mostar © Silvan Rehfeld

SITE VISIT
(USED IN MOSUL TRAINING)
A site visit to the archaeological site of Nabi Yunis in Mosul provided insight for the participants as to the importance of the site to the city. The visit explored the history of excavations on-site and the destruction that the site suffered due to the conflict in Mosul.

CLASSROOM EXERCISES
(USED IN MOSUL TRAINING)

The Image of the City – Group Activity / Classroom Activity
The main objective of the Image of the City exercise is to develop a comprehensive understanding of how urban spaces are perceived and experienced. By observing, mapping, and analyzing various elements within the city, participants aim to uncover patterns and connections that influence people's navigation and interaction with the urban environment. Through this exercise, participants are expected to develop a deeper understanding of Mosul's character, identity, and functionality. By recognizing patterns and connections, they can gain a more holistic perspective on urban heritage. The goal is to enhance their spatial awareness and consider the human experience when designing and shaping cities. Together, they can create more engaging and functional historic urban environments.
Reference: https://www.miguelangelmartinez.net/IMG/pdf/1960_Kevin_Lynch_The_Image_of_The_City_book.pdf

Classifying Urban and Architectural Elements in Mosul - Group Activity / Classroom Activity
The exercise aimed to allow participants to unpack and analyze and dismantle the urban and architectural elements in Mosul. They categorized these elements into building materials, building typologies, architectural elements, and urban spaces. This categorization was based on their findings from a field visit to Old Mosul and further research based on secondary sources, with the intention of understanding the overlapping characteristics across different examples. By carefully examining and categorizing these elements, participants gained insights into their interrelationships and their impact on the city's urban fabric. Through this exercise, participants explored the rich heritage of old Mosul, uncovering the layers of its architectural and urban features. The objective was to foster a deeper understanding and appreciation of the complexities within the city's architecture and urban design. By recognizing the connections and patterns among these elements, participants enhanced their ability to analyze and interpret the intricate urban landscape of old Mosul.

READING REFERENCES

Court, S and Wijesuriya, G. (2015). *People-centred approaches to the conservation of cultural heritage: living heritage*. Rome, Italy: ICCROM. https://www.iccrom.org/sites/default/files/PCA_Annexe-2.pdf

Jokilehto, J. (1986). 'A history of architectural conservation', PhD Thesis, The University of York, England. https://www.iccrom.org/sites/default/files/ICCROM_05_HistoryofConservation00_en.pdf

Jokilehto, J. (2001). *'Training for urban conservation: current issues',* A. Kervanto Nevanlinna (ed.), *Dangerous liaisons: preserving post-war modernism in city centers*, Conference in Helsinki, 15-17 February 2001, ICOMOS Finnish National Committee, ICOMOS-CIF, Alvar Aalto Academy, Herlsinki, pp. 34-43.

Jokilehto, J.(2010). 'Notes on the definition and safeguarding of HUL'*, City & time*, vol. 4, no. 3, pp. 41-52. http://www.ceci-br.org/novo/revista/docs2010/C&T-2010-162.pdf

Jokilehto, J. (2012). 'Culture as a Factor of Development', *Territori della Cultura*, no. 8, pp. 58-67 https://www.univeur.org/cuebc/images/Territori/PDF/08/TdC8_Jokilehto.pdf

Jokilehto, J. (2013). 'What is modern conservation? Some thoughts about the evolution of modern conservation policies' in Serbian language with English summary, *Модерна Конзервација, Modern Conservation*, Serbia National Committee of ICOMOS, no. 1, pp. 13-20.

Jokilehto, J. (2014). 'Evolution of the Normative Framework', Francesco Bandarin & Ron van Oers (eds.), *Reconnecting the City: the Historic Urban Landscape Approach and the Future of Urban Heritage*, Wiley Blackwell, Oxford, UK, pp. 205-219.

Saouma-Forero, G. (2000). *Expert meeting on authenticity and integrity in an african context*. Great Zimbabwe, Zimbabwe: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000122598

(1987). *Charter for the conservation of historic towns and urban areas*. Washington, D.C.: ICOMOS. https://www.icomos.org/images/DOCUMENTS/Charters/towns_e.pdf

(1989). *Recommendation on the Safeguarding of Traditional Culture and Folklore*. Paris, France: UNESCO. https://www.unesco.org/en/legal-affairs/recommendation-safeguarding-traditional-culture-and-folklore

(1994). *The Nara document on authenticity*. Nara, Japan: ICOMOS. https://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/386-the-nara-document-on-authenticity-1994

(1998). *Report of the world heritage global strategy natural and cultural heritage expert meeting. Amsterdam*. Netherlands: UNESCO. https://whc.unesco.org/archive/amsterdam98.pdf

(1998). *Suzhou declaration on international co-operation for the safeguarding and development of historic cities*. Kyoto, Japan: UNESCO. https://whc.unesco.org/en/documents/161

(1999). *Charter on the built vernacular heritage. Mexico: ICOMOS.* https://www.icomos.org/images/DOCUMENTS/Charters/vernacular_e.pdf

(1999). *Second protocol to the Hague Convention of 1954 for the protection of cultural property in the event of armed conflict.* The Hague, Netherlands: UNESCO. https://www.unesco.org/en/legal-affairs/second-protocol-hague-convention-1954-protection-cultural-property-event-armed-conflict

(2003). *Declaration concerning the intentional destruction of cultural heritage.* Paris, France: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000130780

(2005). *Vienna memorandum on "world heritage and contemporary architecture – managing the historic urban landscape"*. Vienna, Austria: UNESCO. https://whc.unesco.org/en/documents/5965

(2008). *Charter on cultural routes. Quebec, Canada: ICOMOS.* https://www.icomos.org/images/DOCUMENTS/Charters/culturalroutes_f.pdf

(2011). *Historic Urban Landscape Recommendation*. Paris, France: UNESCO. https://whc.unesco.org/uploads/activities/documents/activity-638-98.pdf

(2012). *The Kyoto vision. Kyoto,* Japan: UNESCO. https://whc.unesco.org/document/123339

(2012). *Guidelines on cultural heritage: technical tools for heritage conservation and management.* Council of Europe. https://rm.coe.int/16806ae4a9

(2013). *Managing world cultural heritage. Paris, France: UNESCO.* https://whc.unesco.org/en/managing-cultural-world-heritage/

(2013). *'The HUL challenge, re-assessing the values of the past in the light of contemporary trends'*. Florence, Italy: ICOMOS. https://www.icomos.se/wp-content/uploads/2013/10/2013-Meet1302Coclusionjan14.pdf

SITUATION AND CONTEXT ANALYSIS
MODULE 2

LEARNING OBJECTIVES

- Basic knowledge of international legal and policy documents related to situation and context analysis.
- Basic knowledge of relevant frameworks
- Identify gaps in the relevant legal framework and compare them to other frameworks.
- The use of conflict analysis in heritage recovery.
- Map stakeholders and understand relationships between different actors in heritage recovery and the different degrees of participation and engagement methods.
- Link peacebuilding and reconciliation to heritage recovery.

TOPICS

TOPIC 1	Introduction to the International Legal and Policy Documents and Their Applications in the Local Context
TOPIC 2	Understanding the Local Context
TOPIC 3	Conflict Analysis and Its Application to Heritage Recovery
TOPIC 4	Stakeholders, Rightsholders, and Actors Mapping and Analysis
TOPIC 5	Peacebuilding Through Heritage Recovery

RELATED TOPICS

Module 3 - Topic 2	Methodology for Identifying, Assessing, and Mapping Heritage Values and Attributes
Module 3 - Topic 3	Collection and analysis of Information Sources
Module 3 - Topic 5	Significance of Tangible and Intangible Heritage
Module 3 - Topic 6	Conflicting and Changing Nature of Values and Assessing their Loss
Module 4 - Topic 6	Data Management and Recording Techniques
Module 6 - Topic 1	Introduction to Recovery Planning and Guiding Documents
Module 6 - Topic 2	Peacebuilding and Memory Processing in Post-Conflict Recovery Planning
Module 6 - Topic 6	Decision Making and Stakeholder Involvement in Recovery Planning
Module 6 - Topic 7	Monitoring & Reporting in Recovery Planning
Module 7 - Topic 7	Site Management
Module 7 - Topic 8	Post-Completion Management and Consideration
Module 7 - Topic 9	Monitoring and Reporting for Recovery Implementations

LECTURES
(USED IN MOSUL TRAINING)

"Local legal and administrative frameworks for heritage in Iraq"
Presented by: Musab Jassim, Nineveh Archaeology and Heritage inspectorate)

This lecture introduced the participants to the main local legal and administrative aspects of conserving and managing cultural heritage.

"Introduction to PATH"
Presented by: Dr. Elke Selter

This lecture introduced the participants to ICCROM's tool of PATH (Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation). PATH provides vital insights into the cultural drivers of a conflict that have the potential to prolong it or make it reoccur due to unresolved grievances.

Recognized as violations of human rights and war crimes, the denial of access to heritage or its looting and deliberate destruction during conflicts have led to the adoption of the landmark UN Security Council Resolution, 2347 denouncing such acts, and extending protection to at risk cultural heritage in war zones.

Despite such advances, there is only a superficial understanding of why cultural heritage gets targeted during violent conflicts, and what potential role its safeguard or recovery could play in building lasting peace.

PATH addresses this gap. The guiding questions and exercises in the Tool are intended to help heritage practitioners, peacebuilders and supporting organizations to take key decisions on which heritage gets preserved or rebuilt, where, when and by whom. Such decisions are key to maintaining peace and addressing the root causes of a conflict.

TRAINING STRATEGIES

Lecture Topics

Lectures in this module are designed to focus on the situation and context analysis for built heritage in the context of post crisis. Topics in this module focus on:

- PATH (Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation). PATH is an innovative tool developed by ICCROM for assessing the context for post-crisis heritage recovery.
- Introduction to the main types of conflict as defined by UN documents: international, internal, externalized, internalized.
- Methods of context analysis, which include quantitative, qualitative, visual, narrative; historiographic, ethnographic, geographical, urbanistic and architectural.
- Basic information about theoretical body and international doctrine concerning crime of heritage destruction.
- Legal implications of heritage destruction; nexus of crimes against people and heritage destruction.

Case Studies

Case studies are a critical element in module 2 for assisting with the explanation of what situation and context analysis is. International case studies can be an effective tool in showcasing examples of international response in times of conflict and the importance of conflict analysis and understanding the local context. International case studies can also show how heritage can trigger conflict.

Local case studies can be used to study legal aspects of heritage protection in the region being studied. Both local or international case studies can used to discuss the importance of cooperation with local stakeholders.

Classroom Exercises

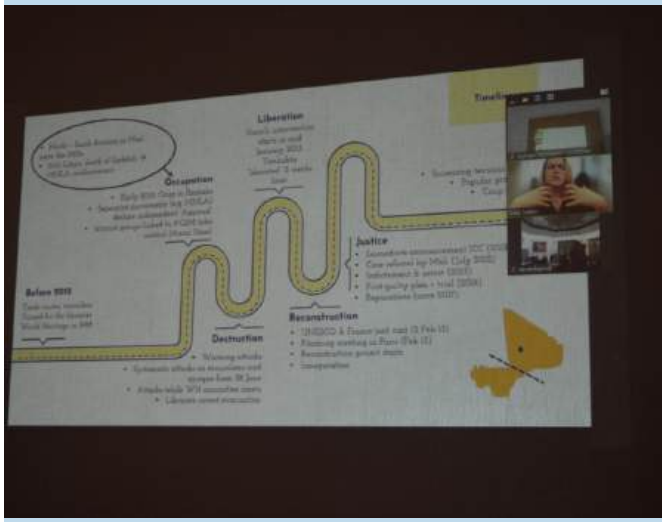
This module dives into understanding the international charters and conventions established to safeguard heritage. Group reading activities can assist the participants in discovering the content within the charters and how they can be utilized in the local context.

Group Discussion

Using the content learned from the lectures and case studies, participants can discuss how these can be relevant to the local context.

SECONDARY CASE STUDIES
(USED IN MOSUL TRAINING)

"The Value of Conflict Analysis (PATH): Case Study on Mali" - presented by Dr. Elke Selter
To better explain the principles of PATH, Dr. Elke Selter introduced the case study of Timbuktu in Mali. She highlighted the topics of international response in times of conflict and the importance of conflict analysis and understanding the local context.



"Rescuing Hammam al-Sharaybi" - presented by Abdelhamid Salah
Abdelhamid Salah introduced a project within the region that incorporated many of the topics that would be explored in the course. These included risk assessment, damage assessment and structural analysis, stabilizing the site and providing a space for the community. Stakeholder analysis was also part of the case study.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Reading Circle - Group Activity / Classroom Activity
In this exercise, participants are asked to work in groups to read, summarize, and analyze the following international charters: the European Landscape Convention of the Council of Europe (also known as the Florence Convention), the Australia ICOMOS Charter for Places of Cultural Significance (also known as the Burra Charter), the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, and The Venice Charter for the Conservation and Restoration of Monuments and Sites.
Each group is assigned to read and summarize one of these documents and prepare a presentation for the other groups. Discussions can take place between groups regarding the conventions and the connections between them, as well as how to apply and utilize these documents in local contexts.
The exercise aims to introduce the participants to relevant international policy documents, doctrinal texts on heritage conservation and their practical applications in local contexts.

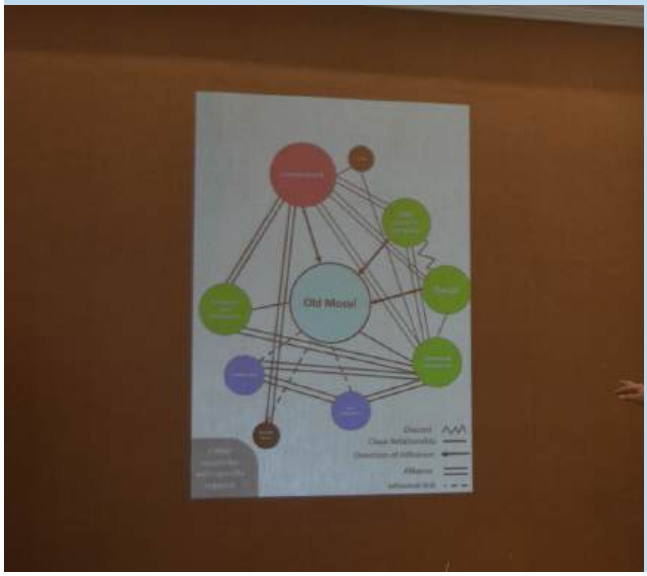
CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Mapping Stakeholders - Group Activity / Classroom Activity
The exercise focuses on the identification, analysis, and mapping of actors and stakeholders in the context of heritage recovery, specifically in post-conflict scenario. Participants are tasked with understanding the diverse range of individuals, groups, and organizations involved in heritage recovery processes. They learn techniques for identifying and mapping key actors and stakeholders, analyzing their interests, influence, and potential roles in peacebuilding efforts. Through interactive activities and discussions, participants gain insights into the complex network of stakeholders involved in heritage recovery. They explore the interdependencies and relationships between various stakeholders and their potential impact on peacebuilding and heritage recovery initiatives.

The exercise emphasizes the importance of mapping stakeholders to create a comprehensive understanding of the actors involved and their respective roles. Participants learn to develop stakeholder maps that visually represent the relationships, interests, and power and influence of different stakeholders. This helps in identifying potential allies, addressing conflicts, and fostering collaboration for effective peacebuilding and heritage recovery strategies.

Overall, the exercise equips participants with the knowledge and skills to navigate the intricate stakeholder landscape in heritage recovery, enabling them to engage stakeholders effectively and build sustainable peacebuilding initiatives.

Reference:
https://www.iccrom.org/publication/path-peacebuilding-assessment-tool-heritage-recovery-and-rehabilitation



READING REFERENCES

Barbero, C et al. (2004). *Conflict-sensitive approaches to development, humanitarian assistance and peacebuilding: a resource pack*. London: International Alert.

British Security Industry Association. (2014). 'Security of Heritage Properties: a guide'. United Kingdom: British Security Industry Association.

Centre for the Protection of National Infrastructure. (2013). *Risk assessment for personnel security.* Centre for the Protection of National Infrastructure

Conley, M. (2014). *Security for peace operations personnel*. Williamsburg, VA: Peace Operations Training Institute.

Garmer, L. (ed.). (2017). *Institutional and coordination mechanisms: guidance note on facilitating integration and coherence for SDG implementation.* New York, NY: United Nations Development Programme.

Goodhand, J.,Vaux, T. and Walker, R. (2002). '*Conducting conflict assessments: guidance notes'.* London: Department for International Development.

International Peace Institute. (2012). *The management handbook for UN field missions*. New York, NY: International Peace Institute.

Office for the Coordination of Humanitarian Affairs. (2018). *United nations disaster assessment and coordination: UNDAC field handbook.* New York, NY: United Nations.

Sida. (2006). *Manual for conflict analysis*. Sida.

Tandon, A. (2018). *First aid to cultural heritage in times of crisis*. Rome, Italy: ICCROM.

Tandon, A. (2021). *PATH - Peacebuilding assessment tool for heritage recovery and rehabilitation*. Rome, Italy: ICCROM.

Willmot, H., Sheeran, S. and Sharland, L. (2015). 'Safety and security challenges in UN peace operations'. New York, NY: International Peace Institute.

ASSESSING HERITAGE SIGNIFICANCE AND VALUES
MODULE 3

LEARNING OBJECTIVES

- Ability to differentiate between heritage significance and values and learn about the different value types.
- Learn how to identify, assess, and map heritage values and how to link them to corresponding attributes.
- Learn about the dynamic and conflictual nature of values, and how to prioritize them.
- Be able to conduct desk research, collect and analyze information from different sources.
- Understand the role of value assessment in every stage of heritage recovery.
- Understand the cultural significance and values.
- Ability to differentiate between heritage significance and values and learn about the different value types.

TOPICS

TOPIC 1	Introduction to Heritage Significance and Values and Their Qualifiers
TOPIC 2	Significance of Tangible and Intangible Heritage
TOPIC 3	Methodology for Identifying, Assessing, and Mapping Heritage Values and Attributes
TOPIC 4	Collection and Analysis of Information Sources
TOPIC 5	Linking Value Assessment to Different Steps in Heritage Recovery

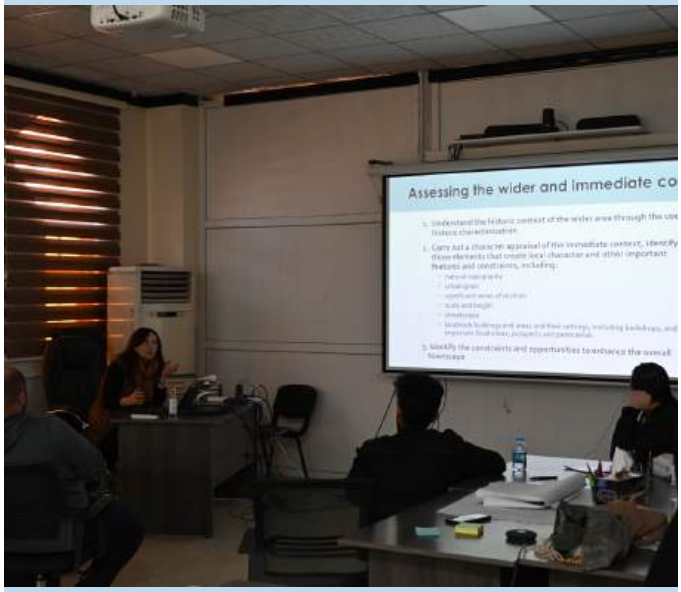
RELATED TOPICS

Module 1 - Topic 3	Overview of Cultural Heritage
Module 2 - Topic 3	Conflict Analysis and its Application to Heritage Recovery
Module 2 - Topic 4	Stakeholders, Rightsholders, and Actors Mapping and Analysis
Module 4 - Topic 3	Collection and analysis of Information Sources
Module 4 - Topic 3.1	Methods and tools for Documentation - City and Neighborhood
Module 4 - Topic 3.2	Methods and tools for Documentation - Building
Module 5 - Topic 1	Identification of Structural Elements and Analyzing their Behavior and Design
Module 5 - Topic 3	Typologies of Hazards Affecting Built Cultural Heritage
Module 5 - Topic 6	Assessing and Managing Risk
Module 6 - Topic 2	Peacebuilding and Memory Processing in Post-Conflict Recovery Planning
Module 6 - Topic 6	Decision Making and Stakeholder Involvement in Recovery Planning
Module 6 - Topic 7	Monitoring & Reporting in Recovery Planning
Module 7 - Topic 2	Basic Intervention Consideration
Module 7 - Topic 6	Stakeholders an d Community Engagement
Module 7 - Topic 8	Post-Completion Management and Consideration

LECTURES
(USED IN MOSUL TRAINING)

"Hierarchy of Values in the Decision-making Phase (Planning)"
Presented by: Cristina Iamandi

Participants delved into the intricacies of prioritizing different heritage values during the recovery planning process, gaining insights into the complexities of cultural heritage conservation decision-making.



"Outstanding Universal Value (OUV)"

This lecture covered the OUV criteria while emphasizing the importance of authenticity and integrity in evaluating the significance of cultural heritage sites on a global scale.

TEACHING STRATEGIES

Lecture Topics

Lectures in this module are designed to be a comprehensive exploration of cultural heritage, delving into the multifaceted aspects that underpin the recovery and understanding of heritage. Topics of the lectures focus on:

- The indispensable connection between heritage values, significance, and community participation Participants learn how local communities play a pivotal role in shaping and safeguarding heritage.
- Emphasis that heritage conservation efforts must align with the values and aspirations of the communities affected.
- Importance of a collaborative approach to heritage conservation.
- Authenticity, integrity, cultural significance, and attributes within the realm of heritage significance and values.
- Fundamental principles governing the assessment and recovery of cultural heritage.
- Methodology and tools for identifying, assessing, and mapping heritage values and attributes to systematically evaluate the significance and unique qualities of heritage sites, essential for effective documentation, and damage and risk assessment.
- Develop essential techniques for data gathering from diverse information sources to foster a comprehensive understanding of cultural significance and values.
- Assessing the loss of heritage values and attributes.
- Identify, evaluate, and document the impact of various factors on the significance of heritage sites, enhancing their ability to prioritize and plan for effective heritage conservation and recovery efforts.

Field Visits

Field visits can play a critical role in allowing participants to immerse themselves in heritage value assessment. Sites can range from exceptional to everyday heritage, both tangible and intangible. Also, visiting examples of restored or rehabilitated projects can provide valuable information to the participants by gaining insight from the heritage professionals who worked on the project.

Classroom Exercises

Following up on the field visits, classroom sessions can provide opportunities for participants to identify the values associated with the structures that were visited and further exploration can be discussed as to how these values can influence the conservation approaches.

Classroom exercises can also explore various aspects and challenges related to maintaining the authenticity, integrity, and heritage significance of this historic area.

Case Studies

Case studies can be presented highlighting the pivotal role of value assessment in heritage recovery. These case studies can illustrate the practical significance of comprehending and assessing heritage values for decision making, especially in the context of post-conflict recovery and conservation.

FIELD VISITS
(USED IN MOSUL TRAINING)

Al-Nuri Mosque and Al-Hadba Minaret
Field visits to Moslawi houses helped participants understand the significance of everyday heritage and its role in heritage recovery, extending beyond iconic monuments. Additionally, participants explored the cultural and historical importance of the iconic landmarks of Al-Nuri Mosque and Al-Hadba Minaret.

Zyada House Restoration and Rehabilitation Project
Participants also embarked on a field visit to the Zyada House Restoration and Rehabilitation Project in Mosul, providing firsthand insights into the role of value assessment in heritage restoration and rehabilitation endeavors. Discussions with site engineers focused on how an understanding of heritage value informs decision-making processes during restoration, including considerations for conservation, removal, and contemporary design adaptations.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Identifying and Mapping Attributes that Convey the Heritage Values of a Heritage Property - Group Activity / Field and Classroom Activity

In this exercise, participants engage in the identification of Heritage Attributes, which encompass the essential features, characteristics and context that contribute to the cultural heritage value of a property or heritage conservation district. The exercise takes place in a classroom setting following a visit to the course case study, the Prayer House. During the exercise, participants utilize various tools, including a value assessment form and a statement of heritage significance.

VALUES		LVL OF IMPORTANCE	ATTRIBUTTES	SOURCES OF INFORMATION	STAKEHOLDERS AND COMMUNITIES
AESTHETIC VALUES					
HISTORIC VALUES					
ARCHITECTURAL VALUES					
SPIRITUAL VALUES					
SOCIAL VALUES					
SCIENTIFIC VALUES					
GEOLOGICAL VALUES					
ECOLOGICAL VALUES					
BIOLOGICAL VALUES					
NON-HERITAGE VALUES					
GAPS AND CHALLENGES					
OPPORTUNITIES, RECOMMENDATIONS AND FOLLOW UP ACTIONS					

These tools assist in systematically evaluating and documenting the significance and unique qualities of the heritage site. By carefully assessing the attributes and values associated with the property, participants gain a deeper understanding of its cultural heritage significance.
Through this exercise, participants develop skills in identifying and documenting the key elements that contribute to the significance and values of a heritage site. The exercise promotes critical thinking and fosters an appreciation for the importance of conserving heritage assets.

FIELD EXERCISE
(USED IN MOSUL TRAINING)

Field Visit: Zyada House Restoration and Rehabilitation Project in Mosul - Group Activity / Field Activity

The purpose of this field visit was to provide participants with a firsthand experience of a heritage restoration and rehabilitation project and to explore the role of value assessment in such endeavors. The Zyada House, located in Mosul, served as the focal point of this visit, offering a practical context to reflect on the importance of heritage value assessment.
During the visit, participants had the opportunity to witness the site's ongoing restoration efforts and engage in insightful discussions with the project's site engineers. The focus of these discussions revolved around the importance of value assessment in guiding decision-making processes throughout the project. Participants explored how an understanding of the heritage value of the property informs crucial choices, including the preservation or removal of elements, materials, and techniques, as well as considerations for contemporary design adaptations.
The visit fostered an interactive learning environment, where participants actively exchanged ideas, shared perspectives, and deepened their understanding of heritage recovery practices. By immersing themselves in the Zyada House Restoration and Rehabilitation Project, participants gained practical insights into the application of value assessment principles within a real-world restoration context.

READING REFERENCES

De la Torre, M. (ed.). (2002). *Assessing the values of cultural heritage.* Los Angeles, California: GCI.

De la Torre, M. (ed.). 2005. *Heritage Values in Site Management: Four Case Studies.* Los Angeles: Getty Conservation Institute.

ICOMOS. (2013). *The Australia ICOMOS Charter for Places of Cultural Significance* (Burra Charter). Australia: ICOMOS.

O'Brien, R. and Barnes-Wylie, J. (2019). *Significance assessment guidelines: guidelines for assessing historic places and historic areas for the New Zealand heritage list/ Rārangi.* New Zealand: Heritage New Zealand Pouhere Taonga.

Saifi, Y., Yüceer, H., and Hürol, Y. (2021). 'Revisiting the Conditions of Authenticity for Built Heritage in Areas of Conflict', *Heritage*, (4), 811–827. https://doi.org/10.3390/heritage4020045

DOCUMENTATION
MODULE 4

LEARNING OBJECTIVES

- Understanding heritage documentation through lectures, case studies and practical field work at the selected case study site, where documentation has and will inform conservation decision making.
- Comprehending: the principles and guidelines of documentation through practical application on the case study site.
- Identifying a suitable methodology depending on the project site.
- Applying the methodology using a variety of tools and techniques.
- Knowing professional practice.

TOPICS

TOPIC 1	Introduction to Documentation
TOPIC 2	Guiding Principles of Documentation
TOPIC 3.1	Methods and Tools for Documentation – City and Neighborhood
TOPIC 3.2	Methods and Tools for Documentation – Building Level
TOPIC 4	Monitoring and Reporting in Documentation
TOPIC 5	Application of Documentation in Heritage Recovery
TOPIC 6	Data Management and Recording Techniques

RELATED TOPICS

Module 2 - Topic 2	Understanding Local Context
Module 3 - Topic 1	Introduction to Heritage Significance and Values and Their Qualifiers
Module 3 - Topic 2	Methodology for Identifying, Assessing, and Mapping Heritage Values and Attributes
Module 3 - Topic 3	Collection and Analysis of Information Sources
Module 3 - Topic 5	Significance of Tangible and Intangible Heritage
Module 3 - Topic 6	Conflicting and Changing Nature of Values and Assessing Their Loss Engagement
Module 5 - Topic 1	Identification of Structural Elements and Analyzing Their Behavior and Design
Module 5 - Topic 4	Understanding and Analysis of Structural Damages of Heritage Buildings
Module 5 - Topic 7	Identification and Treatment of Different Types of Damages at the Material Level First Aid and Shoring Design
Module 7 - Topic 3	Typology and Levels of Interventions
Module 7 - Topic 5	Designing and Implementation of Stabilization Interventions for Heritage Buildings
Module 7 - Topic 7	Site Management

LECTURES
(USED IN MOSUL TRAINING)

"Guiding Principles of Documentation-Importance of Informed Conservation Decisions"
Presented by: Dr. Rand Eppich

This lecture explored the concept of documentation and its integral role in cultural heritage conservation. Participants gained an understanding of how documentation plays a crucial role in conservation efforts and were introduced to the module's goals and objectives.

"Introduction to photogrammetry"
Presented by Dr. Rand Eppich

This lecture was one of many lectures that introduced the tools required for onsite documentation of heritage.

TRAINING STRATEGIES

Lecture Topics

Lectures in this module are designed to provide the participants with the knowledge of principles and techniques for documentation and survey of tangible and intangible cultural heritage at regional, city, neighborhood, and building levels. Topics in this module include:

- Gaining an understanding of how documentation plays a crucial role in conservation efforts.
- In-depth look at the guiding principles of documentation, emphasizing its importance in making informed conservation decisions.
- Introduction to various tools and techniques essential for documentation of cultural heritage, including drone photography, architectural sketching, and laser scanning.
- Condition assessment and mapping.

Fieldwork

Field visits take center stage in this module. Participants can learn from activities including equipment preparation, safety training, group formation, and assessments in the field. Manual recording exercises, including the use of tools like disto, sketching, plumb bobs, and targets, provide hands-on experience. Students can also have the chance to hone their skills in sketching and hand measurement, while also evaluating their existing knowledge. Field visits also offer the opportunity to discuss photography techniques for heritage documentation.

Community-based mapping of cultural resources refers to a participatory approach that actively involves local communities in identifying, documenting, and mapping cultural assets in their area. It aims to empower communities to take ownership of their cultural heritage and contribute to its preservation and management.

Classroom Exercises

In the classroom, participants can learn about hardware distribution, conducte equipment inventory checks, and troubleshoot technical issues. Discussions on lab norms, logistics, and software installations ensure a smooth and efficient work environment. A significant portion the classroom exercises can be dedicated to photogrammetry exercises. Participants learn to capture images of objects from various angles and process them using photogrammetric techniques. The importance of using targets to ensure accuracy in 3D reconstruction is emphasized, providing practical skills for documenting cultural heritage assets. Classwork sessions can also involve processing photogrammetry data using Agisoft Photoscan. Participants learn to cut models, export results, and create Digital Terrain Models (DTMs) and orthophotos, crucial for accurate data processing in cultural heritage documentation.

Case Studies

Participants can grasp the practical importance of thorough documentation in conserving and safeguarding cultural heritage sites and artifacts through relevant case studies.

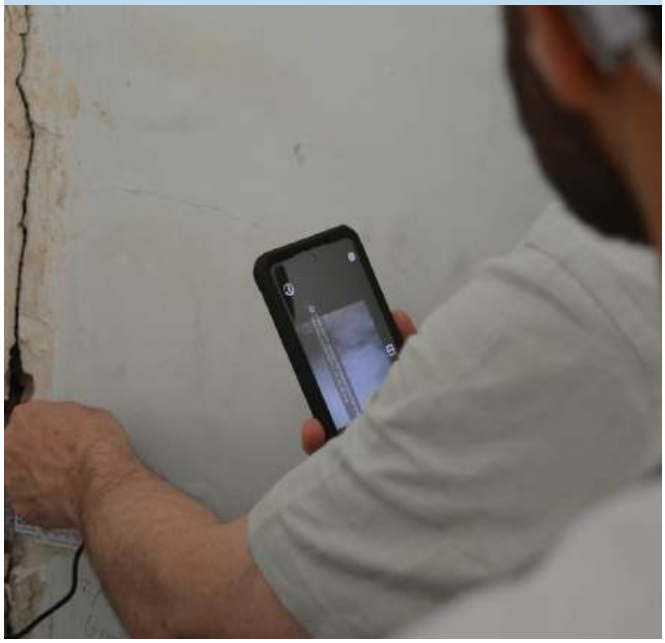
FIELD VISITS
(USED IN MOSUL TRAINING)

Amin Effendi House

Practical fieldwork took center stage as participants visited the Amin Effendi House and its neighborhood. They engaged in activities such as equipment preparation, safety training, group formation, and assessments in the field. Manual recording exercises, including the use of tools like disto, sketching, plumb bobs, and targets, provided hands-on experience. The case study was introduced, and tasks were distributed among groups. Participants honed their skills in sketching and hand measurement, while also evaluating their existing knowledge.

Training focusing on photography techniques for heritage documentation were offered. Participants conducted rectified photography exercises and received guidance on architectural photography. Drone photography was introduced through a live demonstration. The day also covered manual recording and the processing of photography data, along with a field lecture on endoscopy and microscopy techniques. Practical exercises in rectified photography equipped participants with essential skills for documenting cultural heritage and analyzing historical structures in detail.

Another day of fieldwork at Amin Effendi House allowed participants to conduct field tests and control measurements, applying their knowledge in real-world scenarios for precise data collection. Through the use of laser scanning technology, participants had the opportunity to compare laser scanning with photogrammetry technology, aiding them in making informed decisions about the most suitable documentation method for heritage conservation.



FIELD EXERCISE
(USED IN MOSUL TRAINING)

Field Exercise: Community-Based Mapping of Cultural Resources - Group Activity / Field Activity

In this exercise, participants are divided into groups and assigned to a case study neighborhood. Their task involves collecting data through questionnaires and interviews and studying the cultural, social, and economic contexts of the community. The questionnaires serve as a guide for data collection, focusing on gathering information about the neighborhood's cultural resources and heritage values. Using the UNESCO methodology for community-based needs identification, participants conduct interviews with neighborhood residents. These interviews provide firsthand insights into the community's aspirations and perspectives regarding their cultural resources.

The exercise ensures a community-centered approach in the decision-making process. The data collected informs adaptive reuse proposals for the case study, aligning with the community's needs and values. Participants develop practical skills in data collection, questionnaire development, and conducting interviews. They gain an appreciation for community involvement in heritage conservation and adaptive reuse initiatives.

Overall, this exercise enhances participants' understanding of the community's needs and situation, enabling informed and culturally sensitive decision-making when proposing adaptive reuse strategies for the case study site.

CLASSROOM & FIELD EXERCISE
(USED IN MOSUL TRAINING)

Application of Documentation: Mapping and Assessing the Condition- Group Activity / Field Activity and Classroom activity
In this exercise, participants focus on the primary condition assessment of the case study, with the aim of establishing a connection between documentation and other aspects of the recovery process. Participant groups are assigned the task of utilizing the documentation, including maps and plans, to evaluate the main conditions of the case study.

Through careful observation and analysis, participants identify and document key conditions such as cracks, loss of façade plastering, drainage problems, and more. By incorporating these findings into the documentation, participants contribute to a comprehensive understanding of the case study's condition, ensuring well-informed documentation.

The exercise serves a dual purpose. Firstly, it enhances participants' skills in documenting the physical conditions of heritage sites that will be used in subsequent module on damage and risk assessment. Secondly, it emphasizes the importance of linking documentation with other aspects of the recovery process, such as identifying the specific issues that need to be addressed for the successful restoration and recovery proposal of the primary case study.

READING REFERENCES

Burns, J. (editor). (1989). *Recording historic structures*. Washington, D.C.: The AIA Press.

Council of Europe. (1992). *Architectural heritage: inventory and documentation methods in Europe*. Strasbourg, France: Council of Europe.

Early, J. (2003). *Building conservation philosophy, 3rd edition*, Donhead.

Eppich, R. (2007). *Recording, documentation, and information management for the conservation of heritage places: illustrated examples*. Los Angeles, California: The Getty Conservation Institute.

Federman, A, (2017). "Documentation for the Conservation of Built Heritage: Analysis of Recording Methodologies", *Master of Applied Science*, Ottawa, Carleton University.
ICOMOS. (1996) *Principles for the recording of monuments, groups of buildings, and sites.* United Kingdom: ICOMOS.

Letellier, R. (2007). *Recording, documentation, and information management for the conservation of heritage places: guiding principles*. Los Angeles, California: The Getty Conservation Institute.

Remondino F. (2011). 'Heritage recording and 3D modeling with photogrammetry and 3D scanning', *Remote Sensing,* Volume 3(6), pp. 1104-1138.

State of Queensland. (2015) "Guideline: carrying out a heritage survey". Queensland, Austrailia.

DAMAGE & RISK ASSESSMENT
MODULE 5

LEARNING OBJECTIVES

- Identify different types of damages to built structures.
- Identify different types of deterioration and decays on materials and surfaces.
- Identify, assess, and map the existing damages and deteriorations for different typologies of structures and materials.
- Assess the consequences of the damages for the safety of people and the security of the site.
- Analyse various physical, social, economic, institutional, and attitudinal vulnerability factors with respect to the various hazards.
- Develop critical risk scenarios and develop mitigation strategies, etc.
- Prepare the damage and risk maps and integrate them in a global damage and risk assessment of the historic buildings.
- Analyze, using know-how, observation, monitoring, calculation, etc. to identify the causes and the consequences.
- Design a shoring system for a damaged building.
- Analyze the monitoring data to make the right decision for intervention.
- Undertake comprehensive risk assessment for various hazards (flooding/fire, explosion, etc.)

TOPICS

RELATED TOPICS

Module 2 - Topic 2	Understanding Local Context
Module 2 - Topic 3	Conflict Analysis and its Application to Heritage Recovery
Module 2 - Topic 4	Stakeholders, Rightsholders, and Actors Mapping and Analysis
Module 3 - Topic 2	Methodology for Identifying, Assessing, and Mapping Heritage Values and Attributes
Module 3 - Topic 4	Linking Value Assessment to Different Steps of Heritage Recovery
Module 3 - Topic 6	Conflicting and Changing Nature of Values and Assessing Their Loss
Module 4 - Topic 3.1	Methods and tools for Documentation - City and Neighborhood
Module 4 - Topic 3.2	Methods and tools for Documentation - Building
Module 4 - Topic 4	Monitoring and Reporting in Documentation
Module 4 - Topic 5	Application of Documentation in Heritage Recovery
Module 7 - Topic 2	Basic Intervention Consideration
Module 7 - Topic 8	Post-Completion Management and Consideration

LECTURES
(USED IN MOSUL TRAINING)

"Numerical Modeling Applied to Historic Buildings"
Presented by: Marwan Al-Heib

This lecture delved into the concepts and principles of numerical modeling, offering participants a deeper understanding of how computational techniques can be used to analyze and assess historical structures. Numerical modeling is an essential tool in the preservation and restoration of heritage buildings, as it allows engineers and preservationists to predict structural behavior and potential issues accurately.

"Shoring of Heritage Structures"
Prensented by: Marwan Al-Heib

Marwan Al-Heib covered practical information on the methods and techniques for stabilizing historical buildings.

TRAINING STRATEGIES

Lecture Topics

Lectures in this module are designed to enhance knowledge of how to assess damage to historic structures. The topics include:

- The identification of damages to historic structures and damage pathology, providing essential skills for assessing and documenting damages in historical buildings.
- Techniques for assessing and mapping damages, as well as the critical art of shoring to stabilize compromised heritage structures.
- Introduce the concept of risk in disaster management.
- Climate change's impact and the intersection with disaster risk management.
- Vulnerabilities and hazard interactions.
- Risk analysis methodologies.
- Introduction of monitoring tools and techniques for assessing historical buildings.
- Provide information on buckling analysis with Eurocode recommendations and shoring.
- Applying the Finite Element Method (FEM) to structural analysis and preservation. FEM is a powerful computational technique widely used in engineering and architecture to model complex structures and simulate their behavior under various conditions.

Fieldwork

Field visits to the main case study help the participants understand first hand what structural issues can exist in heritage buildings. Participants can also gain useful insight from visiting projects that are undergoing rehabilitation by heritage professionals to enrich their understanding of how the tools they are learning are applied to real world applications.

Classroom Exercises

In the classroom, participants can learn about the factors affecting heritage sites, including man-made and natural hazards, environmental factors, social and economic factors, and more. These discussions fostered collaboration and exchange of ideas among participants.

Case Studies

Case studies of damages to heritage structures offered practical insights into the challenges and solutions related to conserving and restoring these culturally significant buildings. They can explore structural failures and incorrect interventions in case studies, understanding the consequences of poor structural decisions. This highlights the importance of sound structural design and construction practices.

Case studies can offer practical applications of risk mitigation and damage assessment for heritage structures.

FIELD VISITS
(USED IN MOSUL TRAINING)

Amin Effendi House
Practical fieldwork took center stage as participants visited the Amin Effendi House, the main case study for the course, to gain practical experience identifying structural elements and creating detailed mappings. Another site visit took them to Beit Al-Tawaleb, a historic house in Mosul with structural issues. Here, they identified structural elements and assessed the main structural problems, contributing to their understanding of historical conservation and structural analysis. they also worked on identifying hazards and vulnerabilities affecting the Amin Effendi House and its neighborhood, employing risk assessment matrices to assess risks systematically. Based on the risk analysis, participants created disaster scenarios specific to the case study, allowing them to envision and assess potential consequences. The Amin Effendi House provided the opportunity to design and implement shoring techniques learned during the lectures.

Al-Nouri Mosque
Another visit was to Al-Nouri Mosque, where participants assessed structural problems and witnessed UNESCO's efforts within the complex's recovery project, which included the iconic minaret. This hands-on experience offered valuable insights into heritage preservation and restoration in action, enriching their understanding of practical applications in the field.

Al-Tahera Church
A site visit to Al-Tahera Church in Mosul allowed participants to interact with UNESCO engineers, discussing structural consolidation and the significance of shoring in recovery projects. This hands-on experience provided insights into innovative methods for evaluating and restoring heritage structures.

FIELD / CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

In Situ Exploration: Investigating Structural Failures and Interventions - Group Activity / Field Activity

In this exercise, participants visit case studies where they have the opportunity to observe and investigate structural failures and incorrect interventions. The exercise aims to provide valuable lessons and insights by learning from these failures.

During the exercise, participants closely examine the built structures, focusing on the specific areas where failures have occurred. They analyze the causes and consequences of these failures, identifying the mistakes or improper interventions that have contributed to the structural issues. By studying these real-life examples, participants gain a deeper understanding of the importance of sound structural design and construction practices.

The exercise serves as a valuable learning experience, allowing participants to witness the consequences of poor structural decisions firsthand. It highlights the significance of conducting thorough investigations and assessments before implementing any structural interventions. By incorporating these lessons into their own practice, participants become better equipped to ensure the stability and longevity of built structures in future conservation efforts.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

The Application of Numerical Modeling in Damage Assessment for Historic Structures - Group Activity / Classroom Activity

This exercise focuses on utilizing the Abaqus software for numerical modeling and analysis in the context of investigating the structural stability of historic buildings and conducting prior examinations for consolidation interventions. Participants are introduced to the basics of numerical analysis and the Abaqus software, emphasizing their significance in assessing structural behavior. The exercise covers topics such as finite element analysis (FEA) and the application of the Distinct Element Method on masonry structures, as well as modeling techniques, preprocessing steps, and analysis setup in Abaqus.

Practical examples are provided to enhance participants' understanding. They analyze the stability of a damaged structure, simulate load distribution on a heritage building's foundation, and conduct material testing and strength analysis. These exercises allow participants to explore different scenarios and assess the structural behavior of the case study.

By gaining practical experience in numerical analysis using Abaqus, participants become equipped to make informed decisions during the restoration process. The exercise aims to identify potential structural issues, optimize design modifications, and ensure the long-term stability and conservation of the historic building.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Disaster Risk Management: Identifying Vulnerabilities, Hazards, and Mitigation Strategies - Group Activity / Classroom Activity

The exercise focused on disaster risk management and aimed to enhance participants' understanding of hazards and vulnerabilities in the given case study. The exercise involved a comprehensive identification process to determine the specific hazards and vulnerabilities present in the context. Participants examined the interplay between these factors and gained insights into the resulting risks.

To further analyze the risks, the exercise employed a risk assessment matrix. This matrix allowed participants to assess the magnitude of each identified risk based on its likelihood and potential impact. By systematically evaluating the risks, participants gained a better understanding of their prioritization.

Building upon the risk assessment, the exercise proceeded to construct disaster scenarios specific to the case study. These scenarios simulated potential disaster events that could occur, taking into account the identified hazards and vulnerabilities. This exercise allowed participants to envision and assess the potential consequences of such events and prioritise them..

Finally, participants worked collaboratively to suggest mitigation and preparedness strategies tailored to the proposed disaster scenarios. This involved brainstorming and developing effective measures to minimize the impact of disasters, enhance resilience, and ensure prompt and effective response and recovery.

Overall, the exercise provided participants with practical experience in disaster risk management. It enabled them to apply their knowledge and skills to identify, analyze, and respond to risks, fostering a proactive approach to mitigating the impact of disasters and safeguarding the community's well-being.

WORKSHEET ON MITIGATION & PREPAREDNESS STRATEGIES FOR CHOSEN DISASTER SCENARIO

S.No.	Description of Mitigation & preparedness Measure (policy, planning e.g. land use/transport/environment, technical measures for structure or material, maintenance and monitoring)	Scale of Intervention (Provincial, city, neighbourhood, attribute level)	Which hazards are eliminated, if any? Which vulnerabilities and risks are reduced and how?	Who would be involved in developing and implementing the mitigation measure?	Duration of implementation (Short/Medium/ Long term/periodic measure)	Estimated Cost for developing, implementing and maintaining (low, medium, high)
1.						
2.						
3.						

READING REFERENCES

Canadian Conservation Institute. (2016). *The ABC method a risk management approach to the preservation of cultural heritage,* Ottawa: Canadian Conservation Institute (Institut canadien de conservation).

ICCROM. (2018). *First aid to cultural heritage in times of crisis*. Rome, Italy: ICCROM.

Jigyasu, R. (2012). *Disaster risk management of cultural heritage in urban areas: A training guide.* Kyoto, Japan: Research Center for Disaster Mitigation of Urban Cultural Heritage.

UN-ECLAC. (2014). *Handbook for disaster assessment.* UN-ECLAC.

UN, EU, & GFDRR. (2013). *Post disaster needs assessments.* Washington, DC: GFDRR.

UN-Habitat. (2018). *The initial planning framework for the reconstruction of Mosul,* UN-Habitat.

UN-Habitat. (2008). *People's process in post-disaster and post-conflict recovery and reconstruction*. UN-Habitat.

UNISDR. (2015). *The Sendai Framework for Disaster Risk Reduction 2015 – 2030*. UNISDR.

UNISDR. (2016). *United Nations plan of action on disaster risk reduction for resilience: towards a risk informed and integrated approach to sustainable development.* UNISDR.

RECOVERY PLANNING
MODULE 6

LEARNING OBJECTIVES

- Understand the specificity of recovery planning in post conflict situations (vs conventional planning).
- Understand recovery principles and frameworks such as: BBB, CURE, URF, HUL, etc.
- Understand the challenges based/deducted from the analytical phase based on recovery tools.
- Learn about decision making in recovery planning: establishing criteria and deciding about the type and level of intervention, and future appropriate use.
- Learn how to include emerging new narratives, identities, and empowering displaced populations in heritage recovery.
- Learn how to estimate costs, developing BoQ, raising funds, business strategies, writing project proposals, etc.

TOPICS

RELATED TOPICS

Module 1 - Topic 4	Introduction to Heritage Recovery
Module 2 - Topic 3	Conflict Analysis and its Application to Heritage Recovery
Module 2 - Topic 4	Stakeholders, Rightsholders, and Actors Mapping and Analysis
Module 2 - Topic 5	Peacebuilding through Heritage Recovery
Module 3 - Topic 4	Linking Value Assessment to Different Steps of Heritage Recovery
Module 3 - Topic 6	Conflicting and Changing Nature of Values and Assessing Their Loss
Module 4 - Topic 5	Application of Documentation in Heritage Recovery
Module 5 - Topic 1	Identification of Structural Elements and Analyzing Their Behavior and Design
Module 5 - Topic 2	The Application of Numerical Modeling and the Distinct Element Method for Analyzing Heritage Structures
Module 5 - Topic 3	Typologies of Hazards Affecting Built Cultural Heritage
Module 5 - Topic 6	Assessing and Managing Risk
Module 5 - Topic 8	Post-completion Management and Consideration
Module 7 - Topic 2	Basic Intervention Consideration
Module 7 - Topic 3	Typology and Levels of Interventions
Module 7 - Topic 7	Site Management
Module 7 - Topic 8	Post-Completion Management and Consideration

LECTURES

(USED IN MOSUL TRAINING)

“Modes of memorialisation: Antagonist, Agonistic memory and cosmopolitan mode of remembering”
Presented by: Mr. Frazer Macdonald

The lecture aimed to teach participants about different modes of memorialization and to explain the cosmopolitan mode of remembering, the antagonistic collective memories, and the agonistic memory.

“The Role of Culture in City Reconstruction and Recovery”
Prensented by: Dr. Cristina Iamandi

The lecture aimed to introduce the participant to the role of culture in the reconstruction and recovery processes. Moreover, the lecture put emphasis on the necessity of enhancing the existing frameworks of city reconstruction (such as “build back better”) and socio-economic recovery of people’s livelihoods by integrating culture - in its many forms - in reconstruction and recovery processes.

TRAINING STRATEGIES

Lecture Topics

Lectures play an important role in this module and are designed to enhance the understanding of the complexity and specificity of recovery planning when applied at city, neighborhood and building levels. They can also introduce the key guiding documents concerning recovery planning as well as the main reconstruction and recovery frameworks. Lectures can range from a variety of topics. These can include:

- The financial mechanisms of reconstruction and the role the international community can play in providing financial assistance to reconstruct cities, industries and infrastructure damaged during the war.
- Understanding the memory, identity and reconciliation in the planning process and explore ways of integrating collective memory of everyday sites into planning.
- Present adaptive reuse projects as an alternative to demolition and redevelopment.
- Focus on public spaces as contributors to peacebuilding and social cohesion.
- Stakeholder involvement in recovery planning, civic engagement in recovery processes, and communication strategies and tools.
- UN-Habitat 'Urban Recovery Framework'
- Building Back Better.
- UNESCO-World Bank Position Paper on “The Role of Culture in City Reconstruction and Recovery”
- Collective memory and memorials in peacebuilding and reconciliation processes with examples of good practice.
- Recreating place through tangible and intangible heritage.
- Establishing reconstruction priorities; developing vision, goals, and objectives.
- Inventory of built structures and open spaces as a tool for reconstruction planning and management.

Site Visits / Field Visits

Site visits expose the participants to completed or ongoing recovery projects in the local area. Participants can examine the strengths and weakness of these projects and how they are impacting the local region.

Field visits can be conducted in areas undergoing restoration or reconstruction activities that allow the participants to interact one-on-one with residents and shop owners in area to understand the economical and social benefits or failures of the reconstruction efforts. These visits can highlight the importance of involving the community concerns in the recovery planning efforts.

Case Studies

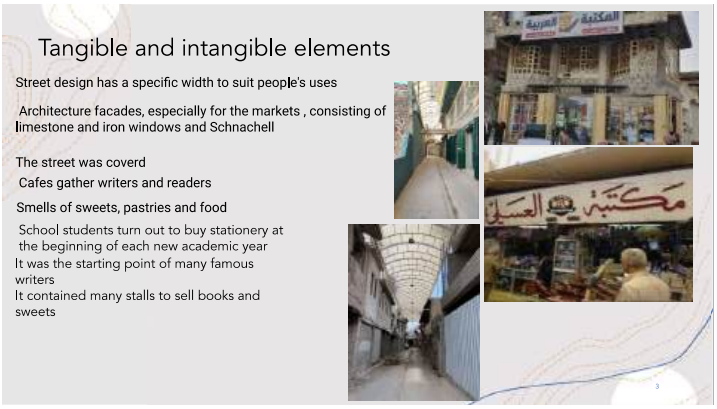
Case studies introduce the participants to the diversity and complexity of reconstruction approaches, depending on the specific context of each city and to learn about the wide range of approaches determined by political, and economic and cultural factors. Case studies can also provide examples of adaptive reuse projects either locally, regionally, or internationally that can provide alternatives to demolition and redevelopment.

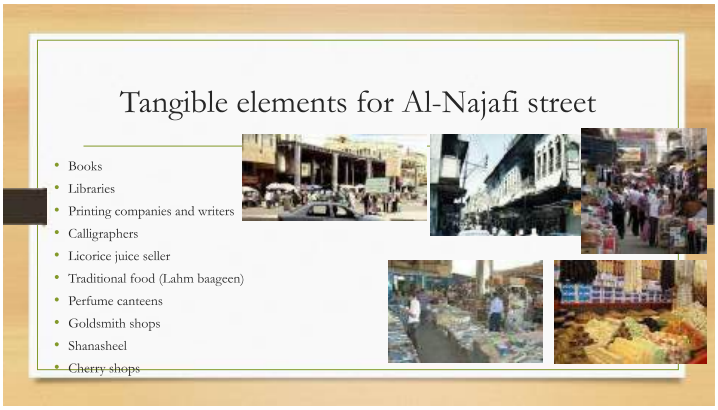
Classroom / Field Exercises

Classroom exercises can build on site visits conducted. Students can propose ways to improve the projects they visited using concept sketches and recommendations. The aim of an exercise like this is to allow collective reflection on the discrepancies between the project design and its implementation, and to propose solutions to enhance this public space.

Field exercise at the chosen case study can allow students to evaluate the potential reuse of the site. Taking the information gained in lectures and international case studies, they can use the case study to explore how the building could contribute to the social and economic benefits to the community.

Sample Participant Presentations





SITE VISITS
(USED IN MOSUL TRAINING)

Al-Jamhorya Park

A site visit was conducted to Al-Jamhorya Park in Bab Lagah area in Mosul. The aim of this visit was to examine a newly created public space and reflect on its qualities and weaknesses, in addition, to assessing the role of the park site,in the recovery of Mosul.

FIELD VISITS
(USED IN MOSUL TRAINING)

Al-Najafi Street

A field visit was conducted to Al-Najafi street in old Mosul. The aim of this visit is to use the transact walk methodology. During the visit, participants had discussions with local shop owners and reflected on their needs and position on current and proposed recovery projects. The field visit allows participants to gain first hand accounts of the potential impacts on various reconstruction and restoration initiatives.

Prayer House

A field exercise at the Prayer House, the case study for the course aimed to introduce the participants to how to understand the historic building through hand-drawing survey bearing in mind its reuse potential.

SECONDARY CASE STUDY
(USED IN MOSUL TRAINING)

"Reconstruction of Timbuktu Mausoleums" - presented by Thierry Joffroy

Thierry Joffroy presented a case study on the reconstruction of Timbuktu Mausoleums and reconstruction of 50 houses for the poor. The session introduced the participants to the role of intangible heritage in the reconstruction process.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Sense of Place - Group Activity / Classroom Activity

In this exercise, participants explore and analyze the concept of "sense of place" within an urban heritage area, aiming to identify the various elements and features that contribute to its definition. Drawing on international charters such as The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter), participant groups engage in thoughtful discussions and brainstorming sessions to uncover the elements that reflect the sense of place in Mosul. Through collaboration and research, each group formulates their findings and presents them to the class. This exercise promotes critical thinking and deepens participants' understanding of the cultural significance and identity of urban heritage areas, fostering an increased appreciation for preserving and enhancing the unique sense of place in historic urban areas.

Reference:
https://openarchive.icomos.org/id/eprint/2145/

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Lessons Learned From Post-World War II Case Studies - Group Activity / Classroom Activity

In this exercise, participants explored the lessons learned from post-World War II case studies in the context of recovery efforts. The instructor presented case studies from war-torn European contexts, highlighting elements to be retained and avoided during recovery. Through group discussions and reflections, participants drew conclusions about these case studies and discussed how to apply the lessons learned in the recovery process for Mosul, while being mindful of past mistakes. Participant groups then prepared presentations to share their findings and recommendations, facilitating classroom discussions. This exercise provided valuable insights and guidance for navigating the complexities of post-conflict recovery and encouraged informed discussions about the recovery of Mosul.

CLASSROOM & FIELD EXERCISE
(USED IN MOSUL TRAINING)

Integrating Inventory into Heritage Recovery Planning: A Practical Exercise - Group Activity / Classroom and Field Activity

This exercise focuses on the development of an inventory and its integration into heritage recovery planning. Building upon the previous exercise in the documentation module, the instructor introduces the concept of inventory and emphasizes its importance in heritage recovery planning through the presentation of various case studies.

Participants actively engage in the exercise by creating inventory forms for both the urban and building levels. They draw inspiration from examples of inventory forms from different survey projects and tailor them to suit the specific case study and its surrounding neighborhood.

Next, participant groups conduct surveys at both the building and urban levels for the designated case study and its neighborhood. The collected data is then carefully analyzed by the groups using GIS software. As a result, they are able to generate thematic maps that serve as valuable resources for their recovery planning projects.

Through this exercise, participants gain practical experience in inventory development, surveying, data analysis, and the utilization of GIS tools. This equips them with the necessary skills to effectively incorporate inventories into their heritage recovery initiatives.

READING REFERENCES

De la Torre, M. ed. (2005). *Heritage values in site management: four case studies*. Los Angeles: Getty Conservation Institute.

FEMA. (2011). *National disaster recovery framework: strengthening disaster recovery for the nation*. Washington, D.C.:FEMA.

GFDRR, The World Bank, (2010). *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*. GFDRR.

GFDRR, The World Bank, EU, UNDP. (2015). *Guide to developing disaster recovery frameworks: Sendai conference version.* GFDRR.

Interreg Europe. (2020). *Built cultural heritage: integrating heritage buildings into contemporary society.* Interreg Europe.

Japan International Cooperation Agency (JICA). (2013). *Recovery and reconstruction process standards documents.* JICA.

Schirch L. (2013). *Conflict assessment and peacebuilding planning: toward a participatory approach to human security.* Boulder, CO: Kumarian Press.

UNESCO. (2011). *Recommendation on the historic uran landscape.* Paris: UNESCO.

UNESCO. (2016). The HUL guidebook: managing heritage in dynamic and constantly changing urban environments, a practical guide to UNESCO's recommendation on the historic urban landscape. Paris: UNESCO.

UNESCO. (2018). *Resolution 2347: mainstreaming the protection of cultural heritage at the global level.* Paris: UNESCO.

UNESCO. (2018). *Warsaw recommendation on recovery and reconstruction of cultural heritage.* Paris: UNESCO.

Wijesuriya, G.and Court, S. (2015). *People-centred approaches to the conservation of cultural heritage: living heritage*. Rome: ICCROM.

RECOVERY IMPLEMENTATION AND MONITORING
MODULE 7

LEARNING OBJECTIVES

- Understand using information from all previous modules, including values, documentation, assessment, etc. to execute and manage a conservation intervention.
- Create a comprehensive implementation package at multiple scopes and scales that includes project documents and execution plans, construction schedule, technical specifications in 3-part format, drawings, BoQ, and other technical documents including Health and Safety plan, change orders, site documentation during implementation while using standards to ensure quality such as ISO, Euro, ASTM, etc.
- Evaluate proposed interventions against established values and write a concise Heritage Impact Assessment that includes the impacts on values, and mitigations to reduce those impacts while balancing modern infrastructure interventions against historic values
- Manage an active heritage recovery project while learning to control quality of the implementation, evaluate materials, reject defects, colors, installation.
- Learn how to write and respond to RFIs, process change orders and adjust the scope of work and financing.
- Monitor after conservation implementation while influencing post-conservation measures after implementation and developing monitoring indicators.
- Understand how to evaluate the state of conservation and write related reports for different entities.
- Implement the Preventive Conservation approach.

TOPICS

RELATED TOPICS

Module 1 - Topic 2	Introduction to the Key Principles and Approaches of Cultural Heritage Conservation and Management
Module 2 - Topic 1	Introduction to Heritage Significance and Values and Their Qualifiers
Module 2 - Topic 2	Understanding the Local Context
Module 2 - Topic 5	Peacebuilding through Heritage Recovery
Module 3 - Topic 4	Linking Value Assessment to Different Steps of Heritage Recovery
Module 4 - Topic 5	Application of Documentation in Heritage Recovery
Module 5 - Topic 1	Identification of Structural Elements and Analyzing Their Behavior and Design
Module 5 - Topic 3	Typologies of Hazards Affecting Built Cultural Heritage
Module 5 - Topic 6	Assessing and Managing Risk
Module 5 - Topic 8	Post-completion Management and Consideration
Module 6 - Topic 1	Introduction to Recovery Planning and Guiding Documents
Module 6 - Topic 3	Planning Principles for Recovery
Module 6 - Topic 4	Financial Aspects of Heritage Recovery

LECTURES
(USED IN MOSUL TRAINING)

“Creating a Health and Safety Plan”
Presented by: Dr. Rand Eppich

Dr. Eppich presented a lecture on creating a health and safety plan. This presentation aimed to clarify these dangers to personal safety can be avoided and mitigated. Moreover, the participants gained the necessary knowledge on creating a health and safety plan for heritage recovery projects.

“An Implementation Comparison - Singapore verses Mosul; Two ways of implementing projects with cultural significance”
Presented by: Mr. Frazer Macdonald

The lecture introduced different ways and experiences of implementing heritage projects. The presentation aimed to show the difference between implementing heritage projects in different contexts.

TRAINING STRATEGIES

Lecture Topics

Lectures in the module focus on financing conservation and the importance of financial planning in the recovery implementation process. They explain the comprehensive process that aims to restore or conserve cultural heritage sites, buildings that have been damaged or destroyed due to armed conflicts, or human-made disasters. Topics include:

- Introduction to writing a workplan for heritage recovery projects.
- Professional practice.
- Construction site safety.
- How to address cracks in historic buildings.
- How to add strength and stability to damaged structures.
- Introduce numerical modelling for historic buildings.
- Presentation of the needs, assumptions, data, results, etc., as a tool to address problems in historic structures.

Site Visits / Field Visits

Field visits to the main case study offer the chance to understand the implementation design on site, documentation, and the verification of designs. This activity aims to show the participant that designs cannot be developed in a vacuum and must be continually verified on site.

Site visits can be organized at reconstruction projects where the participants can be introduced to the practical challenges of reconstruction project implementation and how to address them.

Classroom / Field Exercises

Classroom exercises provide the opportunity to gain a deep understanding of various aspects of recovery implementation and monitoring, including safety, conservation, documentation, and impact assessment, contributing to their ability to effectively manage heritage projects.

Case Studies

Case studies allow students to understand structural techniques including micro-piles for foundation consolidation in heritage structures, foundation improvement techniques and underpinning objectives.

FIELD VISITS
(USED IN MOSUL TRAINING)

Prayer House

A site visit to the Prayer House, the main case study, was supervised by Dr Al-Heib. During the visit, participant groups start thinking about the different recovery solutions, including draining, cracks, bolts, cables, etc. The aim of this filed activity was to help the participant groups in designing the recovery solution for the Prayer House.

CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Creating A Preventive Conservation Plan - Group Activity / Classroom Activity

In this exercise, participants engage in the process of creating a preventive conservation plan for their adaptive reuse designs. The exercise focuses on developing a comprehensive plan that addresses the long-term conservation and maintenance of the heritage elements involved. Participants learn about the importance of proactive measures to prevent deterioration and damage to cultural heritage. They work on developing a checklist for maintenance tasks and identifying potential issues that may arise after implementation. The exercise highlights the notion that the work of conservation doesn't end with the completion of the adaptive reuse project but requires ongoing attention and care. Participants gain practical skills in considering the preventive conservation aspects of their designs, ensuring the longevity and sustainability of the heritage elements involved. By the end of the exercise, participants have a deeper understanding of the significance of preventive conservation in safeguarding cultural heritage.

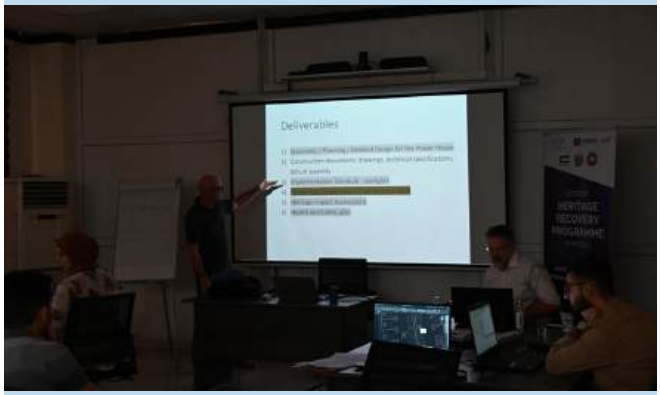
CLASSROOM EXERCISE
(USED IN MOSUL TRAINING)

Writing Heritage Impact Assessment (HIA) - Group Activity / Classroom Activity

In this exercise, participants are introduced to the concept of Heritage Impact Assessment (HIA) as an integral part of recovery implementation. The instructor provides an overview of HIA, explaining the procedural steps involved and showcasing examples of HIA studies from various contexts.

Participants then actively engage in an exercise where they develop their own HIA for the adaptive reuse proposals related to the course case study. The primary objective is to ensure that their interventions have minimal negative impact on the attributes of the case study. By conducting the HIA, participants gain a deeper understanding of the potential impacts their interventions may have on the heritage site and how to effectively avoid or mitigate any adverse effects.

Through this exercise, participants learn the importance of considering heritage impact assessment in the planning and implementation stages of recovery projects, contributing to the preservation and sustainable management of cultural heritage.



READING REFERENCES

Hughes, P. and Ferrett, E. (2015) *Introduction to health and safety in construction: for the NEBOSH national certificate in construction health and safety*. Routledge.

International Labour Office (1992) *Safety and health in construction.* Geneva: International Labour Office.

Hughes, P. and Ferrett, E. (2015) *Introduction to health and safety in construction: for the NEBOSH national certificate in construction health and safety*. Routledge.

NSW Heritage Office (2004) *Preparing a maintenance plan*. NSW Heritage Office.

Petzet, M. (ed.). (2009) *The giant Buddas of Bamiyan: safeguarding the remains*. Berlin: ICOMOS.

Winkler, G. and Chiumento, G. (2009) *Construction administration for architect*. McGraw Hill.

Wordsworth, P. (2001) *Lee's building maintenance management*. Wiley-Blackwell.

IMPLEMENTING
THE COURSE

Several items should be considered when attempting the implementation of a course on post-conflict recovery.

Identifying the Target Audience.
- Who are you trying to reach with the training? Are the participants only limited to cultural heritage field or they are from other fields such as architects, engineers, urban planners and those in charge of recovery?

Determining Goals and Objectives.
- Define clear and measurable goals and objectives.

Reserving Facilities.
- What kind of facilities best meet your needs for the duration of the course. Do you need to rent a house/commerical space to hold the course?

Identifying and Contacting Lecturers.
- Who are the best resourse people to teach the topics of the course?

Assembling Reference Materials.
- Start identifying reference materials useful for the content to be provided.

Case Studies.
- Which primary and secondary case studies will be used for the course?

SHORT LENGTH COURSE
3 -5 DAYS

IMPLEMENTING THE COURSE

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
	Module 1: Introduction to Urban Recovery	Module 3: Changing nature of values	Module 5: What is Risk / Collecting information for Risk Assessment	Module 6: Linking recovery planning with post-conflict reconciliation and peacebuilding	Module 7: PREVENTIVE CONSERVATION and operations, maintenance.
	Module 2: Situation & Context Analysis for post-conflict recovery of heritage	Module 3: Participants select a heritage place in Mosul and they explain which heritage values it has from their point of view	Module 5: First Aid Methodology/ Case Study	Module 6: Lessons learned from post-WW2 case-studies. Elements to be retained or avoided in Mosul.	Module 7: Creating a Preventive Conservation Plan (maintenance and operation plan)
	Module 2: Conflict Tree	Module 4: Guiding Principles of Documentation - Importance of Informed Conservation Decisions	Module 5: From damages to risk: Introducing the concept of risk	Module 6: Public spaces as contributors to peacebuilding and social cohesion	Module 7: An Implementation Comparison - Singapore v's Mosul 2 ways of implimenting projects with cultural significance
			Module 5: Assessing loss of values	Module 6: Landmarks as Forms of Collective Memory: The significance of Al-Najafi street for the inhabitants of Mosul	Participant Presentations
	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

MEDIUM LENGTH COURSE
3-4 WEEKS

WEEK 1

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:30	Module 1: Urban planning of Mosul and the Islamic city	Module 1: Architectural features in Mosul	Module 1: UNESCO's HUL Approach	Module 2: Situation analysis	Module 2: Introduction to Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict
9:00					
9:30					
10:00	Module 1: Introduction to contemporary conservation		Module 1: Visit to Old Mosul	Module 2: Introduction to PATH + Case Study"Mali	Module 2: Case studies on conflict analysis
10:30		Module 1: Image of the city		Module 2: A case study on stakeholder mapping	
11:00	Module 1: Urban/architectural classification				
11:30					Wrap up discussion
12:00				Module 2: Participant group work presentations (stakeholder mapping and situation analysis for heritage builidings	
12:30	Facilitated discussion	Module 1: Introduction to urban recovery			
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

MEDIUM LENGTH COURSE
3-4 WEEKS

WEEK 2

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:30	Module 3: Values and Significance	Module 3: Values and attributes of chosen case study	Module 3: What information do we need to better understand the values	Module 4: Case Studies in Documentation - its importance for conservation	Module 4: Manual recording field exercise, disto, sketching, plumb bob, targets, etc
9:00					
9:30					
10:00	Module 3: Introduction to the value-attribute worksheet		Module 3: Interviewing stakeholders and communities	Module 4:Guiding Principles of Documentation - Importance of Informed Conservation Decisions	
10:30		Module 3: Feedback from the morning field work			Module 4: project production, bringing all together
11:00	Module 3: Heritage assessment	Module 3: Attributes, integrity and authenticity			
11:30					
12:00				Module 4: Introduction to the case study, Initial reconnaissance, inspection, dividing the case study between groups	
12:30	Facilitated discussion	Module 3: Case study of Isfahan			Wrap up discussion
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

MEDIUM LENGTH COURSE
3-4 WEEKS

WEEK 3

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:30	Module 5: What is Risk / Collecting information for Risk Assessment	Module 5: Hazards and Vulnerabilities Exercise	Module 5: Typologies of Building Structures	Module 5: Types of damages, identifying the root causes of damages	Module 5: From damages to risk: Introducing the concept of risk
9:00					
9:30		Module 5: What is First Aid to Cultural Heritage?			
10:00	Module 5: Identify different structural typologies of heritage buildings in old Mosul + Structural and damage analysis		Module 5: Fieldwork at Primary case study	Module 5:Urgent intervention of damaged structures	
10:30		Module 5: First Aid Methodology/ Case Study			Module 5: Risk mitigation
11:00				Module 5: Damage classification	
11:30		Module 5: Ensuring the safety and the security during interventio			Module 5: Designing mitigation solutions
12:00				Module 5: Reporting the damages - documentations	
12:30	Facilitated discussion				Wrap up discussion
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

MEDIUM LENGTH COURSE
3-4 WEEKS

WEEK 4

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
8:30	Module 6: Recovery Planning - definition, phases, components	Module 6: Mapping collective memory and rebuilding identities in recovery processe	Module 6: Recovery planning in Aleppo, Syria	Module 7: PLANNING, DESIGN, INTERVENTIONS	Module 7: Project team work
9:00					
9:30		Module 6: Public spaces as contributors to peacebuilding and social cohesion	Module 6: Project Team work		
10:00	Module 6: Linking recovery planning with post-conflict reconciliation and peacebuilding			Module 7: PLANNING, DESIGN, INTERVENTIONS	
10:30		Module 6: Propose tools for communication and civic engagement	Module 6: The Recommendation on the Historic Urban Landscape		Module 7: Group presentations
11:00	Module 6: Urban Reconstruction in Europe after World War II – Case-studies. The Marshall Plan			Module 7: PLANNING AND IMPLEMENTING a Conservation Project	
11:30		Module 6: Creating schematic designs	Module 6: Understanding the historic building and examining its reuse potential through hand-drawing survey		
12:00	Module 6: Lessons learned from post-WW2 case-studies			Module 7: Project Team work	
12:30					
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

LONG LENGTH COURSE
8-9 MONTHS

MODULE 1 - ORIENTATION WEEK 1

	SUN 03 APR 2022	MON 04 APR 2022	TUE 05 APR 2022	WED 06 APR 2022	THU 07 APR 2022
8:30		Registration	Registration	Registration	Registration
9:00	Registration	Lecture: History of Mosul (Dr Hashem Saleh, UoM)	Lecture: Urban planning of Mosul and the Islamic city (Dr. Hassan Kasim, UoM)	Lecture: Architectural features in Mosul (Dr. Emad Al-Allaf, UoM)	Lecture: Introduction to urban recovery (Rohit)
9:30	Opening				
10:00	Professional expectations (Georges, Ayman, Bssam)	Participant final presentations (continued)	Lecture: Introduction to contemporary conservation (Rohit)		Visit to archaeological site (Nabi Yunus) (Dr. Yasmin Ali, UoM)
10:30	Team building activity (Memory Wall) (Ayman)			Lecture: Legal frameworks for heritage conservation in Iraq (Musab Jassim, Nineveh Archeology and Heritage Inspectorate)	
11:00	Participant final presentations		Exercise: Urban/architectural classification (Rohit)		
11:30				Lecture: Archeology of Mosul (Dr.Yasmin Ali, UoM)	
12:00					
12:30	Facilitated discussion and general feedback on participant presentations (Rohit+Abdelhmid)	Facilitated discussion and general feedback on participant presentations (Rohit+Abdelhamid)	Facilitated discussion (Abdelhamid)	Facilitated discussion (Abdelhamid)	
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

LONG LENGTH COURSE
8-9 MONTHS

MODULE 1 - ORIENTATION WEEK 2

	SUN 10 APR 2022	MON 11 APR 2022	TUE 12 APR 2022	WED 13 APR 2022	THU 14 APR 2022
8:30	Registration	Registration	Registration	Registration	Registration
9:00	Lecture (online): UNESCO's HUL Approach (Rand Eppich)	Introduction to first aid to cultural heritage (Abdelhamid+Younes Shlash+Ayoob Thanoon)	Lecture: Al Hadba Minaret (Dr. Alaa Hamdoun, UoM)	Lecture: NTU project in Mosul (Dr Omar Al-Hafith, NTU)	Lecture: Challenges of conserving urban heritage in Mosul (Dr. Emad Al-Allaf, UoM)
9:30					
10:00	Visit to Old Mosul (Urban and Architecture) (Dr Emad Al-Allaf, UoM)		Team building activity (Abdelhamid+Ayman)	Lecture: Conservation interventions (Georges)	Lecture: Examples of intangible cultural heritage from the Arab World (Ayman Al Shweiki)
10:30		Excersies (Abdelhamid)			
11:00			Lecture(online): Case studies on heritage recovery in a post-conflict context (Amra Hadzimuhamedovic)	Exercise Image of the city (Georges + Ayman) (continued)	Wrap up discussion and introduction to the next module (Rohit + Abdelhamid)
11:30					
12:00		Exercise Image of the city (Georges + Ayman)	Self-study, Central Library of the University of Mosul	Exercise: Urban/architectural classification (continued) (Georges + Ayman)	Lecture (Online): Fighting illicit trafficking of cultural property (Corrado Catesi, Interpol)
12:30					
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

LONG LENGTH COURSE
8-9 MONTHS

MODULE 2 - SITUATION AND CONTEXT ANALYSIS WEEK 1

	SUN 17 APR 2022	MON 18 APR 2022	TUE 19 APR 2022	WED 20 APR 2022	THU 21 APR 2022
8:30	Registration	Registration	Registration	Registration	Registration
9:00	Lecture: Situation analysis (Abdelhamid)	Lecture(Online): Introduction to PATH + Case Study"Mali" (Elke Selter)	Case study: Preah Vihear, Cambodia + Exercise (Elke Selter)	Exercise: Context Analysis (Abdelhamid)	Lecture (online): Significance of cultural heritage of Mesopotamia (Dr Ghada El-Gemaiey)
9:30					
10:00	Lecture (online): Situation analysis (Rohit Jigyasu)	A case study on stakeholder mapping from Egypt "Hammam al-Sharybi" + Exercise: Stakeholder analysis on a city level "Mosul" (Abdelhamid+Ayman) Group work			
10:30			Participant group work presentations (stakeholder mapping and situation analysis for heritage builidings)		Lecture(online): Local social, economic, and cultural conditions analysis (Omar Mohammed)
11:00	Exercise: Exercise: Reading circle “International policy instruments for preserving heritage"				
11:30		Exercise: Exercise: Reading circle “International policy instruments for preserving heritage" (continued)			Case Study on understanding local context (Layla Salih)
12:00				Lecture (Online): Situation analysis on illicit trafficking of cultural property in the context of armed conflict (Corrado Catesi, Interpol)	
12:30	Wrap up discussion (AbdelHamid Salah)	Wrap up discussion (AbdelHamid Salah)	Wrap up discussion (AbdelHamid Salah)		Wrap up discussion (AbdelHamid Salah)
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

LONG LENGTH COURSE
8-9 MONTHS

MODULE 2 - SITUATION AND CONTEXT ANALYSIS WEEK 2

	SUN 24 APR 2022	MON 25 APR 2022	TUE 26 APR 2022	WED 27 APR 2022	THU 28 APR 2022
8:30	Registration	Registration	Registration	Registration	Registration
9:00	Lecture (online): Introduction to Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict (Elisabeth Korinth, Vice President at Blue Shield Germany)	Lecture: Complexity of Context 1- Transitional Justice and Heritage Reconstruction in the Process of Socio-Economic Recovery (Amra Hadzimuhamedovic)	Open discussion (Amra Hadzimuhamedovic)	Lecture: Complexity of Context 5: Risk assessment; Challenge of BBB principle; Building Resilience vs. Authenticity (Amra Hadzimuhamedovic)	Participant presentations
9:30					
10:00	Case studies on conflict analysis: Cross cutting issues - Bosnia, Kosovo, Palestine, Yemen (Amra Hadzimuhamedovic)	Exercise: Reconstruction vs. Recovery; 4C principle (Amra Hadzimuhamedovic)		Structuring the assignment – output of the Module 2	
10:30					
11:00	Exercise: Consultation and decision-making + discussion (Abdelhamid)				
11:30			Lecture: Complexity of Context 4: 3P principle, CURE - (Amra Hadzimuhamedovic)		
12:00	Lecture: Local legal and administrative frameworks for heritage in Iraq (Musab Jassim, Nineveh Archeology and Heritage Inspectorate)				Wrap up discussion and introduction to Module 3 (Documentation) (AbdelHamid Salah, Amra Hadzimuhamedovic, and Rohit Jigyasu)
12:30		Wrap up discussion (Amra Hadzimuhamedovic and AbdelHamid Salah and)	Wrap up discussion (AbdelHamid Salah and Amra Hadzimuhamedovic)		
13:00	End of day	End of day	End of day	End of day	End of day
COLOR CODING	Lecture	Discussion	Site Visit	Course Activity	Case Study

LONG LENGTH COURSE
8-9 MONTHS

MODULE 3 - ASSESSING HERITAGE SIGNIFICANCE AND VALUES WEEK 1

CORE INSTRUCTORS: Nicole Franceschini					
Main Topics	Typologies of values; understand the values; visualize the values; sources of information; loss of values (Conflicting values); transformation of values; change of values; methodologies and tools for recording values; introduction to authenticity; stakeholder value mapping.				
TIME	**SUN 12 June**	**MON 13 June**	**TUE 14 June**	**WED 15 June**	**THU 16 June**
8:30		**Registration**	**Registration**	**Registration**	**Registration**
9:00		Values and attributes of the Prayer House and its neighborhood (1/2) (Nicole Franceschini)	Lecture: Values and living heritage: values and people (Nicole Franceschini)	Interviewing stakeholders and communities (Nicole Franceschini)	Overall debrief on the week, what did we learn, what is missing (Nicole Franceschini)
9:30	Lecture (Online): Values and Significance (Jukka Jokilehto)				
10:15		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	Online: Introduction to values and significance (Nicole Franceschini)	Values and attributes of the Prayer House and its neighborhood (2/2) (Nicole Franceschini)	Lecture: General lecture on heritage, architecture, and historical significance of Mosul (Ali H. Al-Jameel)	Interviewing stakeholders and communities (Nicole Franceschini)	Presentations by participants
11:30	Online: Cultural Mapping: Serial Nomination of Sanssouci and Schloss Charlottenburg (Ayman AlShweiki)				
12:00					Introduction to week 2 (Nicole Franceschini + Rohit Jigyasu)
12:30	Discussion		Lecture: General lecture on heritage, architecture, and historical significance of Mosul (Dr Qasem Jumaa)		
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	Lecture (Online): Understanding values and attributes, examples using Mosul (Nicole Franceschini)	Feedback from the morning field work (Nicole Franceschini)	Lecture: Understanding values and attributes: sources of information (Nicole Franceschini)	Feedback on the interviews and information collected, reflection on missing data information and review of stakeholder analysis (Nicole Franceschini)	Lecture (Online): Revisiting Documentation through Value assessment (Rand Eppich)
14:30	Online: Introduction to the value-attribute worksheet and the work we will do at the Prayer House (Nicole Franceschini)	Lecture: Attributes, integrity and authenticity (Nicole Franceschini)	Case Study (Online): Case study of Isfahan (Dr Nima Valibeig)		
15:00	Lecture(Online): Heritage assessment in Mosul: shortcomings and lessons from the global context (Omar Al-Hafith)	Participants select a heritage place in Mosul and they explain which heritage values it has from their point of view (Nicole Franceschini)	What information do we need to better understand the values of the Prayer House and Mosul? Preparing for interviews with stakeholders (Nicole Franceschini & Nima Valibeig)	Preparation of presentations for the day after (Nicole Franceschini)	Lecture: General lecture on heritage, architecture, and historical significance of Mosul (Mr Siood Al Omari)
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 3 - ASSESSING HERITAGE SIGNIFICANCE AND VALUES WEEK 2

CORE INSTRUCTORS: Rohit Jigyasu, Omar Al-Hafith					
Main Topics	Typologies of values; understand the values; visualize the values; sources of information; loss of values (Conflicting values); transformation of values; change of values; methodologies and tools for recording values; introduction to authenticity; stakeholder value mapping.				
TIME	**SUN 19 June**	**MON 20 June**	**TUE 21 June**	**WED 22 June**	**THU 23 June**
8:30	**Registration**	**Registration**			**Registration**
9:00	Lecture: Assessing values in the context of conflict (changing values, conflicting values, loss of values, new values) (Rohit Jigyasu)	Online session: Heritage Value Assessment Model for Old Mosul (Omar Al-Hafith)			Participant presentations + Introduction to Module 5 (Damage and Risk Assessment) (Rohit Jigyasu + Omar AlHafith)
10:15	**Coffee Break**	**Coffee Break**			**Coffee Break**
10:30	Case study: Documenting cultural resources of in displacement targeting Syrian refugees in North Lebanon (Georges Khawam)	Online session: Application of Heritage Value Assessment Model for Old Mosul: assessment criteria, methodology, and defining fieldwork case studies (Omar Al-Hafith)	Exercise (fieldwork)	Exercise (fieldwork)	
11:00	Exercise (Rohit Jigyasu)				
12:00	Lecture: Architectural heritage values in Mosul (Dr Emad Alallaf, UoM)	Online session: assessing the histroic value, architectural value and authenticity of the selected case studies in Old Mosul (Omar Al-Hafith)			
13:00	**LUNCH BREAK**	**LUNCH BREAK**		**LUNCH BREAK**	**LUNCH BREAK**
14:00	Lecture: The economic value of heritage (Ayman AlShweiki)	Exercise (fieldwork)		Online session: Concluding the heritage significance of the selected cases studies in Old Mosul	Lecture(online): Cultural significance and values of Mosul (Omar Mohammed)
15:00	Lecture: From Value Assessment to decision making for heritage recovery (Rohit Jigyasu)		Online session: assessing the social value of the selected case studies in Old Mosul (Omar Al-Hafith)		
15:45					Online session: Presenting a valuation of the heritage significance of the selected cases studies in Old Mosul (Omar Al-Hafith)
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Site Visit**	**Course Activity**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 4 - DOCUMENTATION WEEK 1

CORE INSTRUCTORS:Rand Eppich

Main Topics	Introductions, goals, initial field visit, beginning documentation		Course Prep	Course Prep	Course Prep
TIME	SUN 8 May	MON 9 May	TUE 10 May	WED 11 May	THU 12 May
8:30		Registration	Registration	Registration	Registration
9:00		CA: Check equipment, prepare for site visit, safety course. Interviews, group forming, assessment in field	Manual recording field exercise, disto, sketching, plumb bob, targets, etc.	Photography field exercise, rectified photography	CA: Autocad introduction
10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:30		SV: Introduction to the case study, Initial reconnaissance, inspection, dividing the case study between groups	Field lecture sketching, hand measurement	Field lecture architectural photography	Continued
11:00		Continued	Continued	Continued	
12:00	Registration	Continued	Continued	Continued	CA: Photoshop introduction, othe tools
13:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
14:00	Introductions - L:0 Case Studies in Documentation - its importance for conservation	L2: Guiding Principles of Documentation - Importance of Informed Conservation Decisions	CA: Interviews, group forming, evaluation of current knowledge, group forming. Software installation, continued assessment	CA: Manual recording and photography data processing	Data management
15:00	L1: What is conservation? And introduction and the role of documentation What are the goals and objectives of this module?	L3: Tools and Techniques for Documentation	CA: Hardware tour, equipment inventory, troubleshooting, lab norms, logistics, beginning software installation, continued assessment of capacity	CA: Rectified photography exercise, software L4 Information Management	Lab work
16:00	Discussion	Discussion	Discussion	Discussion	Discussion
	End of session	End of session	End of session	End of session	End of session
COLOR CODING	Lecture	Case Study	Site Visit	Discussion / Presentation	COURSE ACTIVITY LAB

LONG LENGTH COURSE
8-9 MONTHS

MODULE 4 - DOCUMENTATION WEEK 2

CORE INSTRUCTORS:Rand Eppich					
Main Topics	Data Management, case study and recording techniques				
TIME	SUN 15 May	MON 16 May	TUE 17 May	WED 18 May	THU 19 May
8:30	Registration	Registration	Registration	Registration	Registration
9:00	L6: Photogrammetry, Principles and Tools	Topography and image recording exercise	Photogrammetry recording exercise	Photogrammetry recording exercise	CA: bringing elements together, informal talk and lab work
10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:30	Continued	Field lecture photography for photogrammetry	Field lecture on endoscopy & microscope	Field lecture on 360 photography	CA: Continued vector/raster importing data
11:00		Field lecture drone photography for photogrammetry TBD	BREAK	BREAK	BREAK
12:00		Photogrammetry recording exercise (placing targets, field tests, control measurements)	Photogrammetry recording exercise	CA: Photogrammetry/ Topography and image processing/photorectification exercise	CA: Continued vector/raster importing data
13:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
14:00	Continued	Photogrammetry processing	Photogrammetry processing	Lab Lecture from Hirofumi Ikawa - other types of photogrammetry (Virtual) Reality Capture and its	CA: Check equipment, review archival materials, prepare for site visit
15:00		Continued	Continued	Continued	Continued
15:45		Continued	Continued	Continued	Continued
16:00	Discussion	Discussion	Discussion	Discussion	Discussion
	End of session	End of session	End of session	End of session	End of session
COLOR CODING	Lecture	Case Study	Site Visit	Discussion / Presentation	COURSE ACTIVITY LAB

LONG LENGTH COURSE
8-9 MONTHS

MODULE 4 - DOCUMENTATION WEEK 3

CORE INSTRUCTORS:Rand Eppich					
Main Topics	Data Management, case study and recording techniques				
TIME	SUN 22 May	MON 23 May	TUE 24 May	WED 25 May	THU 26 May
8:30	Registration	Registration	Registration	Registration	Registration
9:00	Photogrammetry recording second exercise, continued condition assessment	Online follow up with the groups by Rand Eppich	Online follow up with the groups by Rand Eppich	Final field visit, final documentation	Participants preliminary presentations
10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:30	Field lectures crack monitor Continued	Continued	Continued	Continued	Continued
11:00	Continued	Continued	Continued	Continued	Continued
12:00	Continued	Continued	Continued	Continued	Continued
13:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK
14:00	L7: Lecture Professional Practice - Instruments of Service, Drawings, Specifications, BoQ	L8: GIS, GPS, Remote Sensing	Recording with alternative photogrammetric tools (Hirofumi Ikawa), pole photography	Lidar with smartphones Hirofumi Ikawa (Virtual) i.e. Apps Trnio	Lecture: Introduction to GPS (Dr Sabah Hussein, UoM)
15:00	CA: Technical Specifications, Bill of Quantity	CA: project production, bringing all together	CA: participants prepare preliminary presentations, report outline	CA: participants prepare preliminary presentations, report outline	Lecture: UAVs/Drones in Remote Sensing and GIS (Dr Abdulrahman Ramzy, UoM)
15:45	Continued	continued BoQ and Specifications	Continued	Continued	
16:00	Discussion	Discussion	Discussion	Discussion	Discussion
	End of session	End of session	End of session	End of session	End of session
COLOR CODING	Lecture	Case Study	Site Visit	Discussion / Presentation	COURSE ACTIVITY LAB

LONG LENGTH COURSE
8-9 MONTHS

MODULE 4 - DOCUMENTATION WEEK 4

CORE INSTRUCTORS: Omar Al-Hafith, Rand Eppich (Online)					
Main Topics	Testing on various structures		Course Prep	Course Prep	Course Prep
TIME	SUN 29 May	MON 30 May	TUE 31 May	WED 01 June	THU 02 June
8:30	Registration	Registration	Registration	Registration	Registration
9:00	Continued field visit, improvement of the case study (unsupervised)	Continued field visit, improvement of the case study (unsupervised) Introducing 3D Laser Scanning	CA: project production, bringing all together	CA: participants prepare final presentations	Participant final presentations
10:15	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
10:30	Continued	Introducing 3D laser scanning	Case study (Online): Architectural Heritage Documentation of Old Mosul (Dr Omar Al-Hafith)	Continued	Continued
11:15			UoM Student case studies' presentations		Wrap up discussion and introduction to Module 4 (Assessing Cultural Heritage Significance and Values)
12:00					
13:00	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	End of session
14:00	Online follow up	Online follow up	Online follow up	Online follow up	
15:00				Lecture (Online): Local social, economic, and cultural conditions analysis (Omar Mohammed)	
15:45					
16:00					
	End of session	End of session	End of session	End of session	
COLOR CODING	Session	Case Study	Site Visit	Presentation and delivering produced documentation	COURSE ACTIVITY LAB

LONG LENGTH COURSE
8-9 MONTHS

MODULE 5 - DAMAGE AND RISK ASSESSEMENT WEEK 1

CORE INSTRUCTORS: Salvatore Russo, Rohit Jigyasu, Abdelhamid Salah					
Main Topics	Understand different typologies of hazards that affect built cultural heritage; understand different typologies of damages that affect built cultural heritage (e.g., structural analysis, structural damages, etc.); understand different typologies of risks; level of damages; structural Behavior and Design; evaluate aspects of risks; risk reduction and mitigation; root causes of damages; tools for damage and risk analysis and assessment; case studies: Learning from failures.				
TIME	**SUN 26 June**	**MON 27 June**	**TUE 28 June**	**WED 29 June**	**THU 30 June**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**Field Visit: Identify different structural typologies of heritage buildings in old Mosul + Structural and damage analysis (Dr Motaz, UoM)**	**Lecture: What is Risk / Collecting information for Risk Assessment (Abdelhamid Salah)**	**Fieldwork at the Prayer House (In situ learning from failures) (Salvatore Russo)**	**Fieldwork at the Prayer House (exercise: designing scaffolding and shoring) (Salvatore Russo)**	**Participant presentations and discussion**
10:15		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30		**Lecture: What is Risk / Understanding Risk (Abdelhamid Salah)**			
11:00		**Hazards and Vulnerabilities Exercise (Abdelhamid Salah)**			
12:00		**Lecture: What is First Aid to Cultural Heritage? (Abdelhamid Salah)**			
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	**Lecture: Response decision-making - how to move forward (Abdelhamid Salah)**	**First Aid Methodology/ Case Study (Abdelhamid Salah)**	**Lecture: First structural aid (Salvatore Russo)**	**Lecture: How planning a proper structural monitoring activity (Salvatore Russo)**	**Emergency simulation (Abdelhamid Salah)**
15:00	**Lecture: Response decision-making - how to move forward (Abdelhamid Salah)**	**Emergency documentation for Collections (Photographs + drawing site map/sketches), handling, stabilization and packing (Abdelhamid Salah)**	**Lecture: New materials for emergency and permanent/resilient structural interventions (Salvatore Russo)**	**Lecture: Global analysis of residual (and reserves) strengths (Salvatore Russo)**	
15:45	**Lecture: Types of movable objects and their vulnerabilities, damages and risks (Abdelhamid Salah)**	**Continued (Abdelhamid Salah)**		**Lecture: Local analysis of residual (and reserves) strengths (Salvatore Russo)**	
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 5 - DAMAGE AND RISK ASSESSMENT WEEK 2

CORE INSTRUCTORS: Marwan Al-Heib, Salvatore Russo (Online)					
Main Topics	Understand different typologies of hazards that affect built cultural heritage; understand different typologies of damages that affect built cultural heritage (e.g., structural analysis, structural damages, etc.); understand different typologies of risks; level of damages; structural Behavior and Design; evaluate aspects of risks; risk reduction and mitigation; root causes of damages; tools for damage and risk analysis and assessment; case studies: Learning from failures.				
TIME	**SUN 03 July**	**MON 04 July**	**TUE 05 July**	**WED 06 July**	**THU 07 July**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**Field exercise: Emergency simulation (Abdelhamid Salah)**	**Field exercise: Structural analysis: The Prayer House as a case study (Marwan Al-Heib**	**Lecture: Types of damages, identifying the root causes of damages (Marwan Al-Heib)**	**Application on the Prayer House - group of students (Marwan Al-Heib)**	**Field exercise at the Prayer House: Exercise on stabilization of damaged structures (Marwan Al-Heib)**
10:15		**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30		**Identification of the principal elements of structure and its role**	**Damage classification - masonry (Marwan Al-Heib)**	**Reporting the damages - documentations**	**Design the stabilisation of the main damaged structures**
11:00		**Observations of the pathologies**	**Damage classification - concrete (Marwan Al-Heib)**		**Planning the intervention**
12:00		**Identification of masonry and concrete surface decay**	**Damage classification - foundations (Marwan Al-Heib)**		**Presentation of the intervention**
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**End of session**
14:00	**Preparation of the site visit - The Prayer House as a case study - analyse of documents (Marwan Al-Heib)**	**Lecture: Typologies of Building Structures in Mosul (Motaz Al-Obaidi, UoM)**	**Lecture(Online): Decay mechanism and effects of decay on alabaster (Simon Warrack)**	**Lecture: Urgent intervention of damaged structures (Marwan Al-Heib)**	
15:00	**Lecture: Ensuring the safety and the security during intervention (Marwan Al-Heib)**	**Lecture: Masonry and concrete surface decay assessment and mitigation (Marwan Al-Heib)**	**Lecture(Online): Alabaster surface decay assessment and mitigation (Simon Warrack)**	**Lecture(Online): Architectural design and structural behavior of heritage buildings (Salvatore Russo)**	
16:00	**(Salvatore Russo)**	**Discussion**	**Discussion**	**Discussion**	
	End of session	**End of session**	**End of session**	**End of session**	
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 5 - DAMAGE AND RISK ASSESSMENT WEEK 3

IMPLEMENTING THE COURSE

CORE INSTRUCTORS: Rohit Jigyasu, Abdelhamid Salah, Salvatore Russo					
Main Topics	Understand different typologies of hazards that affect built cultural heritage; understand different typologies of damages that affect built cultural heritage (e.g., structural analysis, structural damages, etc.); understand different typologies of risks; level of damages; structural Behavior and Design; evaluate aspects of risks; risk reduction and mitigation; root causes of damages; tools for damage and risk analysis and assessment; case studies: Learning from failures.				
TIME	**SUN 17 July**	**MON 18 July**	**TUE 19 July**	**WED 20 July**	**THU 21 July**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**Lecture: From damages to risk: Introducing the concept of risk (Rohit Jigyasu & Abdelhamid Salah)**	**Field exercise at the Prayer House: Risk analysis at building and area levels (Rohit Jigyasu)**	**Classroom exercise**	**Lecture: Risk mitigation (Rohit Jigyasu)**	**Participant presentations**
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**Continued**		**CA: Risk evaluation (Rohit Jigyasu & Abdelhamid Salah)**	**CA: Designing mitigation solutions (Rohit Jigyasu)**	
11:00	**Assessing loss of values (Rohit Jigyasu)**				
12:00				**Case Study on planning for Risk Mitigation Strategies (Abdelhamid Salah)**	
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**End of session**
14:00	**Lecture: Risk analysis methodologies (Rohit Jigyasu & Abdelhamid Salah)**	**Feedback and discussion (Rohit Jigyasu & Abdelhamid Salah)**	**CA: Risk evaluation + Creating risk scenarios (Rohit Jigyasu)**	**Prepare for the final presentations**	
15:00	**Continued**		**Presentation (Online): Community Responses to Heritage Reconstruction in Mosul (Amber Scoon)**		
15:45					
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	
	End of session	**End of session**	**End of session**	**End of session**	
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

IMPLEMENTING THE COURSE

LONG LENGTH COURSE
8-9 MONTHS

MODULE 6 - RECOVERY PLANNING WEEK 1

CORE INSTRUCTORS: Cristina Iamandi, Frazer Macdonald					
Main Topics					
TIME	**SUN 07 August**	**MON 08 August**	**TUE 09 August**	**WED 10 August**	**THU 11 August**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	Introduction to Module 6 (CI)	**L5:** Urban Reconstruction in Europe after World War II – Case-studies. The Marshall Plan. (CI)	**L6:** Introduction to 7 Sites of everyday Memory in Mosul (FMH)	Visit of 'Al-Jamhorya Park in Bab Lagah area - a new public space in Mosul	**L10**: L7: Mapping collective memory and rebuilding identities in recovery processes. Places for collective remembering. (FMH)
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**L1:** Introduction to Topic 1. Recovery Planning - definition, phases, components (CI)	**L5:** (continued) (CI)	**L7**: Modes of memorialisation: Antagonist, Agonistic memory and cosmopolitan mode of remembering (FMH)	Visit of 'Al-Jamhorya Park (continued)	**L10** (continued): Examples of good practice. (FMH)
11:00	**L2:** International Guiding Documents (CI)		**L8:** Examples of post-conflict adaptive reuse projects (FMH)		**L11**: Stakeholder involvement in recovery planning. Civic engagement in recovery processes. The importance of involving vulnerable and disadvantaged groups. Communication strategies (CI)
12:00					
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	**L3:** Setting the Scene for Recovery Planning (FMH)	**Seminar I**: Lessons learned from post-WW2 case-studies. Elements to be retained or avoided in Mosul. Group presentations (ppt). Comments by CI and FMH.	**Studio work**: Develop a design concept for the adaptive reuse of the Prayer House. Individual ideas and sketches.	**Seminar II:** 1. Assess the Implemented Al-Jamhorya Park Project: what worked out and what didn't? 2. Propose ways to improve the project (concept sketches) and recommendations. Group presentations (ppt). Comments by FMH&CI.	**Seminar III**: Propose tools for communication and civic engagement suitable to Mosul. Group Presentations (ppt). Comments by CI.
15:00	**L4:** Linking recovery planning with post-conflict reconciliation and peacebuilding (FMH)		**L9**: Public spaces as contributors to peacebuilding and social cohesion. Introduction to'Al-Jamhorya Park Project in Bab Lagah area Mosul: stages of the project, buget, stakholders, and a reflection of final outcome (FMH)		
	Q&A				
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

IMPLEMENTING THE COURSE

LONG LENGTH COURSE
8-9 MONTHS

MODULE 6 - RECOVERY PLANNING WEEK 2

CORE INSTRUCTORS: Cristina Iamandi, Elena Isayev					
Main Topics					
TIME	**SUN 14 August**	**MON 15 August**	**TUE 16 August**	**WED 17 August**	**THU 18 August**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**L12:** "Building Back Better" principles for reconstruction and recovery. Case-study: the recovery of New Orleans (the 'Make It Right' project) (CI)	**L15**: Rhythm and place: re-creating place through tangible and intangible heritage (EI)	**Field visit** (Al-Najafi street, the bookshop street)	**L17:** Recovery Planning: Recovery Process; Mosul Recovery Plan: Establishing strategic priorities, Greater Mosul Reconstruction Challenges, Mosul Master Plan, Mosul's vision and goals (CI)	**Case-study 1**: Reconstruction of Timbuktu Mausoleums and reconstruction of 50 houses for the poor (Arch. Thierry Joffroy, France)
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**Quiz:** Discuss the application of Building Back Better principle in the recovery of New Orleans (the 'Make It Right' project). Learning from a	**L16:** Collective memory and memorials in peacebuilding and reconciliation processes. Examples of good practice (EI)	**Field visit** of Al-Najafi street (continued)	**L18:** Mosul Master Plan: Detailed Area Plans for Mosul, Old City of Mosul Reconstruction Priorities. Developng vision, goals and objectives. Examples (CI)	**Case-study 1:** Timbuktu (continued)
11:00	**L13**: The UN-Habitat 'Urban Recovery Framework' (URF) (CI)				**Q&A**
12:00	**L14:** UNESCO-World Bank Position Paper on "The Role of Culture in City Reconstruction and Recovery" - The CURE Framework (CI)				**Quiz:** Lessons learned from the case of Timbuktu that can be applied in Mosul
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	**Seminar IV**: Compare the principles of UN-Habitat's Urban Recovery Framework with principles of UNESCO-World Bank's CURE Framework: Commonalities? Differences? Antagonistic or complementary approaches? How	**Seminar V**: Which are the landmarks of Mosul and their role in rebuilding the identity of Mosul? What is the collective memory of Mosul and which are the places attached to it? Group Presentation (ppt). Comments by EI & CI	**Seminar VI**: Landmarks as Forms of Collective Memory: The significance of Al-Najafi street for the inhabitants of Mosul. Establishing priority projects for recovery. Involving the concerned community in planning for the recovery of the bookshop street.	**Quiz**: Develop a long-term vision and goals for the Old City of Mosul	**L19:** Recovery Conservation Plans and Management Plans for historic cities (CI): their specific methodologies
15:00					
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 6 - RECOVERY PLANNING WEEK 3

CORE INSTRUCTORS: Cristina Iamandi, Thierry Grandin					
Main Topics					
TIME	**SUN 21 August**	**MON 22 August**	**TUE 23 August**	**WED 24 August**	**THU 25 August**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**L20:** Inventory of built structures and open spaces in Old Mosul, as a tool for reconstruction planning and management (CI)	**Field work** at the Prayer House: Understanding the historic building and its reuse potential through hand-drawing survey. (Thierry Grandin)	**Mid-Term Evaluation** (written exam)	**Case-study 3**: Urban recovery of Beirut (Arch. Jad Tabet, France/Lebanon)	**L22**: The Recommendation on the Historic Urban Landscape. Its application to post-conflict recovery planning (CI)
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**Field work**: Inventory of 25 properties in Old Mosul, next to Al-Nouri Mosque (CI)	**Field work** (continued)	**Case-study 2**: Recovery planning in Aleppo, Syria (Arch. Thierry Grandin)	**Case-study 3** on Beirut (continued)	**L22:** The HUL Recommendation (continued) (CI)
12:00			**Q&A.** Lessons learned from Aleppo.	**Q&A.** Lessons learned from Beirut.	**L23:** Exemples of Good PractIce: 3 projets that adopt the HUL approch (author: Arch. Jad Tabet)
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	**Seminar VII: Inventory survey form. Group Presentations** of the filled-in survey forms. Review of the draft survey form (ppt). Comments by CI.	**Studio work** on the Prayer House (TG)	**Seminar VIII:** Understanding the historic building and examining its reuse potential through hand-drawing survey. Group presentations (ppt). Comments by TG	**L21:** Characteristics of the traditional Moslawi house: typologies, local building techniques and materials, glossary	**Mid-term evaluation**: Presentation of the Prayer House project (Track 1: Value assessment, documentation, risk & damage assessments)
15:00					
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 6 - RECOVERY PLANNING WEEK 4

CORE INSTRUCTORS: Cristina Iamandi, Amra Hadzimuhamedovic					
Main Topics					
TIME	**SUN 28 August**	**MON 29 August**	**TUE 30 August**	**WED 31 August**	**THU 01 September**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**L24**: Conservation process, conservation plan, appropriate use/reuse, conservation principles (CI)	**Case-study 4**: Recovery Planning of Sarajevo (Dr. Amra Hadzimuhamedovic)	**Online session**. Prayer House Rehabilitation Project. Decision-making: choosing an appropriate use for the building; evaluation of 3	**L28:** Adaptive reuse: establishing the design strategy and necessary interventions. Case-study: the National Library in Sarajevo (AM)	**Studio work** on the Prayer House Rehabilitation Project: Design strategy and types of interventions
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**L25:** (continued) (CI)	**Case-study 4** (continued)	**Online session** (continued)	**Seminar X: Selecting an a**daptive reuse option for the Prayer House using SWOT analysis. Group Presentations of the (ppt) Comments by AH&CI	**Studio work** (continued)
11:15					
12:00					Closure of Module 6.
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**End of session**
14:00	**Seminar IX**: Mosul as a historic urban landscape. Adopting the HUL approach in the recovery planning of Old Mosul. Group discussions and presentations (ppt). Comments by CI&AH.	**L26**: Adaptive reuse: definition, principles and criteria, methodology. Decision-making: reuse options (AH)	**Online session** (continued)	**Mid-session evaluation**: Group Presentations (continued)	
15:00					
16:00		**L27**: Adaptive reuse: case-studies (AH)			
	End of session	**End of session**	**End of session**	**End of session**	
COLOR CODING	**Session**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 7 - RECOVERY IMPLEMENTATION AND MONITORING WEEK 1

CORE INSTRUCTORS: Rand Eppich					
Main Topics	Basic intervention considerations; debris management; stabilization and security measures; upgradation and adaptive reuse; interventions at the project level; community engagement; recording various interventions.				
TIME	**SUN 18 September**	**MON 19 September**	**TUE 20 September**	**WED 21 September**	**THU 22 September**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	TRAVEL	Planning & Designing interventions, STUDIO EXERCISE. Moving from Conceptual Designs to Design Development	Planning & Designing interventions, STUDIO EXERCISE. Moving from Conceptual Designs to Design Development	HEALTH AND SAFETY, risk management, responsibilities, Videos on construction accidents.	REVIEW - PROFESSIONAL PRACTICE and Instruments of service. Communicating with stakeholders, clients, professional team, and constructors
10:15				**Coffee Break**	**Coffee Break**
10:30	UNESCO's initiative in Mosul (Maria Rita, Unesco)	Conceptual Design to Design Development	Conceptual Design to Design Development	Creating a Health and Safety Plan EXERCISE	AUTOCAD sessions
11:00		continued - DESK VISITS, TEAM WORK	continued - DESK VISITS, TEAM WORK	continued - H ^ S	AUTOCAD sessions
12:00				continued - DESK VISITS, TEAM WORK	
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	INTRODUCTION, Module objectives, goals, schedule, project deliverables, **connecting with planning module**.	FINANCE FRAMEWORK - Bonnie Burnham - VIRTUAL LECTURE (starts at 15:00)	continued - DESK VISITS, TEAM WORK	PLANNING AND IMPLEMENTING a Conservation Project - Glenn Boornazian- VIRTUAL LECTURE	continued - EXERCISE on Autocad Creating Implementation Documents, Drawings, Specifications, Bills of Quantity, bid documents, etc
15:00	PLANNING, DESIGN, INTERVENTIONS building level - Spectrum of intervention. From conservation to adaptive reuse, etc.	continued	continued - DESK VISITS, TEAM WORK	continued	
	Planning & Designing interventions, STUDIO EXERCISE. Moving from Conceptual Designs to Implementation	continued	continued - DESK VISITS, TEAM WORK	continued	**INTERNAL INFORMAL Presentation of schematic design, planning intervention**
16:00		**Discussion**	**Discussion**	**End of session**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**Course Activity**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 7 - RECOVERY IMPLEMENTATION AND MONITORING WEEK 2

CORE INSTRUCTORS: Rand Eppich; Frazer Macdonald					
Main Topics	Basic intervention considerations; debris management; stabilization and security measures; upgradation and adaptive reuse; interventions at the project level; community engagement; recording various interventions.				
TIME	**SUN 25 September**	**MON 26 September**	**TUE 27 September**	**WED 28 September**	**THU 29 September**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	HIA Historic Impact Assessment - ESIA Environmental Social Impact Assessment (Rand Eppich)	Site visit to Case Study Prayer House - verification of design interventions, checking on design interventions, additional drawings.	An Implementation Comparison - Singapore v's Mosul 2 ways of implimenting projects with cultural significance (Frazer)	UNDP Mosul University Math Department.(Hugo)	PRESENTATIONS of the design interventions, construction documents, health and safety plan, preventive conservation, Historic Impact Assessment.
10:15	**Coffee Break**		**Coffee Break**		
10:30	Writing a HIA EXERCISE (Rand Eppich)		Recovery and the inclusive nature that the recovery processes Gordon Rattray (confirmed)		PRESENTATIONS
11:00					Closing thoughts, wrapup
12:00			1:100 plans and sections showing adaptive proposal - working towards a visual that sells the approach (Frazer)		
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	Creating Implementation Documents, Drawings, Specifications, Bills of Quantity, bid documents, etc.	PREVENTIVE CONSERVATION and operations, maintenance. Common causes of building and building component failures.	Tutorials (Frazer)	Preparing Presentations (Frazer & Rand)	Virtual Session: Building a Professional Profile (Nicole Franceschini)
15:00		Creating a Preventive Conservation Plan (maintenance and operation plan) EXERCISE	(Frazer) Creating Implementation Documents, Drawings, Specifications, Bills of Quantity	CONTINUED	**End of session**
16:00			**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

IMPLEMENTING THE COURSE

LONG LENGTH COURSE
8-9 MONTHS

MODULE 7 - RECOVERY IMPLEMENTATION AND MONITORING WEEK 3

CORE INSTRUCTORS: Marwan Al-Heib					
Main Topics	Basic intervention considerations; debris management; stabilization and security measures; upgradation and adaptive reuse; interventions at the project level; community engagement; recording various interventions.				
TIME	**SUN 16 October**	**MON 17 October**	**TUE 18 October**	**WED 19 October**	**THU 20 October**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	Introduction to structural intervention	Land improvement and reinforcement by injection.	Prayer house - groups - foundation reinforcement	Introduction to numerical modelling	**Reinforcement of the critical point of a historic structure**
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	Hazards and risks during the recovery works and interventions-	Reinforcement and treatment of old foundation	Prayer house - groups - foundation reinforcement	Finites elements method	Different approaches for the consolidation of a masonry structure
12:00		Principal techniques of foundation reinforcement (design and execution)			Masonry injection
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	Underpinning: General Principle and field of application Execution of works Sizing of works	**Application by the students**	House Lifting and Levelling	Distinct elements method	Using steel bars: bolts, cables: typology, design, installation, verification and control
15:00	Special cases, Underpinning: General Principle and field of application Execution of works Sizing of works Special cases		Micro-piles technique - design		
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 7 - RECOVERY IMPLEMENTATION AND MONITORING WEEK 4

CORE INSTRUCTORS: Marwan Al-Heib					
Main Topics	Basic intervention considerations; debris management; stabilization and security measures; upgradation and adaptive reuse; interventions at the project level; community engagement; recording various interventions.				
TIME	**SUN 23 October**	**MON 24 October**	**TUE 25 October**	**WED 26 October**	**THU 27 October**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	Application of the numerical methods on case studies from historic buildings	Stone replacement: selection of stone, technique of replacement, installation, etc: examples and case studies	Prayer house: identification of structural element for recovery and restoration	Design reinforcement elements for the prayer house: work by group	Presentation by group. Of the application of the reinforcement methodology on the case study of the Prayer house.
10:15	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	Application of the numerical methods on case studies from historic buildings	Application of the numerical methods on case studies from historic buildings	Prayer house: identification of structural element for recovery and restoration	Design reinforcement elements for the prayer house: work by group	Continued
11:15	Application of the numerical methods on case studies from historic buildings	Application of the numerical methods on case studies from historic buildings	Prayer house: identification of structural element for recovery and restoration	Report production	
12:00	Application of the numerical methods on case studies from historic buildings	Application of the numerical methods on case studies from historic buildings		Report production	
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**End of session**
14:00	Reinforcement of degraded masonry structure: cracks treatment and consolidation	Using the jacketing technique for concrete structure: design, execution, installation, verification and control	Prayer house: identification of structural element for recovery and restoration	Discussion, of the design reinforcement elements for the prayer house	
15:00	Reinforcement of degraded masonry structure: using bolts and cables: examples and case studies		Prayer house: identification of structural element for recovery and restoration		
16:00					
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Session**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

LONG LENGTH COURSE
8-9 MONTHS

MODULE 7 - RECOVERY IMPLEMENTATION AND MONITORING WEEK 5

CORE INSTRUCTORS: Rohit Jigyasu, Rand Eppich, Marwan Al-Heib, and Abdelhamid Salah					
Main Topics	Monitoring in recovery; monitoring at project level; monitoring at macro-level; linking between various levels of recovery; wrap up discussion and feedback.				
TIME	**SUN 30 October**	**MON 31 October**	**TUE 01 November**	**WED 02 November**	**THU 03 November**
8:30	**Registration**	**Registration**	**Registration**	**Registration**	**Registration**
9:00	**Group work - Preparation for final presentations**	**Monitoring After recovery, what should be assessed, analysed, and mapped? define the periodic updates for keeping monitoring. (Abdelhamid Salah)**	**Project monitoring and control - Case study: UNESCO restoration and reconstruction projects in Mosul. (UNESCO)**	**Linking various levels of recovery: Project, Nipoorhood, and City levels. (Rohit Jigyasu)**	**Feedback session - Final presentations**
10:15	**Coffee Break**	**Abdelhamid Salah**	**Coffee Break**	**Coffee Break**	**Coffee Break**
10:30	**Group work - Preparation for final presentations**	**Continued**	**Lecture (virtual): Monitoring and quality control for heritage recovery projects. (Rand Eppich)**	**Classroom exercise: Linking the Prayer House with its wider sitting.**	**Feedback session - Final presentations**
11:00					
12:00					
13:00	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**	**LUNCH BREAK**
14:00	**Lecture (virtual): Structural monitoring analysis. (Marwan Al-Heib)**	**Lecture (virtual): Monitoring and quality control for heritage recovery at macro-level (Neighborhood and city levels). (Rohit Jigyasu)**	**Classroom exercise:Development of monitoring indicators for the Prayer House recovery.**	**Continued**	**General review of the course + Q&A session**
15:00				**Feedback session - Final presentations**	
16:00	**Discussion**	**Discussion**	**Discussion**	**Discussion**	**Discussion**
	End of session	**End of session**	**End of session**	**End of session**	**End of session**
COLOR CODING	**Lecture**	**Case Study**	**Site Visit**	**Discussion / Presentation**	**COURSE ACTIVITY LAB**

GLOSSARY

Adaptation
Adaptation means changing a place to suit the existing use or a proposed use.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Adaptive reuse
Adaptive reuse in heritage conservation involves repurposing and renovating historic buildings or sites for new functions while preserving their historical value and character. (National Park Service - Preservation Briefs)

Advisory body
The Advisory Bodies are three international non-governmental or intergovernmental organizations named in the World Heritage Convention to advise the World Heritage Committee in the implementation of the Convention. They are the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM), the International Council on Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature (IUCN).

The specific role of ICOMOS in relation to the Convention includes: evaluation of properties nominated for inscription on the World Heritage List, monitoring the state of conservation of World Heritage cultural properties, reviewing requests for International Assistance submitted by States Parties, and providing input and support for capacity-building activities.
UNESCO. (2021). Operational Guidelines for the Implementation of the World Heritage Convention par. 35.

Aerial photography
An efficient and effective means of quickly documenting the condition of a large site or a number of sites.
Aerial photographs cover many relevant matters and, if sufficiently detailed, can serve as a substitute for conventional mapping and monitoring purposes. There are two general sources of aerial photography: archival research and commissioning flights. Archival research is a cost-effective means of acquiring images of a site, as these images were taken for other reasons, such as road engineering or national topographic mapping programs. Flights may be commissioned for obtaining aerial images, which can be vertical (straight down) or oblique (at an angle). Professional companies usually take vertical images by using expensive, extra-large-format film or digital cameras mounted in the belly of medium-size airplanes. (In “Inspecting Sites,” by Kevin L. Jones)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Aesthetic value
Refers to the sensory and perceptual experience of a place—that is, how we respond to visual and non-visual aspects such as sounds, smells and other factors having a strong impact on human thoughts, feelings and attitudes. Aesthetic qualities may include the concept of beauty and formal aesthetic ideals. Expressions of aesthetics are culturally influenced.
Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Anastylosis
Anastylosis is a term used in the field of heritage preservation and archaeology. It refers to a meticulous process of reconstructing and restoring a damaged or ruined ancient structure or monument by reassembling its original modules. This approach involves using the original materials and architectural elements that have been recovered or preserved to rebuild the structure as faithfully as possible to its original form and design.
Conservation Wiki. Retrieved from https://www.designingbuildings.co.uk/wiki/Anastylosis

Armed conflict
A dispute involving the use of armed force between two or more parties. It is divided into international and non-international armed conflicts. (The Geneva Conventions, 1949)
Attributes

Attributes are the elements of a heritage place which convey its heritage/conservation values and enable an understanding of those values. They can be physical qualities, material fabric and other tangible features, but can also be intangible aspects such as processes, social arrangements or cultural practices, as well as associations and relationships which are reflected in physical elements of the property.
For cultural heritage places, they can be buildings or other built structures and their forms, materials, design, uses and functions but also urban layouts, agricultural processes, religious ceremonies, building techniques, visual relationships and spiritual connections. For natural properties, they can be specific landscape features, areas of habitat, flagship species, aspects relating to environmental quality (such as intactness, high/pristine environmental quality), scale and naturalness of habitats, and size and viability of wildlife populations. Attributes, and the interactions between them, should be the focus of protection, conservation and management actions.
The term 'attributes' is particularly used for World Heritage properties and a clear understanding of the attributes that convey their Outstanding Universal value is critical for their long-term protection. The spatial distribution of those attributes and respective protection requirements should inform the boundary of the property and other management actions.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Authenticity
All cultural properties must meet the fundamental condition of authenticity in order to demonstrate their Outstanding Universal Value. An authentic property expresses its cultural values in a truthful and credible way through a variety of attributes such as its form, materials, function, management system, location, spirit, etc. (ICOMOS Website, 2023)
The condition of authenticity is further defined in the Operational Guidelines, paragraphs 79 to 86.
Baseline assessment
A baseline assessment is an adequate description of the affected environment i) as it is currently, ii) how it was at the time of World Heritage inscription and iii) as it could be expected to develop if the project were not to proceed. This should encompass all dimensions of the environment: physical, biological, resource use, social, cultural, health and economic. The effectiveness of an impact assessment is directly dependent on how well these conditions are understood.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Buffer zone
A buffer zone is a well defined zone outside the protected area whose role is to shield the cultural values of the protected zone from the impact of activities in its surroundings. This impact can be physical, visual or social.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Build Back Better (BBB)
The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies, and the environment.
United Nations General Assembly. (2016). Report of the Open-Ended Intergovernmental Expert 2 Working Group on Indicators and Terminology Relating to Disaster Risk Reduction. Seventy-First Session, Item 19(c). A/71/644.

Civil war
Consists of one or several simultaneous disputes over generally incompatible positions that: concern government and/or territory in a state; are causally linked to the use of armed force, resulting in at least 500 battle-related deaths during any given year during the conflict; and involve two or more parties, of which the primary warring parties are the government of the state where armed force is used, and one or several non-state opposition organizations. (International Peace Institute, 2010)

Climate change
A change in climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
United Nations. (1992). United Nations Framework Convention on Climate Change.

Compatible

Compatible use means a use which respects the cultural significance of a place. Such a use involves no, or minimal, impact on cultural significance.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Computer modeling

A software that processes XYZ coordinate points and builds up meshes that can be formed into different shapes to represent building or site elements. Images of the actual physical elements are then "draped," or projected, over the surface of these meshes. The finished images can be displayed and rotated on the computer to be viewed from different perspectives.
(In "Virtual Solutions," by José Luis Lerma and Carmen Pérez)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Conflict analysis

A tool or process aimed at developing a multidimensional understanding of a conflict, its root causes, dynamics, stakeholders and potential entry points for building peace.
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Conflict prevention

Actions taken to prevent conflict and tensions spilling over into overt violence, including at the local, national and international level.
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Conflicting values

Refer to situations where different stakeholders or interest groups hold divergent opinions, priorities, or preferences regarding the significance, use, management, or treatment of a heritage site or cultural heritage asset. Conflicting values arise when different perspectives or interpretations of heritage values clash, leading to disagreements or tensions in decision-making processes.
Tainter, J., & Lucas, G. (Eds.). (2018). The Oxford Handbook of The Archaeology of Collapse. Oxford University Press.

Conservation

Measures to extend the life of cultural heritage while strengthening transmission of its significant heritage messages and values (ICCROM, 1998). In the domain of cultural property, the aim of conservation is to maintain the physical and cultural characteristics of the object to ensure that its value is not diminished and that it will outlive our limited time span.
International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), Risk Preparedness: A Management Manual for World Cultural Heritage, 1998 and; UNESCO, Traditional Restoration Techniques: A RAMP Study, 1988.

Cracks

In civil engineering, cracks refer to the visible fissures or breaks that occur in structural elements such as buildings, bridges, pavements, or other infrastructure modules. These cracks can occur due to various factors and can have different implications for the overall integrity and performance of the structure.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Craft or artisanal products

Are defined as "those produced by artisans, either completely by hand or with the help of hand-tools or even mechanical means, as long as the direct manual contribution of the artisan remains the most substantial module of the finished product... The special nature of artisanal products derives from their distinctive features, which can be utilitarian, aesthetic, artistic, creative, culturally attached, decorative, functional, traditional, religiously and socially symbolic and significant". (UNESCO and ITC, 1997)

Cultural activities, goods and services

"Cultural activities, goods and services" refers to those activities, goods and services, which at the time they are considered as a specific attribute, use or purpose, embody or convey cultural expressions, irrespective of the commercial value they may have. Cultural activities may be an end in themselves, or they may contribute to the production of cultural goods and services.
UNESCO. (2005). Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

Cultural diversity

"Cultural diversity" refers to the manifold ways in which the cultures of groups and societies find expression. These expressions are passed on within and among groups and societies. Cultural diversity is made manifest not only through the varied ways in which the cultural heritage of humanity is expressed, augmented and transmitted through the variety of cultural expressions, but also through diverse modes of artistic creation, production, dissemination, distribution and enjoyment, whatever the means and technologies used.

UNESCO. (2005). Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

Cultural goods

Are defined as consumer goods that convey ideas, symbols and ways of life, i.e. books, magazines, multimedia products, software, recordings, films, videos, audio-visual programmes, crafts and fashion.
UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics.

Cultural heritage

Cultural heritage includes artefacts, monuments, a group of buildings and sites, museums that have a diversity of values including symbolic, historic, artistic, aesthetic, ethnological or anthropological, scientific and social significance. It includes tangible heritage (movable, immobile and underwater), intangible cultural heritage (ICH) embedded into cultural, and natural heritage artefacts, sites or monuments. The definition excludes ICH related to other cultural domains such as festivals, celebration etc. It covers industrial heritage and cave paintings.
UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics.

Cultural identity

The sense of belonging, identification, and self-definition based on cultural affiliations, shared values, beliefs, customs, and practices.
Hall, S. (1996). Cultural identity and diaspora. In Identity: Community, culture, difference (pp. 222-237). Lawrence & Wishart.

Cultural landscape

Combined works of nature and by humans, and they express a long and intimate relationship between people and their natural environment.
UNESCO. "Cultural Landscapes." World Heritage Convention Internet Site.

Cultural mapping

Refers to the systematic process of identifying, documenting, and analyzing the cultural resources and values within a particular area or community. It involves creating visual representations or maps that capture the diverse cultural elements, including tangible and intangible heritage, historical landmarks, traditional practices, social traditions, and community identities.
Sullivan, Sian. "Mapping Cultural Values: Cultural Ecosystem Services and Cultural Mapping in Practice." ECOS 38, no. 1 (2017): 24-35.

Cultural services

Services aimed at satisfying cultural interests or needs. They do not represent cultural material goods in themselves but facilitate their production and distribution. For example, cultural services include licensing activities and other copyright-related services, audio-visual distribution activities, promotion of performing arts and cultural events, as well as cultural information services and the preservation of books, recordings and artefacts (in libraries, documentation centres, museums).
UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics.

Cultural significance

Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Culture

Culture should be regarded as the set of distinctive spiritual, material, intellectual, and emotional features of society or a social group, and it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions, and beliefs.
UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics.

Culture cycle

Refers to the production of culture as a result of a series of interlinked processes or stages that together form the culture cycle, value chain or supply chain.
UNESCO Institute for Statistics. (2009). UNESCO Framework for Cultural Statistics.

Cumulative impacts

A cumulative impact results from the environmental impacts of a project combining with the same environmental impacts of other past, existing or reasonably foreseeable future projects or activities, including those that may be enabled by the project.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Database

A collection of various types of data, including photographic images, sketches and measurements, condition assessments, and other pieces of information, stored in a systematic way for security and easy retrieval. Individual records or data are separated into sets, themes, and fields, with unique identifiers to allow data to be linked together and queried. Databases can connect separate “pieces” of information together, allowing new information to be derived. (In “Ancestral Art,” by Cliff Ogleby)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Decay
Refers to the gradual deterioration and damage that occurs to historic buildings, structures, or cultural heritage sites over time. It is the result of various factors, including natural processes, environmental conditions, human activities, and inadequate maintenance or preservation practices.
Preservation Brief 47: Maintaining the Exterior of Small and Medium Size Historic Buildings." National Park Service.

Decommissioning
Decommissioning occurs at the end of a project’s lifetime and involves fully removing structures and other elements of a project, usually by those who constructed it. The aim is to restore the place to its previous conditions.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Deterioration
Refers to the process of progressive decay, damage, or decline in the condition of an object, material, or structure over time. It involves the gradual deterioration of physical, chemical, or biological properties that can affect the appearance, structural integrity, functionality, or performance of the entity.
Ashley-Smith, Jonathan, ed. Conservation of Ruins. (2007). Butterworth-Heinemann.

Direct impacts
A direct impact is the result of a cause-and-effect relationship between a project and a specific attribute of World Heritage or other environmental modules.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Disaster
A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceeds the ability of the affected community or society to cope using its own resources. (www.unisdr.org)
Disaster risk management (DRM)
Designing, implementing and evaluating strategies, policies and measures in order to: Improve the understanding of disaster risk; foster disaster risk reduction; transfer and promote continuous improvement in disaster preparedness, response and recovery practices. The explicit purpose of disaster risk management is to increase human security and well-being, as well as sustainable development.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Documentation
The already existing stock of information. As an activity, it stands for the systematic collection and archiving of records in order to preserve them for future reference.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Emergency
An unforeseen combination of circumstances or the resulting state that calls for immediate action. (Merriam Webster Online Dictionary, www.m-w.com)

Fabric
Fabric means all the physical material of the place including elements, fixtures, contents and objects.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Factors
Everything that can affect, positively and negatively, the values and attributes of the heritage place and its state of conservation. Negative factors are usually called threats. How factors affect a property needs to be analysed through a series of parameters namely the underlying causes that are the source of the factor, their origin (if originating within or outside the property),

the current and potential impacts deriving from the factor and the extent and severity of the impacts on the attributes of the heritage place.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Finite Element Analysis (FEA)

Is a numerical method used in engineering to analyze and simulate the behavior of complex structures and systems. It involves dividing the structure or system into smaller, interconnected subdomains called finite elements. Mathematical equations representing the physical behavior of the elements are solved to predict the response of the entire structure to different loads and boundary conditions. FEA is widely used to assess the stress, strain, displacement, and other mechanical properties of structures and modules.
Chandrupatla, T. R., & Belegundu, A. D. (2012). Introduction to Finite Elements in Engineering (4th ed.). Pearson Education.

Flexural Cracks

Flexural cracks occur in structural elements subjected to bending or flexural forces. These cracks are usually observed in reinforced concrete beams, slabs, or columns and appear as narrow, diagonal cracks near the tension side of the member.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Geographic Information System (GIS)

An effective descriptive, analytical, and communication tool to map and assess sites and prioritize necessary work. A GIS is a geographic database that combines spatial information in graphic form with tabular data. (In "Planning Interventions," by Frank Matero and Judy Peters)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Global Positioning System (GPS)

A navigation and mapping tool that uses special equipment to receive radio signals transmitted from a network of twenty-four satellites that circle the earth twice a day in precise orbits. GPS allows the rapid acquisition of detailed and comprehensive data with pinpoint accuracy. There are two general categories of GPS radio receivers ranging in accuracy. For these two categories, accuracy can be improved to several centimeters with a differential signal, which is a ground-based radio station or transmitter. This base station transmits signals that supplement the signals from the satellites. Non-survey grade or handheld GPS devices, in contrast, usually are not corrected by a ground-based station and range between 5 and 15 meters in accuracy. (In "Mapping Features," by Jo Anne Van Tilburg, Cristián Arévalo Pakarati, and Alice Hom)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Graphic record

A measured drawing, rectified photograph, ortho-photo-mosaic or 3-D model that graphically or photographically describes the physical configuration of a heritage place, along with its dimensional and architectural characteristics.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Hazard

Any phenomenon, substance or situation, which has the potential to cause disruption or damage to infrastructure and services, people, their property and their environment. (Abarquez and Murshed, 2004)

Heritage

Heritage is a broad concept and includes the natural as well as the cultural environment. It encompasses landscapes, historic places, sites and built environments, as well as bio-diversity, collections, past and continuing cultural practices, knowledge and living experiences. It records and expresses the long processes of historic development, forming the essence of diverse national, regional, indigenous and local identities and is an integral part of modern life. It is a social dynamic reference point and positive instrument for growth and change. The particular heritage and collective memory of each locality or community is irreplaceable and an important foundation for development, both now and into the future.
ICOMOS. (2002). International Cultural Tourism Charter.

Heritage Impact Assessment

A Heritage Impact Assessment is an activity-specific or project-level assessment that is focused on identifying and assessing the potential effect of a proposed activity or project on the heritage/conservation values of a natural and/or cultural heritage place. In the context of World Heritage properties, a Heritage

Impact Assessment should be particularly focused on identifying and assessing negative and positive impacts on the attributes which convey the Outstanding Universal Value of the World Heritage property.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Heritage information

The integrated activities of recording, documentation, and information management.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Heritage record

A technical dossier of a cultural heritage place, prepared by heritage recorders and consisting of measured drawings, photographs, and technical analysis. It provides necessary basic data for conservation and monitoring activities, as well as posterity records for public archives.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Heritage recording

The graphic and/or photographic capturing of information describing the physical configuration, evolution, and condition of a heritage place at known points in time.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Heritage Value(s)

An aspect of the worth or importance attached by people to qualities of places, categorised as aesthetic, evidential, communal or historical value.
English Heritage. (2008). Conservation Principles.

Historic monument

The concept of a historic monument embraces not only the single architectural work but also the urban or rural setting in which is found the evidence of a particular civilization, a significant development or a historic event. This applies not only to great works of art but also to more modest works of the past which have acquired cultural significance with the passing of time.
ICOMOS. (1964). The International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter).

Historic towns and urban areas

Historic towns and urban areas are made up of tangible and intangible elements. The tangible elements include, in addition to the urban structure, architectural elements, the landscapes within and around the town, archaeological remains, panoramas, skylines, view lines and landmark sites. Intangible elements include activities, symbolic and historic functions, cultural practices, traditions, memories, and cultural references that constitute the substance of their historic value.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Historic value

Is intended to encompass all aspects of history—for example, the history of aesthetics, art and architecture, science, spirituality and society. It therefore often underlies other values. A place may have historic value because it has influenced, or has been influenced by, an historic event, phase, movement or activity, person or group of people. It may be the site of an important event. For any place the significance will be greater where the evidence of the association or event survives at the place, or where the setting is substantially intact, than where it has been changed or evidence does not survive. However, some events or associations may be so important that the place retains significance regardless of such change or absence of evidence.
Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Impact

The effects or consequences of a factor on the attributes of the heritage place, both in terms of the attributes' state of conservation and their ability to convey the heritage/ conservation values. An impact is the difference between a future environmental condition with the implementation of a development project, and the future condition without it. Note that for there to be an impact, there must a source of impact (e.g. noise from an industrial site), a receptor or attribute of the World Heritage property that is affected (e.g. residents living nearby) and a pathway or route by which the harmful action or material is able to reach the receptor (e.g. the air). Impacts can be positive or negative, as well as direct or indirect, current or potential and originating within the heritage place, any existing buffer zone(s) and even beyond it.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R.

(2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Impact assessment

Impact assessment is the process of identifying, predicting and evaluating the potential environmental impacts of proposed actions prior to major approval decisions being taken and commitments made. It is undertaken for the purpose of avoiding or mitigating adverse impacts, and enhancing beneficial impacts. More generally, impact assessment can be appreciated as a way of thinking and planning that can be applied to all scales of activity. Impact assessment can be applied to development proposals at various levels – projects, plans, programmes and policies.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Indirect impacts

Indirect impacts are impacts on the environment which are not a direct result of the project, often produced away from or as a result of a complex pathway. Sometimes referred to as 'second' or 'third-level' impacts, or 'secondary' impacts.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Infill design

Refers to the process of designing and constructing new buildings or additions within existing historic urban contexts or heritage sites. It involves carefully integrating new structures into the surrounding historic fabric while respecting and complementing the existing architectural and cultural heritage.
ICOMOS. (2017). The ICOMOS Illustrated Guidelines on Urban Conservation and Rehabilitation.

Information management

The process of finding, cataloguing, storing, and sharing information by making it accessible to potential users now and in the future.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Information sources

All material, written, oral and figurative sources which make it possible to know the nature, specifications, meaning and history of the cultural heritage.
ICOMOS. (1994). The Nara Document on Authenticity.

Intangible cultural heritage (ICH)

Is defined as "the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognise as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity".
UNESCO. (2003). Convention for the Safeguarding of the Intangible Cultural Heritage.

Integrity

All properties nominated for inscription on the World Heritage List shall satisfy the conditions of integrity. Integrity is a measure of the wholeness and intactness of the natural and/or cultural heritage and its attributes. Examining the conditions of integrity therefore requires assessing the extent to which the property: Includes all elements necessary to express its Outstanding Universal Value; is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; suffers from adverse effects of development and/or neglect.
The condition of integrity is further defined in the Operational Guidelines, paragraphs 87 to 95.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Interpretation

Interpretation means all the ways of presenting the cultural significance of a place.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Intervention

Any action which has a physical effect on the fabric of a place.
English Heritage. (2008). Conservation Principles, p71.

Irreparable damage

Refers to the irreversible and significant loss or destruction of cultural heritage assets or values beyond the possibility of repair, restoration, or recovery. It signifies the permanent loss of tangible or intangible elements that are deemed important, significant, or unique to a particular heritage site or cultural context.
ICOMOS. (1996). Charter for the Conservation of Places of Cultural Heritage Value (The Dublin Principles).

Lacuna

An area of a manuscript, painting, or other material, that is completely missing as a result of any type of damage. The word derives from the Latin expression for "gap."
American Institute for Conservation. Bookbinding and the Conservation of Books: A Dictionary of Descriptive Terminology.

Landscape

"Landscape" means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.
Council of Europe. (2000). European Landscape Convention.

Landscape management

"Landscape management" means action, from a perspective of sustainable development, to ensure the regular upkeep of a landscape, so as to guide and harmonise changes which are brought about by social, economic and environmental processes.
Council of Europe. (2000). European Landscape Convention.

Landscape planning

"Landscape planning" means strong forward-looking action to enhance, restore or create landscapes.
Council of Europe. (2000). European Landscape Convention.

Landscape protection

"Landscape protection" means actions to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity.
Council of Europe. (2000). European Landscape Convention.

Laser scanning technologies

These technologies are generally based on one of three methods: (1) time of flight−a laser pulse is emitted, and the time of light travel is measured; (2) phase comparison−light is emitted at a known frequency, and the shift between sending and returning phases is compared; and (3) triangulation−with a known width between a laser emitter and detector, the angles of sent and returned light provide the distance, using the Pythagorean theorem. Using these technologies, XYZ coordinates are recorded as millions of individual points. At high densities, these individual measures form a “point cloud,” from which a mesh can be generated to create a 3-D model. (In “A Record for Posterity,” by Alonzo Addison)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Maintenance

Maintenance means the continuous protective care of a place, and its setting. Maintenance is to be distinguished from repair which involves restoration or reconstruction.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Management Plan

A Management Plan is a document specifying in detail all the strategies and tools to be used for heritage protection and which at the same time responds to the needs of contemporary life. It contains legislative, financial, administrative and conservation documents, as well as Conservation and Monitoring Plans.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Manual recording techniques

Although often labor intensive, these techniques use tools that are readily available and allow the study of buildings or sites in great detail. Usually this method of recording provides sufficient information and accuracy to begin conservation. Manual recording techniques incorporate tools such as plumb bobs, measuring tapes, and paper and pencil. (In “Wall Deformation,” by Sandeep Sikka)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Measured survey

The activity of producing measured drawings on site by hand measurement and/or by using various heritage recording tools (total stations, photogrammetry, 3-D laser scanners).
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding

Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Minimum intervention

Minimal intervention is the concept of low-key intervention which involves keeping as much and changing as little as possible. Over-restoration of historic buildings can be detrimental to their character and can result in a loss of tangible features and intangible charm. Instead, we should try and accept the worn appearance of old features and avoid removing all traces of imperfections. These are evidence of a building's antiquity and contribute to its irreplaceable patina of age. The old adage, 'little and often' is especially relevant to old houses.
Dublin Civic Trust. (n.d.). Conservation principles. Retrieved from http://www.dublincivictrust.ie/conserve-your-building/conservation-principles

Mitigation

Taking action in the timeframe before a disaster to lessen post-event damage to lives and property. In risk management, many hazards such as earthquakes cannot be reduced, but the risk from that hazard can be reduced, or mitigated, for example by constructing earthquake-resistant buildings, or shelves that prevent objects from sliding off. The former is structural mitigation, the latter is non-structural.
UNESCO. (2010). Managing Disaster Risks for World Heritage.

Monitoring

The repeated measurement of changes based on defined standards, which allow the evaluation of changes occurring on a heritage asset.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Movable cultural property

"movable cultural property" shall be taken to mean all movable objects which are the expression and testimony of human creation or of the evolution of nature and which are of archaeological, historical, artistic, scientific or technical value and interest.
UNESCO. (1978). Recommendation for the Protection of

Movable Cultural Property

Natural heritage
Consists of natural features, geological and physiographical formations and delineated areas that constitute the habitat of threatened species of animals and plants and natural sites of value from the point of view of science, conservation or natural beauty. It includes nature parks and reserves, zoos, aquaria and botanical gardens.
UNESCO. (1972). the Convention Concerning the Protection of the World Cultural and Natural Heritage.

Outstanding Universal Value

Means cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity. As such, the permanent protection of this heritage is of the highest importance to the international community as a whole. The Committee defines the criteria for the inscription of properties on the World Heritage List.
UNESCO. (2021). Operational Guidelines for the Implementation of the World Heritage Convention par. 49.

Patina

Patina, in heritage conservation, refers to the thin layer that develops on the surface of an object or material over time due to natural aging, weathering, and use. It is considered a desirable attribute that enhances the aesthetic and historical value of cultural heritage. (UNESCO. (2013). Historic Urban Landscape: Managing Heritage in an Urban Century)

Peacebuilding

A wide ranging, long-term and multi-level set of activities aimed at building sustainably peaceful relations between groups, particularly by addressing the root causes of the conflict.
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Peacekeeping

Actions taken to support a pause in hostilities, such as a ceasefire or peace agreement, including by keeping warring parties apart.
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Peacemaking

Actions taken to bring a violent conflict to an end or reduce its destructiveness and duration.
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Photogrammetric

survey A survey that produces heritage records by means of photogrammetry.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding

Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Photogrammetry

A survey technique in which a twodimensional or three-dimensional object may be measured from photographs taken from two or more slightly different positions. These are called stereographs, and they provide the viewer with two different perspectives of the same object that mimic the perspective of human binocular vision. Measurements are extracted from the stereographs, and 3-D information is reconstructed using computer software and hardware. (In "Structural Assessment," by Gorun Arun)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Preservation

Preservation means maintaining a place in its existing state and retarding deterioration.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Prevention

Measures taken to reduce the likelihood of losses. Ideally, these measures would seek to reduce losses to zero, but this often is not possible. Key question: How much prevention do you need to undertake?
UNESCO. (2010). Managing Disaster Risks for World Heritage.

Protected urban area

A protected urban area is any part of a town that represents a historical period or stage of development of the town. It includes monuments and authentic urban fabric, in which buildings express the cultural values for which the place is protected. The protection may also include the historical development of the town and support its characteristic civic, religious and social functions.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Reconciliation

The restoration of relationships between (groups of) people following conflict. This can include large-scale intercommunal processes such as national truth and reconciliation committees, and interpersonal or small-scale initiatives to rebuild trust.

PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation. (2021).

Reconstruction

Reconstruction means returning a place to a known earlier state and is distinguished from restoration by the introduction of new material.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Recording

The capture of information which describes the physical configuration, condition and use of monuments, groups of buildings and sites, at points in time, and it is an essential part of the conservation process.
ICOMOS. (1996). ICOMOS Principles for the Recording of Monuments, Groups of Buildings, and Sites.

Recovery

The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.
United Nations General Assembly. (2016). Report of the Open-Ended Intergovernmental Expert 2 Working Group on Indicators and Terminology Relating to Disaster Risk Reduction. Seventy-First Session, Item 19(c). A/71/644.

Recovery Framework

Establishes a common platform for the whole community to build, sustain, and coordinate delivery of recovery capabilities. Describes principles, processes, and capabilities essential to more effectively manage and enable recovery following an incident of any size or scale. Defines how emergency managers, community development professionals, recovery practitioners, government agencies, private sector professionals, nongovernmental organization leaders, and the public, can collaborate and coordinate to more effectively utilize existing resources to promote resilience and support the recovery of those affected by an incident (US Federal Emergency Management Agency, 2016).
A document that articulates a vision for recovery; defines a strategy; prioritizes actions; fine-tunes planning processes; and provides guidance on recovery financing, implementation, monitoring, and evaluation. An effective recovery framework is not a plan, but rather a strategy that complements the Post-Disaster Needs Assessment process by outlining long-term goals and communicating the shared principles according to

which progress will be measured. (GFDRR, 2015).
GFDRR. (2015). Guide to Developing Disaster Recovery Frameworks: Sendai Conference Version. 4 March. http://bit.ly/1iH7kh5.
US Federal Emergency Management Agency. (2016). National Disaster Recovery Framework. Second Edition. US Department of Homeland Security. http://bit.ly/2gdvYtz.

Rectified photography
A technique based on the concept of bringing the surface of an object−a building facade, for example− and the plane of the image (photograph) into a parallel condition. Rectification removes perspective angle and camera lens distortion and creates a measurable image that is geometrically in proportion with the surface of the facade. It is quick and inexpensive, requires minimal training, and demands no high-tech equipment.
Image rectification can be carried out with or without measurement control points on the object, with slight variations in accuracy and reliability. Control points can be measured using a tape measure or, preferably, survey instruments (total station). (In "Recording Streetscapes," by Salim Elwazani and José Luis Lerma)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Rehabilitation
The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.
United Nations General Assembly. (2016). Report of the Open-Ended Intergovernmental Expert 2 Working Group on Indicators and Terminology Relating to Disaster Risk Reduction. Seventy-First Session, Item 19(c). A/71/644.

Reinforcement
Refers to the process of strengthening or fortifying historic structures to enhance their structural integrity, stability, and resistance to external forces. It involves implementing measures to address structural deficiencies and ensure the long-term preservation of the building while respecting its historical value.
Preservation Brief 41: The Seismic Rehabilitation of Historic Buildings." National Park Service.

Remote sensing
A method that broadly refers to capturing imagery from a distance, usually from satellites, but can also refer to aerial photography.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Residual impacts
Impacts that still remain, even after the design of mitigation measures.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R. (2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Response
The reaction to an incident or emergency to assess the damage or impact to the site and its modules, and actions taken to prevent people and the property from suffering further damage.
UNESCO. (2010). Managing Disaster Risks for World Heritage.

Restoration
Restoration means returning a place to a known earlier state by removing accretions or by reassembling existing elements without the introduction of new material.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Reversibility
The use of techniques and materials which allow a repair or alteration to be reversed at a later date without loss of historic features or fabric is always to be preferred. Removal and disposal of old doors and windows is an obvious example of an irreversible intervention. A less obvious example would be the use of modern materials such as resin, concrete or cement which form a tough, almost unbreakable bond with old building materials, making reversibility without damage difficult at a later date.
Dublin Civic Trust. (n.d.). Conservation principles. Retrieved from http://www.dublincivictrust.ie/conserve-your-building/conservation-principles

Rights-holders
Actors socially endowed with legal or customary rights with respect to heritage resources. In cases where there are Indigenous people involved, they have the right to free, prior and informed consent before approval of any project affecting their lands or territories and other resources, and need to participate in impact assessment.
Court, S., Jo, E., Mackay, R., Murai, M., & Therivel, R.

(2022). Guidance and toolkit for impact assessments in a World Heritage Context. Paris, France; Rome, Italy; Charenton-le-Pont, France; Gland, Switzerland: UNESCO, ICCROM, ICOMOS, and IUCN.

Risk
The chance of something happening that will have an impact upon objectives. (Emergency Management Australia, 2000)

Risk assessment
Refers to the systematic process of evaluating potential risks and hazards associated with a particular activity, project, or situation. It involves identifying, analyzing, and assessing the likelihood and potential consequences of various risks, with the aim of making informed decisions and implementing appropriate measures to mitigate or manage those risks.
(Risk management – Guidelines. International Organization for Standardization (ISO), 2018)

Root causes of conflict
Long-term structural factors that have created the pre-conditions for conflict, such as poverty, exclusion or poor governance. (GSDRC, 2017)

Safeguarding
The safeguarding of historic towns and urban areas, and their surroundings, includes the necessary procedures for their protection, conservation, enhancement and management as well as for their coherent development and their harmonious adaptation to contemporary life.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Scientific value
Refers to the information content of a place and its ability to reveal more about an aspect of the past through examination or investigation of the place, including the use of archaeological techniques. The relative scientific value of a place is likely to depend on the importance of the information or data involved, on its rarity, quality or representativeness, and its potential to contribute further important information about the place itself or a type or class of place or to address important research questions. To establish potential, it may be necessary to carry out some form of testing or sampling. For example in the case of an archaeological site, this could be established by a test excavation.
Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Setting
Setting means the natural and/or man made contexts (in which the historic urban heritage is located) that influence the static or dynamic way these areas are perceived, experienced and/or enjoyed, or which are directly linked to them socially, economically or culturally.
ICOMOS. (2011). The Valletta Principles for the Safeguarding and Management of Historic Cities, Towns and Urban Areas.

Settlement Cracks
Settlement cracks occur when the foundation or supporting soil beneath the structure experiences differential settlement. These cracks often appear as vertical or diagonal fissures and may be more prominent near corners or junctions.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Shrinkage Cracks
Shrinkage cracks occur in concrete due to the volume reduction during the drying and curing process. They are typically hairline cracks and can be observed in large concrete slabs, walls, or pavements. They are not generally a structural concern but can affect the aesthetics and durability of the concrete.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Significance
The meaning and values of an item, collection or tradition and what makes it important. Significance is the historic, aesthetic, scientific and social values that a cultural heritage asset holds for past, present and future generations. (Russell & Winkworth, 2009)

Sketch diagrams
Investigative and interpretive drawing tools that combine various methods of recording to understand a site, building, or object. A sketch diagram represents the relationships between elements in order to understand how they interact. It also facilitates communication with others about these key elements. (In “Rapid Assessment,” by Anthony Crosby)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Social value
Refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them.

Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Spatial data
Information on the location, shape, and relationships among geographic features, usually stored as coordinates and topology.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Spirit of place
Spirit of place is defined as the tangible and intangible, the physical and the spiritual elements that give the area its specific identity, meaning, emotion and mystery. The spirit creates the space and at the same time the space constructs and structures this spirit
ICOMOS Canada. (2008). Québec Declaration on the Preservation of the Spirit of Place.

Spiritual value
Refers to the intangible values and meanings embodied in or evoked by a place which give it importance in the spiritual identity, or the traditional knowledge, art and practices of a cultural group. Spiritual value may also be reflected in the intensity of aesthetic and emotional responses or community associations, and be expressed through cultural practices and related places.
Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Stabilization
Refers to the process of strengthening or supporting a structure to ensure its stability and prevent further deterioration or collapse. It involves implementing measures or interventions to address structural weaknesses, improve load-bearing capacity, and ensure the overall safety and integrity of the structure.
Preservation Brief 41: The Seismic Rehabilitation of Historic Buildings." National Park Service.

Stakeholder
Stakeholders are the people who have a direct or indirect interest in, or who affect or are affected by, the implementation and outcome of intervention activities. Typically, they include individuals and representatives of communities, institutions and/or organizations and agencies invested in the project area. (IFRC, 2010)

State of conservation
Refers to the current condition, well-being, and overall management of a heritage site or cultural heritage asset. It encompasses the physical, functional, and cultural aspects of the heritage and evaluates its level of preservation, maintenance, and protection.
UNESCO World Heritage Centre. (2019). Operational Guidelines for the Implementation of the World Heritage Convention.

Statement of significance
A statement of significance provides a concise and distilled summary of the cultural significance of the place. It is common practice for the statement of significance to follow an analysis of each aspect of significance against each value or criterion. The statement of significance summarises each aspect, highlighting the aspects of significance that are most important. The statement of significance underpins decisions about statutory protection and conservation actions and is therefore of critical importance. It should be supported by sound evidence and be able to withstand scrutiny. In some jurisdictions there is a standard format that needs to be followed.
Australia ICOMOS. (2013). Practice Note: Understanding and assessing cultural significance.

Structural analysis
Is the process of calculating and determining the behavior, response, and stability of structures under different loads and forces. It involves mathematical calculations and engineering principles to analyze the internal forces, stresses, deformations, and displacements within a structure. The goal of structural analysis is to ensure the safety, efficiency, and reliability of a structure's design.
Hibbeler, R. C. (2011). Structural Analysis (8th ed.). Prentice Hall.

Structural Cracks
These cracks typically occur as a result of overloading, settlement, or movement of the structural elements beyond their design limits. They can be wide, deep, and extend across multiple sections of the structure, indicating a significant structural concern.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Sustainable
Capable of meeting present needs without compromising ability to meet future needs.
English Heritage. (2008). Conservation Principles, P72.

Sustainable Development
Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
United Nations. (1987). Report of the World Commission

on Environment and Development: Our Common Future (opens in a new window).

Technical analysis
Activity undertaken by heritage recorders to provide conservation professionals with accurate and objective descriptions of the design, construction, materials, and condition of cultural heritage places.
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Thermal Cracks
Temperature variations cause materials to expand or contract. When there is inadequate provision for accommodating these movements, thermal cracks may develop. They are commonly observed in concrete structures and can be identified by their parallel or intersecting pattern.
Edwin H. Gaylord, Jr., and Charles N. Gaylord. (1968). Structural Engineering Handbook.

Total station theodolite
A standard survey device that consists of a powerful telescope mounted on a base that rotates both horizontally and vertically. An operator can locate points by measuring distances through an electronic distance measurement (EDM) device as well as horizontal and vertical angles. Trigonometric calculations are performed by the onboard computer, combining the horizontal and vertical angles with the distance measurement to determine an XYZ coordinate. A series of points can be combined to form lines and planes, thus representing the object being recorded. (In "Defining Cultural Landscapes," by Geofree Chikwanda)
Letellier, R., Schmid, W., & LeBlanc, F. (2007). Guiding Principles - Recording, Documentation and Information Management for Conservation of Heritage Places. The Getty Conservation Institute.

Traditional knowledge
"Refers to the knowledge, innovations and practices of indigenous and local communities around the world. Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, forestry and environmental management in general". (SCBD, 2007)

Trigger
Triggers are single events, or the anticipation of an event, that can change the intensity or direction of violent conflict (e.g. elections, economic crisis, a natural disaster etc.). (GSDRC, 2017)
Underwater cultural heritage
"Underwater cultural heritage" means all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as: sites, structures, buildings, artefacts and human remains, together with their archaeological and natural context; vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and objects of prehistoric character.
UNESCO. (2001). Convention on the Protection of the Underwater Cultural Heritage.

Use
Use means the functions of a place, including the activities and traditional and customary practices that may occur at the place or are dependent on the place.
Australia ICOMOS. (2013). The Australia ICOMOS Charter for Places of Cultural Significance (The Burra Charter).

Value
An aspect of worth or importance, here attached by people to qualities of places.
English Heritage. (2008). Conservation Principles, P72.
Vernacular heritage
Refers to the traditional or indigenous built environment, cultural practices, and tangible and intangible expressions of a particular region or community. It encompasses the architecture, craftsmanship, social customs, traditional knowledge, and values that have evolved over time and are deeply rooted in the local culture and identity.
ICOMOS. (1994). The Nara Document on Authenticity.

Visual integrity
Refers to the overall coherence, authenticity, and aesthetic harmony of a visual or spatial composition. It pertains to the visual appearance and perception of an object, artwork, or environment and the extent to which it retains its original or intended visual qualities. In the context of heritage conservation, visual integrity refers to the visual coherence and authenticity of a historic structure or site. It involves preserving the visual aspects that contribute to its character, historical

significance, and overall visual experience.
ICOMOS. (2020). The ICOMOS Illustrated Guidelines on the Intangible Cultural Heritage.

Vulnerability
The susceptibility and resilience of the community and environment to hazards. 'Resilience' relates to 'existing controls' and the capacity to reduce or sustain harm. 'Susceptibility' relates to 'exposure'.
Emergency Management Australia. (2000). Managing the Emergency Consequences of Terrorism: A Planning Guide for State and Local Governments.
its original modules. This approach involves using the original materials and architectural elements that have been recovered or preserved to rebuild the structure as faithfully as possible to its original form and design.
Conservation Wiki. Retrieved from https://www.designingbuildings.co.uk/wiki/Anastylosis