

A

STORY

OF

CHANGE 2



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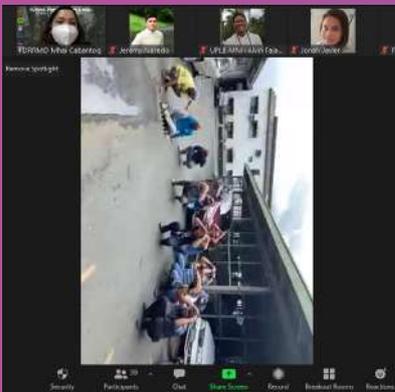
Participants



Unmute



Breakout Rooms



Transforming Online
Learning into Action
for Disaster Risk
Management of
Heritage Collections



Chat



Record





A STORY OF CHANGE 2

Transforming Online Learning into Action for
Disaster Risk Management of Heritage Collections

Kelly Hazejager and Jui Ambani

The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections has been conceived within the framework of ICCROM's flagship programme on First Aid and Resilience for Cultural Heritage in Times of Crisis, as well as its educational programme, CollAsia, with the support of the Cultural Heritage Administration (CHA) of the Republic of Korea.

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FOREWORD

The world continues to face overlapping and intensifying extreme weather events that come together to create disasters, which cause major disruptions in our lives, livelihoods and lifeways. This inescapable part of reality needs to be met with serious attention and action.

Our vulnerability and exposure to extreme disasters can also have a significant impact on our culture and heritage, but the scale of impact can be significantly reduced with mitigation strategies that address multiple hazards simultaneously. To move away from the treatment of single hazards, we have to change our perspective and better understand how multiple hazards and vulnerabilities interact to create disasters.

The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections, across Asia and beyond, aimed to develop multi-hazard risk mitigation strategies for moveable heritage and associated communities in order to reduce disaster risk. One of the first fully online trainings of ICCROM was developed within the framework of FAR - First Aid and Resilience for Cultural Heritage in Times of Crisis, a flagship programme for protecting all types of heritage from conflicts and disasters, in collaboration with CollAsia, a programme for sustaining and promoting heritage collections in South-East Asia.

The Cultural Heritage Administration (CHA) of the Republic of Korea is happy to support this unique initiative and enhance capacities for disaster risk management among museums, libraries and archives in South-East Asia and other risk-prone regions of the world.

The Cultural Heritage Administration of the Republic of Korea contributes to enhancing cultural diversity by creatively preserving and harnessing cultural heritage, and has been reinforcing its cooperation and solidarity with the global community for better conservation of cultural heritage, which is an invaluable asset shared by all humanity. In particular, CHA recently has focused its efforts on protecting cultural heritage from pending climate issues with capacity building activities, such as analysing and categorising potential risks for each heritage type, developing corresponding counter-strategies, and strengthening disaster prevention systems with the use of cutting-edge technology.

“The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections” of ICCROM is a significant step towards expanding the scope of disaster risk management for movable cultural heritage collections. In order to protect our precious cultural heritage from simultaneously occurring conflicts and disasters of the modern days and to ensure comprehensive and sustainable conservation for cultural heritage, it is indeed imperative to develop multi-dimensional risk management strategies.

We are proud to present this publication, *A Story of Change 2: Transforming Online Learning into Action for Disaster Risk Management of Heritage Collections*, with ICCROM, which outlines the key components of this training and presents the remarkable stories of change on-the-ground achieved by the 14 participants representing 11 countries. This publication also captures the memories of collective learning, when a closely bonded group of professionals joined the global mission to manage disaster risk and mitigate its impacts on communities and heritage.

Choi Eung-Chon

Administrator | The Cultural Heritage
Administration (CHA) of the Republic of Korea

The Philippines shares in the global crisis brought about by more intense and more frequent natural disasters. Typhoons, earthquakes, volcanic eruptions, as well as their more dangerous epiphenomena, have been part of the Philippine archipelagic context given its geographical location. As experienced in our country, and abroad, human-induced disasters can compound the harm that these natural occurrences can inflict on our tangible heritage, including our built structures and sites, as well as the collections that they contain. Aside from Climate Change, these are among the reasons why the risk levels that these cultural assets are exposed to are ever changing.

Since 2009, the Escuela Taller de Filipinas has been capacitating the unemployed Filipino youth in the preventative conservation of our cultural patrimony. During the last decade, we have developed a manual for preventative conservation of unreinforced masonry construction using Adobe stones (local volcanic tuff) in parallel with the capacity-building of local communities and young professionals from a wide range of disciplines in developing disaster risk management programs for various properties of significance. In the course of our mentoring, we have trained over 500 out-of-school youth and completed the rehabilitation of more than 30 movable and immovable properties with the support of national and international organizations.

The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections is a training program organized by ICCROM under the First Aid and Resiliency (FAR) for Cultural Heritage in Times of Crisis program, and the CollAsia program, a Southeast Asia-focused program for the protection of heritage collections. This course aims to recalibrate our approach in addressing the increasing risk levels and vulnerabilities of our cultural patrimony in order to properly safeguard them amidst these recurring phenomena.

This timely publication presents the activities that were conducted under the framework of this course. It clearly describes how the course involved 14 young international participants from various cultural backgrounds and fields of expertise. It will show the uniqueness of the approach of the training course, in the sense that, learning was through a safe space of exchange and mentorship that was done online. At the same time, there was enough room for individual and practical work that allowed our participants to develop their own risk management programs that are customized according to their particular heritage collections and their specific contexts.

The Escuela Taller de Filipinas Foundation is honored to have been invited to collaborate in this remarkable endeavor towards increasing human-capacities. Indeed, we must collectively pay due regard to community-based capacity-building that enables us to overtake these aforementioned issues and potential problems even before they occur.

On behalf of Escuela Taller de Filipinas, I congratulate ICCROM for yet another great contribution towards safeguarding our shared cultural heritage collections. Allow me to thank the Cultural Heritage Administration of the Republic of Korea for supporting such a valuable endeavor, as well as the International Council of Museums for their collaboration.

Tina Bulaong
Executive Director | Escuela Taller
de Filipinas Foundation



ACKNOWLEDGEMENTS

Disaster risk reduction for people and heritage is a collective effort. The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections therefore brought together 20 participants from 14 countries. ICCROM is immensely grateful for the continuous collaboration of the Cultural Heritage Administration (CHA) of Korea. Without their generous support it would not have been possible to realise this immersive online training. ICCROM extends its gratitude to the Escuela Taller Foundation de Filipinas Inc., Philippines for enriching the course content by bringing in heritage experiences from South-East Asia.

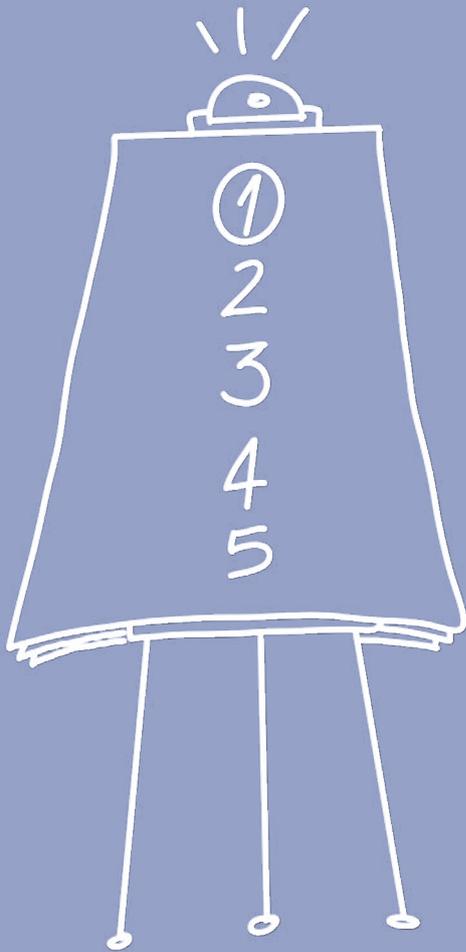
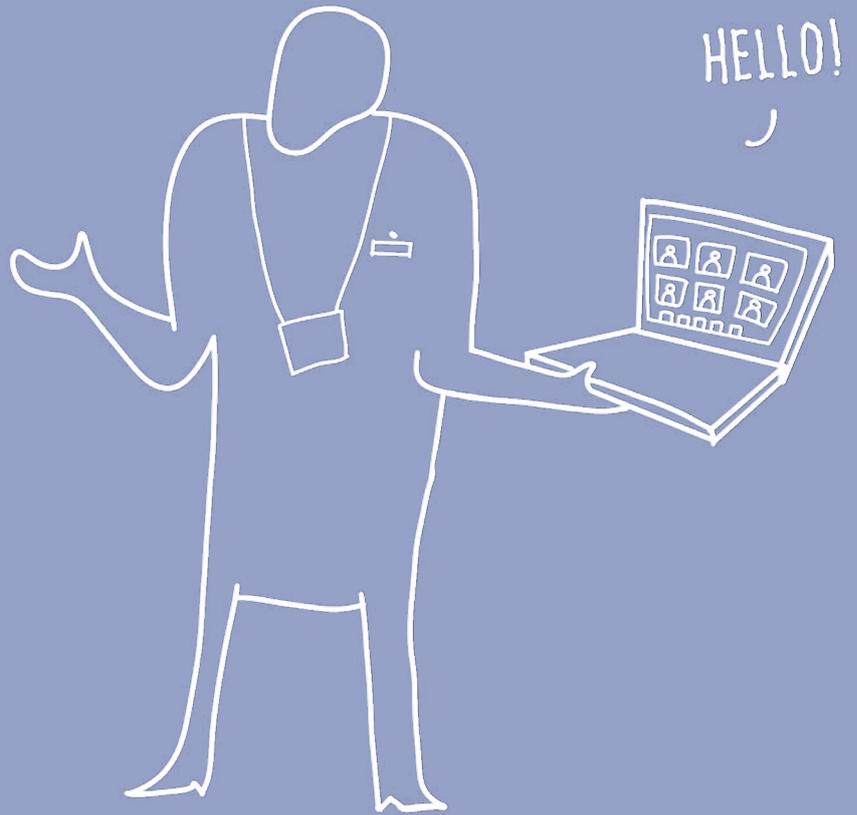
ICCROM deeply appreciates the collaboration of the International Council of Museums (ICOM) in this initiative.

For giving this project a truly interdisciplinary character, ICCROM thanks all the colleagues and organizations who participated in its development and implementation:

- All **participants** of the International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections, for their efforts to enhance capacities for disaster risk management and mitigation globally.
- The multidisciplinary **teaching team** and the **mentors** for their endless commitment to the participants.

ICCROM holds in high regard the following institutions for having supported the projects described in this publication (in alphabetical order): Conservation Office of Sangiran Early Man Site; Estonian National Heritage Board; George Town World Heritage Site; Gujarat Institute of Disaster Management; Historical Museum of Sarmiento; History Museum, Ho Chi Minh City; Lahore Arts Council, Alhamra Art Museum; Ministry of Cultural Heritage, Italy; Museum of Natural History at the University of the Philippines, Los Baños; Muzharul Islam Foundation and the Institute of Architects; National Archives No. 3, Hanoi; National Archives of Malawi; National Museum of Unity, Ibadan Oyo; National Museum in Yangon; National Rail Museum, New Delhi; Patan Museum; Persepolis World Heritage Site Museum; and the University of the Philippines-Diliman.

Last but not least, we wish to thank the contributors who kindly provided photographs and written content to support this publication, and Kelly Hazejager, without whose untiring efforts this publication would not have been possible.



01

INTRODUCTION



National Shrine, St. Anne Parish, Bulacan province, the Philippines, 2020 © Carlos Jr. Tatel

The Need

We live in uncertain times, where we are confronted with overlapping and cascading risks. Recent examples include the floods in large parts of Northeastern Europe and China, which coincided with the COVID-19 outbreak, making it difficult for emergency responders to divert already stretched resources to safeguard heritage collections and sites.

Many cultural institutions, as well as the communities and livelihoods connected to them, were faced with the difficult task of safeguarding heritage in the face of overlapping hazard events and a global health crisis. Threats are not just limited to natural hazards, but also include man-made causes such as armed conflicts.

Manage the Risk of Disasters, Not Just Disasters

In order to effectively deal with multiple risks simultaneously, the heritage field needs to shift its focus away from treating hazards one at a time. Instead, we need to understand the consequences of complex interactions between multiple hazards and the factors that make people and heritage vulnerable and exposed. Managing disaster risk therefore must include human factors and long-term vulnerabilities that exist in a society.

The Course

Focusing on a multi-hazard approach to disaster risk reduction, The International Course on Rethinking Disaster Risk Management for Cultural Heritage Collections offered a fresh perspective for safeguarding heritage in the face of overlapping and cascading risks. The training introduced the concept of scenario-based planning that enabled participants to take proactive preventive measures to secure their collections and buildings against the risk of a complex and large-scale disaster. By developing realistic scenarios participants were able to visualise potential impacts of hazards like fires, floods and earthquakes on heritage and people, leading to the identification of vulnerable areas and assets that need to be addressed on a priority basis.

The training was led by the First Aid and Resilience in Times of Crisis programme in collaboration with Collasia, a programme developed for improving collections' conservation. The initiative benefited from the collaboration with the Escuela Taller Foundation de Filipinas Inc., Philippines and the International Council of Museums (ICOM). It was generously funded by the Cultural Heritage Administration (CHA) of the Republic of Korea. This training programme has helped localise the following Sustainable Development Goals: 4 (Quality Education), 11 (Sustainable Cities and Communities), 13 (Climate Action), 17 (Partnerships for the Goals).

Course Structure

This blended course aimed to develop multi-hazard disaster risk management strategies for cultural heritage collections in Southeast Asia and beyond. Tailored to diverse institutional contexts, the course empowered 20 heritage professionals by enhancing their ability to better understand disaster risk for their respective collections and develop strategies for functional multi-hazard disaster risk management plans in the context of a changing climate, limited resources, and an ongoing public health crisis. 16 participants implemented field projects by the end of the course in 12 countries.

The course encouraged participants to develop realistic scenarios based on data gathered from different sources, as well as from disaster risk management agencies in their respective countries. Online learning was interspersed with practical do-it-yourself activities, out by the participants in their respective institutions. The goals of these activities were to:

- understand the different hazards their sites and collections are exposed to
- determine the frequency and magnitude of the hazards identified
- assess how conditions of vulnerability and exposure at their respective sites could interact with the identified hazards to harm people and damage heritage
- map the likely route(s) that the identified hazard would take, in order to identify the heritage collections that are the most vulnerable to the progressing hazard

Information collectively gathered and analysed by the participants led to the development of realistic scenarios enabling the participants to identify actions that they would take to prepare for and manage a complex emergency situation at their heritage site.

During the mentoring phase, participants were advised to invite specialists from the fields of disaster risk reduction and emergency management, so that they could implement effective mitigation measures and strengthen cooperation with emergency actors. The course modeled on the [FAR methodology for cascading capacity development](#), and comprised of the following phases:



Phase 1 | Two-week online learning (December 2020)

A first-of-its-kind remote learning session empowered 20 heritage professionals and was held across two weeks in December 2020. The online workshop featured a range of learning activities, including short lectures, interactive games, quizzes, online group work, role-play and multiple-choice questionnaires.



Phase 2 | Two-week hands-on workshop, later transformed online (June 2021)

The two-week online interactive workshop, which was originally planned to be conducted in-person at the Escuela Taller de Filipinas Foundation Inc, Philippines, was transformed into an online form due to the COVID-19 pandemic travel restrictions. The content was accordingly adapted, for example, the hands-on practical sessions were transformed into live demonstrations, while the in-person simulation was turned into a tabletop exercise that involved a simulation of a disaster event, brought to life using 3D videos and roleplay based on a scenario.



Phase 3 | Two-month post-training projects (July-August 2021)

The two-month project implementation included an award of six small-scale grants after a competitive selection of project proposals. 14 field projects were successfully implemented in 13 countries in South and Southeast Asia, Africa and South America. This included the development and implementation of disaster risk management plans and procedures in the participants' respective institutions.

Participants of FAR CollAsia 2020-21

The 20 participants for this course were drawn from diverse institutional contexts such as libraries, archives, museums, a World Heritage City, University departments, places of worship and community-managed cultural heritage centers. They represented 14 risk-prone countries – Argentina, Bangladesh, India, Indonesia, Iran, Malawi, Malaysia, Myanmar, Nepal, Nigeria, Pakistan, Philippines, Serbia and Vietnam – and spoke over 12 languages.

Mentors of FAR CollAsia 2020-21

The course was supported throughout by seven mentors from seven countries – Belgium, France, India, Italy, Jordan, Philippines, Vietnam – on a rotational basis drawn from the FAR alumni network of experts and teachers with diverse professional backgrounds such as cultural heritage, architecture, museum studies, paper conservation, humanitarian assistance and disaster risk management. During the three phases conducted between December 2020-August 2021, over 300 hours of mentoring support was provided to the participants remotely.

A Story of Change 2: Transforming Online Learning into Action for Disaster Risk Management of Heritage Collections is a compilation of stories of change from 14 participants who successfully implemented a field project in 13 risk-prone regions around the world, - Argentina, Bangladesh, India, Indonesia, Iran, Malawi, Malaysia, Myanmar, Nepal, Nigeria, Pakistan, Philippines and Vietnam. From increasing awareness on the importance of a multi-hazard approach to disaster risk management through trainings and workshops, to enhancing institutional coping capacities, the publication captures it all.

Unique Features of this Course

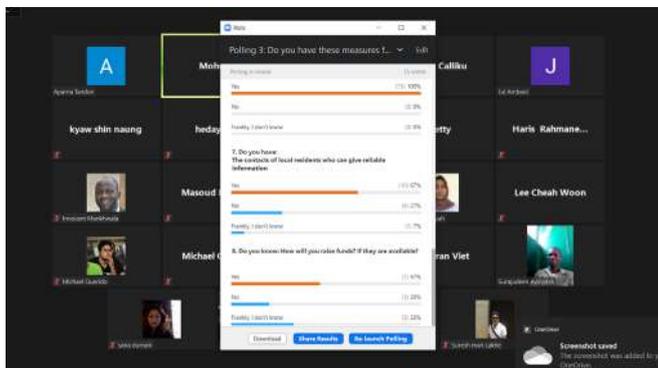


Online learning session on Zoom, 2020 © ICCROM

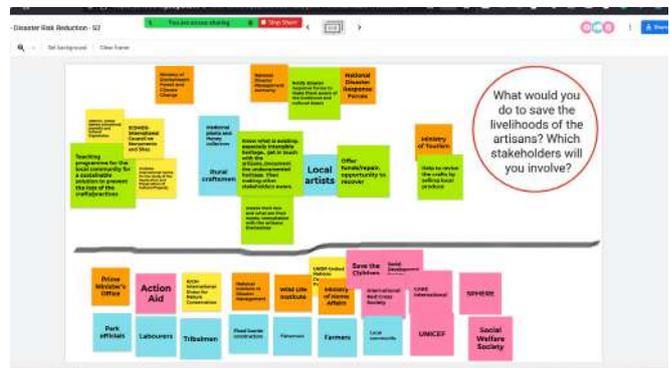
Breaking Geographical and Language Barriers

Working across 3 time zones with participants speaking over 12 languages, the course used interactive team-building sessions and virtual tours to engage the participants, provide insights into their institutional contexts and build an online community for effective disaster risk management.

With the aim of overcoming communication barriers in the virtual space, one-on-one social engagement was encouraged. Additionally, each participant was assigned a mentor to advise offline practical activities. Mentors were chosen based on their familiarity with the topic and regional context, most comfortably spoken language, as well as nearest time zone.



Polling conducted in class using zoom features, 2021 © ICCROM

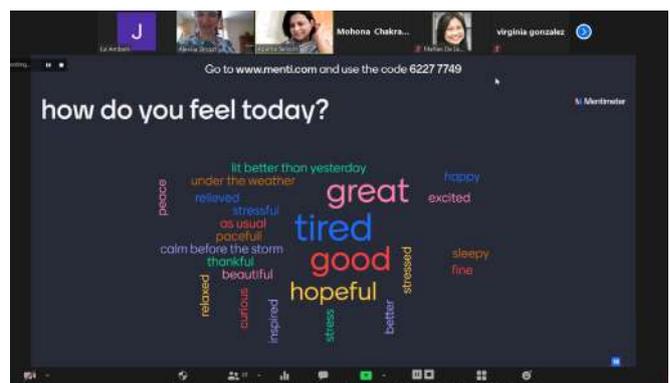


Screenshot of a goggle jamboard session for a group situation analysis, 2021 © ICCROM

Fostering an Online Community of Practice and Networking

While using online learning tools to train people and effect change on the ground was a challenge, the course team saw it as a window of opportunity to innovate and implement a training tailored to participants’ respective contexts. Using digital learning methods, lectures were kept short, concise, informative and graphical.

Group work was designed with more time allocated to the plenary. Collective activities were developed as short games and quizzes to ensure interaction amongst participants. Every session concluded with mentor evaluations and collective reflections.



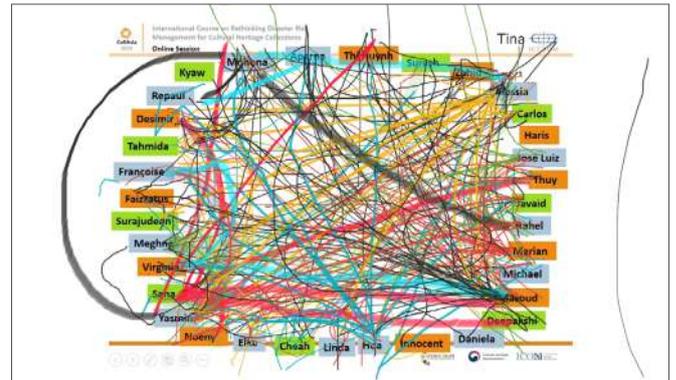
Using mentimeter to continue personal interactions among participants, 2021 © ICCROM

Adapting the Course to Reality

During the global pandemic situation, the mental and physical health of the participants was taken into high consideration. The course team ensured that each participant was heard and given a break from the high-intensity training, when needed.



Screenshot of a live session on tips for handling and salvage of cultural objects, 2021 © ICCROM



An ice-breaker exercise on Jamboard, 2020 © ICCROM

Teaching Across Sectors and Disciplines

The experts for this course were drawn from the FAR alumni network, which spans 87 countries, to help teach the material and strategies to the participants. This teaching team represented various disciplines such as civil protection, disaster risk reduction, fire risk reduction, architecture and engineering, collections management, preventive conservation, humanitarian aid, etc. This exposed the participants to the importance of involving non-heritage civil agencies in managing disaster risk for their respective institutions. The contributions of the teaching team also extended to the curriculum design, as well as customising the course content to match the specific needs of the participants.

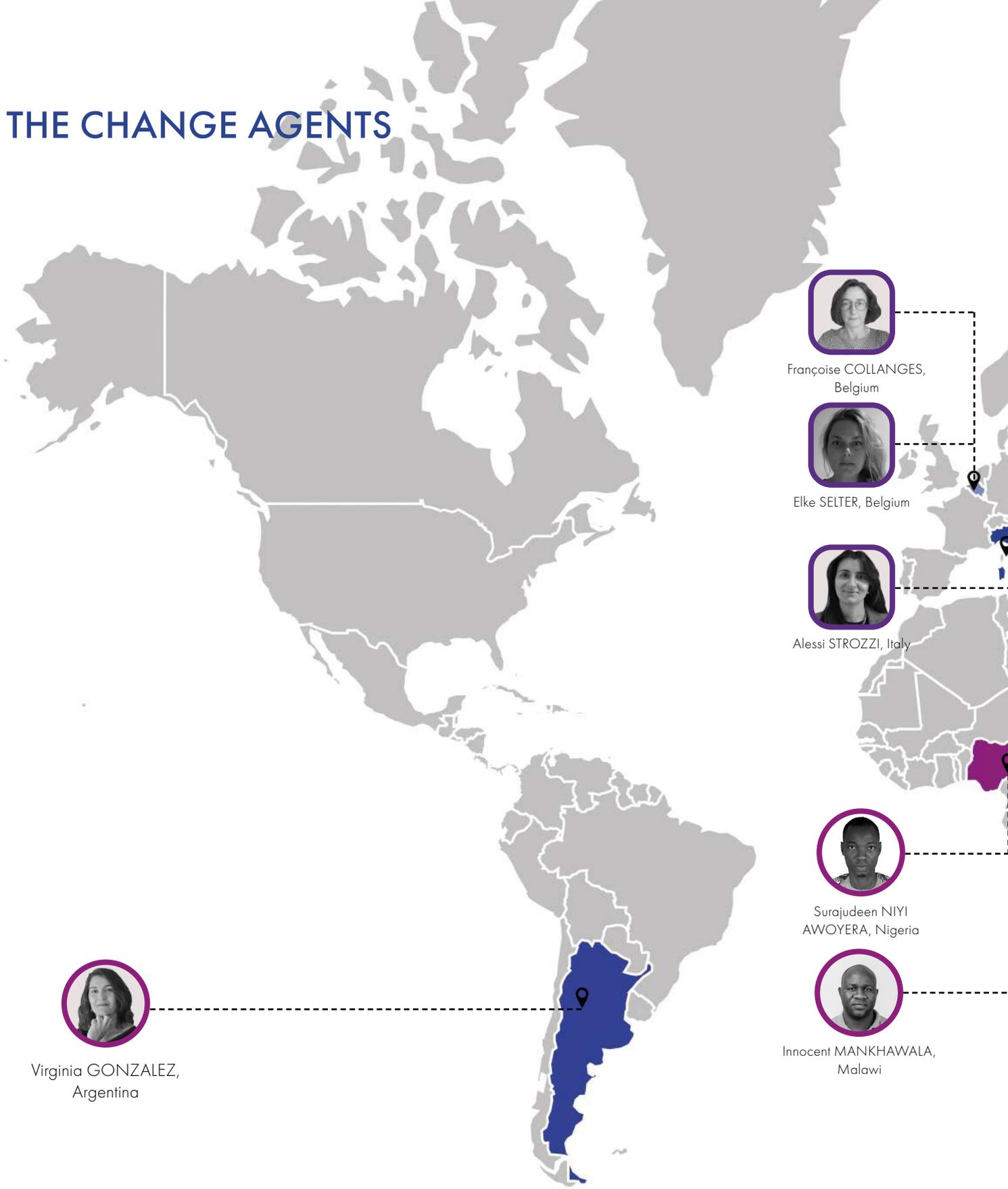


Grand simulation in progress – snapshot of breakout room used as building interior, 2021 © ICCROM

Experiential Learning Through Online Simulation and Scenarios

The grand simulation exercise - which involves multi-actor simulations of life-life disasters and emergency situations - is based on the FAR teaching methodology. It was planned to take place in person in the Philippines in May 2021 and was then transformed online following the restrictions of the Covid-19 pandemic. This activity was then transformed online following the restrictions of the Covid-19 pandemic. In order to break barriers posed by the geographical distance, the course team designed a virtual activity, merging an architectural 3-Dimensional visualization and simulating a real-time emergency response.

THE CHANGE AGENTS



Virginia GONZALEZ,
Argentina



Françoise COLLANGES,
Belgium



Elke SELTER, Belgium



Alessi STROZZI, Italy



Surajudeen NIYI
AWOYERA, Nigeria

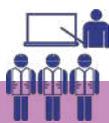


Innocent MANKHAWALA,
Malawi



16

Participants



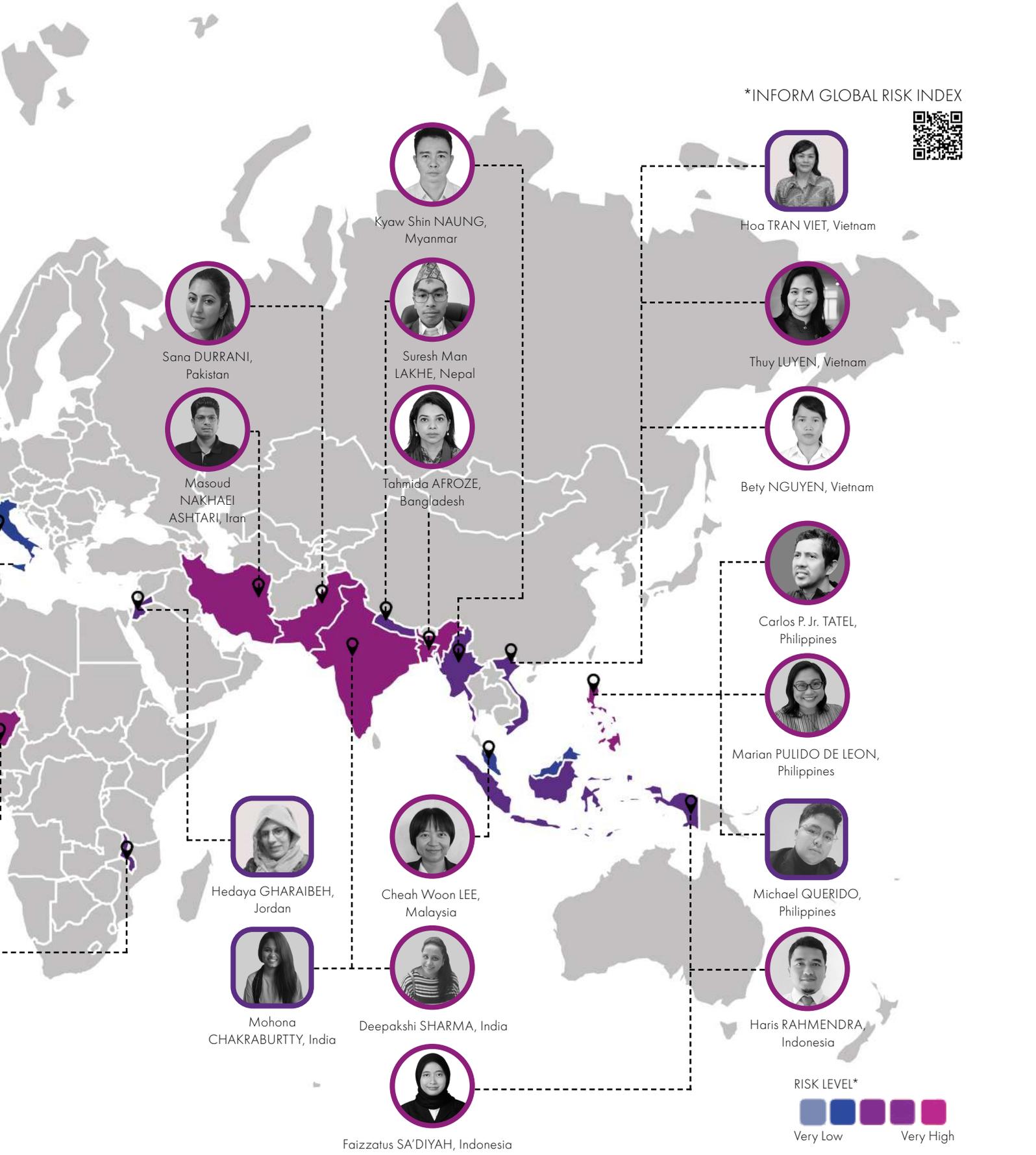
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Mentors



13

Countries



14

Women



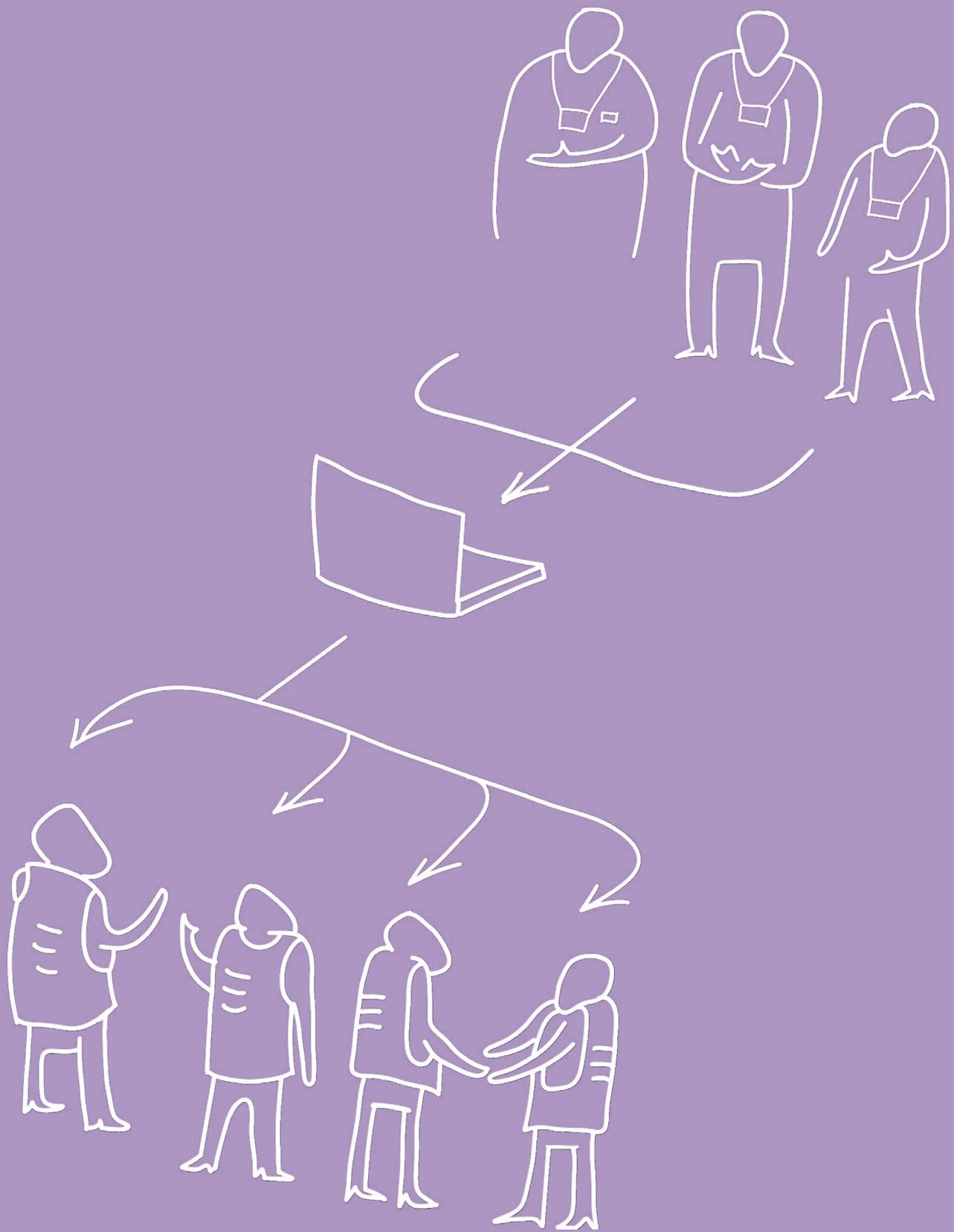
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Men



05

Professional fields



02

**TRAINING THE
TRAINERS**

Mohona Chakraborty

FAR Programme Consultant
ICCROM, Italy



Mohona is an Indian Architect and has a Master's degree in Architectural Conservation from La Sapienza University of Rome, Italy. She has worked on several prestigious conservation planning projects in India, with organizations such as UNESCO and DRONAH. Since joining ICCROM in July 2020, Mohona has contributed to several capacity development activities of FAR as a mentor and trainer. Additionally, she has coordinated training courses and led the research, design, and production of several FAR learning resources, including publications and videos on disaster risk reduction and peacebuilding.

Exchanging Knowledge Across Sectors

Being a young mentor gave me the opportunity to have meaningful exchanges with the participants. With a background in architecture and experience of working with communities, I was confident that I could contribute positively to the development of functional disaster risk management plans for the participants' institutions.

With mutual cooperation, one-on-one discussions and collaborative research, mentees were able to improve their understanding and implement it to improve their disaster risk management plans. In the end, mentees were successful in forming important partnerships and conducting further training in their respective departments. My skills to model and visualise spaces played a crucial role in building realistic scenarios and identifying risk paths, which enabled participants to tailor their plans.

I was aware of the key disaster risk management terminologies, and had an experience in calculating the behaviour of a building under certain forces. However, while working with 4 professionals from 4 different countries, I realised that effective disaster risk management of any cultural heritage resource requires place-based knowledge and the active participation of the local community.

Françoise Collanges

Curator-Conservator
KIKIRPA, Belgium



Françoise Collanges is a member of ICCROM's cultural first aiders' network since 2018. She is an experienced curator of museum collections and conservator, with a degree in the restoration of clocks and similar mechanical objects. Based in Belgium, she works in various other countries as a consultant and supports heritage sites in risk management and preparedness. She is an active member and administrator of Blue Shield France.

Providing Support in the World of Digital Learning

Being a participant in the FAC 2018 training completely changed my whole perspective on disaster risk management for heritage. I had particularly enjoyed the discussions with the mentors, lecturers and other participants, as I could share my own perspective on disaster risk management for heritage. Becoming a mentor myself was a great opportunity to support my colleagues and share my knowledge more widely. As the pandemic transformed this course into a fully online one, I truly experienced how little room is left for informal learning and forming relations, when compared to what can be done with in-person sessions. Therefore providing mentorship, which ranges from answering practical questions to providing moral support, is a great opportunity to compensate for a fully online learning experience and provide more tailored help to the course participants.

Tran Viet Hoa

**Director
National Archives Center III, Vietnam**



Ms. Hoa Tran Viet has served as the Director of the National Archives Center III, the State Records and Archives Department of Vietnam since September 2014. Prior to her current service, she first worked as a teacher of law and public administration at the Hanoi College of Home Affairs, then she moved to work for the Institute of Training public officials and civil servants under the Ministry of Home Affairs and as Chief of the Organization and Personnel Division at the State Records and Archives Department of Vietnam. Ms. Hoa Tran Viet has an MA from Catholic University of Leuven, Belgium and a Ph.D. from National Academy of Public Administration Institute in Public Administration.

Diverse Perspectives on Disaster Risk Management

After taking part in some ICCROM courses, my interest in the application of disaster risk management in my own work grew. Therefore I wanted to inspire my colleagues by sharing the FAR-Collasia spirit. Becoming a mentor for this course gave me a chance to work with ICCROM experts and with other mentees from around the world. This also helped me to further my own learning and create a broader disaster risk management network in my country.

From my viewpoint, having mentors participate helps the mentees go through the learning process more comfortably. The mentees can easily share their difficulties or ideas with their mentors, and therefore the course organizers can better grasp the mentees' training needs, as well as adjust the content and teaching methods when needed. Through this course, the mentees have come to strongly understand the concept of disaster risk management and the steps needed for implementing it in their own institutions, resulting in their ability to carry out meaningful projects in the last phase of the course. These participants are eager and willing to share their knowledge.

My perspectives on disaster risk management have also changed from when I first focused on my own context to a broader comparative context informed by the mentees. I had a chance to put myself in the shoes of each mentee to see what I could do best if I was in their position. Then, I could look back again to my context and adjust my disaster risk management measures.

Michael Querido

**Project Officer
Escuela Taller de Filipinas Foundation Inc.'s, The Philippines**



Michael received his BS Architecture degree from the Polytechnic University of the Philippines – Manila. He's currently a Project Officer of Escuela Taller de Filipinas Foundation Inc.'s Project Development and Management for Heritage Conservation Unit. Under Escuela Taller, he was able to handle the rehabilitation of the San Agustin Church's 400+ year old choir loft's sillerias (choir stalls) (2015-2017), the preventive conservation demonstration project being conducted at Paco Park Ossuary (2017-2019), the conservation of Santa Monica Parish Church's retablo (altar piece) (2018 - 2019), and lastly the on-going conservation of Holy Rosary Parish Church (2019 – present).

Making a Meaningful Change

After I participated in FAC 2018, I always wanted to give back to the organizations that taught me the importance of safeguarding our cultural heritage during an emergency. Being a mentor is an opportunity to make meaningful change in someone's life. It's great to see the professional growth, the undying passion, and the eagerness of not just my mentees but all the participants of this program, to contribute something and to be the beacon of change in the protection of their cultural heritage. As a mentor, my perspective on disaster risk management changed as I learned a lot from all the participants as contexts are continually changing in a very diverse culture. Having a mentor in this endeavour plays a vital role, as mentors will also instill additional knowledge and provide guidance to the participants in learning new concepts that they will learn throughout the program. It is an honour to be part of and be a mentor on this program that will ripple change to the protection of our cultural heritage in a global context.

Hedaya Gharaibeh

Project manager
All Hands And Hearts, Jordan



Hedaya Gharaibeh is a PMP architect from Jordan, who has completed her post-master in Emergency and Resilience from Università Iuav di Venezia, Italy. She is specialized in Urban Resilience in the context of Climate Change, and interested in the disaster risk reduction approach in the built environment. Hedaya is currently working as a Project Management Consultant at Reliefgoods.

Learning Together. Growing Together

I joined this course as a young professional and formed a deep connection with my mentees. While still being in the process of learning more about disaster risk management myself, I was able to bring a fresh perspective to the group. I was selected as a mentor in the second phase of the course, which focused on guiding participants through an intensive 2-week workshop, leading to participants implementing projects in their own contexts. Course participants already had a clear understanding of key concepts, so my role was to help my mentees build contextualised disaster risk management plans. Where needed, I also helped prepare participants to identify and communicate with the relevant stakeholders for the successful implementation of their projects in the final phase. I am happy that they still contact me if they have any questions about disaster risk reduction resources or terms.

I believe that these participants are now part of the group of cultural first aiders around the world... I wish them luck in their future endeavours.

Alessia Strozzi

Book & Paper Conservation Officer
Ministry of Cultural Heritage, Italy



Alessia Strozzi (Ms), Conservation Officer, Italian Ministry of Culture. Currently at the Louvre Abu Dhabi Museum. M.Sc. in paper & book conservation from ICPAL, Rome 2016. Specialised in DRR for CH: she has studied International and European Disaster Law & was part of a research on Italian Civil Protection on behalf of the IFRC. She was the project manager for Preparing Cultural Heritage to Emergencies workshop with the support of ICCROM, taught to several workshops (e.g. Italy, Philippines, South Korea, India), mentor coordinator for ICCROM's FAR-CollAsia project, online learning coordinator for PREVENT workshop.

Collaboration, Commitment, Heart

Collaboration, Commitment, Heart. I think my experience at the FAR-CollAsia course can be summarized by these 3 words. In December 2020, with Aparna's leadership and joined by a few friends from FAC 2019, we initiated this journey of online training. It was a challenge to transform a very practical and interactive course into an online course, but with a strong will to face the new reality, collaboration, the sharing of knowledge and some fun, we can say we did it. Later in May 2021, I joined the course as mentor coordinator.

What do mentors do? Key responsibilities include discussing how to help the participants; which resources or papers should we share; and how to tailor teaching methods to the trainee's personality and the environment that surrounds them. Our commitment was to help participants to achieve their goals. I particularly remember August being the most intense one, as it was the last month to accomplish the projects. There were so many meetings & emails, which was not always easy and sometimes even tiring. But seeing the will of the participants to put into practice in a variety of ways the knowledge acquired, as well as how this increased their happiness, fulfilled my heart. The nights spent reading and giving comments were worth it, I would do it again.

Elke Selter

Researcher/Specialist in International Politics, Armed Conflict and Culture, Belgium



Elke Selter is a research fellow with the British Institute of International and Comparative Law (BIICL). Specialized in heritage in emergencies, she holds a PhD in Politics and International Studies (SOAS, University of London) and an MA in Heritage Conservation (KULeuven, Belgium). Prior to joining BIICL, Elke has worked mainly with UNESCO, in various emergency contexts ranging from the Balkans and Nepal to Haiti, Palestine, South Sudan, and Mali.

Disaster Risk Management Should Be a Collaborative Effort

I have worked with heritage in emergencies for a long time and noticed that a lot of our colleagues in the heritage sector did not have (much) experience with emergency response. That's why I think it is important to share that experience in every way possible. Mentoring those that want to invest serious time in learning to prepare for emergencies is one way to do so.

The mentor-system provides much more personalised support to the participants. I always see how throughout the course, mentees start to grasp the importance of relying on other stakeholders and combining their knowledge of heritage or their institution, with emergency preparedness. Initially participants feel overwhelmed and think they now need to learn everything about emergency management. They also start preparing plans for which they actually have no adequate knowledge, like where to put sprinklers in a building.

Gradually, mentees tend to see that there are many other experts out there on fire safety, structural stabilisation, etc. All it takes is to talk to those people and to link their knowledge with what the mentees already know about the collection or site. That's the essence, nobody can deal with risk management on his/her own.

I learned, through many years of seeing participants at ICCROM's courses, that all over the world, the problems and challenges for cultural institutions are often the same or at least very similar. The culture sector and the emergency sectors work in parallel but not together. Unfortunately, it often takes a disaster to happen before the realisation comes that these sectors should be better linked.



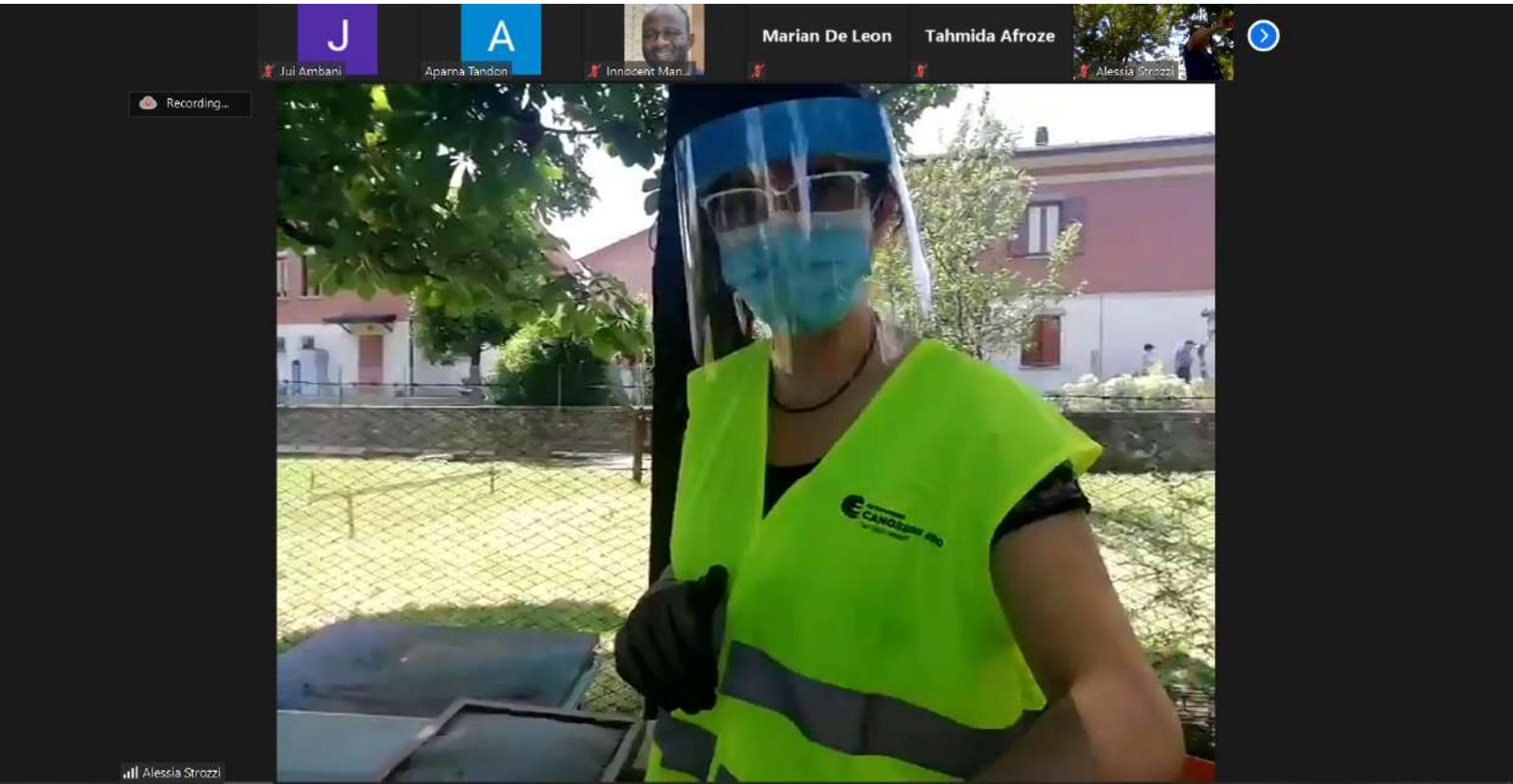
“With the support of the mentors, it has been possible to plan and execute disaster preparedness in a realistic manner and bring change, even if it is a minimal amount.”

“Thank you for opening my eyes about the fact that disaster risk reduction and management is connected to the art and science of conservation and preservation of cultural heritage. I have been into cultural heritage all my professional life, but this is the first time that I am looking at cultural heritage from the perspective of resilience.”

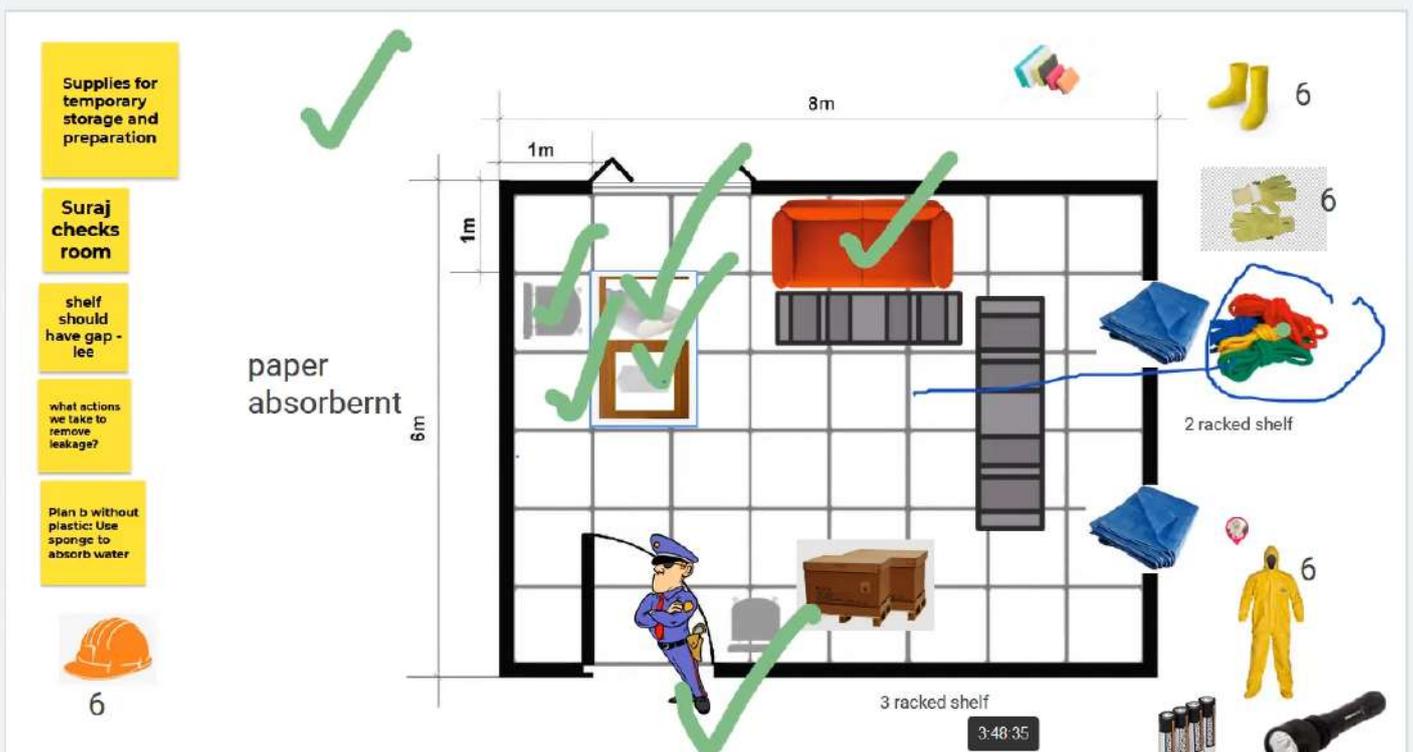
“The course was well planned and mentors were always available to guide us despite the time difference.”

“With the expertise and knowledge of all mentors and course participants, I was able to learn a systematic approach and critical thinking of identifying stakeholders/actors which played a crucial part in the planning of my project on disaster risk management unit and first aid to cultural heritage.”

THE TEACHERS



Zoom screenshot of mentor and teacher Alessia Strozzi giving a live lesson on salvage of collections, 2021© ICCROM



A live exercise being played on the interactive platform Jamboard, 2021 © ICCROM



Aparna Tandon

Senior Programme Leader FAR Programme | Sustaining Digital Heritage, ICCROM
Rome, Italy

Aparna Tandon specializes in disaster risk reduction and post crisis recovery of all forms of heritage. She has 25 years of post-qualification work experience in heritage conservation and has conducted professional training for the conservation of heritage in Asia, the Middle East, Europe, Africa and South America.

As Senior Programme Leader at ICCROM, she leads the design and implementation of its international flagship programme on FAR -First Aid and Resilience for Cultural Heritage in Times of Crisis (FAR). Additionally, she is developing ICCROM's newest training initiative on Sustaining Digital Heritage, which aims to enhance capacities for long term preservation and access. The training builds on SOIMA (Sound and Image Collections Conservation) programme aimed at saving endangered audio-visual heritage, which Aparna helped to initiate and develop at ICCROM.

She has led emergency response, post-event damage and risk assessments, as well as training for post event recovery in Ukraine (2022) Belgium (2021), Lebanon (2020), Croatia (2020), India (2020, 2018), Northern Iraq (2017), Myanmar (2016), Nepal (2015, 2016), Philippines (2013) and Haiti (2010). Additionally, she has held workshops for protecting heritage in conflict-affected countries including Syria, Lebanon, Libya, Egypt and Iraq. Aparna has trained military personnel, civil protection teams and humanitarians for providing first aid to cultural heritage during emergencies.

She has authored several papers and publications. Her recent handbooks on First Aid to Cultural Heritage in Times of Crisis and Endangered Heritage: Emergency Evacuation of Heritage Collections have helped to codify and standardize emergency preparedness and response for cultural heritage. These works have been translated into multiple languages including Arabic, French, Spanish, Japanese and Russian.

Aparna has an MA in Art Conservation from the National Museum Institute, India. She has received advanced level training in Paper Conservation from the Straus Center for Conservation, Harvard University Art Museums, USA. In 2001-2002 she enhanced her professional experience first, as the Fulbright Arts Fellow at the Preservation Directorate of the Library of Congress in Washington, D.C., and then as a Conservation Guest Scholar at the Getty Conservation Institute, Los Angeles, USA, researching disaster risk management for cultural heritage. From 1998 to 2004, she worked as the Curator-Conservator at the Amar Mahal Museum and Library in Jammu & Kashmir, India.



José Luiz Pederzoli Jr.

**Unit Manager, Strategic Planning, ICCROM,
Rome, Italy**

Pederzoli Jr., José Luiz, has a Chemistry Degree (Federal University of Minas Gerais, Brazil; 1991) and a master's degree in Polymer Chemistry with emphasis on cellulosic materials and applications in the area of heritage conservation (University of Helsinki, Finland; 1994). His professional experience is in the risk management for cultural heritage and materials science applied to the conservation of cultural property, more specifically paper-based collections and related materials, with several scientific articles published in specialized journals.

His experience also includes the development, coordination, and training at various national, regional, and international capacity-building activities in the heritage sector. Conservation Scientist at the Netherlands Institute for Cultural Heritage (1997-2003), and at ICCROM (2005-2008). Independent international consultant, trainer, and researcher (2009-2018).

Member of the editorial board of the journal *Restaurator - International Journal for the Preservation of Library and Archival Material*. José Luiz is back at ICCROM since August 2018, where besides his role in strategic planning he also manages a portfolio of training partnerships and prospective activities concerning heritage collections, including risk management, communication and teaching skills, and sustainable development.



Meghna Goyal

**Humanitarian Aid Worker, Cultural First-Aider
Save the Children
Ottawa, Canada**

Meghna is a passionate humanitarian with over eight years of experience in Emergency Operations, Disaster Risk Management and Education for Sustainable Development programs in Asia.

She provides surge support during emergencies to kickstart humanitarian intervention on the ground, and in peacetime, she is focused on preparedness and capacity-building programs around humanitarian priorities. She is currently working with Save the Children, Asia, where she provides operational support to teams on the ground across 11 countries. Among them are cross-border operations in Afghanistan-Pakistan and Thailand-Myanmar conflict responses, health facilities in Cox's Bazar Bangladesh, the economic crisis in Sri Lanka and seasonal hazards in India, Indonesia, Philippines, Nepal, and Fiji.

She works with marginalized communities as part of these responses, which has led her to explore the connection between humanitarian action and the importance of heritage - she is a trained Cultural First Aider from ICCROM. Meghna's recent work in the space of cultural heritage has been documenting the intangible cultural heritage of the Rohingya Refugee community living in Hyderabad, India. Before this, Meghna worked at The Energy and Resources Institute (TERI) on issues related to Climate Change and Youth Entrepreneurship. She is a graduate in Mathematics and a postgraduate in Disaster Management.



Linda Lainvoo

Freelance Heritage Consultant
Tallinn, Estonia

Linda Lainvoo is a freelance heritage consultant. In addition to her everyday work, she also teaches at the Estonian Academy of Arts and Tartu University. She has formerly worked at the Art Museum of Estonia. She was also Director of Art Heritage Field and Head of the Museums and Art Heritage Department at the Estonian National Heritage Board.

Art history and working with cultural heritage has always been her passion. Although safeguarding cultural heritage is one of the main objectives of her work, it has never been just a job, it's something that drives and excites her.

Her main tasks as head of the Museums and Art Heritage department included supervising both the field of museums and art heritage and coordinating the work on these fields. As Director of Art Heritage Field, she was responsible for safeguarding the art monuments in Estonia. That means coordinating periodic inspections, supervising conservation and restoration works and organizing conservation in case of an emergency, maintaining information about the national art monuments, consulting the owners on maintenance and safekeeping of the monuments. Her team also represent Estonia in UNESCO (1954 Hague Convention; 1970 Convention) and in the relevant European Commission expert groups.

In 2019 Linda Lainvoo attended the course First Aid to Cultural Heritage in Times of Crisis (FAC) organized by ICCROM in cooperation with Prince Claus Fund, Cultural Emergency Response Programme (CER), Smithsonian Cultural Rescue Initiative, and Swedish Postcode Foundation.



Repaul Kanji

Research Scientist & Program Manager, Gujarat Institute
of Disaster Management
Gujarat, India

Repaul Kanji is a computer scientist at heart and a disaster risk management professional. He prefers to call himself part academician and part practitioner.

Repaul works with the Government of Gujarat at the Gujarat Institute of Disaster Management as a Research Scientist & Program Manager. He holds the additional charge of Research Officer & Program Manager at the SAARC Disaster Management Centre (IU). He is associated with the Integrated Research on Disaster Risk (IRDR), which is a trans-disciplinary research platform of the International Science Council and the United Nations Office for Disaster Risk Reduction (UNDRR) as a Young Scientist.

He is the co-founder of the national platform of youth and young professionals (YYPs) of India working in disaster risk management and climate change adaptation, known as the Confederation of Risk Reduction Professionals (CRRP). The platform currently has more than 200 members from various different backgrounds, coming from reputed universities and organizations from all over the world. CRRP is a part of the U-INSPIRE Alliance, which is a global movement of YYPs across the globe supported by UNDRR and UNESCO.

To pursue his objective of building a culture of disaster resilience, he has a small social entrepreneurial venture – Risk & Resilience Institute, which works at a confluence of research and practice.

He is a trained Cultural First Aider from ICCROM, and a Cultural Heritage Steward trained by the Smithsonian Institution's course on Leadership.



03

**STORIES OF
CHANGE**



Virginia González

Director
Historical Museum of Sarmiento
Buenos Aires, Argentina

Virginia is the Director of the Historical Museum of Sarmiento, which is an institution dedicated to the study, conservation and investigation of the life and work of Domingo F. Sarmiento. It especially showcases his literary, military, political, journalistic, educational and social work.

DRM journey

Virginia's museum is located in the city of Buenos Aires, Argentina, which is exposed to a high risk of natural hazards such as wildfires, floods, seismic activity and extreme heat due to its diverse landscapes and climates. Virginia knew that her museum would be affected by storm surges, or 'sudestada', as they are known locally, due to its location in a low-lying area near a river.

This motivated her to join this training course to be able to collect evidence of how this hazard could become a disaster. To achieve this she carried out comprehensive disaster risk assessment and developed a disaster risk scenario that would help her identify how a serious flood could damage her museum. The following timeline predicts how her hazard, a sudestada, would meet vulnerabilities, capacities, and exposure in her museum, thereby helping her define mitigation measures.

Virginia's scenario takes us to 15 September, in the year 2023...

The Sudestada would cause the museum to flood due to the intensity of the rain and the blocked drainage at the museum. This would further start a fire, causing damage to the museum and its collections in addition to the water damage. Since this would occur at night when the museum is understaffed, the two security guards present would be unable to deal with the events and impacts. They would react in the way that they thought was best, but without proper training they would miss key opportunities for action.

Disaster Risk Scenario

How events might unfold at the Historical Museum of Sarmiento.

hrs	15 September 2023	Action taken
	Weather forecast channels and radio will forecast that a Sudestada will hit the city of Buenos Aires in less than 48 hours.	
	16 September 2023	
15:00	The Sudestada will hit earlier than expected, with winds and rain bringing about 75mm of water in 2 hours. The entire city will begin to flood and go into lockdown. Transportation will come to a standstill , phone lines will be overloaded , and there will be an electricity shortage .	Set emergency protocols and train security staff.
15:40	Water will start accumulating on the site, which will block the drainage systems already impacted by excess vegetation and lack of maintenance.	Prune vegetation regularly.
16:00	Water will enter the museum library through a window left open unintentionally . Water will come into contact with exposed electrical circuits , sparking a fire .	Train staff on closing procedures. Call an electrician to conduct a full electrical assessment of the museum.
16:15	The whole library and its collections, including wooden objects and paper, will quickly catch fire . It will go unnoticed by the security guards due to the lack of fire-detection systems .	Install fire-detections systems immediately.
16:30	Security personnel will try their best to control the accumulation of water, and will then also notice heavy smoke coming from the library. They will make the safe decision to leave the building .	Establish evacuation protocols.

16:40

Security personnel will call the museum director. The **fire will have spread** beyond the library room due to it **lacking fire doors**.

Contact the fire department for training and to conduct a full building fire-safety assessment.

16:45

Virginia will call the fire department, but they will be unable to reach the museum with their **limited resources and blocked roads**.

Organise temporary storage and establish relationships with other museums.

Likely Impact

The fire will have heavily impacted much of the library collection, which accounts for about 10% of the museum's value. The influx of water will significantly damage the vulnerable wooden collections, as well as impacting the structural integrity of the building.

Mitigation Strategies Implemented

Building a scenario allowed Virginia to identify the ways in which hazards would affect her region and museum. Coupled with all that she had learned during her training and from her mentor, she was able to take decisive action to implement mitigation strategies, preparing for and reducing the effects of disaster risk.

Week 1, Virginia invited electricians to assess the electrical systems and supervise their repair. She purchased the electrical devices needed for the repairs, which were completed over 2 months.

Week 3, Virginia purchased a security control system, installed it and tested it in her museum before implementing it fully.

Week 4, Virginia consulted the fire department for guidance in purchasing and installing smoke detectors. They were installed by the museum maintenance staff.

Week 6, Virginia used what she had learned during the course and scenario-building to train the museum staff and conduct a scenario-based evacuation drill for them.

Week 8, Virginia further improved and completed the scenario she had designed in order to develop a functional disaster risk management plan.

Positive Actions

- Establishment of **relationships** with civil defence, the fire department, non-profit rescue and disaster prevention organizations, and other stakeholders.
- Training of around **200 staff members** in disaster risk management using a scenario to conduct an evacuation drill.
- **Repair and maintenance** of electrical and drainage systems
- Installation of fire detection system and **15 smoke detectors**.
- Implementation of **security control system**.
- A functional disaster risk management plan developed using the scenario.
- A webinar on disaster risk management and scenario based-training with over **85 participants** from various backgrounds.

Partnerships

- PACHAMAMA Conservation and Restoration Institute of Sao Paolo, Brazil
- Civil Defence, Buenos Aires
- Voluntary Firefighters at the Ministry of Security of the Argentine Republic
- Ministry of Culture, Argentina



Experts from the local fire department assessing the fire risk to the Sarmiento Museum, 2021 © Virginia González

Afterlife

- Work with the Ministry of Culture to create regulations to enhance the visibility of the need to rescue collections during a disaster or an emergency.
- Collaborate with the city's fire department to purchase less corrosive fire extinguishers.



Marian Pulido de Leon

Curator and Researcher
University of the Philippines
Los Baños, The Philippines

Marian is a curator and researcher at the Museum of Natural History at the University of the Philippines, Los Baños, the Philippines (UPLB MNH). Her museum is a university-wide repository mandated to safeguard, preserve and maintain over 600,000 natural history treasures in order to explore, document, and preserve the Philippines' biological diversity.



DRM journey

Marian's museum is located in the municipality of Los Baños, in the Laguna region of the Philippines. This region is especially at risk to typhoons, tropical cyclones, that bring heavy rains and strong winds, which can lead to flooding and landslides. As a part of the training, Guided by her mentor, Marian carried out a comprehensive disaster risk assessment for her museum and developed a disaster risk scenario to predict how a super typhoon would come to impact the UPLB MNH, helping her to define relevant mitigation measures.

Marian's scenario brings us to 25 September, 2026...

The super typhoon would cause intense rain resulting in landslides in the area around the Museum. This would block access roads and bring a significant amount of muddy water to the building site. The arrival of muddy water would further damage a lot of the museum's collections, causing the museum security staff to panic. Further steps to mitigate the damage would be hindered by the extended lack of electricity and road access.

Disaster Risk Scenario

How events might unfold at the Museum of Natural History at the University of the Philippines.

hrs	25 September 2026	Action taken
08:00	<p>It will be a regular working day at the museum during a pandemic with reduced personnel.</p> <p>UPLB Engineering staff will finish the task of pruning trees and checking electrical cables, after the recently completed renovations on site.</p>	
16:00	<p>A weather bulletin will place Laguna in the path of a super typhoon, which will be making landfall at 20:00 hrs in Quezon, a nearby province.</p> <p>The UPLB will release a memorandum to immediately leave the office.</p>	
22:00	<p>The super typhoon will hit with sustained winds of 230 km/hr and precipitation of 8-10 mm/hr.</p> <p>Electricity will be shut off by the provider.</p>	<p>Ensure the museum is using its battery-operated CCTV and the security guards have their flashlights.</p>
	26 September 2026	
23:30	<p>The intense rain over the last day will cause landslides in the area.</p> <p>This will cause muddy water to reach the ground floor of the MNH and enter the building through the main door, affecting 9 exhibition areas.</p>	<p>Assess the risk of landslides to the museums by involving experts.</p> <p>Get valuable collection items off of the floor.</p>
	27 September 2026	
00:45	<p>Security guards will leave the museum in a panic and call the museum director to report the current status of the building.</p>	<p>Implement proper evacuation procedures and signages for all types of emergencies.</p>
02:00	<p>Strong winds and heavy rains will subside. Electricity will remain turned off and access roads to the museum will be blocked. It could take 2-3 days before the roads are cleared.</p>	<p>Prepare an evacuation and salvage plan for the museum collections.</p>

08:00

Museum director will call an **online meeting** with staff, but will only be able to reach 75% of the staff. They begin discussing how to safeguard their damaged collections.

Create detailed contact lists and protocols for post-emergency check-ins
Train staff in evacuation, storage and salvage of museum collections.

Likely Impact

The super typhoon will have heavily impacted the museum building and collections. Efforts to mitigate the damage will be delayed for several days by the blocked roads and untrained staff.

Mitigation Strategies Implemented

Through the process of researching and building a scenario, Marian identified the capacities she would need to develop to effectively mitigate and prepare for her museum’s vulnerability to disasters. Participating in this training enabled her to not only learn and utilise a wealth of disaster risk management knowledge, but to also share it widely. Her mitigation strategies included carrying out thorough disaster risk assessments of the site, training staff in disaster risk management procedures, and reducing the physical vulnerabilities of her museum.

Week 1, Marian conducted meetings with diverse and multidisciplinary stakeholders, such as firemen and local municipality representatives. She also outlined her project timelines and targets.

Week 3, Marian organised training for her museum’s staff on disaster management, risk assessment, as well as the identification of hazards, risk, vulnerabilities and exposure. She also started drafting proposed mitigation measures.

Week 4, Marian reviewed and revised the museum’s disaster risk management plan in consultation with key stakeholders.

Week 6, Marian designed Information, Education and Communication (IEC) materials for her training programme for the institution.

Week 7, Marian organised a nationwide webinar on disaster risk management with over 100 participants from 60 institutions on “Future-Proofing Museums: Protecting the Heritage of Natural History and Cultural Collections from Disasters and Other Risks”

Week 8, Marian used the disaster risk management plan she had developed to create a manual and protocol to be followed in her institution.

Positive Actions

- **Comprehensive Disaster risk assessments** for the six most common **hazards** in her region.
- Nationwide disaster risk management **webinar with over 100 participants** from 60 institutions “Future-proofing Museums: Protecting the Heritage of Natural History and Cultural Collections from Disasters and Other Risks”.
- **Staff training** through online disaster risk management **orientation and earthquake drill**.
- Development, distribution and display of **Information, Education and Communication (IEC) Materials** on how to protect yourself when facing a hazard.
- Pruning and maintenance **vegetation** on the site.
- Formation a **committee** on collection management policies.
- A **disaster risk management plan** drafted for the museum.



A snapshot of the earthquake drill conducted by Marian for the staff of the UPLB Museum, 2021 © Marian Pulido de Leon

Partnerships

- Philippines National Historical Commission
- National Museum of the Philippines
- Municipal City Hall of Los Baños
- Laguna Provincial Disaster Risk Reduction Management Office

Afterlife

- Hold writeshops on UPLB MNH collections management policy and disaster risk management plan.
- Organise a webinar series with regional partners.
- Host simulation exercises for the museum staff.
- Plan meeting and coordination with UPLB Disaster Risk Management Committee.
- Improve emergency preparedness by identifying evacuation and assembly sites, distributing signages and go-kits, and purchasing trauma kits.
- Fully assess the UPLB MNH by carrying out a valuation of its collections and inspecting the electrical systems.



Deepakshi Sharma

**Museum Consultant
National Rail Museum
New Delhi, India**

The National Rail Museum in New Delhi (NRM), where Deepakshi is a museum consultant, collects, preserves, and displays exhibits depicting the rail mode of transport, its history, technical concerns, and how it is still being developed. Visual representations communicate important facts and statistics of the railway system.



DRM journey

New Delhi, a known high-seismic zone, is prone to earthquakes and also faces a high risk of flooding, extreme heat and wildfires. Deepakshi chose to direct what she learnt in her training and comprehensive disaster risk assessment to build a disaster risk scenario that envisions how her city and museum would experience the prevalent risk of frequent earthquakes.

As a key component of the training, Deepakshi carried out a disaster risk assessment for her museum. She then developed a scenario to forecast how an earthquake would come to impact the National Rail Museum (NRM). The following timeline predicts how an earthquake might interact with the existing vulnerabilities, exposures, and capacities to impact the NRM, enabling Deepakshi to define mitigation measures to enhance her capacities.

In Deepakshi's scenario we are transported to 25 December, 2023...

The 6.2 magnitude earthquake in New Delhi would cause museum exhibits to topple at the National Rail Museum, as well as causing panic amongst visitors and staff. The chaos of the earthquake would be worsened by the start of a fire caused by an electrical spark. This fire would cause serious damage to the museum building and collections, as well as posing a threat to human life. The city-wide impact of the earthquake would limit the availability of help services, in addition to causing distress for visitors and surrounding communities.

Disaster Risk Scenario

How events might unfold at the National Rail Museum.

hrs	25 December 2023	Action taken
13:00	It will be a busy Christmas Day at the museum, with all visitors and staff following pandemic and social distancing regulations. A 6.2 magnitude earthquake will hit, with its epicenter being at the Delhi ridge region.	Install Public Address (PA) system for early warning Establish evacuation procedures and install clear signage.
13:02	Several museum exhibits, including a life-sized train carriage, will topple . Visitors and staff will panic and try to flee , forgetting social distancing.	
13:10	An electrical spark will cause a fire in an AC outlet that was damaged by the earthquake.	Establish emergency protocol for the museum staff, including turning off central power supply.
13:15	The security post will be abandoned in the panic . The Museum Director will be informed of the impacts of the earthquake.	
13:20	The fire will continue to spread to the museum building, damaging collections.	Contact the local fire department to train staff on what to do during a fire.
13:30	The museum will fill with smoke from the fire, which will create chaos as it will reduce visibility and increase panic.	
13:50	Due to the impact of the earthquake around the city, food, water, or medical first aid will be delayed in reaching the museum.	Make a list of basic supplies for an emergency and stock the museum.

14:00

People from the neighbouring informal settlements of Sanjay Camp will jump the boundary walls to seek **refuge** on museum grounds, adding to the chaos.

Likely Impact

The earthquake will have had a serious impact on non-secured objects. The ensuing fire will have damaged a significant amount of the indoor collection.

Mitigation Strategies Implemented

Thanks to Deepakshi's detailed disaster risk scenario that highlighted the importance of mitigation measures and the involvement of local stakeholders, she was able to identify the first steps to take for her museum to mitigate and prepare for an earthquake. She collaborated with her local fire station to prepare staff members, and crucially shared what she had learned during her months of training with colleagues from across the country.

Week 1, Deepakshi prepared a maintenance plan for the museum so that all staff members were aware of their responsibilities.

Week 3, Deepakshi developed coordination and communication protocols among museum staff to prepare for an emergency.

Week 4, Deepakshi facilitated the installation of fire suppression related equipments and first-aid kits guided by the fire department.

Week 5, Deepakshi catalogued the most highly valued exhibits digitally to ensure accessible documentation.

Week 6, Deepakshi arranged a workshop on disaster risk management and awareness for staff members of other railway organisations, creating a strong network of railway museums across the country.

Week 7, Deepakshi organised inSIGHT activities with the local community of the National Rail Museum to build a better relationship, foster awareness and enhance capacities for emergency preparedness.

Week 8, Deepakshi conducted a 2-day scenario-based training and fire drill for the staff of the National Rail Museum, enhancing their preparedness and strengthening the museum's relationship with the fire department.

Positive Actions

- **3 Public Address systems (PAS)** and evacuation signages installed.
- Training of **museum staff members** in a fire drill, including on the use of fire extinguishers, and implementing emergency protocols.
- Nationwide online workshop with over **90 participants** from 34 state rail museums on "DRM and Scenario-Based Training for the Rail Museums of India".
- Cataloguing of all museum exhibits, including train carriages.
- Implementing a detailed maintenance plan, which was designed with the help of ICCROM and the fire department
- Use of ICCROM's participatory game inSIGHT to involve diverse stakeholders.

Partnerships

- Ministry of Railways
- Chanakyapuri Fire Station

Afterlife

- All institutions that participated in the workshop will carry out site inspections and prepare a preliminary disaster risk management plan.
- Carry out a fire audit of the NRM with the local fire station.
- Create outdoor evacuation route signages.



Museum staff being trained by the fire department on how to use fire extinguishers, 2021 © Deepakshi Sharma



Masoud Nakhaei Ashtari

**Project Manager and Restoration Lab Expert
Persepolis World Heritage Site Museum
Fars, Iran**

Masoud is a project manager and restoration laboratory expert at the The Persepolis World Heritage Site, located in the Fars Province of Iran. This site consists of the monuments of the acropolis of the city of Parse, now reconstituted as the Foundation for Parsa-Pasargadae Research, which is responsible for the Achaemenid heritage.



DRM journey

The Persepolis World Heritage Site is located in a region that is susceptible to flooding, earthquakes, extreme heat, and wildfires.

Masoud carried out a comprehensive disaster risk assessment for his heritage site as a key part of the training. He then developed a disaster risk scenario to predict how extreme heat and the increased probability of fires would come to impact the Persepolis World Heritage Site, helping him to define mitigation measures.

Masoud's disaster risk scenario takes us to July 15th, 2023...

Extreme heat and the increased use of air conditioning would overload the worn-out electrical system in the museum, sparking a fire. This fire would quickly spread because the building structure and many collection objects are made of wood. It would also cause an explosion at the restoration lab where chemicals are stored. The security guards would get injured due to lack of appropriate training on how to deal with a fire.

Disaster Risk Scenario

How events might unfold at the Persepolis World Heritage Site Museum.

hrs	15 July 2023	Action taken
14:00	On an abnormally hot summer day, the museum staff overuse a worn-out electrical system, which will strain it and spark a fire . The wooden materials of the museum, such as the columns, will quickly catch fire.	Contract electrical experts to inspect, evaluate and repair the electrical system.
14:02	The fire will trigger the museum's outdated fire alarm system, which will notify the security guards. They will contact the fire department and the museum director. The museum director will also contact the fire department, causing some confusion.	Establish emergency protocols and conduct fire drill training.
14:15	By this time, the fire will spread to the wooden ceiling. Incorrectly packaged and stored museum objects will be exposed to the fire.	Conduct a value and disaster risk assessment of the museum and its collections. Train staff on proper packaging and storage.
14:22	Fire will spread to the restoration lab, where chemical materials are kept. Chemicals in the lab will accelerate the fire and cause an explosion , which will further spread the fire to the repository , where many wooden objects are located.	
14:27	Due to the sound of the explosion, Security guards will approach the museum to investigate, but will get injured due to the unpredictable nature of the fire and lack of appropriate training. Museum experts and neighbouring residents will arrive, expecting to control a small fire with a fire extinguisher .	Train staff members on what to do in an emergency and evacuation procedures.
14:50	Fire department will arrive after some delays due to smaller fires in the area, and the museum expert will ask them not to use water to prevent damage to earthen materials. Fire officials will notice the injured security guards and request medical aid.	Make a formal collaboration with the fire department to assess the fire risk to the building.

14:59

Winds will spread the fire to the southern Barzan area, filled with dried plants, which will cause distress amongst the local residents. **Local villagers** who have experience extinguishing mountain fires will control the fire here, while waiting for the fire department still occupied with the fire at the World Heritage Site.

Establish relationships with local stakeholders to share knowledge and learn about their relationship to the world heritage site.

Likely Impact

Wooden architectural features and unprotected objects will have been significantly damaged, leading to a heavy loss for the museum and its collections.

Mitigation Strategies Implemented

Developing a disaster risk scenario brought to light for Masoud the critical importance of community participation in order to effectively and sustainably manage hazards and disasters for his heritage site. He identified that he should train the site's staff in disaster risk management and emergency procedures such as firefighting and first aid, and collaborate with relevant experts to inspect his heritage site for vulnerabilities. Masoud used ICCROM's tool [InSight](#) (A Participatory Game for Enhancing Disaster Risk Governance) to better understand the difference between local and management perceptions of the site. This participatory game directly engages the community in all phases of disaster risk management of an institution, region or city.

Week 1, Masoud identified a range of stakeholders he would involve in playing the InSight game. He involved local community representatives, farmers, artists, factory workers, teachers, firefighters, medical experts, heritage restorers, members of the village council, etc.

Week 2, Masoud held meetings with game facilitators to train them and discuss possible challenges in having a dialogue with the community.

Week 3, Masoud collaborated with electrical and fire experts to assess the risks to his museum, as well as identify vulnerabilities and mitigation measures.

Week 4, Masoud played the InSight game with stakeholders in order to facilitate community participation and engagement in disaster risk management. This opened a dialogue about existing issues between the site management and the local communities.

Week 6, Masoud organised a training course for staff members of the Persepolis World Heritage Site in disaster risk management, firefighting, and first aid to people, as well as to cultural heritage.

Positive Actions

- **Training** for 10 staff members on disaster risk management, firefighting and first aid.
- Playing of **InSight** with **33 stakeholders** from 7 villages, with one of the takeaways being that local communities, especially farmers and shepherds should be integrated into site and disaster risk management.
- Installation of updated fire prevention and suppression equipments, following the advice of the local fire department
- Repair of worn-out electrical systems.
- Emergency and evacuation protocols at the World Heritage Site established.

Partnerships

- Persepolis World Heritage Site
- Fire Department
- Red Cross Center

Afterlife

- Playing the next phase of inSIGHT. In the first phase the challenges were identified, so next the aim is to prioritise the challenges, find solutions and engage the local stakeholders more.
- Bring the INSIGHT game to two other regions, a community of Pasargadae World Heritage Site, and the community of Sivand which sits between two World Heritage Sites.
- Conduct and organise first aid training and earthen workshop for staff members and local community members.



Masoud playing inSIGHT with the local community and relevant stakeholders on-site at the Persepolis World Heritage Site, 2021 © Masoud Nakhaei



Kyaw Shin Naung

Assistant Director
National Museum Yangon, Myanmar

Kyaw Shin is the Assistant Director at the National Museum in Yangon, Myanmar.



Tahmida Afroze

Architect
Muzharul Islam Foundation & Institute of Architects
Bangladesh

Tahmida is an architect, researcher and museum professional working for the Muzharul Islam Foundation and the Institute of Architects in Bangladesh.



DRM journey

Both Tahmida and Kyaw Shin recognised that their own institutions would benefit from a better understanding of disaster risk management and an implementation of preventative mitigation measures specific to flooding as both Bangladesh and Myanmar are at a high risk to heavy rainfall and flash floods. By participating in the training and learning from their course colleagues, they realised that they could consolidate their knowledge and present it to be used by other museums around the world. They used Masoud's disaster risk scenario on floods as a case study upon which to build a toolkit for helping other museum professionals to identify their own vulnerabilities.

This disaster risk scenario takes us to 23 March 2023 at the Persepolis World Heritage Site...

A heavy rainfall will hit the Persepolis World Heritage Site in the Fars province which will lead to a flash flood, causing panic and chaos. The museum on site which is an earthen structure will face seepage of flood water due to lack of maintenance and repairs, and the drainage systems will overflow. In the chaos of the region, experts will be unable to reach the site and many precious unprotected objects of the museum will face heavy water damage.

Disaster Risk Scenario

hrs	23 March 2023	Action taken
10:00	As per the early warning, heavy rainfall will hit Fars province, leading to a flash flood within 30 minutes.	Important to include your site on a flood-risk zone map
10:20	Visitors on-site will flee into the covered museum, as the flood water starts accumulating on the archaeological site.	
10:25	Strong winds will blow leaves into the gutters, which will block the already under maintained drainage system .	Emphasise the importance of maintaining a functional drainage system
10:30	A museum expert on-site will notice water leaking from the roof of the earthen building , and notify the museum director.	
11:00	Part of the roof will collapse due to the increased weight of the water and existing structural weakness. This will damage a stone inscription.	Conduct a structural safety assessment with a structural engineer
11:05	The earthen walls inside the museum will get damaged due to the excess water seepage , leading to a risk of long-term effects on its structural integrity.	

11:15

Staff will have been searching for a way to **evacuate** the visitors, themselves, as well as some valuable collections and rescue teams will be unable to help since they will be helping in one of the affected villages.

Develop strict evacuation protocols for dealing with such emergencies.

12:00

The museum expert will visit the repository and notice that a lot of rainwater has **infiltrated and inundated** the area, which will damage items located on the ground.

Conduct assessment of collections for their vulnerability to flooding and prepare a plan for their safeguard.

24 March 2023

13:00

The part of the roof that will have been leaking will be covered with a temporary plastic tarp.

Likely Impact

Many collection items will have been damaged by the influx of water. The structural integrity of the building will also have been diminished by the seepage of water.

...To Test Their Toolkit:

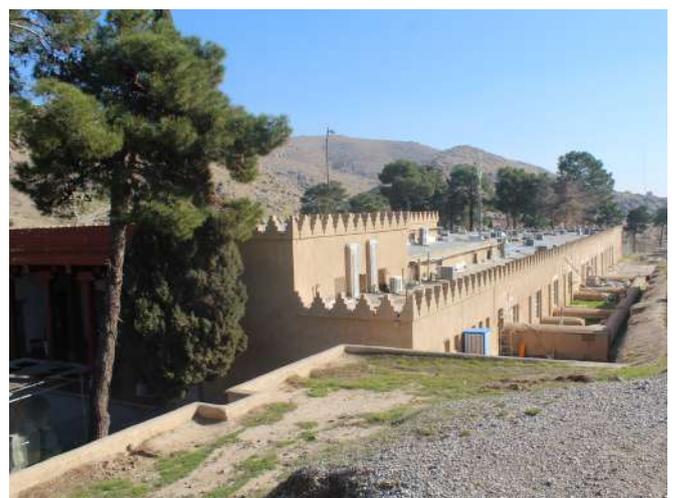
Tahmida and Kyaw Shin used their toolkit to analyse the flooding for Masoud’s scenario and identify incidents, impacts, and vulnerabilities. From this analysis they were able to propose mitigation strategies in the form of ways to reduce risk, increase resilience, and better plan a flood response. Apart from the strategies mentioned on the timeline, further strategies included placing electrical access points high above the ground; applying water-resistant coating to surfaces; following early warnings for weather; and providing staff training in object care during emergency response operations.

Positive Actions

As a culmination of their months of training, research, and collaboration with colleagues, Tahmida and Kyaw Shin developed an in-depth toolkit for diverse museum professionals to be able to identify their own vulnerabilities to flooding at a collection, building or site level. This toolkit included information about the different types of buildings and sites, what their specific vulnerabilities are when exposed to a flood hazard, and an evaluation form to assess a building or site’s vulnerabilities.



Persepolis World Heritage Museum, exterior view, 2021, © Masoud Nakhaei Ashtari



View of earthen elements at the Persepolis World Heritage Museum, 2021 © Masoud Nakhaei Ashtari

Afterlife

- Build on their research to cultivate more detailed, culture-specific and contemporary solutions for flood mitigation.
- Disseminate this toolkit to share the benefits of effective disaster risk management plans and strategies.



Thuy Luyen

**Manager
National Archives No.3
Hanoi, Vietnam**

Thuy is the Manager of the National Archives No.3 in Hanoi, which is one of the four major national archives of Vietnam. Its mission statement is to preserve and store high-value government records from 1945 until the present day, as well as to provide public access.



DRM journey

Typhoons and floods are the most frequent and devastating hazards in Vietnam, though the region is also susceptible to droughts, landslides, forest fires, and occasional earthquakes. During her training Thuy carried out a comprehensive disaster risk assessment for her institution and developed a disaster risk scenario to forecast how a super typhoon would come to impact the National Archives No.3, helping her to understand her institution's vulnerabilities and existing capacities, in order to determine mitigation measures.

The following timeline predicts the course of events following the impact of the super typhoon and the accompanying intense winds and rain.

Thuy's disaster risk scenario transports us to June 4th, 2023...

The super typhoon will bring heavy winds and intense rain in Hanoi city, which will cause flooding after several hours. Water will enter the archives building due to windows unintentionally left open and windows damaged by the weather. The water will further spark a fire, exposing the building, collections, and its staff members to both the impact of fire and flooding, and likely resulting in the loss of many documents.

Disaster Risk Scenario

How events might unfold at the National Archives No.3.

hrs	04 July 2023	Action taken
17:00	Following a weather forecast warning in the morning, a super typhoon will hit Hanoi city and bring heavy winds and rain.	
18:00	Continuous heavy rain will cause flooding between 1 and 3 meters in the city, which will block many roads.	
18:20	Water will come through the unintentionally left open windows on the 6th floor. Heavy winds will also break several windows.	Establish protocols for closing windows, especially when getting weather warnings.
18:40	The water entering will cause an electrical short-circuit , which will spark a fire on the wooden table and paper items.	Contact an electrician to assess and repair the electrical wiring.
18:42	The 5 security guards still on-site will respond to a fire alarm that will go off.	
18:45	Security guards will head with extinguishers to the fire and call the director, who will instruct them to stay away from the fire. Director will notify the fire department , who will be delayed, which will lead to further damage of the collections.	Ensure that all staff and security guards are trained in how to behave in a fire incident.
18:55	Drainage systems will be overwhelmed by water and trash, which will cause the water level to rise quickly at the site due to the continuous rainfall.	Ensure drainage pipes are cleared regularly.
19:15	The fire officials will arrive on site and will suppress the still-ongoing fire.	Collaborate with the fire department and request a fire-risk assessment of the site.

05 July 2023

11:00

The wind and rain will have subsided, and the Director will be able to travel to the site on foot.
The Director will organise with her team to document the damage, cover the broken windows, and move documents to higher shelves.

Set up a document digitisation programme. Connect with neighbouring institutions and have a temporary storage location prepared.

Likely Impact

Many exposed documents will have been lost in the fire. The influx of water will have damaged a large proportion of the low-stored collections, as well as damaging structural elements of the building.

Mitigation Strategies Implemented

Through the process of researching and developing her disaster risk scenario, Thuy connected the hazards of typhoon, flooding, and fire to the vulnerabilities that exist at her institution. This allowed her to identify what aspects of the building had to be more regularly maintained, the importance of adequately training and preparing staff for such an event, and the benefits of sharing her acquired disaster risk management knowledge as widely as possible.

- Week 1**, Thuy collaborated with the local fire department to carry out a fire-risk safety assessment.
- Week 2**, Thuy contracted an electrician to assess the condition of the electrical systems and replace old wiring and lighting systems.
- Week 3**, Thuy organised scenario-based training through disaster simulation exercises for all five departments of the National Archives No.3.
- Week 4**, Thuy implemented emergency protocols and signages with signs, lights, emergency numbers, and evacuation plans as well as instructions.
- Week 6**, Thuy held a contest asking staff and readers for ideas to improve the safety of the archives.
- Week 7**, In light of the Covid-19 pandemic, Thuy also organised a workshop on dealing with multiple risks simultaneously and protecting cultural heritage.
- Week 8**, Thuy coordinated an exhibition on 'Disaster in the Archives', highlighting the best staff ideas on how to improve safety in the archives.

Positive Actions

- Invitation to the fire experts to inspect the building, assess fire-risks, and advise on solutions.
- Training of **49 staff members** with scenario-based fire prevention and on how to properly use fire extinguishers in collaboration with the fire department.
- Installation of **10 fire extinguishers**, per fire experts advice
- Maintenance and improvement of electrical and lighting systems.
- Implementation of emergency protocols and signages.
- Disaster risk management workshop on "Protecting Cultural Heritage during Covid-19" with **48 participants** organised.
- Contest among staff and readers to collect ideas on how to improve safety within the archive, which received **98 submissions**.



Staff learning emergency procedures and how to use fire equipments in case of a fire at the archive, 2021 © Thuy Luyen

Partnerships

- Ba Dinh district fire prevention and rescue police
- State Records and Archives department of Vietnam
- National University

Afterlife

- Train staff on flood management and preparedness, as well as implement a flood-risk prevention plan based on a disaster scenario.
- Send security and selected staff members to an annual professional fire-prevention training for a certificate.
- Organise further workshops in collaboration with the Ba Dinh fire department and other heritage sites in Vietnam.



Bety Nguyen

Curator
History Museum
Ho Chi Minh City, Vietnam

Bety is a curator at the History Museum located in the heart of Ho Chi Minh City. This museum keeps and preserves a large collection of more than 44,000 antiques, as well as being part of the cultural heritage architecture of the city.



DRM journey

Ho Chi Minh is exposed to the hazard of flooding due to both rising tides and heavy rains, as well as cyclones and wildfires. Since the History Museum is located in a low-lying area close to several rivers, it is especially at risk. During her training Bety concluded that many museums in Vietnam are equipped in fire prevention, so she chose to develop a disaster risk scenario that predicted the impact of flooding, especially since the museum's storage had flooded prior in 2019.

As part of the training, Bety conducted a comprehensive disaster risk assessment for her museum and also developed a disaster risk scenario to forecast how flooding would come to impact the History Museum. This scenario helped her to highlight her existing capacities, as well as the vulnerabilities that she needs to mitigate.

The following timeline predicts the potential impact and ramifications of flooding caused by heavy rains.

Bety's disaster risk scenario takes us to August 2nd, 2022...

Continuous heavy rains would lead to an influx of water in the museum. The accompanying strong winds would uproot trees and damage building windows, resulting in the injury of a security guard. Eventually the lower level of the museum would flood, causing water damage to collections housed in storage, as well as compromising the building's structural integrity.

Disaster Risk Scenario

How events might unfold at the History Museum.

hrs	2 August 2022	Action taken
13:00	As forecasted earlier that day, heavy rains hit Ho Chi Minh City. Only staff will be on the premises since the museum will have been closed since 11:30. Due to intensifying rain and winds, security guards will go to close the windows.	
15:00	Continuous strong rains and winds will cause a window to break and trees to fall. Falling trees will block the museum entrance, one of which will injure a security guard drawn outside by the noise.	Prune trees.
15:10	The Head of Security will call for an ambulance and notify the Museum Director.	
15:30	The drainage system will have become blocked , which will lead to the accumulation of water.	Check pipes and repair the drainage system.
15:40	The water will start entering the building, especially the basement where the storage is located. The existing flood barrier to the storage area will be faulty, which will flood the storage area.	Collaborate with relevant stakeholders and conduct a full building assessment.

16:10

The ambulance for the injured guard will still not have arrived due to flooded/blocked roads.

Purchase first aid supplies and carry out basic first aid training.

17:30

The Director will carry out a full building inspection, and will be shocked to learn that the flood barrier was compromised and the storage area was flooded. 20-30 cm of muddy water will have entered the storage area and damaged low-lying collections.

Replace the flood barriers and create a maintenance plan. Raise vulnerable items off the floor.

Likely Impact

Many of the museum’s collections will be impacted long-term by their exposure to water, and will need to be treated for mould, termites, etc. Prolonged high humidity will also weaken the building’s structure, especially of the basement and foundation.

Mitigation Strategies Implemented

Constructing and researching a flooding scenario emphasised for Thi the critical importance of having specific disaster risk management training and plans for this hazard. Therefore Thi sought to share the knowledge she had gained by conducting in-depth training sessions for her museum’s staff members to raise awareness and take concrete action.

Week 1, Bety held meetings with the History museum staff to introduce the main concepts and importance of disaster risk management.

Week 3, Bety collaborated with disaster prevention and search and rescue experts to inform museum staff of the risk of flooding in Ho Chi Minh City.

Week 5, Bety implemented additional warning signages as a safety measure in the museum.

Week 7, Bety facilitated the moving of collections in storage to a safer and higher location to reduce vulnerabilities.

Week 8, Bety leveraged and shared her knowledge during a webinar on “Protecting cultural heritage during Covid-19”.

Positive Actions

- **Maintenance** of pipes and drainage system, as well as the pruning of trees.
- **4 training sessions** for museum’s collections team, which covered creating value pies, understanding key terms, visualising scenario-based risk paths, the importance of collaboration with stakeholders, and risk mitigation exercises.
- Webinar on “**Protecting cultural heritage during Covid 19**” conducted.



The impact of the 2019 flood on the archive’s basement which did not have a flood barrier, 2021 © Bety Nyugen



The museum staff maintaining the flood barrier to the basement storage, 2021 © Bety Nyugen

Afterlife

- Continue to spread awareness of the importance of disaster risk management and what is, by training all the museum staff and collaboration with other cultural heritage institutions.
- Conduct training on flood management and preparedness, leading to the implementation of a flood prevention plan based on a flood disaster scenario.



Surajudeen Niyi Awoyera

Principal Heritage Officer and Monument Manager
National Museum of Unity
Ibadan Oyo, Nigeria

Surajudeen is the Principal Heritage Officer and Monument Manager at The National Museum of Unity, Ibadan (NMUI), a storehouse of memories aimed at fostering unity in Nigeria. It collects, conserves, studies and interprets material evidence of the development of the people of Nigeria and the Nigerians in the diaspora.



DRM journey

The The National Museum of Unity, Ibadan (NMUI) is in proximity to Lake Alalubosa, and this region of Nigeria is susceptible to flooding and wildfires. As a core part of the training, Surajudeen conducted a comprehensive disaster risk assessment for his museum and then formed a disaster risk scenario to predict how intense rain and flooding would come to impact the National Museum of Unity, helping him to outline mitigation measures.

The following timeline considers the manner in which sudden intense rain could lead to flooding and cause damage to the museum building and objects.

Surajudeen’s disaster risk scenario transports us to April 25th, 2024...

Heavy rain would lead to flooding of the museum premises, which would be intensified by Lake Alalubosa overflowing. The influx of water would cause trees to fall and damage the building, leading to roof collapse and a severe impact on museum collections. The debris from the roof would further damage the electrical circuits and spark a fire that would lead to the heavy damage of important collections, as well as the evacuation of staff.

Disaster Risk Scenario

How events might unfold at the History Museum.

hrs	25 April 2024	Action taken
22:15	Ibadan will be hit by flash rain and serious sandstorms . Intense rain will continue for more than 16 hours.	
	26 April 2024	
12:00	All water outlets and drainage channels around the museum will be blocked by plants, vegetation, and debris, which will flood the museum premises. Security guards and a couple staff members are on site.	Maintain drainage channels.
14:30	Lake Alalubosa will break its banks .	Follow weather updates and early warnings.
15:30	The water from the lake will increase the volume of water flooding the museum premises.	Develop emergency protocols for staff.
15:45	The heavy flooding will uproot trees , which will cause several to fall onto the building’s roof. This will cause the exhibition gallery to collapse and will damage several museum objects.	Prune trees.
15:55	The falling roof will have damaged the electrical circuits , which will cause a short-circuit and spark a fire in the exhibition gallery where over 500 wooden objects are located.	Contact an electrician to inspect electrical systems.

16:00

A few offices will catch fire, and will result in the loss of **important documents**. This will force the remaining **staff and security guards to evacuate** in a chaotic manner.

Conduct fire drills with staff.

16:03

Trees will fall on the library, which will **break the pipes** and cause significant damage.

16:15

Museum security will contact the curator, who will contact the fire department and their neighbouring institution for assistance.

Develop clear protocols on how to deal with an emergency.

17:30

Fire trucks will be delayed in their arrival due to blocked roads, as well as many emergencies throughout the city.

Build a collaboration with the fire department and conduct a fire risk assessment of the building.

Likely Impact

Several museum collections will have sustained irreversible damage due to exposure to both fire and water, with the wooden and paper objects especially impacted. The museum building also will have experienced significant structural damage.

Mitigation Strategies Implemented

Surajudeen’s flooding scenario highlighted the vulnerabilities of the National Museum of Unity to a disaster, and also the opportunities to most efficiently prepare for such a disaster and mitigate its impact.

Week 1, Surajudeen organised a staff meeting to develop a disaster risk management plan for the museum, especially to address the flood and fire risk.

Week 2, Surajudeen facilitated the clearing and removal of vegetation debris.

Week 3, Surajudeen procured emergency supplies and materials to support emergency rescue of cultural heritage.

Week 4, Surajudeen digitised the cultural collections through video documentation.

Week 5, Surajudeen developed a partnership with the local fire department, and followed their advice on purchasing fire extinguishers.

Week 6, Surajudeen organised fire drills and training for the staff of the museum with the support of the fire department.

Week 8, Surajudeen held a workshop for the museum staff on the museum’s disaster risk management plan.

Positive Actions

- **5 fire extinguishers** installed.
- Maintenance of **drainage and electrical systems** to reduce vulnerabilities of the museum.
- Fire prevention and drills training for **30 staff members**, in collaboration with Oyo State Fire Services.
- Development of **Disaster Risk Management plan**.
- **Workshop** to share Disaster Risk Management knowledge and raise awareness of new Disaster Risk Management plan and its implementation, “The Importance of Disaster Risk Management for Cultural Heritage Collections and Future Preservation of National Museum of Unity Ibadan”.

Partnerships

- Oyo State Emergency Management Agency (SEMA)
- Oyo State Fire Service



A fire drill being conducted at the NMUI, 2021
© Surajudeen Niya Awoyena

Afterlife

- The committee will form clear protocols to maintain the newly acquired risk mitigation materials.
- The NMUI will mandate periodic inspections of the electrical system and all electrical appliances installed.
- The NMUI will install fire and smoke detection devices to manage a potential fire outbreak.
- The NMUI will train its staff to manage a potential flood hazard.
- A stakeholders map with contact details will be designed and posted at the Museum Antiquity protection unit to effectively coordinate an emergency response.



Sana Durrani

Visual Artist, Art Restorer and Educator
Lahore Arts Council, Alhamra Art Museum
Lahore Region, Pakistan

Sana is a visual artist, art restorer and educator at Alhamra Art Museum. Her museum houses the collection of paintings, prints, sculptures and ceramics owned by the Lahore Arts Council, displaying both works of old masters and living contemporary artists.



DRM journey

The Lahore region of Pakistan is regularly exposed to the hazards of flooding, water scarcity, extreme heat and wildfires. Since her museum had also flooded in 2016 following heavy rains, Sana realised throughout her training that there was a lot of progress to make in terms of disaster risk management and mitigation for heavy rains and flooding.

As a key part of the training, Sana conducted a comprehensive disaster risk assessment for her museum and consequently developed a disaster risk scenario to predict how heavy rains and subsequent flooding would come to impact the Alhamra Art Museum, helping her to develop mitigation measures.

The following timeline predicts how the museum would be exposed to heavy rains and flooding, and also how its vulnerabilities could intensify the impact of the hazard.

Sana's disaster risk scenario brings us to October 7th, 2023...

A thunderstorm would bring strong winds and heavy rain, which would lead to water seepage at the museum due to under-maintained skylights, the roof needing repair and blocked drainage systems. Paintings and other artefacts would become wet and sustain long-term damage. The rain would further cause the roof to collapse and make the building inaccessible to staff.

Disaster Risk Scenario

How events might unfold at the Alhamra Art Museum.

hrs	7 October 2023	Action taken
17:15	Following an early warning, a thunderstorm will start, which will bring strong winds and heavy rain . This will cause heavy traffic on the roads since it will also be rush hour.	Contact a structural engineer to conduct a structural assessment.
20:00	Following 2 hours of heavy rain, water will seep through poorly maintained skylights , and will impact the displayed paintings.	
21:00	Blocked drains on the roof will cause rainwater to leak into the storage room, which will make the walls damp. The seeping water will fall on the paintings and objects stored in the room.	Regularly maintain drainage systems.
21:30	The weather department will issue a new warning for flash floods and inaccessible roads due to intensifying rains.	
21:45	The museum director will be unable to reach the museum and will contact the security staff on site to get updates on the situation. She will instruct all staff to evacuate and secure the building.	Develop evacuation protocols for staff during an emergency.
	8 October 2023	
03:00	Continuous rain will cause the storage ceiling to collapse , which will break shelves and throw valuable collection items onto the floor and into the dirty water collected there.	Train staff in disaster risk management, proper storage, salvage and evacuation.

04:00

Water from the storage room will start **flooding** the main hall.

04:15

The circuit room, close to the storage room, will also have been impacted by the water, which will be a fire risk.

08:00

The rains will subside and the museum director will arrive on foot to understand the impact of floods on the museum.
The director will call a rescue team and contact nearby institutions for help.

Contact an electrician to conduct an electrical assessment.

Establish partnerships with neighbouring cultural institutions for joint emergency preparedness.

Likely Impact

Many valuable collection items will have sustained water damage, including borrowed paintings. The building will likely experience long-term structural damage due to water seepage and humidity.

Mitigation Strategies Implemented

Using the understanding developed through her scenario, Sana took important steps to mitigate and prepare for potential hazards. Along with tackling vulnerabilities, she identified the importance of well-informed and trained stakeholders to deal immediately with the effects of a disaster.

Week 1, Sana developed a relationship with stakeholders, such as other museums, electricians and the fire department, in order to involve them in the process of risk reduction and emergency preparedness.

Week 2, Sana contacted structural engineers to assess the safety of her building.

Week 3, Sana created a plan for creating digital inventories of museum collections, as well as carrying out an assessment of the state of the building.

Week 4, Sana conducted a webinar for the public sector and interested stakeholders to raise awareness on the importance of disaster risk management.

Week 5, Sana organised a seminar on first aid to cultural heritage for staff members of the Alhamra art museum, to improve their emergency preparedness and communication.

Week 7, Sana planned a 3-day training workshop on mitigation strategies, situation analysis, stabilisation and emergency response for staff members.

Week 8, Sana conducted a hands-on training on how to salvage damaged collections for the staff of the museum.

Positive Impacts

- Plan for updating the **collections' digital inventories**, as well as improving storage facilities and methods.
- Two-day workshop for **15 staff members** on disaster risk management and for enhancing their capacities.
- Open webinar raising awareness, "Conserving the Past, Promoting disaster risk management unit and first aid to cultural heritage" with **32 diverse professionals** attending.
- Interventions by structural engineers to mitigate structural risks identified for the skylights and other building openings.

Partnership

- Walled City Lahore Authority



Sana providing hands-on training to the staff of the Alhamra Art Museum, 2021 © Sana Durrani

Afterlife

- Conducting future workshops on risk management and first aid to cultural heritage for both museums and other heritage professionals.
- Exploring proposals for academic programmes in heritage conservation.



Innocent Mankhawala

**Principal Archivist
National Archives of Malawi
Lilongwe, Malawi**

Innocent is the Principal Archivist at the National Archives of Malawi, which is a government department that has the mandate to conserve and preserve the country's documentary heritage and media for research, reference and posterity. The National Archives is located in Pagat House, Malawi.

DRM journey

While Malawi faces the hazards of flooding, volcanic eruptions, extreme heat, and wildfires, Lilongwe is particularly at risk to wildfires. Through his training and by carrying out a comprehensive disaster risk assessment for his institution, Innocent came to understand that natural hazards can also have complex interactions with conflicts and social instability, therefore he developed a disaster risk scenario that predicted the impact of a fire on his institution, overlapping with protests by the community, enabling him to define mitigation measures.

The following timeline predicts how the National Archives and its staff members would experience the overlapping hazards of a fire and being involved in a political protest, in addition to what vulnerabilities would exacerbate the situation.

Innocent's disaster risk scenario takes us to June 2nd, 2025...

A political protest in Lilongwe will cause staff members to panic, which would be exacerbated by the start of a fire in the park close to the archives. The fire would quickly spread to the archive building, with evacuation hindered by an inaccessible emergency exit, as well as protestors. The room containing flammable audiovisual materials would be severely impacted by the fire.

Disaster Risk Scenario

How events might unfold at the National Archives of Malawi.

hrs	2nd June 2025	Action taken
10:30	In light of political instability and protests in Lilongwe, the protest route will reach the National Archives. The staff on-site will be locked in and panic . They will worry about whether they have enough supplies to stay in and safeguard their collections.	Police will provide security services.
10:45	Meanwhile, due to extreme temperatures, the park close to the archives will catch fire and reach the kitchen on the ground floor. The increasing heat from the fire will spark an internal fire in the kitchen from the poorly maintained electrical circuits.	Maintain electrical systems and install fire detection and fighting equipment in collaboration with the fire department.
10:50	Fire will begin to spread beyond the kitchen to other rooms and offices Staff will find it hard to use the emergency exit since the fire outside has caused further chaos among the protestors, blocking the exit routes.	Maintain proper evacuation routes and train staff on managing fire.
10:55	The archive staff will alert the director, who was on leave, as well as call the fire department and police for help.	Develop relationships with the local fire department and police.
11:12	The staff members will be able to evacuate the archive eventually but the fire department will be unable to reach the archives due to the protests.	
11:30	Fire will reach the digitisation room across the kitchen, damaging a substantial collection of AV heritage, flammable objects and alcohol .	Assess the fire risk of the archives in collaboration with the fire department.

3rd June 2025

09:00

Staff members will return on-site and try to transport records and items to a temporary storage space in the city for salvage.

Create partnership with other cultural institutions for assistance and storage.

Likely Impact

A portion of the archived records will have been lost to fire damage, including the collection of AV heritage which would be in the process of being digitised.

Mitigation Strategies Implemented

By building this disaster risk scenario, Innocent was able to identify that while certain vulnerabilities, such as being a government building or occupying a not-built-for-purpose building, cannot be easily removed, protocols can be established and capacities developed to mitigate the risk posed to staff members and valuable items.

Week 1, Innocent reached out to and engaged with relevant stakeholders including the fire department, owner of the building, and the Department of Disaster Management Affairs.

Week 3, Innocent installed 10 fire extinguishers and a smoke detector, under the supervision of the fire department.

Week 4, Innocent conducted a training for the staff on dealing with a fire, including how to use fire equipment and establishing evacuation protocols.

Week 6, Innocent facilitated finding resources to digitise his archive's records and repositories.

Positive Actions

- 10 fire extinguishers and a smoke detector installed.
- Development of strong relationships with stakeholders: fire department, lands, owner of the building, Department of Disaster Management Affairs.
- Including disaster risk management plans and strategies in future work plans to allocate sufficient resources.
- Carry out training with staff members to equip them with firefighting skills, as well as sharing knowledge on the importance of disaster risk management.



The masonry building of the archives, Pagat House, 2021 © Innocent Mankhwala



A snapshot of the highly flammable digital repository located in the archives, 2021 © Innocent Mankhwala

Partnerships

- Fire Department
- The Human Rights Defenders Group
- The Department of Disaster Management Affairs

Afterlife

- Procuring fire extinguishers for the office building.
- Engage the Department of Disaster Management affairs on further capacity development for the archive staff, as well as other cultural institutions.



Cheah Woon Lee

**Sustainable Development Officer
George Town World Heritage Site
Pulau Pinang, Malaysia**

Lee is a Sustainable Development Officer running the 'George Town Heritage Habitat Seed Fund' programme. At the George Town World Heritage Site there are more than 3,000 category II shophouses used as both commercial shop lots and residential homes, making up a majority of the heritage buildings at the site.

DRM journey

The George Town World Heritage Site is particularly exposed to the hazards of flooding, and occasionally to tsunamis and extreme heat. While conducting a comprehensive disaster risk assessment as a key part of the training, Cheah identified that continuous disaster risk reduction awareness campaigns do exist in the community; therefore she chose to focus her disaster risk scenario on understanding how individual tenants and owners of property perceive the overlapping and cascading hazard risks to their homes and belongings. Past occurrences of shophouse fires causing significant damage motivated Lee to not only develop an illustrative scenario predicting how fire would impact the George Town World Heritage Site, but also to use it to inform others and define mitigation measures.

The following timeline predicts how an individual residing in one of the shophouses might react to the hazard of a fire, and how this fire will interact with the structural and behavioural vulnerabilities to impact the community more widely.

Cheah Woon's disaster risk scenario takes us to May 7th, 2022...

Extreme heat, in combination with old and faulty wiring would have sparked a fire that quickly spread along the shophouses as they are fueled by paper, timber building materials, and the presence of potentially explosive materials. As the shophouses do not have smoke or heat detectors, occupants would have little warning to evacuate.

Disaster Risk Scenario

How events might unfold at the National Archives of Malawi.

hrs	7 May 2022	Action taken
19:00	Extreme and intensifying heat will lead to the old and faulty electrical wiring in shophouse at Lebu King 1 sparking a fire .	Call electricians to inspect and upgrade wiring.
19:10	The fire will develop quickly as Lebu King 1 is filled with stacks of paper materials .	Install smoke or heat detectors to provide warning to occupants.
19:15	The fire will continue to spread to the neighbouring shophouse , Lebu King 3 and 5, as they share a partition wall. The shops will luckily be unoccupied outside of office hours.	Prepare an evacuation plan and add signages in case there are people.
19:30	People in the neighbourhood will call the fire department, but due to the building materials the fire will continue to spread quickly before the firemen can arrive.	Collaborate with the local fire department to provide basic fire risk training to the residents and shop owners.
19:32	Debris from the ceilings of the timber shops will start falling and spread the fire to the materials of the wood workshop and its electrical equipment, which will lead to a risk of a major fire incident.	
19:40	The fire department will arrive on the site but significant fire damage will already have occurred to these shophouses.	Partner with a structural engineer and fire department to assess fire risk to the shop houses.

Likely Impact

Many shophouses of traditional timber architecture will have sustained significant fire damage, also putting the residents' lives at risk.

Mitigation Strategies Implemented

Developing this disaster risk scenario allowed Lee to identify that regardless of being a world heritage site, there are key vulnerabilities and potential capacities to consider when communicating disaster risk reduction to tenants and owners of the shophouses. This scenario also helped her advocate for upgrading the premises of 3 buildings to make them safer environments and better prepared for hazards in the form of fires and flooding.

Week 1, Lee supervised the ongoing structural renovations and electrical rewiring to upgrade selected shophouses.

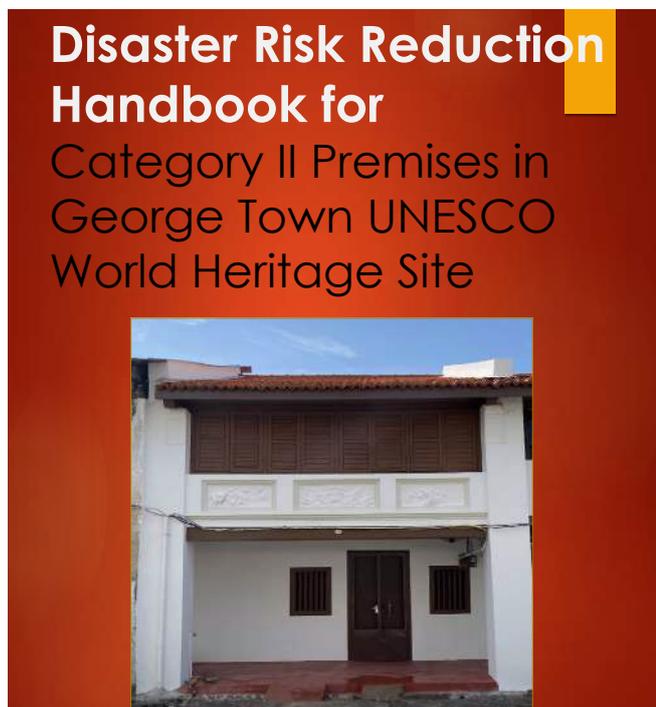
Week 3, Lee carried out a risk path assessment to help draft steps for disaster risk reduction.

Week 6, Lee created a draft of a "Disaster Risk Reduction Handbook" including important steps to take for fire safety and shared it with owners and occupants of the shophouses.

Week 8, Lee held meetings with community members to share basic knowledge of disaster risk reduction and emergency response.

Positive Actions

- **3 building premises** upgraded to reduce their vulnerability to hazards by fixing roofs, replacing rotten timber members, maintaining water pipes, and building fire-rated brick walls.
- Tailored **Disaster Risk Reduction Handbook** created and shared for **2 of the shophouses** in the George Town World Heritage Site.
- Local community stakeholders engaged in the sharing of knowledge about basic disaster risk reduction and emergency response.



A page from the disaster handbook created by Lee, 2021
© Cheah Woon Lee



A page from the disaster handbook created by Lee, 2021
© Cheah Woon Lee

Partnership

- Penang State Government

Afterlife

- 3 more premises will be upgraded to reduce their vulnerabilities to hazards.
- The handbook will be presented to the owners and occupants of the shophouses, and an in-person focus group activity will be conducted in order to discuss its contents.



Carlos Jr. Tatel

Associate Professor, Department of Anthropology-
University of the Philippines-Diliman
Quezon City, the Philippines

Carlos is an Associate Professor in the Department of Anthropology at the University of the Philippines-Diliman in Quezon City. He applied his newly developed disaster risk management skills to both the National Shrine of the St. Anne Parish in the Bulacan province, and Bulwagan Palma (Palma Hall), a building on his university campus.



DRM journey

The Philippines is at high risk for many hazards, including flooding, earthquakes, landslides, tsunamis, volcanoes, cyclones, water scarcity, and wildfires. The Quezon city is situated close to a river and especially faces intensifying heavy rains and flash floods. Hence, Carlos carried out a comprehensive disaster risk assessment for the National Shrine of St. Anne and chose to build a disaster risk scenario that addressed the impact of heavy rains caused by a typhoon that would flood the river, in order to highlight the vulnerabilities of the site. This further helped him to outline mitigation measures that could also be applied to other heritage sites and buildings.

The following timeline predicts how a potential hazard such as a cyclone and ensuing flooding will interact with the existing vulnerabilities of the heritage site.

Carlos' disaster risk scenario takes us to August 14th, 2023...

A typhoon will hit Quezon city, bringing torrential rains to the region and resulting in the overflowing of the local river systems. As the town will start flooding, water would seep into the church structure, and the weather would destroy a stained glass window and antique belfries. Numerous paper documents would also sustain significant water damage.

Disaster Risk Scenario

How events might unfold at the Patan Museum.

hrs	14 August 2023	Action taken
22:00	A tropical cyclone named locally as Typhoon Lolong will make landfall in the Philippines with sustained winds of 250 km/hr.	Follow early warning systems to better prepare for emergencies.
	15 August 2023	
7:00	Overnight torrential rains will saturate the city dam, which will force the authorities to open some of the gates, bringing a lot of water to the main rivers and their tributaries.	
8:30	The Pampanga and Angat river systems will overflow , which will flood the town and area where the church is located. Main roads and other infrastructural facilities will also be quickly flooded , obstructing accessibility.	
8:35	Existing anti-flood structures will slow down entry of the floodwaters, which will give staff on-site time to secure and move several objects.	
9:00	Rainwater will overwhelm the under maintained roof and gutters , which will bring water into the church through the walls, effecting the many paper documents .	Repair and maintain the roof gutters and drainage systems.
9:05	The stained glass window will be destroyed by the intense winds accompanied by heavy rainwater. Heavy winds will impact two of the antique belfries, which will already be in a vulnerable state . Both the bells and the connecting walkway will be damaged.	Contact a structural engineer to inspect the structural integrity of the church building.

11:00

The extent of the flooding in the town will be significant and will **prevent emergency response teams** from being able to reach people and impacted buildings for several hours.

Build capacity to mobilise and respond in an emergency by training church members, as well as involving local communities and stakeholders.

Likely Impact

A significant amount of the paper documents will have sustained water damage. Vulnerable building features such as the stained glass window and the belfries will have been seriously damaged.

Mitigation Strategies Implemented

Developing and building a detailed disaster risk scenario predicting the impact of a typhoon and the resulting flooding on a heritage site demonstrated to Carlos the crucial capacities that can be developed and upheld by actively involving local stakeholders and communities in disaster risk preparedness and mitigation. Carlos therefore introduced the following mitigation strategies to enhance capacities for Disaster Risk Management in his community.

Week 2, Carlos held several meetings with relevant stakeholders to plan possible interventions.

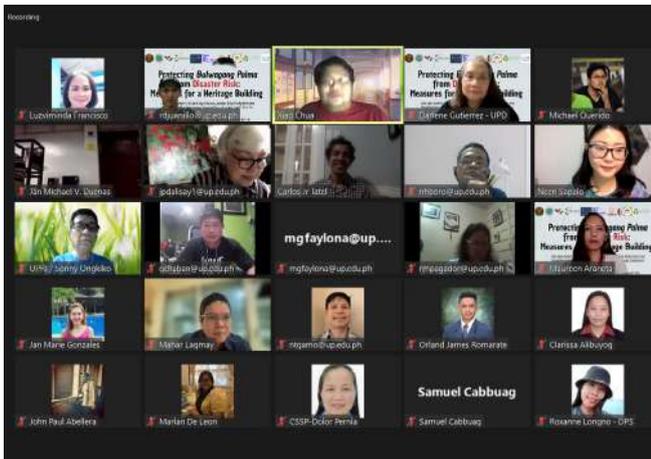
Week 3, Carlos invited the local community and regular church goers to spread awareness about the importance of their role in the disaster risk management of the church.

Week 4, Carlos organised online initiatives to involve students, church staff members and local communities in developing knowledge of disaster risk management.

Week 6, Carlos conducted an online workshop for university staff members that introduced them to key disaster risk management concepts and used Palma Hall as a case study.

Positive Actions

- Online webinar with over **130 participants** on disaster risk reduction and management as applied to Diliman, in Quezon City campus of UP.
- Online workshop attended by **29 university staff members** focusing on disaster risk management issues specific to Palma Hall.



Ongoing webinar with university staff members on disaster risk management, 2021 © Carlos Jr. Tatal



Exterior view of the National Shrine of St. Anne, 2021 © Carlos Jr. Tatal

Partnerships

- Heritage Watch of Hagonoy, Bulacan
- University of the Philippines-Diliman
 - UP College of Architecture
 - UP Department of Anthropology
 - UP Office of Initiatives for Culture and the Arts (OICA)
 - UP Resilience Institute
- Escuela Taller de Filipinas Foundation
- International Council of Museums - Philippines Chapter

Afterlife

- Apply for Palma Hall to be recognised as a national heritage building in order to improve the building's utilization and management.
- Carry out a similar online webinar workshop on the case study of the Santa Ana Church in Hagonoy.



Haris Rahmendra

Conservation Analyst Conservation Office of Sangiran Early Man Site Sragen, Indonesia

Haris is a conservation analyst at the Balai Pelestarian Situs Manusia Purba (BPSMP) Sangiran Site, an archaeological site and a museum complex containing several separate buildings, including the Krikilan Cluster Museum. It is the museum's mission to collect, conserve, and display the findings from the archaeological site.



DRM journey

Indonesia faces frequent flooding, wildfires and earthquakes among other natural hazards. With an aim to share his knowledge gained on disaster risk management for his institution, Haris collaborated with Ms Faizzatus Sa'diyah from Museum Musik Indonesia to train his staff and plan mitigation measures for his institutional vulnerabilities. Haris carried out a comprehensive disaster risk assessment and developed a disaster risk scenario that not only predicted the impact of an earthquake, but also the effect of secondary hazards such as fires on his institution.

The following timeline considers the impact of an earthquake and resulting fire on the Krikilan Cluster Museum, its collections, and its staff.

Haris' disaster risk scenario transports us to December 30th, 2023...

When a 4.1 magnitude earthquake hits the city, it will cause panic amongst the museum visitors, as well as cause an electrical short circuit, sparking a fire. This fire would quickly spread due to the prevalence of wood, cloth and plastic materials, resulting in significant damage to a large portion of the museum's collections.

Disaster Risk Scenario

How events might unfold at the museum complex of the Balai Pelestarian Situs Manusia Purba Sangiran Site.

hrs	30 December 2023	Action taken
10:00	The museum will be open to the public with an exhibition and will experience large visitors.	
10:45	A 4.1 magnitude earthquake will hit the city unexpectedly.	
10:50	The earthquake will cause an electrical short circuit in the power cables in display area 3, which will spark a fire .	Call an electrician to check all the electrical circuits.
10:55	Prevalence of wood, cloth and plastic materials will fuel the fire , which will cause it to spread faster, damaging many objects.	
10:57	The security team, who will be equipped with the skill to use a fire extinguisher will run to the room, but will be unable to reach on time due to the visitors running in panic.	Develop evacuation protocols and train staff and security members.
11:00	Visitors and staff, including the security guards, will evacuate the building due to the increasing fire, which will lead to chaos. The staff will call for the fire department, who will be delayed due to the impact of the earthquake on other parts of the city.	Establish an evacuation plan for staff and visitors.
13:20	The fire department will arrive on-site and combat the fire, although many valuable collections will have been damaged.	Establish a disaster risk management plan that includes fire-proofing exhibits at-risk, protocols for an emergency, and notifying emergency services.

Likely Impact

A large portion of valuable exhibitions and collections will have been exposed and significantly damaged by the fire.

Mitigation Strategies Implemented

As a result of developing this disaster risk scenario, Haris realised that one of the key vulnerabilities to address was the lack of evacuation and disaster risk management plan. He also highlighted the need for training among his staff members, as well as the need for collaboration and knowledge sharing among cultural institutions around the country.

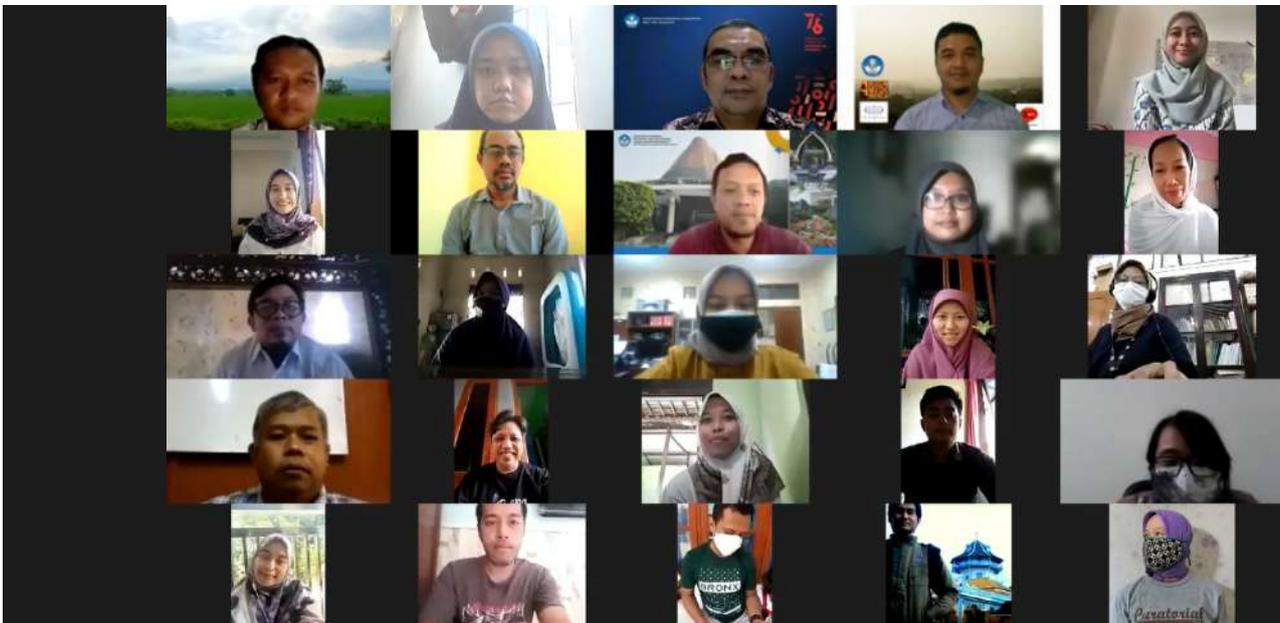
Week 1, Haris organised a meeting between the regional disaster management agency, the Department of Education and Culture, Gadjah Mada University and BPSMP Sangiran to discuss policy documents and the need for the development of an institutional disaster risk management plan.

Week 4, Haris and Faizzatus collaboratively organised an online webinar to train staff members on Disaster Risk Management for the museum staff and other cultural heritage professionals around the country.

Week 6, Haris carried out an evaluation for the webinar participants to carry out a collections value assessment.

Positive Actions

- Developing a draft of a **Disaster Risk Management plan for his institution**.
- Hosting an **online webinar** to share disaster risk management knowledge with **40 participants** from his museum, as well as the Museum Musik of Indonesia. The online training included assessing disaster risk, actor and stakeholder mapping, and communication methods with mass media.
- Evaluation and survey of **23 of the webinar participants** to collect data for building a value pie and planning a better distribution for the museum's collections.



Screenshot of ongoing webinar conducted on zoom in collaboration with Museum Musik Indonesia, 2021 © Haris Rahmendra

Partnership

- Museum Musik Indonesia.

Afterlife

- Carry out actor and stakeholder mapping to better understand the value of the museum and site.
- Build partnerships with the local fire department, disaster risk management agency, and other museums for better preparedness during an emergency.
- Further research and study on developing context-specific disaster risk management plans for the museum.



Suresh Man Lakhe

**Museum Officer
Patan Museum
Lalitpur, Nepal**

Suresh is a Museum Officer at the Patan Museum complex, a World Heritage Site located in Patan Durbar square. The Patan Museum is housed in the medieval Royal Palace, built in the 17th century, and its collection includes metal sculptures, stone sculptures, wooden artefacts, paintings, and photographs.



DRM journey

Nepal is one of the most earthquake prone countries in the world, among several other natural hazards. The Patan Square and its contained heritage is especially exposed to this hazard, as demonstrated in 2015 when an earthquake of 7.8 magnitude damaged several wings of the Patan museum and even led to one's complete collapse. Considering the museum's past experience with earthquakes, Suresh sought to utilize his newly gained comprehensive disaster risk assessment skills to prepare his institution for future incidents. He formed a disaster risk scenario to forecast how an earthquake would come to impact the Patan Museum, helping him to define mitigation measures.

The following timeline considers how a future earthquake could become a disaster and impact the Patan Museum, its staff, and its collections.

Suresh's disaster risk scenario transports us to October 15th, 2024...

An unprecedented earthquake in the monsoon season would cause the collapse of the museum's roof, falling roof tiles and cracks in the building. This damage would make the building vulnerable to the ongoing rains, as it would quickly impact the collections. The rainwater would also spark a fire that spreads quickly among the wooden architectural components. The security guards and the fire brigade would do their best to extinguish the fire quickly, but many historical architectural features would have sustained significant damage.

Disaster Risk Scenario

How events might unfold at the Patan Museum.

hrs	15 October 2024	Action taken
10:00	It will be the Dhasina festival in the Kathmandu valley, and all museums and galleries will be closed. The Durbar square will be filled with thousands of visitors.	
15:00	A 6.3 magnitude earthquake will strike with an epicentre around 100 km away from the Patan square. As a result, 3 temples and 2 historical monuments in the square close to the museum will collapse.	
15:02	The museum building's roof will collapse in the south wing due to lack of maintenance. Permanent cracks will appear in the building. The collapsed roof will damage parts of the collection.	Invite a structural engineer to inspect and maintain the roof regularly, especially since monkeys tend to damage it.
16 October 2024		
08:00	The untrained museum staff will be unable to temporarily cover the collapsed roof and will enter the museum without gear and focus on evacuating and salvaging the damaged collections.	Train staff and share knowledge on steps to be taken for disaster risk management and personal safety.
14:30	Catering to the chaos post-earthquake in the city, the emergency response team will still be unable to reach the museum to help.	Build relationships with the emergency rescue services and civil defence.

16:30

It will start to **rain**, which due to the collapsed roof will damage the still exposed publications.

Carry out a value assessment of the collections.

17:15

Seepage of rainwater through the collapsed roof will also cause an **electric switch box to catch fire, impacting the wooden components located nearby.**

Call an electrician to carry repair and maintain the museum wiring.

17:25

Security guards on-site will notice the fire, locate **fire extinguishers** and call the fire department.

Train staff in collaboration with the local fire department.

17:55

Fire will be extinguished by security guards, the fire brigade, and the local community, but cause major damage.

Likely Impact

Many historical architectural features such as wooden ladders, rafters, and historical windows will have sustained fire damage. The influx of water from the collapsed roof will have damaged important collections, and will have a long-term impact on the building.

Mitigation Strategies Implemented

Coupling the knowledge gained from researching and developing this disaster risk scenario with his past experience of an earthquake at his site, Suresh was able to identify mitigation measures by highlighting the vulnerabilities that should and could be targeted and the existing capacities that must be enhanced.

Week 1, Suresh carried out a comprehensive disaster risk assessment of the museum to identify the risk path, as well as a building safety assessment with structural engineers and electricians inspecting the building wiring and roof.

Week 3, Suresh held meetings with the local community, stakeholders and the Nepal army to share his knowledge about disaster risk management.

Week 4, Suresh prepared an emergency contact list to disseminate among museum staff.

Week 5, Suresh conducted a value assessment of the museum collections.

Week 7, Suresh drafted an institutional disaster risk management plan and trained his staff with protocols in times of emergencies.

Positive Actions

- A scenario-based of disaster risk management plan drafted, including a risk path identification and analysis.
- Building safety assessment conducted, with repairs of wiring and better maintenance of the roof systems.
- Value assessment of collections created.
- Developing relationships with the local community and other stakeholders such as the fire department, the Nepal army, civil defence, etc.
- Emergency contact list prepared and staff trained to be better prepared in a disaster.



Interaction between staff and local community, supported by Lalitpur Metropolitan city, 2021 © Suresh Man Lakhe

Afterlife

- Carrying out regular training refreshers for staff to support disaster risk management
- Holding a workshop with the local community, Department of Archaeology, the municipality, and other related stakeholders to prepare for the detailed Disaster Risk Management plan
- Form a final and detailed Disaster Risk Management Plan for Patan Museum and Patan Durbar Square in the next year
- Support the management of the Patan Museum's store

04

**TOGETHER FOR
CHANGE**

Changing Perspectives to Manage Disaster Risks for Cultural Heritage and Associated Communities

After the completion of this course it is clear that the participants achieved impressive results thanks to the dedication and commitment of all involved, despite the changing and often difficult circumstances of the pandemic.

All the participants enhanced their understanding of how their cultural heritage sites are exposed to disaster risk. They developed detailed scenarios that helped them to understand what capacities they and their institutions already possess for managing disaster risks, as well as what vulnerabilities they must reduce in order to mitigate the risk of overlapping extreme hazard events and epidemics.

The participants broadened their networks and made connections with different sectors, often leading to fruitful collaborations. This in turn led to strengthening their institutions' emergency preparedness.

Various milestones were achieved, including enhancing capacities at local and subnational levels, as well as developing coordination mechanisms with emergency response services and carrying out heritage-specific risk assessments.

Participants from India, Argentina, Malawi, Vietnam and Nigeria conducted training for heritage professionals to enhance their capacity to respond in the event of a flood, fire or earthquake. Furthermore, participants from Pakistan and the Philippines, as well as others, organised webinars sharing key disaster risk mitigation knowledge and raising awareness among varied disciplines and professionals.

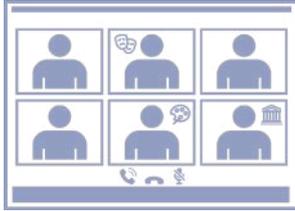
Using a vulnerability and capacity assessment activity taught during the course, a participant from Iran gained key insights on how his heritage site is a source of resilience for the local communities. The participants from Indonesia and Nepal carried out value assessments of their collections and buildings in order to develop priorities for risk management. Finally key disaster risk management tools and resources for other heritage custodians were developed by participants from Bangladesh, Malaysia and Myanmar.

The participants successfully gathered the missing links to formulate functional disaster risk management plans. This included collecting data related to the physical state of their buildings, local climate, hazard profiles of their regions, as well as vulnerability and capacity analyses of their respective institutions. They now better understand the likely interactions between their vulnerabilities and risks confronting their heritage sites, and have developed relationships with diverse stakeholders to safeguard their heritage and collections in an emergency.

The participants who conducted webinars and/or training workshops have also received further interest from various governmental and non-governmental institutions for a similar training programme, initiating a community of practice through the broader application of the lessons learnt from this course.

Finally, and most importantly, this course has created a family of cultural heritage professionals who are now armed with the tools and the strategic vision to safeguard their heritage sites and collections in complex disaster scenarios. Through cohort-based learning, these participants have also joined an ever growing network of cultural first aiders around the world.

6



Webinars held on disaster risk management

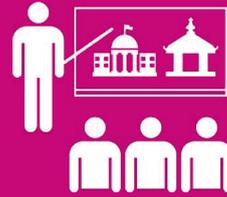
with over...


400
participants



3

Handbooks and toolkits on managing fire and flood risks



11

Trainings and workshops

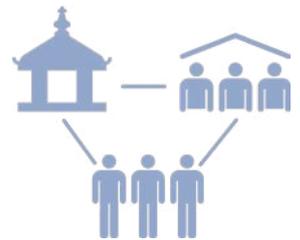
4

Institutions upgraded their disaster risk management plan



23

Partnerships made



11

Buildings assessed for safety and risk mitigation implemented



PHASE 1

7-18 December 2020

91%

Sessions



"They were very interactive and engaging."

"Featured a range of effective ways to deal with problems for the participants who are facing issues with their key stakeholders."

"Also included a virtual party that concluded the first phase of the course."

Concepts



"The course addressed the concept of heritage and its value in a very refreshing way. I understood the disaster risk management cycle in a much broader sense."

"I completely understood the topics and why taking the necessary steps for enhancing preparedness and response strategies is so important for the protection of cultural heritage collections."

"Thinking critically about value was very new and fascinating for me and I have learned to prioritize and plan for the collections."

Tools



"The risk matrix and value pie, were very useful and informative to learn to use."

"I learned about new echnology tools such as Jamboard."

Simulation of Scenarios



"Doing this was crucial and formed the basis of any disaster risk management plan."

Team



"I am very grateful for the involvement and commitment of the team who worked arduously to empower us with the knowledge about disaster risk management in a very short period of time."

Knowledge Gained

"This course has empowered me with the knowledge of how to design a disaster risk management plan for my institution."

"I was able to fulfil the needs of my museum and am more eager than ever to carry out a functional disaster risk management plan."

"This course has made me realize how important it is to have a disaster risk management plan and how to plan one for my own museum."

"This training has provided a great platform on how to prepare for and respond to disasters."

"From this course I gained new perspectives on how disasters are not natural and can happen at anytime. So, it's very important to manage the risk that will lead to the loss of the value of heritage."

"Now I have the ability to clearly communicate with my institution and key stakeholders, to support safeguarding our cultural heritage collections. Additiionally, I can now train other staff in my institution, using the knowledge gained from the course."

"The course has created a family of cultural heritage professionals prepared with the tools of disaster risk management and with an empathetic outlook and strategic vision for their heritage collections and countries."

"Although the assignments and group activities looked challenging at first, the methods of teaching, the pre-course assignment and the regular recap sessions helped me to grasp the concepts quickly."

PHASE 2 7-18 June 2021

89%

"I really appreciate the chronological steps used in teaching the participants the Course."

"I loved the last session where Alessia took us on a step by step tour via video and showed us in practice how to treat object collections in times of emergency."

Sessions



"Through this project I have been able to identify my key stakeholders and I have interacted with most of them."

"After participating in this training, my understanding of concepts became clear and I have not only started sharing this knowledge and experience with my museum but also other rail museums."

"Our museum along with staff from other museums now fully understand the concept of risk, vulnerabilities, exposure, hazard, disaster and why is it so important."

Concepts



"The grand simulation was really helpful. The sophisticated technical effects made the situation look and feel like a real disaster. Really suspenseful!!!!"

"This made us ready to handle disasters and taught us how to deal with disasters and all the challenges that accompany them."

"We learned through this that teamwork is highly important, as well as how to prepare for and respond to such situations."

Grand Simulation



Stakeholders



"There is a need to link up with agencies such as the Fire Police, Department of Disaster Prevention, and the Red Cross."

"I will review the strategy of facilitating the tenants and owners under my projects in terms of disaster risk reduction."

"Your plan must have confirmed support and involvement from local communities or relevant organizations and this differs in every situation."

Knowledge Gained

"Through the course I learnt how the layers of protection and mitigation strategies evolve step-by-step."

"The most effective and excellent way of learning is from each other's experiences."

"This training has helped us to prepare for a disaster situation. Although we can't necessarily avoid it, we now understand that it is crucial to detect and block any risks possible."

"It helped me to grow my understanding of the surrounding environments, needs, cultural contexts etc. that form the specific premises of an overall disaster risk reduction plan, instead of merely thinking about providing equipment and basic training."

"This project has prepared me to face unexpected challenges, and that one should always prepare a plan B for unforeseen situations."

"This training has grown my commitment to the work that I do every day. By seeing that heritage is a fundamental part of all state projects, no matter the level, we can form a collective awareness and strengthen the recognition of social groups through their material testimony."

"With the knowledge gained from taking the training, I have started an initiative to disseminate the information to my own museum (National Rail Museum) and 34 other rail museums/galleries."

"Through an online workshop supported by ICCROM FAR CollAsia, all museums who joined will work on their disaster risk management plans and report their progress."

"You cannot protect heritage alone."

05

GLOSSARY

GLOSSARY

Adaptation: Adjustment in natural or human systems to a new or changing environment that exploits beneficial opportunities or moderates negative effects. (IPCC, 2014)

Read more: <https://perma.cc/CL9W-YDVS>

IPCC : <https://perma.cc/PT5W-EBAP>

Build back better: 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. (UNDRR, 2016)

Read more: <https://perma.cc/H3BR-UK4J>

Capacity: The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience. (UNDRR, 2016)

Read more: <https://perma.cc/H3BR-UK4J>

Capacity Building: Capacity-building is defined as the process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world. An essential ingredient in capacity-building is transformation that is generated and sustained over time from within; transformation of this kind goes beyond performing tasks to changing mindsets and attitudes. (UN, 2002)

Read more: <https://perma.cc/MKA6-RFG3>

Capacity development: The process through which individuals, organizations and societies obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time.

Read more: <https://perma.cc/ZD4P-L9AZ>

Climate change: Changes in average weather conditions that persist over multiple decades or longer. Climate change encompasses both increases and decreases in temperature, as well as shifts in precipitation, changing risk of certain types of severe weather events, and changes to other features of the climate system.

Note that the United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of 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.'

Read more: <https://perma.cc/PT5W-EBAP>

Climate action: Climate actions undertaken for mitigation reduce the level of greenhouse gases in the atmosphere. In contrast, the latter response, climate change adaptation refers to actions taken to reduce the impact of climate change once it occurs. Since human emissions of greenhouse gases have locked in a certain amount of future climate disruption, climate actions that undertake adaptation appear imperative as a key component of an integrated and balanced response to climate variability and change.

Read more: <https://perma.cc/U4FA-6K33>

Global change: Changes in the global environment that may alter the capacity of the Earth to sustain life. Global change encompasses climate change, but it also includes other critical drivers of environmental change that may interact with climate change, such as land use change, the alteration of the water cycle, changes in biogeochemical cycles, and biodiversity loss.

Read more: <https://perma.cc/PT5W-EBAP>

Coping Capacity: The ability of people, organizations, and systems, using available skills and resources to face and manage adverse conditions, emergencies, or disasters. The capacity to cope requires continuing awareness, resources, and good management, both in normal times as well as during crises or adverse conditions. Coping capacities contribute to the reduction of disaster risks.
Read more: <https://perma.cc/CL9W-YDVS>

Cultural heritage: Cultural heritage may be defined as the expression of the ways of living as developed by a community that are passed on from generation to generation, including customs, practices, places, objects and artistic expressions and values. Often, cultural heritage is characterized as either tangible or intangible. (ICOMOS, 2002).
Read more: <https://perma.cc/Q2JW-F5MW>

Forecast: Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.
Read more: <https://perma.cc/CL9W-YDVS>

Disaster: A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to human, material, economic and environmental losses and impacts. (UNDRR, 2016)
Read more: <https://perma.cc/H3BR-UK4J>

Disaster Risk: Disaster risk is considered as the combination of the severity and frequency of a hazard, the numbers of people and assets exposed to the hazard, and their vulnerability to damage.
Read more: <https://perma.cc/TZ43-3ZVG>

Disaster Risk Assessment: A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend. (UNDRR, 2016)
Read more: <https://perma.cc/H3BR-UK4J>

Disaster Risk Reduction: (DRR) Disaster risk reduction is aimed at preventing new and reducing existing disaster risks and managing residual risks, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. (UNDRR, 2016)
Read more: <https://perma.cc/H3BR-UK4J>

Disaster Risk Management: (DRM) Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses. (UNISDR 2017 Terminology)
Read more: <https://perma.cc/VBV6-52SG>

The policy objective of anticipating and reducing risk is called disaster risk reduction (DRR). Although often used interchangeably with DRR, disaster risk management (DRM) can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk. (Adapted from UNISDR Global Assessment Report 2015)

Exposure: The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas.

(UNIDDR, 2017 Terminology)

Read more: <https://perma.cc/PY9T-FW4V>

Hazard: A process, phenomenon or human activity that is considered dangerous, and may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation. (UNDRR, 2017)

Read more: IASC, 2011: <https://perma.cc/85SP-6HKW>

IFRC, 2017: <https://perma.cc/WP7R-ELK8>

UNDRR, 2016: <https://perma.cc/H3BR-UK4J>

Indigenous knowledges: refers to Indigenous peoples' systems of observing, monitoring, researching, recording, communicating, and learning that are required, as for any group, to support survival and flourishing in an ecosystem and the social adaptive capacity to adjust to or prepare for changes.

Read more: <https://perma.cc/CL9W-YDVS>

Intangible Cultural Heritage: Intangible cultural heritage encompasses the practices, representations, expressions, knowledge, skills, instruments, objects, artefacts and cultural spaces that a given community, group or individuals recognize as part of their cultural heritage and express through oral tradition; customs; language; performing arts; ritual and festive events. (UNESCO, 2003)

Read more: <http://perma.cc/5ZXN-XCPV>

Livelihood: A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living.

Read more: <https://perma.cc/CL9W-YDVS>

Mitigation: The lessening or minimizing of the adverse impacts of a hazardous event. The adverse impacts of hazards, in particular natural hazards, often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures include engineering techniques and hazard-resistant construction as well as improved environmental and social policies and public awareness. (UNIDDR, 2017 Terminology)

Read more: <https://perma.cc/57AM-7M9E>

Preparedness: The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters. (UNISDR 2017 Terminology)

Read more: <https://perma.cc/B4EZ-RQXL>

Prevention: Activities and measures to avoid existing and new disaster risks. disaster prevention expresses the concept and intention to completely avoid potential adverse impacts of hazardous events. While certain disaster risks cannot be eliminated, prevention aims at reducing vulnerability and exposure in such contexts where, as a result, the risk of disaster is removed.

(UNISDR 2017 Terminology)

Read more: <https://perma.cc/K62J-VR2T>

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management. (UNDRR, 2016)

Read more: <https://perma.cc/H3BR-UK4J>

Rehabilitation: The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster. (UNISDR 2017 Terminology)

Read more: <https://perma.cc/GK46-Y8WU>

Reconstruction: The medium- and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk. (UNISDR 2017 Terminology)

Read more: <https://perma.cc/SJ7K-P3K6>

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. (UNISDR 2017 Terminology)

Read more: <https://perma.cc/Q94Q-HN5N>

Response: Actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected. (UNISDR 2017 Terminology)

Read more: <https://perma.cc/AG6N-ML88>

Risk: The combination of the probability of an event and its negative consequences. The word “risk” has two distinctive connotations: in popular usage the emphasis is usually placed on the concept of chance or possibility, such as in “the risk of an accident”; whereas in technical settings the emphasis is usually placed on the consequences, in terms of “potential losses” for some particular cause, place and period.

Read more: <https://perma.cc/TZ43-3ZVG>

Risk Paths: Interdependency between complexity drivers and causal relationships among various risk factors during risk assessment for disaster management, the identification of risk path scenarios enables gaining a better understanding of the sources and impact areas of risks, and to better deal with the risks, thereby contributing to the practice.

Read more: <https://perma.cc/2E6U-VMKY>

Risk Mapping: The process of identifying high-risk areas. This is done by correlating a hazard, such as an earthquake, to the terrain and to the probability that such an event will occur. The results of these analyses are usually presented in the form of risk maps, which show the type and degree of hazard represented by a particular natural phenomenon at a given geographic location. Risk mapping is usually the first step in vulnerability reduction.

Read more: <https://perma.cc/CL9W-YDVS>

Scenario: Sets of assumptions used to help understand potential future conditions such as population growth, land use, and sea level rise. Scenarios are neither predictions nor forecasts. Scenarios are commonly used for planning purposes.

Read more: <https://perma.cc/CL9W-YDVS>

Stakeholder: An individual or group that is directly or indirectly affected by or interested in the outcomes of decisions.

Read more: <https://perma.cc/4L8B-MHX2>

Sendai Framework for Disaster Risk Reduction 2015 --- 2030: The Sendai Framework aims to achieve the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries by 2030. It has seven targets and four priorities of action, which include concerns for protecting cultural heritage from disasters.

Read more: <https://perma.cc/MDB6-G5VG>

Shock: Shocks are sudden, unexpected or unpredictable events that have impacts on livelihood security.

Read more: <https://perma.cc/CL9W-YDVS>

Sustainable Development Goals: The Sustainable Development Goals, or SDGs for short, are an intergovernmental set of development goals. All United Nations members have committed to work towards the achievement of all the goals by their target date 2030. The SDGs are made up of 17 goals and 169 indicators. The SDGs have replaced the Millennium Development Goals.

Read more: <https://perma.cc/R5X3-68SM>

Sustaining peace: Sustaining peace offers a new approach to enhance the capacity of societies not only to address the immediate consequences of conflict but also to prevent the outbreak of violence using peaceful means. From a sustaining peace perspective, peacebuilding is a long-term, nationally driven process that focuses on strengthening the attitudes, structures, and institutions associated with peace rather than the factors that drive and sustain conflict. (Joint General Assembly/Security Council resolutions on peacebuilding)

Read more: <https://perma.cc/5LYS-85LH>

Tangible Cultural Heritage: Tangible cultural heritage is composed of the physical manifestations of culture produced, maintained and transmitted within a society. It may refer to:

- a. Immovable cultural heritage: places of human habitation including buildings; villages; towns and cities; and structures.
- b. Movable cultural heritage: documents and archives; works of art; handicrafts; tools and machineries, etc.

(UNESCO, 2003; UNESCO, 2012)

Read more: UNESCO, 2003: <http://perma.cc/5ZXN-XCPV>

UNESCO, 2009: <https://perma.cc/7PRG-8SMV>

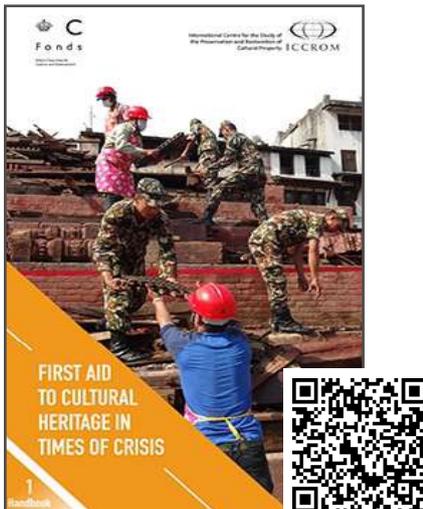
Value of cultural heritage: The term 'heritage values' refers to the meanings and values that individuals or groups of people bestow on heritage (including collections, buildings, archaeological sites, landscapes and intangible expressions of culture, such as traditions). These values have been a key factor in the legitimization of heritage protection and management, although the understanding of what they are has varied over time and there are nuances between one country and another. There are many classifications of values, including historical, aesthetic, economic, social, scientific and an array of other types.

Read more: <https://perma.cc/2MWX-32MY>

Vulnerability: The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards. (UNDRR, 2016)

Read more: <https://perma.cc/H3BR-UK4J>

OTHER RESOURCES



First Aid to Cultural Heritage in Times of Crisis Handbook 1

Author: Aparna Tandon, ICCROM

Year of publication: 2018

Also available in:

English | French | Turkish | Arabic | Portuguese



First Aid to Cultural Heritage in Times of Crisis Toolkit 2

Author: Aparna Tandon, ICCROM

Year of publication: 2018

Also available in:

English | French | Turkish | Arabic | Portuguese



Endangered Heritage Emergency Evacuation of Heritage Collections

Author: Aparna Tandon, ICCROM

Year of publication: 2016

Also available in:

Arabic | English | French | Georgian | Japanese | Nepali | Portuguese | Russian | Spanish | Turkish | Ukrainian | Farsi | German | Italian



inSIGHT: A Participatory Game for Enhancing Disaster Risk Governance

Author: Aparna Tandon, ICCROM

Year of publication: 2020

Also available in:

English | Georgian | Arabic | French | Spanish



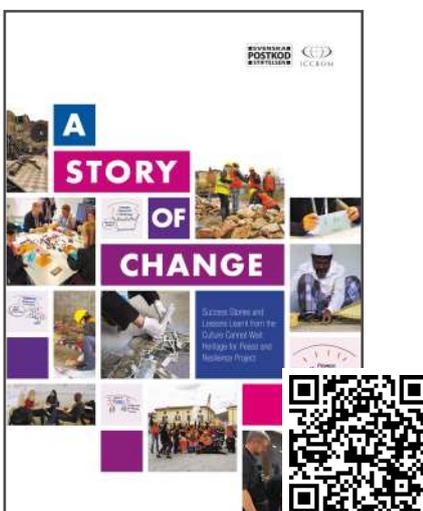
PATH - Peacebuilding Assessment Tool for Heritage Recovery and Rehabilitation Toolkit

Author: Aparna Tandon, ICCROM

Year of publication: 2021

Also available in:

English | French | Arabic



A STORY OF CHANGE - Success Stories and Lessons Learnt from the Culture Cannot Wait: Heritage for Peace and Resilience Project

Author: Yasmin Hashem, ICCROM

Jui Ambani, ICCROM

Year of publication: 2021

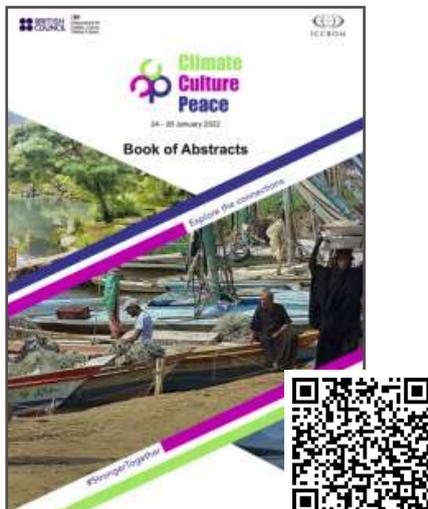
Also available in:

English | French



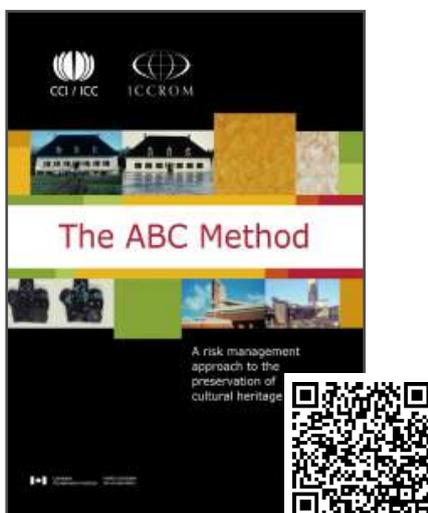
Climate.Culture.Peace Conference Report

Author: Aparna Tandon, ICCROM
 Marcy Rockman, ICCROM
 Jui Ambani, ICCROM
 Kelly Hazerjager, ICCROM
Year of publication: 2022



Climate.Culture.Peace Conference Abstract

Author: Mohona Chakraburty, ICCROM
 Yurim Jeong, ICCROM
Year of publication: 2022



The ABC Method: a risk management approach to the preservation of cultural heritage

Author: Stefan Michalski, ICCROM
 José Luiz Pedersoli Jr., ICCROM
Year of publication: 2017



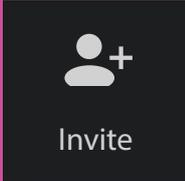
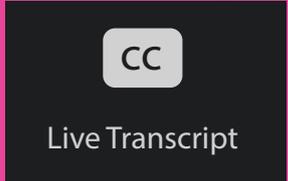
#culturecannotwait



First Aid and Resilience for Cultural Heritage in Times of Crisis (FAR) is a flagship programme of ICCROM. It trains, builds knowledge, creates networks, increases awareness and informs policy with an overall aim to reduce disaster risk for tangible and intangible heritage and associated communities.

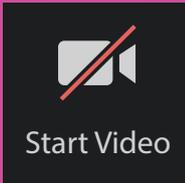
The Programme motto – culture cannot wait – is grounded in the belief that by integrating heritage into the wider programmes for Disaster Risk Reduction (DRR), Humanitarian Aid, Peacebuilding and Climate Action, we can build peaceful and disaster-resilient communities.

Today, the FAR network of over 1000 cultural first aiders span 87 countries. Since 2020, the Programme has served 97 Member States and 18 non-Member States by offering advisory services for protecting cultural heritage before, during and after a disaster or a conflict.



GROUP #1	The significance of area:	Most significant and vulnerable
6-8 PARTICIPANT	<ul style="list-style-type: none"> Unique agriculture Industrial environment Variety of handicrafts Culture and heritage centres Cultural and ethnic diversity Human resources 	<ul style="list-style-type: none"> Agriculture Human resources Cultural heritage properties Industry
RED CROSS, 1 FARMER, 2 TOURISM, 1 ARTIST, 1 PRODUCER, 2	Strengths and Capacities <ul style="list-style-type: none"> Tourists Youth experts among locals 	Threats <ul style="list-style-type: none"> Water crisis and decrease of underground water Subsistence Agricultural depended economy
	Government support: No	
	Solutions: Development of tourism industry and handicrafts	

heritage and human resources which fear of them, introduced as the most vulnerable Capatzen based on their point of view.



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