



R RITSUMEIKAN
UNIVERSITY

DMUCH
Institute of Disaster Mitigation
for Urban Cultural Heritage
Ritsumeikan University

Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University



Many cultural heritage sites around the world are exposed to the risk of disasters.

Even cultures where one is meant to feel ease are no exception.



Notre Dame Cathedral damaged from large scale fire (2014 [one on the top], 2019 [one on the bottom]), Paris, France (Photo: AFP/AFLO)



Temple submerged in flood water (Year: 2011, Ayutthaya, Thailand) (Courtesy: Tourism Authority of Thailand)



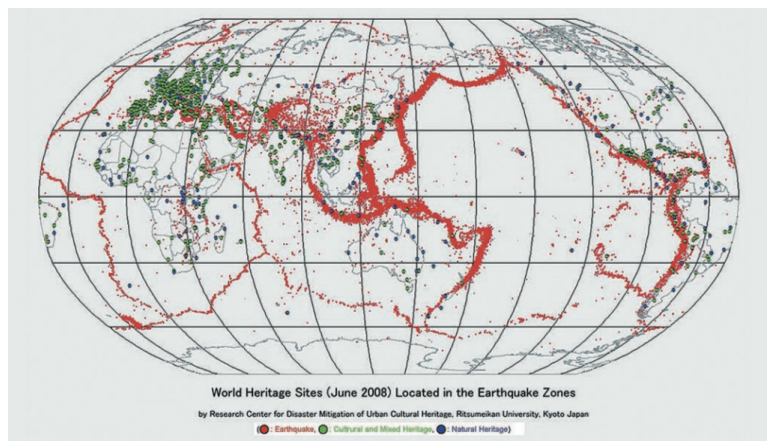
Medieval township destroyed by earthquake (Year: 2016, Amatrice, Italy)

Many of the world heritage sites are located in earthquake-prone zones, such as the Pacific Rim and the Himalayan orogenic belt.

The conservation of cultural heritage and the historic cities surrounding them is an important global issue.

Source

Kanefusa Masuda, et. al. (2009) "Importance of international recognition on the risk of world cultural heritage sites located in earthquake zones" Journal of Disaster Mitigation for Historical Cities, Vol.3, pp.203-210.



Distribution map showing world heritage sites and earthquake zones (2008) (●: Earthquake, ●: Cultural heritage and mixed heritage, ●: Natural heritage)

Our Mission

Cultural heritage rooted in the local communities of historical cities is the achievement of human cultural activities nurtured over a long period of time and is valuable common social capital. It is the responsibility of today's society to protect this irreplaceable cultural value from the threat of disasters and to pass it on to future generations.

Global Center of Excellence for Education, Research and Development of Strategy on Disaster Mitigation of Cultural Heritage and Historic Cities

Disaster and Disaster Mitigation

Civil Engineering Architecture
Earthquake Engineering Urban Planning
Disaster Science

Conservation of Cultural Heritage

History Preservation and Restoration Studies
Policy Science Cultural Heritage Conservation
Geography Digital Humanities

Newly emerging research area that bridges the two traditionally separated fields

The tangible and intangible cultural heritage of historical cities contains a wealth of wisdom, technology, and experience of our predecessors to face and coexist sincerely with the natural environment and disasters. The Institute of Disaster Mitigation for Urban Cultural Heritage, Ritsumeikan University (R-DMUCH) aims to realize a culture of disaster mitigation that can be passed on to the future by extracting such wisdom of our predecessors and rooting it in the community as a whole. For this purpose, we are working on research issues related to cultural heritage disaster prevention or historical city disaster prevention, based on a multifaceted evaluation of historical, cultural, and technological values that transcends the boundaries of the academic disciplines of humanities and science and engineering.

We also intend to create a platform for both domestic and international research projects in collaborating with various research organizations such as the Art Research Center, Ritsumeikan University that makes the best use of information technology archiving cultural materials.

R-DMUCH celebrates 20 years since its establishment and will continue collaborating with industry-government academia, NPO/NGO, and international institute including local societies by engaging in development of the disaster mitigation of the cultural heritage, researching history and traditions to carry forward cultural values, acquiring disaster mitigation technologies that can be applied to the field, and producing work-ready practitioners and young researchers who will take charge of the new research developments.

We also organize the educational research environment in order to make a practical contribution to the society as a center of excellence for the field of disaster mitigation of cultural heritage.

We sincerely wish for your continued support and cooperation.
Shinta YOSHITOMI,
Director of Institute of Disaster Mitigation for Urban Cultural Heritage



Learning from the history of disaster and communities

With surveying the value of cultural heritages and buildings, collecting historical materials related to past disasters and social responses to them, creating a "Memory map" of local community based on qualitative surveys, and developing a space-time GIS to understand the various aspects of historical disasters, we explore the history of disasters in historical and cultural cities to learn more about the regional knowledge readily available for disaster mitigation initiatives in the future.

Developing disaster mitigation technologies of historic and cultural cities

By developing seismic design and seismic retrofitting technologies, and fire protection systems with advantages of traditional wisdom, regional history and culture, and also proposing disaster mitigation countermeasures of historic and cultural regions by assessing geo-environments, we aim to establish new disaster mitigation technologies of historic and cultural cities uniting both "historic, cultural and design values" and "disaster mitigating performance".

Preventing damage of cultural heritage sites from human and animal made disasters

We systematically investigate damages to cultural heritage caused by human

and animal activities including criminal acts, such as theft of traditional artifacts and arson of historical buildings, and invasion of raccoons into the temples and shrines. Further, we develop effective counter measures including action planning guidelines and hi-functioning protection systems to safeguard the cultural heritage site from the human and animal made disasters.

Designing disaster mitigation for historic cultural cities

We aim to make local disaster mitigation plans in historical zones and policies to effectively implement them. We contribute to designing the future of historical environments and communities through practical applications of analyzing the local characteristics and making the best use of the cutting-edge technology of disaster mitigation in the fields.

Contributing for the international societies

We have been authorized as the only UNESCO Chair in the field of cultural heritage risk management. Through our International Training Course (ITC), and the research network that it has generated, we are carrying out research, as well as developing educational programs to enhance the capacity for disaster risk management of cultural heritage. We promote the study and field research of disasters that affect cultural heritage around the world.

Dissemination of Researches and Educational Activities

Journal and symposium

We are annually publishing Journal of Disaster Mitigation for Historical Cities by assembling research articles submitted to the Symposium on Disaster Mitigation of Cultural Heritage and Historical Cities.



Publication of textbooks and lectures

We are publishing some books titled "Introductory Volume" to Cultural Heritage Disaster Mitigation Studies, "Text: Disaster Mitigation of Cultural Heritage", and "The Memory of 2015 Nepal Earthquake" which are compilations of the achievements of the researches and the lectures that are given at the graduate schools.



Academic program on "Cultural Heritage Disaster Mitigation Studies"

This course is provided as a multidisciplinary program under a credit system in which graduate students can also participate. We provide various opportunities to learn "Cultural Heritage Disaster Mitigation Studies" to the public, Ritsumeikan students, other universities students and adult students with business experience, in order to contribute to the expansion and development of the existing academic field.

Collaboration with Communities and International Societies

Joining the organizations and Agreements with both home and internationally (some examples)

<Agreements with international organizations and regional organizations>

- ◆ International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM)
- ◆ Southeast Asian Ministers of Education Organization-Regional Centre for Archaeology and Fine Arts (SEAMEO-SPAFA)

<Organizations we join>

- ◆ Liaison Council for Exhibition of All Japan School Children's Excellent Mapping Work
- ◆ Disaster Alliance of Disaster Research Institutes (GADRI)

<Agreements with domestic organizations>

- ◆ International Research Institute of Disaster Science (IRIDes), Tohoku University
- ◆ Social Welfare Council, Neighborhood Association

<Agreements with overseas universities and organizations>

Europe

UK: Earthquake and People Interaction Centre, Department of Civil, Environmental and Geomatic Engineering, University College London
Department of Geography, University of Sheffield

Italy: University of L'Aquila

Consiglio Nazionale delle Ricerche, Istituto di Ricerca per la Protezione Idrogeologia
BENECON SCaRL

East Asia

China: Institute for Historic and Cultural Cities of National Importance, Beijing
Tsinghua Tongheng Urban Planning & Design Institute
School of Architecture, Southwest Jiaotong University

Republic of Korea: International Council on Monuments and Sites (ICOMOS)
KOREA

Education Center for Honam Regional Building Renovation
Engineer in Division of Architectural Engineering, Chosun
University Gwangju

National Research Institute of Cultural Heritage
Disaster Management Research Institute for Cultural
Heritage, Jeonju

Southeast Asia

Indonesia: National Development Planning Agency (BAPPENAS)

Malaysia: George Town World Heritage Incorporated, Malaysia

Thailand: Faculty of Architecture and Planning, Thammasat University

Southern Asia

India: Gujarat Institute of Disaster Management

Nepal: Institute of Engineering, Tribhuvan University

North America

USA: The Center for Public Service, Portland State University

Contribution for the Society

Support for the Global Societies

UNESCO Chair Programme: International Training Course on Disaster Risk Management of Cultural Heritage

As the core educational project of UNESCO Chair Programme on Cultural Heritage and Risk Management, the International Training Course (ITC) on Disaster Risk Management of Cultural Heritage at Ritsumeikan University is an intensive educational program and the scientific network which was developed in response to the recommendations made by the Special Thematic Session on Risk Management for Cultural Heritage that was held in Kobe, Japan, in January 2005 as a part of the World Conference on Disaster Reduction (WCDR). This meeting adopted a declaration that recognized the close relationship between cultural heritage protection and socio-economic development. The ITC has been acting as a focal point for organizing international research, training, and information networking in the field of risk management and disaster mitigation related to cultural heritage.

In light of these challenges, comprehensive disaster risk reduction is essential for the protection of cultural heritage from disasters. Therefore, the ITC organizes our program to build institutional capacities for disaster risk reduction. It is fundamental for these plans to consider the characteristics of cultural heritage and the nature of the hazards experienced in a particular region.

The ITC is organized in cooperation with UNESCO, ICCROM, ICOM, ICOMOS/ICORP and relevant institutions of the government of Japan. We will continue these outreach activities and dissemination of our research outcomes. Continuously enhancing the effectiveness of the ITC program, we conduct follow up workshops and we collaborate on international research projects with ITC alumni.

Supporting developing countries' education on disaster mitigation for cultural heritage

As part of the Indonesian government training, we invite local government officials and conduct training through lessons and best practices in urban and community planning in Kyoto, Osaka, and Shiga by lectures, discussions, and field surveys.

Support for Communities

We hold Children's Map Contest for Community Safety, and collaborate with voluntary disaster mitigation organizations run by local communities or with civic organization such as TOMMOROW'S KYOTO, cultural heritage platform for safer historical communities.



Ritsumeikan University, UNESCO Chair programme, International Training Course on Disaster Risk Management of Cultural Heritage



Training Guide of Ritsumeikan University, UNESCO Chair programme, International Training Course on Disaster Risk Management of Cultural Heritage



Ritsumeikan University, Indonesian government training

History

Apr. 2003 21st century COE program adopted (Until 2007)
Aug. 2003 Research Center for Disaster Mitigation of Urban Cultural Heritage established
Apr. 2004 Kakuchi Elementary School Center established
Jan. 2005 UN World Conference on Natural Disaster Reduction (Kobe) in-charge of secretariat for themes and open forum
Apr. 2005 The Academic Frontier Promotion Program adopted (Until 2009)
Mar. 2006 Research Center for Disaster Mitigation of Urban Cultural Heritage constructed
Jan. 2006 Symposium on Disaster Mitigation of Cultural Heritage and Historical Cities started (Annual Project)
Oct. 2006 UNESCO Chair Programme on Cultural Heritage and Risk Management, International Training Course (ITC) on Disaster Risk Management of Cultural Heritage started (Annual Project)
Sep. 2007 Children's Map Contest for Community Safety started (Annual Project)
Apr. 2008 Global COE Program adopted (Until 2012)
May 2009 Ideas Competition for Strategy on Disaster Mitigation of Cultural Heritage and Historic Cities started (Until 2012)

Apr. 2013 Reorganized as Institute of Disaster Mitigation for Urban Cultural Heritage
Apr. 2014 Started a support by Toyota Foundation for International Training Course (ITC) (Until 2016)
Mar. 2015 UN World Conference on Natural Disaster Reduction (Sendai) hosted a public forum
Apr. 2017 Support to ITC program from the National Institute for Cultural Heritage (until 2018)
Mar. 2019 Adoption of FY2019 ODA UNESCO activity spend subsidy (cooperation project for the spread and development of the UNESCO activities that contribute for the achievement of SDGs)
Jul. 2023 The DMUCH's 20th Anniversary Keynote Lecture was held

Organization

Director
Shinta YOSHITOMI (Professor, College of Science and Engineering, Ritsumeikan University)
Deputy Director
Akio MURANAKA (Professor, College of Letters, Ritsumeikan University)



Cover page annotation

Upper left Damages from serious flood disaster in Hanshin area in 1938
Upper right A fire broke out in Shuri Castle (2019, Okinawa) (Photo: EAP=Jiji Press)
Center left Streets of Gion, Kyoto
Center right Water discharge training at Daigoji temple
Lower left Ritsumeikan University, UNESCO Chair programme, International Training Course on Disaster Risk Management of Cultural Heritage
Lower right A fire broke out in Notre-Dame Cathedral (2019, Paris) (Photo: AP/AFLO)

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