

### WORLD HERITAGE SITES (JUNE 2008) LOCATED IN THE EARTHQUAKE ZONES

by Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University, Kyoto, Japan

- Earthquake
- Cultural and Mixed Heritage
- Natural Heritage

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#### **Proceedings of**

#### THE INTERNATIONAL TRAINING COURSE ON DISASTER RISK MANAGEMENT OF CULTURAL HERITAGE

2010, 5th year, 13th to 26th September 2010, Kyoto, Kobe, Sasayama, Japan

ICOMOS ICORP SCIENTIFIC MEETING,
"Sustainable Protection and Recovery of Cultural Heritage in Post Disaster Situation",
25th to 26th September 2010 at Kyoto, Japan

140th Anniversary of the Ritsumeikan Academy,
110th Anniversary of Ritsumeikan University,
RITSUMEIKAN UNIVERSITY AND ICOMOS-ICORP
INTERNATIONAL SYMPOSIUM,
"How to Protect Cultural Heritage from Disasters:
Risk Preparedness and Post Disaster Recovery",
26th September 2010 at Kyoto, Japan

#### **PREFACE**

In response to the increasing vulnerability of cultural heritage properties to various hazards such as earthquakes, fire, floods and cyclones, the Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University, and Kyoto organized the Fifth International Training Course on Disaster Risk Management of Cultural Heritage as part of its UNESCO Chair Programme.

In the light of devastating Haiti earthquake that struck on January 2010, this year's training course focused on emergency response and long term recovery of wooden and composite cultural heritage from earthquake and fire. The course was organized in Kyoto, Kobe and Sasayama from 13 to 26 September 2010 and was attended by five teams of two participants each, from Turkey, Peru, Bhutan, Palau and Serbia.

During the course, classroom lectures, workshops and practical demonstrations were organized at the World Heritage Sites in Kyoto, Kobe and historic area of Sasayama.

Towards the end of the training course, ICOMOS-ICORP Scientific Meeting on sustainable protection and recovery of cultural heritage in post disaster situation was organized from 24 to 27 September 2010. The meeting discussed measures for addressing cultural heritage requirements during post disaster recovery process such as documentation, damage assessment, emergency protection and repair and interventions aimed at reducing future disaster risks. The meeting was attended by renowned international experts and members of ICOMOS-ICORP.

On behalf of Ritsumeikan University and other partners of the training course, and ICOMOS-ICORP, we would like to sincerely thank Mr. Kai Weise, consultant to UNESCO Kathmandu office and his team for painstakingly going through all the deliberations of these events and putting together this comprehensive and richly illustrated document.

Thanks are also due to all those including the staff of Ritsumeikan University, who helped in organizing these events and contributed in making it a success.

Kanefusa Masuda & Rohit Jigyasu

Professors, Research Center for Disaster Mitigation of Urban Cultural Heritage Ritsumeikan University, Kyoto, Japan

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#### **SECTION 1 BACKGROUND**

#### 1.1 Introduction and Objectives

#### **Disasters and Cultural Heritage**

Recent destructive earthquake in Haiti on 12 January 2010 has caused enormous loss of life, property and cultural heritage especially in the historic area of Jacmel. This disaster has once again shown that cultural heritage is highly vulnerable to natural disasters such as earthquake and fire. In the post disaster phase, the challenge is how to salvage heritage properties. which are at risk of demolition and to assess their damage. The long term challenge during recovery phase is how to repair and retrofit them and undertake reconstruction that respects tangible as well as intangible heritage values. This event also brings forward the challenges of engaging various stakeholders at the local, national, regional as well as international levels for protecting cultural heritage during such severe situations.

In the light of these challenges, comprehensive risk management is essential for the protection of cultural heritage from disasters. Therefore Cultural Heritage and Risk Management project of Ritsumeikan University Research Center for Disaster Mitigation of Urban Cultural Heritage (Rits DMUCH) aims to organize the UNESCO

Chair International Training Programme and develop a scientific support network, in order to build the institutional capacity needed to formulate comprehensive risk management plans that are based on the characteristics of cultural heritage and nature of hazards in the regional context.

#### Ritsumeikan University and its **Training Course**

UNESCO Chair Programme on the International Training Course on Disaster Risk Management of Cultural Heritage is a followup of the recommendations adopted at the Special Thematic Session on Risk Management for Cultural Heritage held at UN-WCDR (World Conference on Disaster Reduction) in January 2005 in Kobe, Hyogo, Japan. One of these recommendations advocated the need for the academic community to develop scientific research, education and training programs incorporating cultural heritage in both its tangible and intangible manifestations, into risk management and disaster recovery. The importance of strengthening knowledge, innovation and education to build a culture of

disaster prevention at WH properties was reiterated also by the World Heritage Committee at its 30th session (Vilnius, Lithuania, July 2006).

Furthermore, the "Declaration", adopted at the International Disaster Reduction Conference (IDRC) of Davos (August 2006) confirmed that 'concern for heritage, both tangible and intangible, should be incorporated into disaster risk reduction strategies and plans, which are strengthened through attention to cultural attributes and traditional knowledge'.

In response to these recommendations by the international community, Rits DMUCH has been acting as a focal point for organizing international research, training and information network in the field of cultural heritage risk management and disaster mitigation.

The previous training courses have been attended by participants from Nepal, India, Pakistan, Bhutan, Bangladesh, Iran, P.R.China,

Korea, Philippines, Indonesia, Taiwan, Serbia and Moldova Last vear's training Course was held in Kyoto (Japan) and Kathmandu (Nepal). In the Kathmandu part, ten participants from Nepal participated as observers.

#### Objectives and Methodology of the **Training Course**

The main objective of the course is to provide an overview of the various facets of disaster risk management of cultural heritage. The course provides interdisciplinary training for professionals to:

- Undertake an integrated risk assessment to analyze the vulnerability of cultural heritage to physical, socioeconomic and political risks;
- Build an integrated system for disaster risk management of cultural heritage, incorporating disaster preparedness and urban planning;
- Formulate risk management plans for cultural heritage that correspond to the regional disaster management

plan; and · Establish an

international scientific network system for risk management of cultural heritage.

The course comprises lectures, site visits, workshops, discussions and individual/ group presentations.



BACKGROUND

Participants are expected to actively participate throughout the course. The course aims at promoting the development of collaborations and network building among scholars and professionals in cultural heritage protection.

Based on the information obtained from lectures and site visits, and exercises through workshops, the training course also sets the goal of raising planning skills in cultural heritage disaster prevention, by having each participant make a plan during team project for the prevention of disaster to his/her country's cultural heritage, in line with each country's respective social and economic situation. In order to do so, the Centre has asked the participants to prepare the relevant materials before coming to Japan, so that the two participants from each country could learn from each other's experience through this process.

In 2006, which was the first year for training course, eight participants from four countries were invited, namely India and Pakistan, where a great earthquake occurred in 2005 in Kashmir, Indonesia, which suffered Indian Ocean Tsunami triggered by the Sumatra Earthquake in 2004 and by the Earthquake on the Javanese Island in 2006; and Korea, which had suffered a big forest fire.

We, Rits-DMUCH exchanged MoU with ICCROM and made a criterion

for choosing participants with the support of ICCROM. As a result, in 2007 which was the second year for training course, we invited eight participants from Bangladesh, China, Peru and Philippines for the training course.

In 2008, which was the third year for the training course, seven participants were invited from Bhutan, Iran, Nepal and Serbia. We also invited 2 experts from Taiwan as observer. Last year's training course had participants from Moldova, China, Jamaica and Nepal (refer to the previous participants lists).

Last year's training course (2009) had participants from Moldova, China, Jamaica and Nepal (refer to the previous participants lists). Besides Kathmandu part of the training course had observers from local municipalities, university and cultural institutions.

#### **Organizers and Participants**

The training course is organized in cooperation with the UNESCO World Heritage Centre, ICCROM, ICOMOS and relevant institutions of the government of Japan. Participants will include managers of cultural heritage, disaster risk management experts, decision makers and government officials involved in cultural properties or disaster management.

## Focus of the Fifth International Training Course 2010

In the light of Haiti earthquake, this year's training course will especially focus on emergency response and long term recovery of wooden and composite cultural heritage from earthquake and fire. The following areas will be considered at greater depth during this year's course:

- How to prevent fire in wooden heritage of historic towns, especially following an earthquake?
- What kind of emergency preparedness and response systems should be developed for protecting cultural heritage properties especially those which are located in urban areas at the time of disaster?
- What are the essential considerations for assessing post disaster damage to cultural heritage properties?
- How to plan for long term recovery of cultural heritage properties after disaster through engagement of stakeholders at local, national as well as international levels?

The training course would include field-based learning, classroom lectures and practical demonstrations at the World Heritage Sites in Kyoto, Kobe and historic area of Sasayama. In Kobe, the focus will be on lessons learnt from recovery following 1995 Great Hanshin Awaji earthquake and in Sasayama area, the focus will be community engagement in disaster risk management plan at settlement level.

During the course, Rits DMUCH will also provide various kinds of academic support to the participants to help them develop risk management plans for cultural heritage in their own countries. For this purpose, each country team will jointly select one cultural heritage site in their respective country before attending the course.

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#### UNESCO Chair on Cultural Heritage and Risk Management

## TIMETABLE OF THE INTERNATIONAL TRAINING COURSE ON DISASTER RISK MANAGEMENT OF CULTURAL HERITAGE 2010, 5th year

	9/13 (Mon)	9/14 (Tue)	9/15 (Wed)	9/16 (Thu)	9/17 (Fri)	9/18 (Sat)	9/19 (Sun)
THEME	INTRODUCTION	RISK AN	IALYSIS	RISK ASSESSMENT AND MITIGATION	FIRE PREVENTION AND EMERGENCY PREPAREDNESS	FORMULATING	G DRM PLAN 1
	to DMUCH	to DMUCH	to DMUCH	to DMUCH	to DMUCH	to DMUCH	to DMUCH
	9:30-10:00 (30) Registration 10:00-11:20 (80)	9:00-10:00 Move to Kiyomizu-dera Temple	9:30-10:30 (60) Lecture 4 Introduction to Disaster	10:00-11:20 (80) Lecture 5 Seismic Performance	9:30-10:00 Move to Ninnaji-Temple	9:30-10:50 (80) <b>Lecture 9</b> How to make the EWSS	10:00-13:00 (180) Team Project Formulating
1st	Lecture 1 Orientation to the Course and Introduction to the Context of Historic City of	10:00-12:30 (150) Site Visit 1 World Heritage Site in Kiyomizu-dera	Imagination Game (DIG) (OKUBO)	of Japanese Historical Structures (IZUNO)	10:00-12:30 (150) Site Visit 3 World Heritage Site Fire Prevention	plan for Sannei-zaka Important Preservation District? (OKUBO)	Pormulating DRM Plan for Case Study Sites
	Kyoto (MASUDA)	Temple (SHIRAISHI, Kyoto Pref.)	10:30-11:30 Move to Sannei-zaka		Facilities at Ninna-ji Temple (OMORI)	Tea Break 11:00-12:00(60) Lecture 10	
	Tea break		Area	Tea Break		International Co- operation for the	
	11:40-13:00 (80) Lecture 2 Earthquake		11:30-13:00 (90) Site Visit 2	11:40-13:00 (80) <b>Lecture 6</b> Performance of		Rehabilitation of Earthquake- Affected Cultural Heritage	
2nd	Engineering and Disaster Risk Management for Cultural Heritage (TOKI)		Sannei-zaka Important Preservation District for Groups of Traditional Buildings and Surrounding	Historic Masonry Structures (FURUKAWA)		(AKIEDA, National Institute for CH) 12:00-13:00 (60) Lecture 11 Outline of DRM Plan for Heriage Sites and its Link with Site	
		12:30-13:30 Move to DMUCH	Area (OKUBO)		12:30-13:00 Move to DMUCH	Management Plan (JIGYASU)	
	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
3rd	14:00-17:00 (180)  Presentations by the Training Participants 15min*12	14:30-16:20 (110) Workshop 1 Risk Analysis Exercise for Klyomizu-Dera Temple (JIGYASU)	14:00-15:30 (90) Workshop 2-1 Field work at Sannei-zaka Important Preservation District (OKUBO)	14:00-15:20 (80) Lecture 7 Introduction to the Integrated Methodology for Assessing Risks (JIGYASU)	14:00-15:20 (80) Lecture 8 Disaster Mitigation Plan of Cultural Heritage in Kyoto City (ISHIZAKI, Kyoto City FD)	14:00-18:00 (240) Team Project Formulating DRM Plan for Case Study Sites	Free
		Tea Break	15:30-16:30	Tea Break	Tea Break		
		16:40-18:00 (80) Lecture 3	Move to DMUCH	15:40-18:00 (140)	15:40-18:00 (140)		
4th	Tea Break  17:20-18:00(40)  Special Report Recovery Process of Damaged Cultural Heritage: Experience of the Pisco Earthquake (TERESA)	Disaster Risk Management of Cultural Heritage - Significance and Core Principles (JIGYASU)	16:30-18:00 (90) Workshop 2-2 Risk Assessment Exercise: DIG in Sannei-zaka Important Preservation District (OKUBO)	Workshop 3 Building a Disaster Risk Scenario and Assessing Risk Levels (JIGYASU)	Workshop 4 Role Playing Exercise for Emergency Response Procedures (JIGYASU)		
Dinner	19:00-20:30 (90) Welcome Dinner	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant	Restaurant
Accom- noda- ion	Kyoto	Kyoto	Kyoto	Kyoto	Kyoto	Kyoto	Kyoto

9/20 (Mon/Holiday)	9/21 (Tue)	9/22 (Wed)	9/23 (Thu/Holiday)	9/24 (Fri)	9/25 (Sat)	9/26 (Sun)
RECOVERY PLANNING		FORMULATIN	G DRM PLAN 2	PRESENTATION	ICOMOS -ICORP MEETING	INTERNATIONA SYMPOSIUM
to KOBE	to Sasayama-town	to DMUCH	to DMUCH	to DMUCH	to	to DMUCH
8:00-10:00 Bus Transition to Kobe	10:00-11:20(80) Lecture 12 Experience of the Great Hanshin-Awaji Earthquake:	10:00-10:40 (40) Lecture 15 Nepal Case Study (Kai Weise)	10:00-13:00 (180) Team Project Formulating DRM Plan for Case Study Sites	10:00-13:00 (180) Open Jury Presentation of a DRM Plan for Each Site	Free	9:00-12:00 ICOMOS- ICORP Meeting (Session 2)
10:00-11:30(90) Site Visit 4 the Great Hanshin-Awaji Earthquake Memorial: Theater, Exhibition (TAJIHI, Disaster Reduction and Human Renovation Institution)	Damage Assessment (MURAKAMI, Hyogo Pref.)	10:45-11:25 (40) Lecture 16 Korean Case Study (CHOI Byung-Ha)		tor Each Site by the Training Participants  Critique and Comments from the Resource Persons		
	Tea Break  11:40-13:00 (80)  Lecture 13  Training of Heritage Manager (MURAKAMI, Hyogo Pref.)	11:30-12:10(40) Lecture 17 Taiwan Case Study (Shang-Chia Chiou)				
		Tea Break				
11:30-13:00 Move to Sasayama		12:20-13:00(40) <b>Lecture 18</b> Blue Shield (Sue COLE)				
Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14:00-16:00(120) Site Visit 5 History of Architecture and Conservation in Sasayama Important Preservation District (SAIMOTO, NARITA,	14:00-15:20 (80) Lecture 14 Disaster Risk Preparedness and Integrated Protection of Cultural Heritage in Japan (UMEZU, ACA Japan)	14:00-18:00 (240) Team Project Formulating DRM Plan for Case Study Sites	14:00-18:00 (240) Team Project Formulating DRM Plan for Case Study Sites	14:00-17:00 (180) Team Project Preparation for Panel Presentation	14:00-17:00 (180) ICOMOS-ICORP Meeting (Session 1)	13:00-17:30 140th Anniversary of The Ritsumeika Academy,110th Anniversary of Ritsumeikan University
Sasayama City)						International Symposium "How to Protect
						Symposium "How to Protect
Sasayama City) Tea Break 16:00-18:00 (120) Workshop 5 Emergency Response and Recovery Plan for Sasayama (MURAKAMI, Hyogo Pref)	16:00-19:00 move to Kyoto					Symposium "How to Protect Cultural Heritage
Tea Break  16:00-18:00 (120)  Workshop 5  Emergency Response and Recovery Plan for Sasayama (MURAKAMI,				17:00-18:00(60) Team Project Final Review of Panels (JIGYASU)		Symposium "How to Protect Cultural Heritage from Disasters: Risk Preparedness and Post Disaster
Tea Break 16:00-18:00 (120) Workshop 5 Emergency Response and Recovery Plan for Sasayama (MURAKAMI,		Restaurant	Restaurant	Team Project Final Review of Panels	Restaurant	Symposium "How to Protect Cultural Heritage from Disasters: Risk Preparedness and Post Disaster

Organized by Research Center for Disaster Risk Mitigation of Urban Cultural Heritage, Ritsumeikan University, Kyoto, Japan In Cooperation with UNESCO World Heritage Centre, ICCROM, ICOMOS

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#### UNESCO Chair on Cultural Heritage and Risk Management

## INTERNATIONAL TRAINING COURSE ON DISASTER RISK MANAGEMENT OF CULTURAL HERITAGE 2010

#### Name of Participants

Nam	e of Participants					
	Name	Picture	Current Position, Organization/Institution and E-mail address	Selected Site	Country	
1	Dechen Tshering		Structural Engineer, Division for Conservation of Heritage Sites, Department of Culture, Ministry of Home & Cultural Affairs, Royal Government of Bhutan dechentshering@yahoo.com	Wangduephodrang Dzong	Bhutan	
2	Junko Mukai	1	Deputy Chief Conservation Architect, Division for Conservation of Heritage Sites, Department of Culture, Ministry of Home and Cultural Affairs, Royal Government of Bhutan junpee0212@yahoo.co.jp			
3	Alexander G Dwight		Director, Historical Preservation Officer Bureau of Arts & Culture, Ministry of Community & Cultural Affairs delbochel@gmail.com	Airai Bai, Ngkeklau Bai, Melkeok and Koror Bai	Palau	
4	Sunny Ngirmang	9	Palau National Registrar, Bureau of Arts & Culture, Palau Historic Preservation Office bac_reg@palaunet.com			
5	Teresa Vilcapoma Huapaya	35	University Professor, Sagrado Corazon University terevilh@yahoo.es	Historical Centre of the City of Arequipa	Peru	
6	Olga Keiko Mendoza Shimada		Doctor Course Student, JSPS Research Fellow, Ritsumeikan University, Graduate School of Science & Engineering olgakeiko@gmail.com			
7	Marilene Terrones Diaz	9	University Professor, Sagrado Corazon University marileneterrones@gmail.com	The City of Cusco		
8	Milica Grozdanic	19	Director Cultural Heritage Preservation Institute of Belgrade milica.grozdanic@beogradskonasledje.rs	Belgrade's samples of Oriental-Balkan architecture (Princess Ljubica Residence, Prince Milos Residence, Tavem "2",	Republic of Serbia	
9	Svetlana Dimitrijevic Markovic		Architect – conservator - Senior Associate Cultural Heritage Preservation Institute of Belgrade svetlana.d.markovic@beogradskonasledje.rs	Dositej's Lyceum etc.)		
10	Zeynep Gul Unal		Assistant Professor, Dr. Yildiz Technical University, Faculty of Architecture, Restoration Department zgulunal@gmail.com	Kütahya district	Republic of Turkey	
11	Meltem Vatan Kaptan		Research Assistant, PhD Student, Yildiz Technical University, Faculty of Architecture, Structural Systems Division meltemvatan@gmail.com			

#### Name of Lecturers and Resource Persons

	Name	Country	Picture	Work Position and Affiliation E-mail address	
1	Kenzo TOKI 土岐 憲三	Japan		Director, Professor, Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University	Lecture 2 International Symposium
2	Kanefusa MASUDA 益田 兼房	Japan		Professor, General Secretary of ICORP Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University km@fc.ritsumei.ac.jp	Lecture 1 Team Project, Open Jury ICORP Scientific Meeting International Symposium
3	Rohit JIGYASU	India	30	Professor, President of ICORP, Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University Conservation Architect and Disaster Mgmt. Consultant rohit.jigyasu@gmail.com	Lecture 3,7,11 Workshop 1,3,4 Team Project, Open Jury ICORP Scientific Meeting International Symposium
4	Takeyuki OKUBO 大窪 健之	Japan		Professor, Department of Civil Engineering, College of Science and Engineering, Ritsumeikan University okubo-t@se.ritsumei.ac.jp	Lecture 4,9 Site Visit 2 Workshop 2 Team Project , Open Jury
5	Kazuyuki IZUNO 伊津野 和行	Japan		Professor, Department of Civil Engineering, College of Science and Engineering, Ritsumeikan University izuno@se.ritsumei.ac.jp	Lecture 5
6	Aiko FURUKAWA 古川 愛子	Japan		Assistant Professor, Kyoto University, Dept. of Civil and Earth Resources Engineering furukawa.aiko.3w@kyoto-u.ac.jp	Lecture 6
7	Satoru ISHIZAKI 石崎 了	Japan		Director of Disaster Prevention and Crisis Manage- ment Office, Kyoto City Fire Department	Lecture 8
8	Yumi AKIEDA 秋枝 ユミ イザベル	Japan	-	Research Fellow MSc. (Architectural Conservation) Japan Center for International Cooperation in Conservation National Research Institute for Cultural Properties, Tokyo y.akieda@tobunken.go.jp	Lecture 10 Team Project, Open Jury ICORP Scientific Meeting
9	Yasumichi MURAKAMI 村上 裕道	Japan		Director of Cultural Asset Division, Hyogo Prefecture Board of Education yasumichi_murakami@pref.hyogo.jp	Lecture 12,13 Workshop 5
10	Akiko UMEZU 梅津 章子	Japan		Senior Specialist for Cultural Properties, Cultural Properties Department Agency for Cultural Affairs of Japan kmk@bunka.go.jp	Lecture 14 Workshop 5
11	Kai WEISE	Nepal	1	Architect, Planners' Alliance for the Himalayan & Allied Regions (PAHAR Nepal) pahar@mail.com.np	Lecture 15 Team Project, Open Jury ICORP Scientific Meeting

#### Name of Lecturers and Resource Persons

Nam	e of Lecturers and R				1
	Name	Country	Picture	Work Position and Affiliation E-mail address	
12	Byungha CHOI 崔 炳夏	Republic of Korea		Appointed expert of Historic sites from CHA of Korea(Rep. of) choikhmer@hotmail.com	Lecture 16 Team Project, Open Jury ICORP Scientific Meeting
13	Shang-Chia CHIOU 邱上嘉	Taiwan		Vice President National Yunlin University of Science and Technology chiousc@yuntech.edu.tw	Lecture 17 Team Project, Open Jury ICORP Scientific Meeting International Symposium
14	Sue COLE	United Kingdom	130	Senior International Advisor National Advice team English Heritage, London UK Sue.Cole@english-heritage.org.uk	Lecture 18 Team Project, Open Jury ICORP Scientific Meeting International Symposium
15	Mr. SHIRAISHI	Japan		Technical Specialist for Cultural Property, Cultural Property Division, Kyoto Prefec- ture Education Agency	Site Visit 1
16	Hikokazu OMORI 大森 彦一	Japan		Executive Director, Omori Architectural Office. Chief Technical Expert of Cultural Property Building Repair/Restoration, Expert of Fire-Fighting Equipment	Site Visit 3
17	Masatoshi NARITA 成田 雅俊	Japan		Cultural Asset Protection Office, Board of Education, Sasayama City	Site Visit 5
18	Kenji SAIMOTO 才本 謙二	Japan		Hyogo Heritage Organization	Site Visit 5
19	Hideki SUNAHARA 砂原 秀輝	Japan		General Director, Kyo-o-gokoku-ji Temple 教王護国寺	International Symposium
20	Moe CHIBA 千葉 茂恵	Japan		Programme Specialist for Culture, UNESCO New Delhi	Open Jury ICORP Scientific Meeting International Symposium
21	Gustavo ARAOZ	USA		President of ICOMOS	Open Jury ICORP Scientific Meeting International Symposium
22	Akatsuki TAKAHASHI 高橋 暁	Japan		Programme Specialist for Culture, UNESCO Office for the Pacific States	Open Jury ICORP Scientific Meeting

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#### Name of Lecturers and Resource Persons

	Name	Country	Picture	Work Position and Affiliation E-mail address	
23	Daijiro KITAGAWA 北河 大次郎	Japan		Project Manager, ICCROM	Open Jury ICORP Scientific Meeting
24	Robyn RIDDETT	Australia	9	Director Anthemion Consultancies Melbourne, ICORP Member rgrd@bigpond.com	Open Jury ICORP Scientific Meeting
25	Victoria GILL	Philippines		Consultant, Endangered Heritage, Manila, ICORP Member victoria gill@endangeredheritage.com	ICORP Scientific Meeting
26	Minna Perähuhta	Finland		Senior Architect Ministry of the Environment, minna.perahuhta@ymparisto.fi	ICORP Scientific Meeting

TEAM PROJECTS TEAM PROJECTS

# SECTION 2 Team Projects of International Training Course Disaster Risk Management Plan for Cultural Heritage Sites

#### **2.1 BHUTAN**

DISASTER RISK MITIGATION PLAN FOR WANGDUEPHODRANG DZONG

Junko Mukai and Dechen Tshering

The objective of the project is to incorporate the Disaster Risk Management Plan into the ongoing Conservation Project of the Wangduephodrang Dzong. Additionally, the Disaster Risk Management Plan for the cultural heritage site needs to be incorporated into the District Disaster Risk Management Plan. The target audience of the project will be the monks. The responsible agencies will be the Monk Body, the District Administration and the Department of Disaster Management and the Department of Culture under the Ministry of Home & Cultural Affairs.

The Wangduephodrang Dzong Conservation Project with a total budget of Nu. 200 million and a project period from 2008 to 2013 are being implemented with the executing agency being the Ministry of Home & Cultural Affairs and the Division for Conservation of Heritage Sites acting as the implementing agency.

Assessing the heritage site, the following hazards were identified; fires magnified by wind, earthquakes, flood that lead to erosion and landslides and the impact of heavy transportation. The vulnerabilities of the Wangduephodrang Dzong were identified as the following; wooden construction, structural deterioration, water leakage, electrical wiring, narrow passages, steep steps, oil lamps and crowded spaces.

The disaster scenario that was chosen was a fire that breaks out in the centrally located monastic zone on the first floor, the wooden structure catches on fire and the wind causes it to spread quickly. There is only one exit which leads through the courtyard of the administrative zone. The fifty monks that reside in this area must descend from a narrow staircase.

The mechanism for disaster management is coordinated by a National Steering Committee chaired by the Minister for Home and Cultural Affairs with the secretaries of all ministries being members. The Department of Disaster Management takes on the central role by coordinating between the district authorities, the Technical Working Group and the Resource Mobilization Working Group. At the district level, the District Committee on Disaster Management is chaired by the Governor. Funds are provided through the Gross National Happiness Commission and the Finance Ministry. His Majesty's Relief Fund supports relevant agencies and individuals directly.

Various improvements were proposed for emergency preparedness. On the ground floor, the creation of a second exit was proposed. The kitchen was to be relocated outside the Dzong. Offices were to be relocated and alternative paths created. On the first floor the fire extinguishers were to be placed in appropriate locations and the existing fire-fighting equipment was to be reviewed. Appropriate locations for wet areas were to be created and sanitary piping was to be checked. On the second floor (upper courtyard level) the creation of a new exit in Zone A and the utilization of the basement space as a refuge area were proposed. Measures were to be found to stop the spread of fire from Zone B. On the third

floor measures were required to stop the fire from spreading along the attic space.

Short and long term recovery plans were proposed. The responsibilities are distributed between the various authorities. The District Committee on Disaster Management includes the Disaster Focal Person, Monk Body, Cultural Officer and the Engineering Division. Their work is coordinated with the Department of Disaster Management and the Department of Culture which includes the Division of Cultural Properties and the Division for Conservation of Heritage Sites.

The proposed pilot project consists of various specific actions. The possibility of strengthening trained manpower needs to be studied, especially in respect to disaster management of heritage sites and the structural analysis of heritage structures. Proper legislation needs to be formulated for the protection of cultural heritage. Additionally, the suitability of the fire fighting equipment must be studied, depending on the required typology. These activities would be carried out through discussions between the Division for Conservation of Heritage Sites and the Division for Cultural Properties and meetings with the Department of Disaster Management, the Central Monk Body and the Wangduephodrang Monk Body.

**TEAM PROJECTS TEAM PROJECTS** 

#### 2.2 Palau

#### **BAI - TRADITIONAL MEETING HOUSES**

Sunny Ngirmang and Dwight Alexander

The site of the Irrai Traditional Village is spread around the Irrai Bai, which is associated with the events that have made a significant contribution to the broad patterns of Palauan history; associated with lyrics, folklores, and traditions significant in Palauan culture, the site embodies the distinctive characteristics of a type, period, or method of construction, or the representation of the work, of a master.

In the traditional management system, the Bai caretaker was assigned by the Chiefs. The Traditional Men's Club was assigned the regular maintenance. The Department of Heritage Properties of the Airai State Government is the responsible authority under the State Historic Policy. At the national

government level the Palau Historic Preservation Office is responsible under the Historical and Cultural Preservation Act.

The Irrai Bai was built before the 1700s. The structure has



been moved about 200 meters from its original location after it was damaged during the Second World War and was renovated in 1984, 1992 and 2009. The Irrai Bai was listed on the Palau Register of Historic Places in 1989. There is no system to warn the nearby community in the event of a fire. There are only two access roads made of basalt stones with a maximum width of 1.5 metres. and requires the Hospital and Fire Department 25 minutes to respond. The electrical system has been installed by lay community members. The structure is infested by insects and rats, with the threat of chewed electrical wires igniting fires.

on the Bai including



The threat of vandalism and negligence to property is high and monitoring is minimal. The possibility hazards of fire, arson and neglect exists. The destruction of the archaeological site and nearby Bai would lead to the loss of traditional knowledge, oral history

the identity of the place. It would also have an impact on the economy of the area.

The disaster scenario which was created begins with a fire caused by the sparks from wires that have been chewed on by rodents. Nearby residents inform the community coordinator who informs the fire department, the hospital and the State office. The residents assist injured tourists and start fighting the fire. The coordinator arrives with the youth



club. Thirty minutes later the fire truck and the ambulance arrive and the fire is in full blaze. The medical team is able to rescue the injured tourists, but the heritage structure is lost to the blaze. The reason for the loss of the heritage property is due to the distance of the fire hydrant,



the difficult access and the delayed response of the fire truck.

Certain measures were proposed for mitigation and emergency preparedness. A water reservoir needed to be constructed nearby that is accessible to the community and a second access road is required. On site residents need to be given the responsibility to monitor the property and a designate staff within State Heritage Protection office is needed to liaison. Effective networking between the state government, the National Emergency Management Office, the Palau Historic Preservation Office and other stakeholders is required. An emergency phone must be installed. The national policy needs to include disaster risk management, along with public education and awareness. The responsible staffs need to have appropriate training.





TEAM PROJECTS TEAM PROJECTS

#### 2.3 Peru

### DISASTER MITIGATION FOR THE CITY OF CUSCO

Teresa Vilcapoma, Marilene Terrones and Keiko Mendoza

The City of Cusco was inscribed on the World Heritage List in 1983 under criteria (iii) and (iv). The Spanish buildings were built over the ruins of the Inca city. Cusco is a unique testimony of the Inca culture and the urban landscape illustrates the mixed cultures of the Incas and the Spanish.

The management system includes the three main stakeholders: the Municipality of Cusco, the National



Institute of
Culture and
the National
Institute
of Civil
Defence. The
Municipality,
as the local
government
of the city is

responsible for urban development and is also the local authority in case of a disaster. The National Institute of Culture maintains declared monuments, monitors the inventory, carries out restoration projects including training of required personnel and carries out interventions in case of an emergency. The National Institute of Civil Defence is responsible for risk management and therefore stores emergency equipment, checks fire fighting equipment, carries out earthquake drills and trains personnel for risk management. However there are no protocols which clarify the responsibilities of these authorities in case of a disaster.



Cusco has a long history of earthquakes, landslides and floods. It must be noted that the Inca walls were not damaged, but the colonial and republican buildings were completely destroyed. Regional and local hazard maps have been prepared indicating extremely high, high, medium and low hazard areas. There are over eight hundred



thousand tourists that visit the city every year. The streets are narrow with many slopes, steps and slippery pavements. Many old buildings are in a bad condition. The vulnerable monuments that have been identified are: the Inca Wall Street Saphy, the main square, the University Rector Building located in Tigre street, the Saint Teresa Church, the South Portal Plaza de Armas (Main square), the Auditorium Saint Antonio Abad University, the Society of Jesus Church, the Palace of Justice, the Site Museum and Saint Domingo square, and the Inca walls in Choquechaca. The disaster scenario that was created was an earthquake of

magnitude 8 which has a severe impact on the physical fabric of the city with the loss of life and cultural properties. The earthquake would also set off landslides leading to further damage.

The objective of the Disaster Risk Management Plan would be to

contribute to reducing the effects of the disaster. It would require the estimation of the level of risk through the identification of danger and the analysis of vulnerabilities. It would entail the establishment and implementation of specific prevention measures and actions related to preparedness and education of the people. It would allow for the declaration of a state of emergency in the case of a disaster. Mitigation and preventative actions would need to be carried out. The mitigation measures would include appropriate government policies. land use, building guidelines, evacuation plans, drills, maintenance and monitoring procedures and technical measures for strengthening of monuments. The Emergency Team would comprise of the three main stakeholders (the Municipality of Cusco, the National Institute of Culture and the National Institute of Civil Defence) as well as the fire brigade, police force, the community



and volunteers. In the Emergency Preparedness and Response Plan the evacuation routes and safe areas were identified. The rescue routes were identified along with the locations of fire hydrants. The Recovery Plan provided immediate, short-term and long-term actions

with indications of the responsible institutions, and required human, technical and financial resources.

The proposed Pilot Project focused around the San Francisco de Asis square, the historical centre of Cusco located 300 meters south west of the city's main square. The Pilot



Project proposed the establishment a recovery plan with immediate actions (within a month), short term actions (within 6 months) and long term actions (within 3 years). The responsible institutions and required human, technical and financial resources have been identified.



TEAM PROJECTS TEAM PROJECTS

#### 2.4 Republic of Serbia

#### OUTLINE OF DISASTER RISK MANAGEMENT PLAN FOR KOSANCICEV VENAC, BELGRADE, SERBIA

Milica Grozdanic and Svetlana Dimitrijevic Markovic

Kosancicev Venac is a place of scenic beauty and a significant part of the townscape of Belgrade. This area is a testimony to the historic development of Belgrade from the first half of the eighteenth century, when the late-mediaeval settlement was reconstructed, to the present day. This is the oldest compact Serbian settlement in Belgrade where the old raster of spontaneously created streets has been preserved along with a number of historic buildings, public places and the necropolises of the Roman Singidunum.

The site consists of residential buildings including the embassies, a university of art, an elementary school, a church and patriarchate, a museum and taverns. There are two cultural assets of special importance, eight cultural assets, sixty four historic buildings and underground chambers of archaeological value. The buildings consist of timberframe or masonry structures.

The existing national, regional and city level institution for disaster management don't include cultural heritage expertise. Existing planning and building legislation is not harmonized with values of



cultural heritage. Interim technical regulations for construction in seismic areas were adopted in 1964. The existing plans and projects do not reflect the actual implementation. There is no clear division of responsibilities in respect to implementation. There are no funds for conservation, rehabilitation and protection of cultural heritage. Traditional knowledge and sustainable practices that ensured a certain level of protection of cultural heritage from the worst effects of natural hazards or human-made disasters are being progressively abandoned. Public buildings at the cultural heritage site are fitted out with security, warning and emergency equipment, which is not the case for residential buildings. The community is not instructed, educated and organized in the case of disasters and there is no cooperation with the public offices.

Past events show that the possible hazards would be earthquakes, landslides, rising round water and fire. The vulnerability of the site would be the weak soil, narrow winding streets, cobbled pavement and lack of preparedness and knowledge on responding to disasters.



The disaster scenario that was created was a 5.6-magnitude earthquake which activated a landslide as a result of which the underground chambers of the archaeological value collapsed. This caused further landslides and the collapsing of structures which blocked the main roads. There is panic, various fires and the threat of theft to the musuem collection. The impact of such a disaster would be fatalities and injury to people, collapsing of historic buildings and the disruption of services.

The Disaster Management Plan provides clear, flexible and practical guidance to reduce the risk from hazards such as earthquakes, fires

and landslides. This
plan is assigned to
the City Assembly of
Belgrade in cooperation
with the Ministry of
Culture, the Ministry
of Interior Affairs, the
Disaster Management
Agency, the Heritage
Preservation Institute
of Belgrade, local
maintenance offices, the police.

the health services, the emergency response teams and the residents of Kosancicev venac. Additionally the priest, museum staff and embassies staff would need to be involved.

The mitigation measures consist of the strategic level (funding, education and networking), the physical planning level (building guidelines and water sources) and the technical level (slope stabilization and fire-fighting equipment). A maintenance and monitoring system is to be established which includes routine patrols of the of the Kosancicev venac area by the Heritage Preservation Institute

of Belgrade and the training of staff and volunteers to evacuate visitors, colleagues and collections. For emergency preparedness and response, an evacuation plan including safe areas and shelters are planned together with an emergency response team.

A recovery plan with short-term and long-term recovery activities were identified including the related stakeholders. Under the short-term activities were damage assessment of moveable and immovable cultural heritage and protection measures for movable cultural heritage and damaged historic buildings. The long-term recovery activities included setting up the financial

system, reviewing policy and the Disaster Risk Management Plan, improving infrastructure, reviewing documentation data and implementing conservation and restoration work on cultural monuments.

The proposed pilot project was to prepare a Disaster Risk Management Plan for Sopocani Monastery, World heritage Site. On

the outskirts of Stari
Ras, the first capital
of Serbia, there is an
impressive group of
medieval monuments
consisting of
fortresses, churches
and monasteries.
The monastery

at Sopoćani is a reminder of the contacts between Western civilization and the Byzantine world. Disaster Risk Management Plan for Sopocani Monastry should identify and assess the main disaster risks to the heritage values and the human lives within the site.

#### 2.5 Republic of Turkey

#### DISASTER RISK MANAGEMENT AND RECOVERY PLAN FOR ESKIGEDIZ HERITAGE SITE

Zeynep Gül ÜNAL and Meltem VATAN

The town of Eskigediz is located in the Kütahva Province. The significance of the site is based on three main characteristics. It is an urban heritage site with a traditional urban structure (street pattern, walls, fountains, etc.), monumental buildings and vernacular architecture. There is an archeological site with archeological surface remains and an aqueduct. The site is also surrounded by natural heritage with endemic flora, agricultural and spring water sources. The zoning plan indicates the boundary of the urban site, the natural site and the archaeological sites. Various monuments, buildings. ruins and public squares are registered. Further inventories of buildings were prepared in 2003 and 2005.





Various laws define the link between the heritage site management and disaster management: Cultural and Natural Values Conservation Law (Law 2863 -1983), Law of Mandatory Earthquake Insurance (Law 587-1999) and Property Tax Royalty (10%) for Heritage Building Restorations. The executive powers are held by the Ministry of Culture, The Disaster and Emergency Management Agency, the Governor, the Municipality and the Vak'f.

The latest disaster that occurred was an earthquake in 1970. Buildings collapsed, with fires adding to the destruction, injuries and fatalities. The following interventions were carried out: repair, restoration, reconstruction and relocation of the settlement. The potential hazard map indicates areas vulnerable to earthquakes, with high risk areas for fires, floods and rock fall. The vulnerabilities are based on lack of maintenance, poverty, lack of awareness about disasters. insufficient fire fighting system and equipment. This is magnified by the fact that the site is located near an active fault, close to rocky hills with limited access to the village. The streets are narrow and there are dead ends. The construction is of poor quality and the heating system is

unsafe. The vulnerability also arises from the construction materials: Wood and mud brick. The disaster scenario that was created was an earthquake which led to rock fall and fires. Buildings collapsed, people are injured and there are fatalities. The electricity, communication and water supply is cut off. The roads are blocked. There is panic and chaos.

The mitigation and emergency preparedness is based on three levels: policy, emergency response and technical. On the policy level the Governor is the commander of the emergency situation. The Heritage Damage Assessment Task Force is established under the Ministry of Culture. Public awareness, education and field exercises are carried out. At the emergency response level an evacuation plan is developed. Various locations are determined for shelters, refuges, a field hospital, emergency communication system, secure area for salvaged cultural heritage objects and an Emergency Site Operation Center. Various teams are set up: local search and rescue. fire fighting and heritage damage assessment. On the technical level there are pre-disaster activities (condition survey, areal fire fighting system, river water pumping system, building based fire-fighting system, power cut and check valve system and prevention of rock fall) and post-disaster activities (security of rescued cultural objects, damage assessment, diagnosis, intervention, manual for building repairs

The building inspections would be needed to consider

and monitoring).

the risk levels before the disaster and the damaged state and usability after the disaster. The first step would be to gather qualitative data through visual inspection. The second step would involve quantitative data through laboratory tests and numeric analysis. The damage assessment would be categorized under safe for use (none-slight), unsafe for use (moderate – heavy) and dangerous for use (severe – total).

The recovery plan proposed the following short term activities: Revising of the preservation plan, cost estimation for repairing and restoring the disaster damages and development of the rehabilitation plan. The long-term activities would include rehabilitation plan in action, establishing disaster research institute, using natural site for health tourism and using endemic flora as an economic sources.

The proposed pilot project entailed the development of the system for building assessment after a disaster. This would require the Heritage Damage Assessment Task Force to gather data from the field. The damage would be considered, through processing the data, analyzing and coming to a decision for a new preservation plan for the historic buildings and site.







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# SECTION 3 Report on the ICOMOS / ICORP Scientific Meeting on Sustainable Protection and Recovery of Cultural Heritage in Post Disaster Situation

Saturday, 25th September 2010: 14:00-17:00 Sunday, 26th September 2010: 9:00-12:00 Organized by ICOMOS International Scientific Committee on Risk Preparedness (ICORP) in cooperation with Research Center for Disaster Mitigation of Urban Cultural Heritage, Ritsumeikan University (Rits-DMUCH), Kyoto

## **Proceedings of the ICORP Scientific Meeting**

Our experiences from recent disasters such as Haiti have clearly shown that cultural heritage needs are not adequately addressed during post disaster response and recovery phase. In fact, significant cultural heritage is lost not only due to the main hazard event that causes disaster but also during response and recovery phase as a result of lack of appropriate policies and procedures, coordination and awareness among various stakeholders. There is clearly a need to recognize and address this issue and develop standard operating procedures for carrying out various activities such as documentation, damage assessment, emergency protection and repair and interventions aimed at reducing future disaster risks. This requires effective teamwork

among cultural heritage institutions and professionals at local, national as well as international levels and also coordination with civic defence agencies and those responsible for relief and rehabilitation. Moreover these activities and procedures should be tailored to the nature of heritage and local socio-cultural, economic and institutional context.

The scientific meeting aims to discuss these issues in the light of experiences gathered from various parts of the world. Based on the deliberations of this meeting, we hope to come up with ICORP recommendations that could lead towards developing specific guidelines, pilot projects and further scientific activities in this area.

## 3.1 Issues and Challenges of World Heritage Properties

#### Giovanni Boccardi UNESCO / World Heritage Centre – Asia Pacific

(through Video Conference)

There is no mechanism to address disaster related risks for World Heritage, though this is a rising concern. The terminology of in use is not yet clear; Disaster Risk Reduction, Disaster Risk Management, Risk Preparedness etc. Furthermore, all the stages before, during and after the disaster must be considered. Disaster related risks and other risks that affect the property in a slow and gradual process require different approaches.

The perspective of UNESCO is slightly different from that of ICOMOS, UNESCO follows the mandate of the United Nations linked to ensuring peace and security, which is closely linked to sustainable development. This means that not only the physical affect is considered, but the social, economic and the environmental impact needs to be addressed through the heritage sector; as part of development. For example if a museum is shut for two years, this would affect the rehabilitation process and the income. The same could be said with facilities such as community centres, etc.

The establishment of Post Disaster Impact Assessment is being funded by the United Nations, World Bank and the European Commission. Culture and heritage is included with the involvement of UNESCO. This is closely linked to the activities of ICORP. The Post Disaster Impact Assessment is carried out a couple of months after a disaster has taken place. The tangible and related impacts on the sustainable development of the community are assessed. This is linked to the redevelopment sectors and a system of complete guidance which includes heritage. Mechanisms of funding are provided through UN Flash Appeals. Some cultural projects have been included for Pakistan after the recent floods. This is often linked to communities that ask for work opportunities.

Resource manuals have been developed which are available on the website. "Managing Disaster Risk for World Heritage" includes identifying, assessing and planning mitigation measures. It also considers the positive role of heritage in reducing disaster risks.

A roster for Disaster Reduction experts is being prepared with ICORP being one of the key partners. It is also important to build capacity within the countries. This is being done through the International Training Courses being provided by Ritsumeikan University. There should be funds available for training activities of the national authorities.

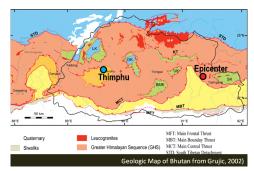
## 3.2 CHALLENGES TO PROTECT HERITAGE SITES IN BHUTAN

- in the Post Earthquake Situation
- 21 Sep 2009 Earthquake M6.1 Affected the Eastern Regions

Junko Mukai, Dy. Chief Conservation Architect Division for Conservation of Heritage Sites, Department of Culture, Ministry of Home & Cultural

Royal Government of Bhutan

Affairs,



Bhutan lies in the highly earthquake prone eastern Himalayan region. On 21 September 2009 an earthquake of intensity M6.1 struck the eastern region of the country casing damage to Lakhangs (temples), Dzongs (fortresses), houses and government buildings.



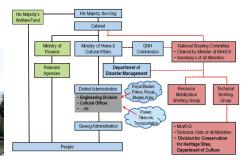
The response of the government was quick. Under the Ministry of Home and Cultural Affairs, the District Administration sent their engineers and cultural officers to assess the damage. The effected buildings were placed under four categories: Beyond Repair, Major Repair, Partial Repair and Minor Repair. It was however not always clear, what criteria were to be used to segregate the four categories.

The National Steering Committee, which is chaired by the Minister of

MoHCA and includes the secretaries of all ministries, has two Working Groups; resource mobilization and for technical works. The Technical Working Group and specifically the Division for Conservation of Heritage Sites of the Department of Culture were requested to come up with solutions on how to restore the damaged

structures.

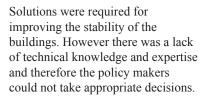
The earthquake had affected some buildings while others were not affected at all. Referring to old





photographs it was clear that the cracks found in some buildings existed even before the earthquake. However the people seemed to have lost confidence in the traditional structures and slept outside.

The question arose whether the solution would be to demolish and reconstruct. The local governments preferred immediate emergency measures to be taken. However it was necessary for the central government to quickly standardize the response for vernacular buildings by setting guidelines. Compensation was provided based on the categorization of the affected buildings.



The response to the buildings that were beyond repair and requiring minor repair was clear. The challenge was how to deal with the buildings that required major and partial repair. The traditional response to the earthquake was

to carry out rituals to subdue the deity of the ground.

The major question was how to evaluate the stone masonry. It has not been possible to continue without this knowledge.



	Lhakhang (Temple)	Dzong (Fortress)	House	Government Institutions
Beyond Repairs	37	0	446	13
Major Repairs	95	2	1017	31
Partial Repairs	100	3	1750	59
Minor Repairs	52	2	1382	56
Total	284	7	4595	159





## 3.3 The little things that count and The reconstruction after the 1934 earthquake; Examples from Nepal

Kai Weise Planners' Alliance for the Himalayan and Allied Regions (PAHAR Nepal)

Five examples of disasters in the World Heritage properties of Nepal and the lessons learnt.

1. Fire gutted the Prattapur Temple (Swayambhu Monument Zone, Kathmandu Vallev World Heritage property) in August 2003. The fire probably began due to the oil lamps that are burnt at the opening to the sanctum. The fire was further fuelled by the pigeon droppings which then led to the internal wooden framing to catch fire. The accessibility to the temple was hindered, since the tantric temple can only be opened once a year and only for the priest. The fire brigade had difficulties reaching the location which is on top of a hill with no road access. Ultimately they managed to pump water from a pond. A hole was opened at the

top of the Shikara structure and cold water was pumped in. This led to rapid cooling and the washing away of the mud mortar. The structure collapsed two weeks later. The reconstruction work was simplified by the fact that a second temple of the same design is located to the south.









2. In March 2009 a fire gutted the Banglamukhi Temple (Patan Durbar Square Monument Zone, Kathmandu Valley World Heritage property). The fire began after the electricity connection was restored at midnight and a short circuit of the electrical cables released sparks. The artificial enamel paint on the woodwork caught fire. Most of the interior was destroyed and the intricately carved wooden member were charred.

3. In January 2006 the Tansen Durbar, the District Headquarters, was attacked by the Maoist. After taking a number of persons hostage, they set fire to the historical buildings, which were completely destroyed. The destruction of these historical buildings

was unnecessary and the Maoist leaders regretted the action. This led to the preparation of a report linking it to the importance of Nepal ratifying The Hague Convention and the Protocols.



which is located at an altitude of 93.5 meters.

5. There are various locations within the Kathmandu Valley World Heritage property which are affected by erosion. In Changu Narayan the erosion could be linked to the reforestation using an alien species









pinus roxburghii which in the long run has been detrimental to the soil. In Pashupati the construction of a road through the ancient forest has threatened the surrounding environment and heritage structures

The Kathmandu Valley was severally impacted by the 1934 Great Bihar-Nepal Earthquake. Even though the epicentre was some 350 kilometres to the southeast, intensities of IX and X were experienced within the valley due to the soil consistency and liquefaction. A book was compiled by Major General Brahma Shumsher Rana on the reconstruction effort which has recently been translated with the support of Ritsumeikan University. The document shows how even in those days

the response to the disaster was coordinated. Importance was given to monuments and temples, the lessons learnt were documented, and an international collaboration in sharing of knowledge and resources existed. This was especially the case between Nepal and Japan.

## 3.4 Philippines The Ring of Fire quenched by Storms

Victoria Gill

The following World Heritage properties are located in the Philippines: the Rice Terraces of the Cordilleras, the Baroque Churches of the Philippines, Historic Town of and has a population of 82 million. 26 million people live in Manila.

In 1991 Mount Pinatubo erupted and displaced 30,000 people, killing 9000. This was followed by Typhoon Yunya. The Mayon Volcano erupted in 2006. The Taal Volcano, Tagaytay, considered the smallest volcano in the world has a grade 2 warning.

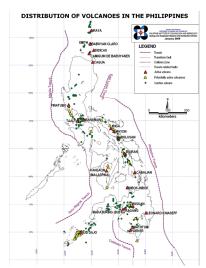




Vigan, Puerto-Princesa Subterranean River National Park and the Tubbataha Reefs Natural Park. The Philippines consists of 7107 islands

On 16 July 1990, a magnitude 7.8 earthquake shook almost the entire island of Luzon and some







parts of Visayas. The active fault lines show that the Philippines sits on a small plate which is affected by any seismic activity in the region; the "Ring of Fire". Fault



lines run through Manila. It has been predicted that a Haiti-style earthquake would cause 10% of high rise failure and 30% loss of hospitals. The water reservoirs and airports are constructed on fault lines. There is only one bridge across the river. Though there is a certain amount of awareness, guidelines are not adhered to.

Should a Tsunami hit Manila Bay, it would have a devastating effect on all the cultural facilities and museums that have been built on low

ground behind the harbour.

There are approximately 23
Typhoons that hit the Philippines
each year. In 2009 Ondoy was twice
the size of Katherina and affected
twice the population. There are still
three million people displaced due to
this typhoon. The water only receded
after 12 weeks leading to the spread
of diseases. The damage to the
World Heritage properties still has
not been assessed. What is left of the
heritage? How do we audit it? How
do we condition report it? How do
we protect it?





## 3.5 Case study from Indonesia - Damage Assessment for the Reconstruction of Padang's Urban Built Heritage -

Yumi Isabelle AKIEDA member of Japan ICOMOS NC member of ISC Theory and Philosophy of Conservation Research Fellow, National Research Institute for Cultural Properties Tokyo

The West Sumatra Earthquake (M 7.6) of September 2009 which was followed by aftershocks and heavy rains affected the urban environment and architectural heritage of Padang. There was a lack of response due to insufficient communication and information leading to slow recovery. An assessment mission for built heritage was carried out in November 2009 organized by the Indonesia government, the UNESCO Jakarta Office and the National Research Institute for Cultural Properties Tokyo.

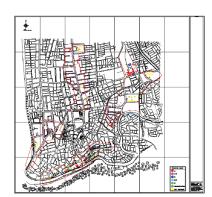
The task was to assess the significance and losses to the affected heritage. A standard operating procedure was to

be developed for the various components and phases of recovery. Teamwork and coordination issues need to be dealt with. Additionally, all activities and procedures need to be tailored to the specific context.

The objective of the damage assessment was to formulate reconstruction recommendations, guidelines and an action plan to submit to the authorities. This further required priorities for restoration and reconstruction planning to be determined. The criteria to outline the "degree of destruction" need to be determined. This was critical, since often simplification leads to a lack of information to ensure appropriate follow-up. This also depends on the nature of the heritage and the individual building. Various checklists were prepared depending on the stage of assessment, required details and for documentation.

Survey on 57 out of 73 registered historic buildings was carried out. Visual assessment was carried out to observe cracks, losses and deformations to assess the state of damage both outside and inside. The objective of the survey was to complement prior survey, collect

detailed information on the buildings themselves, their state and factors of damage, define priority levels for restoration and gather previously uncollected essential basic information for the repair of heritage buildings The data was placed in a matrix, showing each



building part with an overview of damage according to structural materials (bricks, wood, concrete and steel) and issues in common to different building types. This was the basis for restoration planning and prioritizing. The priority areas were mapped and recommendations were prepared for the repair of buildings. It was recommended that a more complete legislation for protection was required. Stakeholders need to cooperate with the authorities. Experts need to be provided with instructions, education and training. The heritage buildings are required to be well maintained.

Evaluation of historic buildings was done based on priority and the repair guidelines depending on the historic and cultural value, the extent of damage and the feasibility of restoration.

The Guidelines that were developed focus on four main aspects.

Measures for the protection and preservation of historic areas and townscape are to be widely promoted. Systems for protection and preservation of certain districts

and areas are to be established using mild restrictions and guidelines. The national system for the registration of historic buildings needs to be expanded with more complete support measures within the national and municipal governments. Regular surveys and research on the historic city and architecture must be conducted and an understanding for heritage protection must be promoted amongst the citizens.

On completion of the assessment, the assessment report was published. The guidelines and action plans were given to the authorities. However this has not been implemented. There is a lack of funding since Padang is not World Heritage and is not given priority. Since this was not considered a national disaster, there are no set channels for funding. However a follow-up mission has been planned for October 2010.



## 3.6 Case study report from Japan

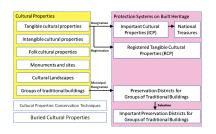
Prof. Dr. Kanefusa Masuda Research Centre for Disaster Mitigation of Urban Cultural Heritage Rits-DMUCH, Ritsumeikan University, Kyoto, Japan

There are 17 World Heritage sites under the Historic Monuments of Ancient Kyoto. The Daigo-ji temple, a five storied Pagoda, built in 952 AD and the oldest building in Kyoto, has paintings on the surface of wooden members.

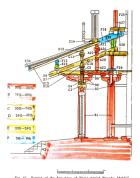
The Kyo-ou-gokoku-ji Temple (Built in 794AD) is a wooden structure with many religious objects. In the Nijo-jo Castle (built in 1603AD) the interiors are made of wood, paper and organic material that are flammable. All these heritage structures are vulnerable to fire.

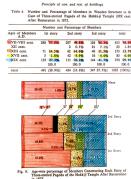
The following table shows the categorization of cultural properties in Japan and the respective laws for their protection. The system for the conservation of cultural property

has a long history, which changed as it adapted to the social changes in Japan.



The Horyuji Temple, a five storied pagoda in Nara, which was built between 680 and 700 AD never collapsed. Traditional building structures are themselves important to traditional knowledge systems. These and similar structures have been restored over the years. A study was done in the 1960's on the Hokki-ji pagoda built in 706AD to determine how much of the original materials still remain. The result showed that the mean average of original material was over 50%. Wooden building needs constant maintenance and reconstruction. Traditional techniques and materials are essential, and they are protected







as Conservation Techniques by the cultural property protection law in Japan.

A large number of World Heritage properties lie in earthquake prone areas. Statistics would show that the highest number would be in Southern Europe, followed by South America, Eastern and Western Asia and then South Asia.

During the Kobe Earthquake in 1995, a mansion which was built in 1881 as the American consulate (now a restaurant) completely collapsed. The structure which used foreign building techniques needed to be rebuilt as a safer structure retaining the authenticity of design and material. 70% of the original material was reused. This was possible because the structure did not catch fire. However fires destroyed large areas of Kobe.



The wooden cities such as Kyoto have experienced many fires during its 1200 year history. Today, many of the heritage structures are surrounded by wooden buildings. These create a threat in case of earthquake fires, often hindering accessibility for fire engines. The water reserves for extinguishing activities are often insufficient for



large scale fires. In some villages such as Shirakawa-go, traditional fire-fighting systems were in place. The thatched roofs were drenched with water from nearby ponds to keep sparks away. Today modern hydrant systems have been installed with a 600 ton water reservoir on the hill. Training is carried out every spring and autumn which draws many tourists to view the spectacle.

The Rokuon-ji Temple, originally built in 1485 AD, was reconstructed after the fire of 1950. The temple had lost its authenticity, however it was the garden that was inscribed as a World Heritage. Ise Jingu, an Imperial Shinto shrine, has been reconstructed every 20 years over the past 1300 years, retaining the same design and craftsmanship. As per the Nara Document, authenticity needs to be defined as per the context and culture. This would be the basis for developing an appropriate means of conservation.



## 3.7 Case Study of 1999 Taiwan Earthquake

Prof. Dr. Shang-Chia Chiou National Yunlin University of Science and Technology, Taiwan

The 921 Earthquake also known as the 1999 Chichi (Jiji) Earthquake or simply 921 was a magnitude 7.6 earthquake which occurred on September 21, 1999. The Central Weather Bureau of Taiwan recorded a total of 12,911 aftershocks in the

month following the main tremor, including another earthquake on October 22, 1999 in Chiayi (known as the 1022 Earthquake). Damage caused by the earthquake included



2,416 deaths (including missing people), 1144 severely wounded, with 44,336 houses severely damaged and a total of about US\$ 9.2 billion worth of damage. It was the second-deadliest earthquake in recorded history in Taiwan, after the 1935 Hsinchu-Taichung Earthquake.

Since Taiwan is not a member of UNESCO the post-disaster recovery had to be done by local scholars. Immediately following the earthquake an emergency cabinet

meeting was convened to discuss how to tackle the aftermath. The same day the military was mobilized, with large numbers of conscripted solders heading to stricken regions to assist in all situations. On September 25 President Teng-hui Lee declared a state of emergency in the affected areas.

giving sweeping powers to local authorities to ignore the usual bureaucratic and legal restrictions on measures to bring relief to people and locations most in need.



According to the reports from local governments, 91 designated monuments (authorized by the Ministry of the Interior before 2005) were damaged by the 921 earthquake including 3 designated monuments severely destroyed, that were estimated about US\$ 94 million to renovate them. According to Article 3 of the Cultural Heritage Preservation Act, "cultural heritage" refers to the following assets having historic, cultural and/or artistic value: antiquities, monuments, national arts, folk customs and related cultural artefacts and natural cultural landscapes. Unfortunately, thousands of unlisted historic buildings were cleaned up very quickly by the military owing to the declaration of emergency.



This led to various activities. A Cultural Heritage Rescue Team was established involving 50 scholars and about 400 students from 12 universities. Investigations on the damage on historic buildings were done. 222 historic buildings were listed to exclude from the military's clean-up list. These buildings were then classified under 4 categories;

severe, moderate, light and safe. Temporary reinforcement or consolidation was carried out. Laws and regulations were amended to include historical buildings. Funds for renovation were sought through appeals. Three technical support centres were established. Training courses were carried out and handbooks for historic buildings were published.



Some of the achievements from these efforts were the amendment of Article 3 of the Cultural Heritage Preservation Act to include historic building and settlements. A support system including grants and special loans was established to conserve historic buildings. The adaptive reuse has become an important issue for conservation of historic buildings. Technical support and advice were provided from three technical support centres. A conservation quality control system for historic buildings is still being applied.

## 3.8 A comprehensive lesson learnt from a heritage disaster

#### - The current trend in South Korea after the Shungreamoon fire –

CHOI Byung-ha Expert of CHA, South Korea

There is an increase in fire related disasters on wooden heritage structures. Several structures in World Heritage sites have caught fire. Some structures are additionally damaged during fire fighting. The authorities often have difficulty choosing the appropriate fire fighting method. Large scale forest fires also occur which is a major threat since most temples in Korea are located in the mountains surrounded by forests. Sometimes fires that start in a temple spread to the surrounding forests. There are an increasing percentage of arson cases. The reason for this rise in arson is probably a society with increased economic, social and mental stress. The problem is how to take care of this stressed society.



The Shungreamoon gate was originally constructed in 1479. It was partially damaged in the 1950's during the Korean War. In 1962 it was designated as the number one national treasure in Korea. For the Korean people, this designation of being "number one" has a big

The number of the fire disaster during the past 5years



significance and is the nation's pride. From 1961 to 1963, a big scale restoration work was done. The fire that engulfed Shungreamoon began at 20:47 on 10 February 2008 and continued till 02:05 on 11 February 2008, until the entire structure collapsed. At 20:47 the gate was set on fire by an arsonist. 3 minutes later, the fire was alarmed. In another 3 minutes, a fire engine arrived and soon the National Emergency Management Agency informed the Cultural Heritage Administration of the fire. A minute later, fire-fighters went into the gate and the fire was immediately extinguished. This part went very well. Under normal circumstances it would have been impossible for the fire engines to arrive in 5 minutes, however on that day it was a holiday and the streets were empty. The problem was that smoke kept coming out from the roof even though the fire was supposedly extinguished. The firemen pointed the water cannons at the point where the smoke was coming from. At 21:37 the chief of the firemen finally ordered to get drawings of the gate; they had not experienced such a fire and did not know what to do. They received the drawings a couple of hours later, but it was too late. The Cultural Heritage Administration had asked the firemen to extinguish the fire carefully so that they would not damage the structure. They later







changed the policy into active fire fighting, but it was a very crucial time for the firemen. At around 10, the firemen found flames under the roof. They tried to get into it by breaking the tiles, but it was impossible because of the frozen surface. There was another way of breaking the front panel of the gate, but they wanted to keep it. The Cultural Heritage Administration's decision to break the panel to save the material was way too late. Eventually the 2nd floor collapsed,

but the 1st floor was safe because it is made of stones.

In the 1990s, great thought went into figuring out how to preserve cultural properties.

Initially the Shungreamoon gate was made into a traffic island to ensure that people could not get close to the structure. However this was changed and the space in front of the gate was utilized for various activities and people could get closer access to the gate. The problem is how to balance conservation and utilization of cultural properties. The Korean people saw their cultural pride burning down live on TV. Generally, disasters such as these on cultural properties lead to social issues which then escalate to political issues. The merit is, for example, that people pay more attention to cultural properties,

and eventually they become safer. The demerit is, on the other hand, there will be more social/political pressure on management. The truth is veiled and forgotten until the event becomes a kind of legend. The opportunity to learn from the disaster is lost. The link between the Cultural Heritage Administration and the local authorities is strong, but the National Emergency Management Agency is not interested in cultural properties.

The arsonist was arrested. One of his excuses was that the people should not worry, since it is possible to retrieve the building through reconstruction. We must have the courage to say

that it is not possible to recover the value. However the Municipality and the Cultural Heritage Authority had already been developing a plan to reconstruct and add parts of the supposed historic wall. How can we draw a clear line between restoration and reconstruction?



## 3.9 Potential collaboration between ICCROM and ICORP

Daijiro Kitagawa ICCROM

## Activities of ICCROM concerning RM

#### Meetings

- Participated in the thematic Session on "Cultural Heritage Risk Management within the framework of the World Conference on Disaster Reduction", Kobe, Japan – 2005 (with WHC and Bunka-cho with support by Ritsumeikan University)
- Organised the session on "Integrating Traditional Knowledge Systems and Concern for Cultural and Natural Heritage into Risk Management Strategies", Davos, Switzerland – 2006 (with WHC)
- Final Recommendations of the Meeting include the following text:
- "Concern for heritage both tangible and intangible should be incorporated into disaster risk reduction strategies and plans which are strengthen through attention to cultural attributes and traditional knowledge."
- Help develop the "World Heritage Strategy for Reducing Risks From Disasters"
- Day of Study on the Earthquake in L'Aquila

#### Meetings & Workshops

• 1st UNESCO WH Workshop on Disaster Risk Reduction to Cultural Heritage, Olympia, Greece 2008

- 2nd UNESCO WH Workshop on Disaster Risk Reduction to Cultural Heritage, Acre, Israel 2009
- ICCROM has been invited to be the Clearing house on disaster risk reduction
- Workshop on "Assessment of Vulnerability of World Cultural and Natural Heritage Properties to Disasters and Climate Change", Beijing, China 2009



#### **Training Courses**

- Continuing collaboration with Ritsumeikan University on "International Training Course on Disaster Risk Management"
- "First Aid to Cultural Heritage in Times of Conflicts" (six-week course currently underway 2010, Rome)
- "Reducing Risks to Collections Course" (four-week course 2009, 2007, 2005, Beijing)
- "First Aid to Cultural Heritage in Haiti" (three-week course, 08-09/2010, Port-au-Prince) o Some aspects of risk management in
- Course on "Conservation of Built Heritage" 2007, 2009, 2010
- "LATAM programme"

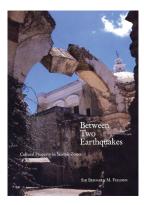
#### **Publications**

- FEILDEN, B., 1987, Between Two Earthquakes, Cultural Property in Seismic Zones, Rome/Los Angeles, ICCROM/ Getty Conservation Institute.
- FEILDEN, B. and JOKILEHTO, J., 1993, 2nd ed. 1998, Management Guidelines for World Heritage Sites, Rome, ICCROM.
- STOVEL, H., 1998, Risk Preparedness: A Management Manual for World Cultural Heritage, Rome, ICCROM.
- ICCROM, ICOMOS, IUCN, UNESCO-WHC, 2010, Managing Disaster Risks for World Heritage, WH Resource Manual, Paris, UNESCO.
- (A Manual of Collections Risk Management by ICCROM & Canadian Conservation Institute are currently finalizing)

## Potential Collaboration with ICORP

#### **Potential joint activities:**

- Invite ICORP members to engage in ICCROM training courses and other activities
- Conduct joint research activities such as organisation of conference,



publication, etc.; (e.g. ICOMOS-ISC for the Theory and Philosophy has worked in a number of conferences and publications. Conference and publication on Values and Criteria in Heritage Conservation" in 2007)
• Participate in meeting

#### **Future Activities**

of ICORP...

- "Risk management" will be one of the pillars in the Programme & Budget 2012-13 biennium;
- In particular, we are planning for an Exploratory Workshop on Risk management with International and Regional Partners;
- It might be a step to further develop new

programme?

• ICORP can be a partner in respect to World Heritage, Material Science, Living Heritage, Risk Management and Regional Collaboration.



#### 3.10 UNESCO Hague **Convention and its Second** Protocol

Akatsuki Takahashi Programme Specialist for Culture UNESCO Office for the Pacific States

The Hague Convention of 1954 and the Second Protocol address human induced disasters in respect to technical and socio-cultural aspects. The reconstruction of Dresden took 60 years. It also dealt with the movement of cultural properties during the Second World War.

The definition of cultural property is broader than that for heritage. The definition of cultural property by the Hague Convention is broad, including libraries, museums and archives, shelters for cultural properties, etc. The Hague Convention stipulates the protection of cultural property during armed conflicts and in time of peace as well. (Article 3 – in time of peace / Article 4 – in armed conflicts) Article 11 stipulates the withdrawal of immunity in exceptional cases of unavoidable military necessity. Military necessity is described vaguely. This was a major issue which has been clearly defined in the 2nd protocol.



5 sites are under the Special Protection regime by the 1954 Convention. Since the adoption of the 1954 Hague Convention, many things happened. In the field of culture, various conventions have been established such as the 1972 WH Convention. On the other hand cultural heritage has been damaged during ethnic conflict in Cambodia and in Croatia the Mostar bridge was attacked because of its symbolic value.



In 1990s, the end of cold war allowed the advancement of international criminal courts. (ICTY – ad hoc / ICC – permanent) These were behind the preparation and adoption of the 2nd Protocol in 1999. Intentional attack on historic towns and cultural heritage constitute war criminals according to article 8 of the Rome statutes.

At the request of the Member States. UESCO launched the elaboration of the 2nd Protocol. Adopted in 1999, the 2nd Protocol brought about several improvements to the Convention. Upon the outbreak of hostilities, a Party to the conflict may request, on an emergency basis. enhanced protection of cultural property under its jurisdiction or control by communicating this request to the Committee. The Committee shall transmit this request

immediately to all Parties to the conflict. In such cases the Committee will consider representations from the Parties concerned on an expedited basis. The decision to grant provisional enhanced protection shall be taken as soon as possible and, notwithstanding Article 26, by a majority of fourfifths of its members present and voting. Provisional enhanced protection may be granted by the Committee pending the outcome of the regular procedure for the granting of enhanced protection, provided that the provisions of Article 10 sub-paragraphs (a) and (c) are met. In exceptional cases, when the Committee has concluded that condition (b) is not fulfilled. the Committee may decide to grant enhanced protection, provided that the requesting Party submits a request for international assistance under Article 32 Article 10 of the 2nd Protocol (1999)

a) It is cultural heritage of the greatest importance for humanity: b) It is protected by adequate domestic legal and administrative measures recognising its exceptional cultural and historic value and ensuring the highest level of protection; (Special consideration: Article 11.8) c) It is not used for military purposes

or to shield military sites and a declaration has been made by the Party which has control over the cultural property, confirming that it will not be so used.

The International Committee of Blue Shield (ICBS) was established in 1996 comprising of a consortium of five NGOs (ICA, ICOM, ICOMOS, IFLA, CCAAA) ICBS plays a consultative role for the

1999 Protocol and can also make a recommendation to the Committee regarding cultural properties to be put under Enhanced Protection. In that case, the Committee shall invite State Parties concerned to make such request.

Operational Guidelines for the Implementation of the 2nd Protocol provide more detailed rules and guidance. These were prepared by the Intergovernmental Committee (12 State Parties) from the period of 2005 - 2009 and endorsed by the Meeting of State Parties in November 2009. The new measures include criteria for Enhanced Protection based on the definition of the Greatest Importance for Humanity (GIH) - Not OUV but **Exceptional Cultural Significance** (ECS). It further requires synergy with the World Heritage List and Memory of the World Register.

The Intergovernmental Committee of the 2nd Protocol made several

> recommendations. A better balance of state parties among different regions was sought. The cooperation and coordination among the World Heritage Committee, the 2nd Protocol Committee and the Committee

for the Memory of the World Register was to be improved. The Operational Guidelines were to be further elaborated as an evolving document in terms of measures to be undertaken in time of peace, application to natural disasters, application to peace keeping operations, etc. This is still an ongoing process. The 5th Meeting of the Committee will take place in Paris, 22-24 November 2010.

#### 3.11 Christchurch Earthquake

Mary O'Keeffe ICORP member Secretary, ICOMOS New Zealand Presented by Robyn Riddett

Christchurch, located on New Zealand's South Island, was founded in 1848, by British settlers. The city is built on a wide alluvial plain, beside two rivers. Whilst New Zealand is located on the "ring of fire" (tectonic plate boundaries) and is tectonically active, Christchurch is not noted for earthquakes. However on 4 September 2010 an earthquake of magnitude 7.1 struck, with well over 100 aftershocks, some measuring over 5 on the Richter scale. The estimated damages thus far are NZ\$4 billion. The death toll was 0. The response has been fast and effective. Assessment teams were on the ground the following day, assessing damage to buildings, and assessing further risk. The continuing aftershocks further weakened already damaged buildings. The Christchurch City Council (CCC) was aware of the importance of built heritage to the region's history and identity, and heritage issues were a high priority from the start. The CCC issued press releases and information forbidding demolition without consent and without prior assessment. ICOMOS NZ co-ordinated the establishment of a skills list of volunteers from NZ and overseas for heritage work.

In spite of the 7.1 magnitude of the earthquake the survival rate of heritage buildings was high, with few catastrophic building failures. The major group of Gothic Revival buildings which are essential to the city's architectural character and sense of identity survived the quake with only limited damage. Many other



heritage buildings in the central city survived with minimal damage. These successes are largely the result of the extensive programmes of seismic strengthening carried out over the last three decades. Unless these can be consolidated quickly there is a serious danger of further structural failure and damage to contents and fittings, particularly stained glass. Christchurch and Canterbury possess the largest collection of Victorian stained glass in New Zealand, much of it of very high quality. At least one significant window has already been destroyed as a result of the failure of the east wall of the Church of the Holy Innocents at Mt Peel, dating from 1869. Other windows are in grave danger.

The very small number of buildings surviving from the 1850s, mainly of timber construction, appeared to have survived the earthquake in good condition. From the 1860s onwards there was increasing construction in stone and brick. Where masonry structures were strengthened in accordance with both local and national building codes, the structures performed well. Damage resulted from falling brick chimneys, some of which have broken through roofs and seriously damaged interior spaces, including, in one circumstance, an important collection of colonial furniture. Damage to brick houses dating from the 19th and early 20th centuries has been considerable.

The high level of awareness of earthquakes in New Zealand from the beginnings of European settlement in the mid 19th century and particularly since the Napier earthquake of 1931. led to buildings and infrastructure being designed to withstand them. The fact that no lives were lost in the Canterbury earthquake reflects this level of preparedness. Response to ensure public safety was immediate and rapid and damaged buildings were quickly cordoned off. Inspections of buildings began within a few hours of the earthquake and every structure was graded as unsafe (red); limited access (yellow) or safe (green). As was inevitable, initial engineering assessments were rapid, decision making variable and often based on a limited knowledge of individual structures. As time went on assessments were revised, sometimes by the engineers who had designed the strengthening systems for the buildings concerned.



There was widespread misunderstanding that buildings graded as unsafe were to be demolished, and in the case of at least one listed heritage building demolition took place without any process being followed and within 48 hours of the initial earthquake. It seems likely that this was an opportunistic exploitation of the earthquake that apparently absolved the owner from giving tenants notice and following the usual

process for demolition of a heritage building. Hasty demolitions of unlisted character buildings have occurred, particularly in suburban areas in the days immediately following the earthquake. In many cases these buildings were almost certainly repairable but demolition suited owners' commercial objectives. Staff of the Christchurch City Council heritage unit worked alongside staff from the New Zealand Historic Places Trust's Southern Regional Office to prepare a data base of damaged heritage buildings, to process applications for securing work, requests for engineering assessments and to stem a tide of hasty demolitions. Efforts were also made in the days following the quake to ensure that rubble from damaged buildings was inspected to prevent reusable materials from being dumped.

#### **Key points**

- Seismic strengthening and regular maintenance make major contributions to both public safety and building survival.
- Buildings constructed after the 1931 Napier earthquake (and designed and engineered accordingly) generally fared better.
- Wooden buildings generally fared well, except for collapse of brick chimneys stressing the need for reinforcing of brick chimneys.
- Just because a building is deemed unsafe, does not make it un-saveable.
- The need to gather and retain collapsed material for possible reinstatement has to be stressed.
- Vigilance is needed by city managers to prevent opportunistic demolition by owners.

### 3.12 Disaster Planning in the UK

Sue Cole

The World War II and Cold War emergency arrangements were reviewed after 9/11 and led to the Civil Contingency Act. A national structure was established with government department and

the Cabinet office (COBR). Regional Resilience plans were established which are regularly updated which include yearly exercises, coordination and capacity building activities. Emphasis is on the "Gold, Silver, Bronze" approach, which means the involvement of authorities, emergency services, NGOs. charities away from and on site. Resilience covers natural disasters (Flood, Snow, Fire, Earthquake, Hurricane and Pandemic - foot and mouth, flu). man-made disasters (Accidents, Arson, Terrorism and

Industrial action) and armed conflict (participation in overseas military and humanitarian actions).

These arrangements function pretty much at a macro scale although there is always room for improvement. UK resilience website includes information on cultural heritage and impact on and

cultural heritage is included in some exercises. But recent events have identified particular challenges. Responders often forget cultural heritage is important. The system is very dependent on a few people. Climate change means there are repeated events such as floods, storm surges etc. These are not covered by insurers. However the UK Government approach is to

encourage personal responsibility rather than state cover. National cultural heritage organisations are beginning to give advice on adaptations to address flooding and disasters linked to climate change. However there is not much disaster planning in the historic environment field.



was going on, information on disaster planning was provided and a visitor viewing gallery was provided. The Windsor Castle fire was caused by electrical overload. This led to a better disaster plan and increased cooperation between organisations. The sudden summer floods at Boscastle had massive impact on a small village. This was a wake-up call to many authorities.







Hazard risk maps were updated and local disaster plans produced. Basic information was provided to each household at risk. Information on "do's and don'ts" on repair to historic buildings were issued.

Floods threatened the operations of the historic

Severn Valley Railway which was being run by a local volunteer group. Good dissemination of information and appeals for help ensured the survival of the Railway. The target for the appeal of £300,000 was reached in 4 days.

The capsizing of the MS Napoli threatened the Jurassic Coast natural World Heritage property. An emergency plan enacted to stop pollution and looting.

The regional resilience plan incorporates awareness of World Heritage values and World Heritage staff participated in exercises.

The European Union put in place a Solidarity Fund after the central European floods in 2002. This pays for infrastructure resilience projects but is very difficult to access. The EU funds resilience projects on a range of issues; however cultural issues are traditionally dealt with by the Council of Europe. Should the CoE be approached to address disaster planning for cultural heritage? There has been talk on setting up a European task force to help in disaster situations. How



can cultural heritage be embedded in? ANCBS is effectively the executive arm of the Blue Shield based in The Hague and does lobbying, fundraising and training and capacity building for military and civilians. Two Missions were carried out; Cologne and Haiti

There are some very basic challenges.

• Communication:

At international, national, regional and local levels, between civilians and emergency services and the military, between different cultural

heritage sectors and professionals. Need a common language (disaster risk reduction, emergency planning, and business continuity planning ......)

• Common

Standards

For maps and locational information, values, assessment data, security protected or freely accessible? How do we maintain common standards? How do we ensure information is kept up to date? Who monitors? Basic templates adapted or bespoke for each property? Training for all?

Funding

How do we tap into the funds that are out there? EU funds? Charities? Sponsorship?

Relevance

The most fundamental challenge is how do we make this relevant? Do we need a champion? How can we embed good management of cultural heritage into peoples' hearts and minds?

## 3.13 Amarbayasgalant Monastery, Mongolia

Chris Marrion

The Amarbayasgalant Monastery in Mongolia has faced many near disasters, however it was only after a fire devastated 80% of the National Gallery of Art that the issue was taken seriously. The Arts Council was responsible for the protection of the Monastery. In 2007, through the US ambassador's fund for Cultural Preservation, the purchase of fire extinguishers was planned. The fire bridge was located some two hours drive away. However it was necessary to develop a strategy to protect the monastery and provide information to the Lamas.

The Monastery was constructed in 1737. It was the largest Monastery in Mongolia with two to three thousand monks living there. From 1930 onwards under the Communists, the site was largely destroyed and abandoned till the 1990s. Twenty eight out of the forty temples remain. Today there are only fifty to sixty monks staying at the site. The government is considering nominating the monastery for the World Heritage List.

The objective of the study was to see what could be done to reduce the risk of fire, assess risks and hazards and develop a strategy. There were various ignition sources such as the electrical wiring and the oil lamps (friendly fires). In such places of worship, these sources of fire are the main problems. The second component that needs to be considered is the fuel for the fire. It is important to suppress the fire as quickly as possible. This can be done through smoke detectors and establishing sprinkler systems.

However alternative strategies needed to be considered that would have immediate effect. Awareness building and training could be carried out. A fire safety manager is needed to be identified. Visitor procedures needed to be reviewed. Should a fire start, it would be important to detect it as quickly as possible which would require a watch. Once detected, everyone around would need to be notified by means of some kind of system. Possible means of fire suppression would be required close at hand such as wool, sand, earth or water.

The process of detection, notification, and response and fire suppression is the basic strategy against fires. This process needs to be established, especially in areas such as the monks' dormitories.

The key lessons are that fire happens and it is important to have the ability to respond. This requires planning and strategies with clear prioritise. Sustainability must also be considered.

#### 3.14 Case Study from Finland

Minna Perähuhta

In Finland the greatest risk to buildings are fires. Eighty percent of buildings are built of wood; wooden structures, facades, etc. There are lots of fires that destroy buildings and even entire towns. Heating is done using wood fires. Sources of fires can also be candles and electrical wires and appliances. Most fires are however started by drunken

men smoking in bed and falling asleep.

There is also a great impact from climate changes.
This has led to extreme climatic situations such as storms and

high winds which are unprecedented

There are international and national standards however these are different from the local level standards for individual houses. For example there are new energy norms.

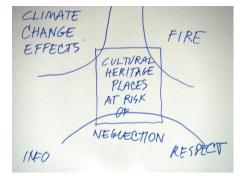
Neglect is due to insufficient information, respect and knowledge. This is true not only for the owners but also with the authorities. It would be necessary to have a legal basis with local and public

participation. Even though the State and the municipalities might make clear decisions, the citizens often don't accept the authority.

It is not possible to save all buildings that are over 100 years old. The main threat seems to be the construction of parking lots. Such decisions are taken by the municipality. There

are also old churches being burnt down intentionally or through arson. Owners also do not care. There are no mechanisms to deal with such situations. Decisions

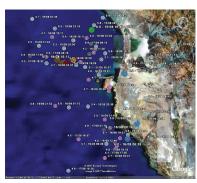
are taken at local level. Cultural properties are often considered liabilities.



## 3.15 Experience of the 2007 Pisco Earthquake, Peru

Teresa Vilcapoma Huapaya

On 15 August 2007, 18.40 an earthquake of magnitude 7.9 struck and five hundred and ten people were killed. Three hundred people died in the interior of churches and houses. Sixteen thousand families became victims to the earthquake and ninety percent of building affected



Pisco was founded in 1640. The previous earthquake was in 1942 of magnitude 8.4. Sixty five years later in 2001 an earthquake of magnitude 7.9 struck.





1942 2001

Various cathedrals and churches collapsed. Several churches were torn down completely instead of being restored or reconstructed. The Pisco San Clemente church, the towers survived but were later torn down.







A similar incident took place with the Society of Jesus Church. The Mayor of the City ordered the demolition of the church.





Other monuments affected inside the monument area. The Ica Cathedral:







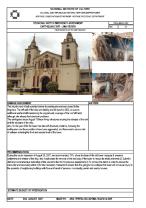
The Sanctuary of Luren:







Preliminary identification of damage to heritage buildings was prepared for the province of Canete. These included religious, public, domestic buildings including urban environmental and monumental areas. The damage was assessed under three categories: grave, moderate and light. Additionally, a preliminary proposal with notes on recovery and restoration were provided for each of the buildings. Notification was sent to the property managers to ensure that no demolition takes place with prior consultations. However even though recommendations were provided, the recognition of many monuments were cancelled allowing for demolition. This was the case of the San Clemente Church in Pisco and the Luren Church and Socorro Chapel in Ica.



# SECTION 4 Report on International Symposium "How to Protect Cultural Heritage from Disasters: Risk Preparedness and Post Disaster Recovery"

Organized by

Ritsumeikan University Research Center for Disaster Mitigation of Urban Cultural Heritage (Rits-DMUCH) and ICOMOS-ICORP

Under the auspices of

Ministry of Foreign Affairs, Agency of Cultural Affairs, Japan-ICOMOS, Kyoto Prefecture, Kyoto Prefectural Board of Education and Kyoto City 140th Anniversary of Ritsumeikan Academy - 110th Anniversary of Ritsumeikan University

Conference hall in Rits-DMUCH, Kinugasa Campus, Ritsumeikan University Sunday, 26th September 2010: 13:00-17:30

#### **Proceedings of the International Symposium**



## Keynote Speech 1: "Risk Preparedness for Cultural Heritage in World – Challenge and Present Situation"

Gustavo Araoz (ICOMOS)

I am delighted that finally there is a real pulse on ICORP, a committee of international specialists that fulfils one of the essential components of the mission of ICOMOS for sharing experiences, providing guidance, and cooperating across borders, across cultures and across oceans. For years we have been waiting for this day, because unfortunately, over the past decade we have gone through a number of horrible catastrophes in every continent without ICOMOS having had the ability to provide an appropriate response to our colleagues at the time of their extreme need

If ICORP has reached this level, it is very much thanks to your chairman Rohit Jigyasu, to Prof Masuda, to Sue Cole and to all of you in the Committee who have worked decisively to overcome the obstacles that had been blocking your path to success. ICOMOS is grateful to each and every one of you, as well as those, such as Robyn Riddett and Dinu Bumbaru, who helped develop the early vision for ICORP.

2010 has brought us more than our fair share of catastrophes. We began in January with the horrific earthquake in Haiti, followed by equally severe seismic activities in Chile, China and New Zealand, fortunately, all with less damage and suffering than in Haiti. We also had destructive floods in Guatemala, Pakistan, India, Poland, the Czech Republic, Germany, the United States, Singapore and, again, in China.

Risk Management is not my area, and I do not like to speak about fields in which I am not a specialist, so I will try to steer clear of speaking directly about the methodologies related to risk management and risk response. What I know about this field is the result of being in the position of having to provide as President of ICOMOS some meaningful response to the heritage damage caused by recent catastrophes. While this is not a task that I will ever shy away from, I assure you that in the future, if I or my successors have to face such situations again, the existence of ICORP will enable us to do it with the security that comes from knowing that we have a professional corps that can address these situations. So, as with all the other ISCs of ICOMOS. I will not diminish the calibre of your discussions with my amateurish comments. Instead, today I will share with you what I think may be some of the lessons learned from the experience in dealing with the Haiti earthquake, the offer of assistance that ICOMOS made to our Haitian

colleagues, and the difficulties that we have encountered along the way. After that, I would also like to share with you some ideas about the role that ICORP could play in the broader world of ICOMOS. The main lesson from Haiti is one you know very well and it is that. preparedness is crucial. In Haiti there was a complete absence of preparedness in two ways: One was the lack of preparedness to meet the everyday challenge of heritage conservation due to a very weak institutional structure with a long history of unsustainable programs and ineffective results. This was true at both the private and the 2 public levels. The result of this was that for years Haiti had been undergoing a major heritage disaster in slowmotion.

The other lack of preparedness was in risk management. The January earthquake of more than 8 points in the Richter scale suddenly re-set the speed of a tragic situation into "fast-forward" and submerged the heritage of the country, already at high risk, into a condition of maximum damage and vulnerability. Once disaster hit, it was like a house of cards collapsing. Everything went from bad to worse, to worst. In a country where most construction relies on concrete and brick and block masonry, the standards for construction materials and building construction codes had for decades been inadequate; and to make things worse, those inadequate standards

were rarely enforced. As could be expected, collapses were widespread due to deficient steel reinforcement. but even more so because the poor composition of both poured in place concrete construction as well as in prefabricated concrete masonry units rendered the material unable to absorb the forces created by the quake. One tragic aspect to this situation is that for years, Haitians buying concrete were not aware of the poor quality of the materials they were buying. So, lesson #1 is update construction codes and standards to meet the level of risk and enforce them. The visuals that were carried by the international media carried such pathos that the international community immediately responded in an unusually compassionate effort to alleviate such extreme destruction. The response, however, was not so easy. Since Haiti had been the object of UN peace-keeping forces for some years, it was difficult for both insiders and outsiders to discern where recovery responsibilities rested, on national institutions or on the international peace-keeping structure of the United Nations. It quickly became not only a matter of dealing with the physical disaster; it was also an issue of a disentangling a complex institutional disaster situation.

The weakness of institutions in Haiti extended also to ICOMOS. Once a promising National Committee in the Caribbean region, the Committee had been allowed to slowly decline

to the point that its total inactivity led ICOMOS to declare it cancelled a few years ago. The absence of ICOMOS in Haiti made our work more difficult. Even though a number of us at least knew a few of the key preservationists from the old days and were able to use those contacts.

As a nation, Haiti had repeatedly failed to meet its present or future needs, and history seemed to be coming back to collect an overdue unpaid bill. The national heritage legislation in Haiti dates from 1940, and is based on a grand monuments concept that gives the State the very narrow right to give protection and official recognition to only major historic structures that belong to the government. The government has always felt that the law gave it no authority to intervene over privately held buildings, regardless of the values they could have acquired over the years. This, meant that the official national heritage register consisted of a list of about 20 monumental buildings, of which most of the ones in Port-au-Prince collapsed. There were no broader inventories of historic urban districts, of vernacular structures. of rural and industrial landscapes. In 3 other words, there was no way to measure the earthquake damage to heritage structures beyond the officially recognized monuments. Another lesson, then, from this experience is one that is rather obvious and that we tend to take

for granted, and it is that for an appropriate disaster response, the basic set of tools to protect heritage under normal circumstances needs to be functionally in place. Making things worse in this very unhappy story is that, like so many other government buildings in Port-au-Prince, the office and archives of the country's heritage authorities were severely damaged. While the building did not entirely collapse, its damage rendered it dangerous and inaccessible. Reportedly, considerable amounts of singlecopy archival material was lost, which takes us to lesson #3: always have redundant archiving systems in separate locations, and give maximum physical protection to major repositories. Under these conditions, ICOMOS and all the international assistance community has to respond to this catastrophe under the most uncertain conditions. Our only possible response was to offer our Haitian colleagues a very ambitious assistance program consisting of a sequence of events that addressed a program of rapid heritage identification, damage assessment, and finally of repair and recovery.

As risk management specialists you all know that every risk preparedness methodology recognizes the phenomenon of local communal shock in the immediate aftermath of a devastating catastrophe, and their inability to think clearly to take major decisions. That is why disaster

scenario games are important, and why response plans train certain key response team members on the implementation of actions according to a pre-established set of criteria and scenarios, without putting emotionally over-stressed individuals in the position of having to come up with difficult decisions. Such was the case in Haiti, where all heritage authorities had undergone severe personal losses.

What our first mission to Haiti led by Esteban Prieto and Dinu Bumbaru found the week after the earthquake was a dire need for help, but except for a few focused details concerning the village of Jacmel, there was no specific guidance from our Haitian colleagues as to what that massive assistance should be. And this was the reason that ICOMOS took the initiative to develop the ambitious assistance and recovery menu. You will recall that to populate our assistance teams, ICOMOS issued a call for expert volunteers, and the response was overwhelming. Within a month we developed a database that contained over 300 names that we made available to the Haitians. ICOMOS was ready to mobilize, and even though we had no idea about the level that our mobilization would entail, potential funding sources for mobilization were identified. However, in spite of frequent messaging to Haiti to accelerate our assistance we met continued silence at the other end. We pursued a number of access lines to Haiti,

most visibly that of working closely with UNESCO. ICOMOS attended the meetings convened in Paris to coordinate emergency assistance, and in every one of those occasions, the same generous offer was presented to the Haitian heritage and cultural authorities in attendance. In Washington, we met with the Minister of Culture designated by the Haitian President to be in charge of all foreign reconstruction assistance, and to whom I reiterated the ICOMOS offer. The overall objective presented by the Haitians at all these donor meetings was very encouraging. They wanted to use international assistance not so much to return to the earthquake status quo ante; instead they wanted to find a silver lining in this darkest of clouds to build solid institutional that would sustain the socio economic development that for so long has eluded Haiti. To achieve this, the Haitians insisted, they had to be in full charge of accepting and coordinating all foreign assistance. In other words, the international assistance community was to stand by and wait for a green light to mobilize. Respectful of this wish, ICOMOS offered help to the Haitian cultural authorities by gathering and consolidating the many offers for heritage recovery proposed by the major donor countries. At my request, many of our National committees gathered such information, and again, it was sent to both Haiti and to UNESCO. Still, no response. And standing by without

any response is what we have now been doing for almost nine months. Let me state that our frustration is not unique. Many assistance and donor organizations are deeply concerned by the shared inability to help improve local conditions that are simply getting worse. As is the nature of these events, we are now well into the stage of increasing donor and media fatigue. Money and interest are inevitably flagging and being diverted to other issues. I don't know whether we will be called to help, nor do I know that if we do, we will be able to secure the necessary funding now.

The one minor success that we did have was through our cooperation with World Monuments Fund, who moved aggressively ahead with a privately sponsored mission to evaluate damage in the historic Gingerbread district of Port-au-Prince, a site in their Watch List. Our volunteers from ISCARSAH. led by Steve Kelley and supported by our Steering Committee (which was chaired by Dinu Bumbaru and included among others, Prof Masuda, Rohit Jigyasu and Rasool Vatandoost of Iran), developed a rapid field damage assessment methodology that was used by the WMF, whose mission members consisted of many ICOMOS members. ICOMOS also contributed the dazzling work of Randolph Langenbach of large-scale oblique aerial photo-murals that was intended to facilitate the rapid

identification of unlisted heritage structures in the absence of real inventories. As far as we know, the aerial photomurals have not been used. Through our cooperative work in Blue Shield, multi-language signs to visibly identify every heritage site to prevent its demolition during the clearing operations were printed in Austria and sent to Haiti via the Dominican Republic. ICOMOS also participated by sending Lynn Fontaine of Canada in a recent World Heritage Centre risk management mission requested by Haiti to the World Heritage site of La Citadelle-Sans Souci, but this is not directly related to the earthquake, as the property is located in an area that was not affected by the tremors. The last time met with the Haitians was at the World Heritage Committee meeting in Brasilia last month.

Once again, I reminded Daniel Elie, the head of ISPAN, of the standing offer made by ICOMOS, and this time he did agree to accept our help in developing new heritage legislation. Our ICOMOS Legal Committee-ICLAFI -has already been asked to begin this work.

I wish I had more success to report to you on Haiti, but I do not. The case of Haiti, of course is so extreme in damage and so complicated by the uniquely peculiar local conditions and circumstances that I don't know whether the lessons to be learned from this experience are vast, or whether

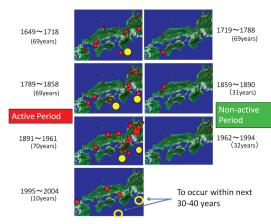
they are so particularly unique as to not be very useful at all. What I do know is that we should not be discouraged by our experience in Haiti. I mentioned at the beginning of this talk that the reorganization and activation of ICORP is for ICOMOS a cause for celebration. If we cannot respond in Haiti, at least we all know that sadly, more disasters will come and hopefully ICOMOS will be more ready next time with a more professional and less ad-hoc response to a tragic situation. What does it mean for ICOMOS to be ready? That is up to you, the ICORP experts, to decide. In talking to Rohit, Sue and Prof Masuda, we agreed that I should conclude my talk with a vision for the role of ICORP in ICOMOS. That role, of course, will be largely up to you to develop and fulfil. I can however, add a few big-picture ideas: The Bureau of ICOMOS has recognized the need to drive home the importance of risk management planning in every heritage community, along with developing our ability to assist them in this task. This would include training and the development of mutual support networks and partnership, specialized information, manuals and other tools.

My vision is that ICOMOS should be ever ready to come to the assistance of heritage in the aftermath of any disaster anywhere in the world. For me, that requires a strong and energetic ICORP, and would include

- Maintaining an updated base of volunteers with specific qualifications.
- Developing damage assessment methodologies for the full range of heritage resources.
- Have in store the equipment and all the tools necessary to achieve rapid deployment of teams in the aftermath of disaster.
- Have a permanent fund to sustain the initial rapid deployment and assistance stages until other donations can be secured to sustain later stages and replenish the fund.

#### Keynote Speech 2: "Cultural Heritage of Near Future – Case of Kyoto"

Kenzo Toki (Ritsumeikan University)



As I have been involved in the field of disaster prevention, I have come to think that the people in Kyoto are not too concerned about the future, though they have relied on what has been inherited from the past. Today I would like to focus on the intergenerational justice.

The modality of disaster risk management for cultural property greatly changed after the Kobe Earthquake. I have worked in this field for 15 years, believing that the field of disaster prevention and the field of cultural property studies, which were ignorant of each other before the great earthquake, should collaborate together. The chance where I came to that state of mind was the big fire in the city

of Kobe which occurred due to the earthquake. Fortunately, there was not much of cultural heritage in Kobe, but there was also an incident that the fire preventive facility in Ninna-ji Temple in Kyoto

malfunctioned. Kyoto Basin has such a small space, but embraces a number of national treasures in it. A big inland earthquake is predicted to strike Kansai Area soon, within 30-40 years; it might come tomorrow. We need to move fast. There have been repeatedly active seismic time

periods and peaceful periods each of which is around 120 years, and now we are living in an active time.

The reason why I specifically talk about Kyoto is the proportion of the number of cultural properties to the population. In Kyoto, there is a cultural property per every 1000 people while the proportion is about 10 times smaller in the other main cities in Japan. There are so many cultural properties in Kyoto, considering its population.

The situation has changed from the old days due to the spread of the urban area. There used to be no residential house around each temple, but now it is surrounded by so many houses. Today we need to consider possible fires coming from the outside of temples, as well as fires that will occur inside.

A number of temples and shrines were burnt down during the Civil War Era and the Meiji Renovation. It means there were 2 big losses of shrines and temples in Kyoto in the past. The third time, if there will be, could be caused by an earthquake.

The Kobe Earthquake in 1995 killed more than 6000 people, and brought damages of 10,000,000,000,000 yens, which was equal to a quarter



of the national budget at that time. It raised people's awareness for disaster risk management of cultural heritage. In 1997, activities of advocacy by NPOs / NGOs started. In 2003, a national committee was formulated. I was the chairman of the second round committee in 2008, and in its final report the national decisions toward protection of cultural properties were stated. I believe that was a small but strong step for promotion of the issues concerned with protection of cultural heritage from seismic disasters.

One of the pilot projects was taken place in Sanneizaka in Kyoto, which took a totally distinct course of decision making from the usual policy making in Japan. First NPO and the local residents held a couple of meetings to make a draft plan, and proposed it to the Kyoto municipal office. Then the mayor of Kyoto requested a budget from the central government. This is how the project started. We installed 2 tanks each of which can contain 1500 tonnages of water, and connected with pipes made of polyethylene, which is strong material to earthquake ground motion. We are about to finish the construction work this year.

We are not only talking about abstract concepts, but also implementing concrete and practical projects. Today we do what will be helpful for people in the future.

In order to achieve disaster risk management for cultural properties, people from various fields need to cooperate. This COE is now going through its 8th year. We are to realize the cooperation in the remaining 2 years and a half.

Protection of cultural heritage from natural disasters is what the university researchers have been working on, but it is also important to realize that it consists of just a part of the problems concerned with cultural heritage. Now I have come to think that it is important to look at cultural heritage from a broader

perspective because just to think about natural disasters is not enough, and that we should take actions for the future of Kyoto. Kyoto at present time greatly relies on cultural heritage from the past but we are not offering much of anything for coming generations.

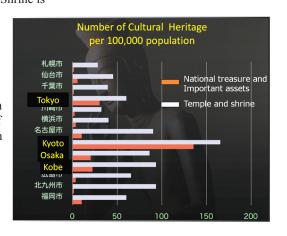
We need to realize that there are so many gifts that the people in 100 years ago sent for us in terms of preservation of cultural properties. For instance, Heianjingu Shrine is

a shrine that was built in commemoration of the 1100th anniversary of the capital transfer to Kyoto, and is conveying the traditional style architectures in the Heian Era. Jidai Matsuri, one of the 3 biggest festivities in Kyoto, just started some 100 years ago. Biwako Canal is bringing water from Biwa Lake, located in Shiga Prefecture next to Kyoto. The drinking

water of people in Kyoto today is provided by the facility built more than 100 years ago. Another example is the fire fighting facilities in Higashi-Honganji Temple.

I have been working with influential people for the sake of the future of Kyoto, including the president of Kyoto Prefecture, mayor of Kyoto City, presidents of universities, members of Kyoto Lions Club and heads of temples in Kyoto. The

temples in Kyoto are very powerful organizations in terms of cultural heritage conservation. It took 10 years to found Kyoto Platform for Cultural Heritage for Tomorrow. It is going to be effectuated on the 21st of October this year. Its name platform indicates that anyone can join us at any time. We appointed Mr. Koichiro Matsuura, a former managing director of UNESCO, to director. We are now planning to found a committee for younger generations.



As of something visible and tangible, we are reconstructing Rashomon Gate, which was an entrance of the old capital of Kyoto. We are intending on enhancing the public awareness for cultural heritage conservation, having people reminisce over the long history of Kyoto. Rashomon is planned to be built with donation from citizens.

Keynote Speech 3:
"Risk Preparedness for
Cultural Heritage –
From a point of view of
UNESCO New Delhi"

Moe Chiba (UNESCO New Delhi)

Over the past decade, there has been a growing recognition of the importance of disaster risk preparedness and management of cultural heritage sites. While the subject became prominent



recently during the 2005 UN World Conference on Disaster Reduction (Kobe, Japan, 2005) and thanks to its Hyogo Declaration and Framework of Action, ICOMOS had been already actively advocating for the inclusion of risk preparedness in the cultural heritage management as soon as the early 1990's. Likewise, ICCROM has been carrying out numerous training activities on the subject since late 1990's. UNESCO, too, has been publishing

several manuals and guidelines on protecting cultural sites including the one specifically on the disaster management of World Heritage Sites. Besides, the number of symposiums and workshops related to the topic seems to be on a rise every year.

Notwithstanding the merit of such efforts, the principle advocates of heritage, in particular UNESCO, would want to further ask themselves why the implementation

is yet to follow at the national level despite of the multiplication of conferences, recommendations, action plan and guidelines; and, to what extent these events and materials are effective in assisting the heritage conservation practitioners in a real term. The presentation shared with the audience some of the personal observations – doubts

and dilemmas - about our current effort to mainstream heritage concern in the framework of natural disaster management from the perspective of a UNESCO field officer.

Many recommendations and action plans; but why the implementation does not follow?

Is our approach relevant or sufficient?

Interactions with the Government departments and local heritage conservations reveal that there is not so much the lack of awareness or understanding about the need for disaster mitigation plan for heritage sites, but rather the absence of national resources, both human and financial, is the real issue. Section below provides some facts and figures from Bhutan, Maldives and India to give ideas on the ground reality under which the heritage practitioners are operating:



Example of Bhutan: Bhutan has recently graduated from LDC status, however poverty alleviation remains the utmost national priority. Human resources in the Division for Heritage Conservation is extremely limited with some 16 technical staff only to look after the up-keeping of some 2000 historical buildings scattered across the country, in addition to supervising the construction of new traditional architectures. Two colleges are available giving advanced course on engineering, however there is no faculty to study local traditional architecture. The country has no

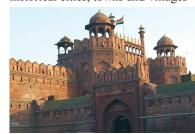
scientific research institutions to support the work of heritage conservation. After the September 2009 earthquake, the Division for Conservation of Heritage Sites has been trying to advocate the intrinsic advantage of traditional architecture against RC construction, however in vain, as the Division has been so far unable to provide with scientific data to backup its views.



Example of Maldives: The Maldives is a LDC with a typical small-island economy largely dependent on fishery and tourism. Tsunami in December 2004 affecting 64% of GDP was a major setback to the Government's development agenda. The country has limited number of 'historical buildings', thus heritage conservation has never been the obvious area of work for the Government. However, the country is known to have important number of Buddhist sites, that would require thorough study and if tapped well, would be another potential tourism resource for the country other than beaches. The lack of country's human resources in this area is however even more acute:

the country counts only one trained archaeologist. The highest education degree offered in the country stops at high-school so far.

Example of India: India cannot be said to be short of funds or human resources. Nonetheless, the sheer size of the country and the number of the cultural sites is a major challenge. There are more than 3500 sites under the responsibility of Archaeological Survey of India (ASI), another 3000 under the State Departments of Archaeology, not to mention hundreds and thousands of historical cities, towns and villages



with vernacular houses which come under the purview of any government department. In 2007-08, ASI was allocated with an important annual budget of 22 million USD. However, dividing this sum by 3500 sites, an annual budget allocation per site would be 6000 USD, which is hardly adequate if one tries to undertake any serious conservation work

This is a short overview of the context within which some countries are struggling to fulfil their mandate. In face of such multiple constraints,

a series of international conferences, general recommendations and guidelines are ultimately of no use, but could even be a source of frustration as these events and documents fail to address the reality ground under which the heritage departments of the developing nations are operating. Instead, concrete tools and mechanisms that would support their capacity building and implementation seem to be required.

What support tools and mechanisms would field practitioners find useful?

Some of the supports, which the local heritage conservators are constantly looking for include:

(a) Easy access to relevant and reliable data: there is no dearth of resource persons and useful case studies somewhere in the world. However, such information is often scattered and not always easy of access. Field practitioners, engrossed in their day-to-day assignment, do not usually have time to search either. Further, when one has access to information, it is difficult to know if this could be trusted. To this end, an on-line database where list of resource persons and case studies are stocked in one place, and where, in addition, the peer review is provided, which could be a useful tool, that may be proposed to ICOMOS, ICCROM and/or UNESCO for possible development.

(b) Response/advice to their dayto-day technical queries: local sites managers are constantly and desperately seeking for guidance to their concrete technical issues that arise on a day- to- day basis. Their tasks are as concrete and pragmatic as where to place the fire extinguisher and water pipes in the 14th century old temples or how to reinforce timber frame structures. Site managers are also at the front line of sometimes difficult negotiations with local stakeholders, and are often called to act as agents for awareness-raising and training of local population, which requires another specific set of communication and teaching skills. Another on-line platform of practitioners where heritage conservators and engineers can submit technical queries appears to be useful. Such system already exists in India. Developed and implemented by UN office in India, the system, called Solution Exchange, offers a space for dialogue for the communities of practitioners respectively in the area of education, water, disaster management, IT, poverty alleviation etc. While no platform exists for heritage conservation and engineering, it is tempting to make one either via ICOMOS or ICCROM

(c) Continuous and long-term relationship with supporting partners: international technical assistance has been often criticized

for being 'one-off'; 'short-term' and 'no follow-up'. Expert mission is one of the classical forms of international assistance for countries in need of support, especially immediately following the disaster. However such mission has disadvantage of being limited in duration and frequency. Besides, a common complaint is that the invited experts are not sufficiently familiar with local context, thus their recommendations end up being general and not so useful.

Training workshops, such as the present one being organized by Ritsumeikan University, is another form of international assistance, which is often appreciated and which, one hopes to see happening more often. However it also has its weakness of addressing to a selected few with limited outreach. Further, such international workshop is resource heavy and could not be maintained unless important funding source is available.

While the merit of expert missions and workshops should not be undermined, one also needs to admit that they are not the most suitable form of technical support, when it comes to the capacity building of a national heritage team, which requires a long-term mentoring process. To this end, it seems worthwhile to explore the possibility of developing a long-term bilateral partnership agreement between countries needing support and

academic institutions abroad capable of offering required scientific research and technical advice. This form of collaboration, where, for instance, a team of two experts from a research institution visits a partner country once a year for two weeks, and this over the period of 5 years, could be less resource heavy and efficient in terms of impact at a local level, as compared to organizing an international workshop.

Heritage Preservation during and after Disaster– How convincing is our argument outside our own circle?

There is perhaps room for UNESCO and heritage advocates in general to critically assess how persuasive is our argument for heritage preservation in the context of disaster, noting that heritage has never been the main priority in the national development agenda of many of the countries.

Since 1980's UNESCO has been a forerunner of the concept of Culture and Development. Critics have noted however that while much progress has been made in terms of rhetoric, the concept is yet to be fully understood in practice. The concept is certainly valid for developed countries, which has managed to build its economy around creative industries, but this is still not the case for many of the developing nations. Culture and heritage are not part of UN Millennium Development Goals. An OECD report in 2007

noted that only 1.7% of the ODA in the world was spent on culture related projects.

When culture and heritage is the last point of development agenda, it is all the more difficult to convince the governments on the importance of heritage in the wake of disaster. While it is easy to blame the prevailing heritage-insensitivity amongst the government officials and hard-core development agents. the heritage advocates, may also want to assess what pragmatic evidence and data we have been able to provide to convince the non-heritage people about the merit of investing in culture and heritage in general and after disaster in particular.

During the early response phase, the priority is given to human security, namely shelter, food and sanitation. Providing a "sense of continuity" in terms of livelihood and social network (family, friends and neighbours), then comes as the key focus of the recovery phase. If we are to advocate for heritage preservation, it is necessary that we learn to position ourselves within these fundamental logics of disaster management and argue our cases using their languages rather than our own.

To this end, understanding the economic and social values of cultural heritage for peoples living within and around the heritage is a

vital step. Surprisingly, despite of the popularity of UNESCO World Heritage Sites and their contribution for tourism sector, case studies on socio-economic value of specific cultural heritage sites do not appear to be many, or if they are available somewhere, they are not used effectively by the heritage advocates, whose focus has been on historic and aesthetic value of built elements rather than their contemporary socioeconomic functions. Such multidisciplinary studies are however to be encouraged, if the heritage advocates wish to support their cases beyond their limited professional circle.

These are some of the points that have emerged out of my personal observation as a field officer of UNESCO, and which I hope would serve as food for thought for our common goal for protection of heritage.

To end with, I would like to express my deep appreciation to Ritsumeikan University and in particular to Professor Kanefusa Masuda, who, immediately following the September 2009 earthquake in Bhutan, rang UNESCO New Delhi to ask if his university could be of any assistance. Thanks to this offer, UNESCO New Delhi was able to field two technical missions in Bhutan without much delay. Such a dedicated partner is really precious and UNESCO New Delhi hopes Ritsumeikan University to be

one of the institutions to consider kick-starting a long-term mentoring collaboration with some of the countries needing support.

Thank you for your attention.

#### Keynote Speech 4: International Training Course for Disaster Risk Management of Cultural Heritage

Kanefusa Masuda (Ritsumeikan University)

I would like to present a brief report on the training course this year. This vear's International Training Course for Disaster Risk Management of Cultural Heritage took place from the 13th to the 24th September. The Training Course has been held since 2006 as part of UNESCO Chair Program, reviewed and licensed by UNESCO World Heritage Centre. It is publicized on the website of UNESCO, and we receive so many applications every year. The UN World Conference was held by UNESCO, ICCROM and the Agency for Cultural Affairs in Kobe 2005 in order to direct international disaster prevention policies in the coming 15 years. Cultural heritage was also included in the agenda. It was a good chance for us to start the training program. Through the 5-year pathway of the program, 22 teams have participated in total. We received over 70 applications this year. The training course is a short-term, intensive program that lasts for 2 weeks. Our main target is government officers of middle standing, but the participants in the past also include people with other occupations such as university professors. Our basic goal is to share the rich experience of natural disasters on cultural properties in

Japan, as well as the knowledge on countermeasures against them, with international experts, for there are both so many cultural properties and natural disasters in Japan. The cultural properties in the old city of Kyoto were registered as UNESCO World Heritage, named Historic Monuments of Ancient Kyoto.

This year, we added new emphasis on post-disaster recovery procedures. The course comprised of various lectures, and site visits and workshops in Kiyomizu Temple, Sanneizaka, Ninna-ji Temple, Kobe and Sasayama. We welcomed only one male participant, but it was purely the result of the scoring by ICCROM. We always choose participants with consultation to ICCROM. This is a good proof of the fact that more and more women are standing in the international centre stage of cultural heritage studies today.

From now, I would like to briefly introduce you what the management plans that the participants made, are like. The Bhutan team made a disaster management plan for Wangduephodrang Dzong, which is a fort and municipal office of the government at the same time. The structure has conveyed the traditional architectural style of Tibetian Buddhist culture. The exterior is made of stones, but the interior is wooden, and it would be so vulnerable to fires occurring from the inside of the structure. Two experts who work on cultural heritage conservation in the central government made mainly a detailed

evacuation plan of valuable art works housed in the Dzong.

As of the Palau team, we invited Mr. Alexander, who is a director of UNESCO domestic team in Palau. Palau is the first country from the south Pacific region to join this program. A disaster mitigation plan was formulated for several old wooden public houses. There are paintings on the beams of the houses. This is how the culture and history were recorded and submitted in Palau that has no written literature. They are basically meeting houses but they also functioned as places that pass down history to next generation. Despite of the lack of detailed references or data, the Palau team formulated a very good plan to protect such houses with local communities.

Cusco is the target site of the Peru team. From among the 5 participant countries, Peru has especially a lot of earthquakes similar to Japan, and therefore how to preserve historic buildings from seismic disasters is an issue. In the Inca days, many masonry buildings were built, and they are strong against earthquakes. However in 1500s as Spain invaded, the architectural tradition was passed down to Spanish architects, and there were more European-style buildings. The definition now is how to coincide those two types of buildings with each other and to preserve the values. The team formulated a rescue plan and retrofitting plan for the buildings surrounding San Francisco Square which is located in the centre of Cusco, gaining engagements from

various sectors involved in urban planning.

The target site of the Serbia team is Belgrade Fort. Belgrade is the capital of Serbia, and it has experienced a lot of damage due to continuous battles of the warfare. Now it is a peaceful time, and the team has made a plan of utilizing the fort as a symbol of the cultural identity of divided various races and ethnic groups. It would play a very important role for mutual understanding between different ethnicities. To support that, a disaster mitigation plan for many different types of buildings in the site was drafted. Not just emergency preparedness, but also short- and long-term recovery processes were considered.

The historic area that the Turkey team targeted is not developed much for the decrease of dwellers population, and as a consequence much of the historic landscape has been maintained. How to protect it for the future was studied. Many different risks from various natural hazards were considered, and against them resque areas, evacuation routes, operation centers and others were put together. Separate to that, possible involvement of the public for protecting the area was also studied.

They are just two-week efforts and therefore far from perfect, but anyway I am pleased to show you the fruits of hard works by the participants.

#### Panel Discussion "How to Protect Cultural Heritage from Disasters: Kyoto and World"

#### **Presentation 1**

Speaker: Hideki Sunahara

I am giving you a presentation as a person who is in charge of protecting cultural properties in Toii Temple. In 794, Emperor Kammu established the capital Heiankyo in Kyoto. In the east and west sides of Suzakumon, which was considered as the main entrance to the city, Toji and Saiji were built. These temples were designated by the emperor to be built, and therefore we can say that Toii is kind of a national temple. In 825, Emperor Saga tried to introduce a new trend of Buddhism from China, and designated Toji as a particular temple which has a function of promotion of the academic studies of the new branch, Shingon School. Saiji, the west temple, was dismantled after the Ritsuryo Registrations were demolished, while Kukai, the great founder of Shingon School, tried hard to retain all the Buddhist artifacts and documents in Toji he brought back from China. They are still intact today and are designated as national treasures. It is the result of monks and local people who have been very helpful for protecting the temple from disasters, especially from the fires after battles

In Muromachi Era, the 15th century, there were continuous battles in the city of Kyoto for 10 years. Most parts of Kyoto were burnt down to ashes. In order to protect the buildings in Toji, the monks tried not to take a specific side to avoid battles, as well as moved the artifacts to Daigoji Temple for preservation sake. The artifacts and documents were eventually preserved.

In 1486, there was a farmers' revolt, and many farmers came together in Toji, which resulted in a fire in the main hall. The fire spread and the whole temple structures except the pagoda were reduced to ashes. There is a record saying that at that time people living around the temple tried to evacuate the statues to safer places.

The structures were reconstructed based on the positions of the foundations remained after the fire. All the buildings were built in the same manners and in the same scales of which they were constructed originally. There are 80 national treasures, 3683 special cultural heritage assets and over 90000 undesignated treasures in the temple today. It is considered as a miracle that such a big number of artefacts have been retained. The reason why they are still intact is that the local community was very much involved in curbing fires which broke out. Even today, the fire brigade, which consists of local community members, works to secure the area

together with the fire department and the temple office. In addition, the temple is equipped with surveillance facilities for fire detection such as monitoring cameras and sensors. The surrounding area is also monitored very tightly.

#### Presentation 2

Speaker: Shang-Chia Chu

Today I would like to share our experience of 1999 Jiji Earthquake. So many disasters happen in Taiwan every year: earthquakes, fires, typhoons, floods and rapidly changing weathers. Recently there are also arsons on monuments. This year there was another big typhoon that killed over 5000 people.

On September 21st, 1999, a big earthquake occurred in the centre of Taiwan, and it killed more than 2400 people. The total damage was as much as 92 billion dollars. It was the second biggest earthquake in the record in Taiwan started from 1935.

The military helped cleaning up the debris immediately after the earthquake. Some of the damaged historic buildings were also cleaned up unfortunately. One of the big issues is, therefore, how to rescue damaged historic buildings after disaster. One volunteer team, named "Cultural Heritage Rescue" and comprised of 15 scholars and 400 students from 12 universities in Taiwan, started to investigate the damaged historic buildings from the

25th. As a pioneering investigation, more than 1000 buildings were inspected, and 742 buildings were investigated and listed. As the second step, the team made a list of 222 historic buildings to be protected from the cleaning up activity by the military on the 27th October, which was very quick. The third step was to convince the government to be involved in the recovery. Then the team finished up their work by publishing reports on cultural heritage conservation.

Some grants for temporary reinforcement of 90 damaged historic buildings were offered from the government in November. Technical advise were also provided. As of the law and regulations to protect the damaged historic buildings, the buildings that were newly listed after the earthquake were also added to the target. The government initially funded 40000000 US dollars for the recovery of the national monuments. They also provided loans for supports of restoration of private historic buildings. One of the examples of the monuments restored with the national fund was Jiji train station, which was located right on the epicentre of the earthquake. Another one was a very famous temple that we call the Taiwanese Forbidden City. The local residents convinced the government to preserve the temple. It took 10 years to recover the whole structure totally. Another important thing is to provide technical supports and advices after earthquake. At that time, 6 historic buildings were approved of total renovation by the government. In order to improve the performance for renovation, the government qualified 85 architects and engineers to provide expert knowledge. Several seminars and training courses were held after the earthquake, and useful handbooks and manuals were also published along with them.

In the meantime, how to empower the local capability for preservation of built heritage and prevention of disasters was also discussed. We agreed the usefulness of various community-based strategies such as local meetings, in-situ surveys and mapping trainings. In 2005, the law of cultural heritage conservation was revised, and now there are national funds and loans for local supporting systems.

Today there are so many different adopted measures for reconstruction and reinforcement, and choosing which to use is a big challenge. We are now discussing how we should preserve historic buildings and monuments.

There are currently 7 potential world heritage sites in Taiwan. Though Taiwan is not a member of ICOMOS, we are trying to preserve our cultural properties for the world. This year the government is planning to formulate a disaster preparedness

plan for the nationally designated 88 monuments.

The lesson learned from the earthquake was that even if the financial support is limited, the potential of human is infinite.

Taiwan is a member of the global community, and we are willing to share our experience with the other nations world-wide.

#### Presentation3

Speaker: Sue Cole

I would like to talk about how we deal with disasters in the UK. The structural organization of emergency planning has changed in the last 10 years. We made arrangements after the second world war, the cold war and 9.11 to the national structure that deals with resilience. The national structure which looks at resilience and recovering belongs to the cabinet office, and it operates regional governments' resilient departments underneath. It is possible for them to call the military, but that is fairly rare. Usually the emergency service is consisted of police, fire brigade and ambulances.

We luckily updated the road maps and exercises for organizations' capacity building. We are taking a strategy called "Gold, Silver and Bronze Approach", and involving as many organizations as possible. The resilience covers natural disasters: snow, fire, earthquake, hurricane, pandemic and others. There are

also manmade disasters. We have accidents, terrorism, arsons and industrial actions. Although the UK has ratified the Haag Convention, we hope we are not going to be invaded. Yet the military personnel are supposed to be aware that cultural properties must not be destroyed by military actions, and their knowledge will also help when they engage in overseas military actions. For example, church in the business district in London was once bombed by IRA. It was reconstructed as a symbol of hope after that, and its religious activities are continued.

We set up the UK resilience website which I argue you to look at. That has sections on risk preparedness. response, recovery and disaster risk management scenarios on cultural heritage. We listed out lessons and challenges. There are discussions in both high-level words and practical areas. We have now more and more people addressing the issues. Resilience should not be dependent on a few people. We are promoting "personal responsibility" approach. We put insurances on our properties and we take responsibilities on them. The government cannot support you with money after the financial crisis. There is not enough money to do a lot of things like what we have previously done.

Therefore, the national heritage associate organizations, including English Heritage, are beginning to give aside retrofitting of historic buildings for flooding or storms. It is a problem. There are already so many good plans, but because the resource is finite they have to make new protocols to associate with other organizations that would provide assistance. A good thing is that people are very interested in what to do for preservation of their cultural heritage. A local volunteer group with only 10 people, for example, worked on salvation of historic properties in a small village which was flooded. We need to keep promoting such mutual cooperation more.

The Jurassic Coast World Heritage Site is a natural site, which is incorporated in the regional resilient plan, and the world heritage staffs have participated in the exercises. They adopted a plan to stop pollution by oil spill and rooting. The EU funding, which pays for infrastructure projects, was made available. However, it is very difficult to access to cultural projects. Recently a resilient project was done by EU, which was addressing safety of several historic buildings, and a perfect report came out. Yet we still have a long way to go to figure out how to do this. We need to set up a European task force in which cultural heritage is embedded

I am delighted that Japan has ratified the Haag Convention. It also deals with what to do in peaceful times. The association of the national committees of Blue Shield has been doing important works, looking at how to lobby ratifications of Blue Shield, how to raise fund, how to train, how to build capacity of militaries and civilians and how to make archives.

The challenge lies in communication. How do we get people to value their cultural heritage? How do we let them know that heritage is something that would support their daily lives? We need to get a common language, be able to reach out to the global communities and explain in very simple terms why these places should be protected.

The ICORP meeting that we just had is hopefully reaching away toward doing this. We have had various meetings alike. We are promoting cultural heritage preservation. We hope they will reach across the world through the Haag Convention and the UNESCO World Heritage Convention. We will help establishing knowledge, pulling together various case studies so that we can learn from each other's mistakes and share best practices. The collaboration does not have to be in money; it can be knowledge and it can be people.

#### **Presentation 4**

Speaker: Rohit Jigyasu

As is obvious from the first presentation, when one talks about heritage, he/she talks about something very close and personal. Heritage is something that belongs to people. It is not separated from people. Also when one talks about disaster, one often talks very personally. On one hand we talk about something so much local and touches your heart. Many of us have personal experiences as well. When an earthquake happened in India in 2001, ironically it was the day my son was born, and my wife was in the area where the earthquake happened. When I was coming to send the news that my son was born, I knew that thing had happened. Then I was not looking at it as an expert. I was looking at it as a human. I did not know what would have happened to my family, and I was sitting in Norway.

When a disaster happens, we experts, international community or national governments look at something that people cannot handle from another level, even though we want to help them. We are outsiders who do not feel the pain, but at the same time we are concerned as human beings.

There is a gap that I think we need to bridge. I sometimes feel that our scientific communities need to find links with the ground. As ICORP, I hope that all of us will consider what

we can do as experts on one hand and as humans on the other. That is why in the meeting we were not only talking about big things but also about small things that each of us can do in the year ahead. It is up to us as conscious human beings to do what we can do in our own capacity. Even in the capacity, if we could link with other people or groups, we can bring ourselves together. Whenever we have this kind of training course or conference, we get new people in our family. When a disaster happens and some member is feeling pain, then maybe the other family members can also feel the pain of his or her own, and eventually give helps.

I have been involved in giving lectures to officers and experts for so long, but I sometimes feel that there is no reason for giving lectures but just to think by myself about what I can do as a person. We need to try to contribute as individuals first.

#### **Panel Discussion**

Panels: Rohit Jigyasu, Sue Cole, Moe Chiba, Hideki Sunahara Coordinator: Kanefusa Masuda

#### Masuda:

We had four presentations from different perspectives. We first had a presentation from Mr. Sunahara about the daily efforts of the temple with more than 1000 years of history in Kyoto on cultural heritage conservation. For long time Kyoto has not suffered from hazard, but in

the future we need to be careful as Dr. Toki said. How the world will assist Kyoto in time of disaster is so much dependent on how Kyoto assists the world because we are not separate. Dr. Chiou talked about the situation in Taiwan: how the country responds to a big disaster such as the last typhoon from the perspective of how to establish linkages with heritage owners. Dr. Cole conveyed wisdom from Europe. She told us that destructions of other cultures due to war could be horrible. UNESCO has recognized the importance of preventing such wars from occurring, and it depends on our will to pursue sustainable peace. Mr. Sunahara also mentioned that Toji had suffered from a lot of damages due to warfare. Dr. Rohit pointed out the links between the cultural heritage conservation activities in the global context and contributions of individuals.

#### Cole:

I would like to add some more about the Haag Convention. The Haag Convention targets not only built heritage but also archives, libraries, art galleries, museums and others. The variety of targets requires methodologies vary as well. The Haag Convention requirements call on state parties' preparation in peace time, and trainings of military and civilians. The registered buildings are still quite few, but the reality is that there are still so many military conflicts in the world. You usually start from such properties that have

globally recognized values. Then you need to know whether your heritage is military's legitimate target or not, and you have to make arrangements on either to move such heritage or try to stop to be used for military purposes. This is a big piece of work, and actually is something that nobody has done vet. That is something that we are working interactively at the moment. The operation guideline of the second protocol came out during the last committee. Everybody is really collaborating to create a really practical guideline to make sure that it will actually work both in terms of policies and on the ground. Quite ironically, the mark of Blue Shield is on the building in Netherland, which is used for the ministry of defense. The crucial point of the Haag Convention is to promote peace and prepare for warfare at the same time, that is: risk preparedness.

#### Masuda:

How do you think the Haag Convention, whose target is only limited within Europe so far, will be concerned with the ideas on cultural heritage conservation in a peaceful environment like Kyoto?

#### Sunahara:

I believe that such ideas that are contained in the Haag Convention will be so important to Kyoto, too. Even as for Toji, since the cultural properties imported from China are gradually deteriorating by years, people have been replicating them

for the coming ages, by using very high techniques. We are more or less prepared for possible loss of assets as a temple.

#### Masuda:

The Haag Convention focuses on military conflicts, but even in events of disasters there would be military actions. For example, after the Haiti Earthquake, militaries from different countries went to rescue immediately. How do you think the Haag Convention can possibly contribute to preparedness for natural disasters? What perspectives are there now?

#### Cole:

It is very important to enlighten military and civilians with values of cultural properties. Cultural heritage itself is a part of a system of culture which has been formed in a long time, and therefore should be incorporated into the scheme of risk preparedness, including the training of military. Military people and civilians both should be instructed for counteractions to the event of disaster, considering cultural heritage conservation.

#### Masuda:

One of the main topics today is response in post-disaster recovery phase. Considering how to preserve cultural heritage values through recovery, we need to have military with expert knowledge and techniques required to preserve values and achieve recovery at the

same time. What kind of activities did the military do in Taiwan after the last disaster, and what kind of trainings are there?

#### Chiou:

Actually, we are currently working on educating the military about cultural values. Even though in the traditional realm, the military's role was just simply to defend the homeland, we recognized the importance of its role for heritage conservation after the last earthquake. We persuaded the military soldiers to conserve their dormitory buildings, which are old buildings built by the people's army from China soon after the second world war, and therefore are cultural properties. Through that, we enhanced the soldiers' awareness on heritage conservation.

#### Masuda:

That is a very unique and witty experiment where the soldiers really live in heritage buildings.

#### Cole:

In the UK, we carried out a big-scale drill for the military at Stonehenge whose area is 700ha. It was a training program on how they should act at a heritage site under a disaster situation.

#### Masuda:

Recently, I often find lines for recruitment of the Kyoto City fire department mentioning the importance of protecting the world

heritage in Kyoto, and obviously it is motivating the people. I am not sure, but it could possibly be used for recruitment messages of the selfdefense force of Japan in the future.

#### Sunahara:

I am feeling a bit awkward with the new branches of police and fire department near Toji temple. To my opinion, it takes a little time for the temple to coordinate with those people fully.

#### Masuda;

Anyhow, the role of what we call civil defence is becoming more and more significant lately.

Now I would like to open the discussion to the floor and receive questions from the audience.

#### Floor:

I would like to ask Mr. Sunahara whether there is something like general guideline for local people made by the temple. I know you are already taking on so many other roles though.

#### Sunahara:

We do not have such a comprehensive guideline yet. The protection of Toji has been pretty much dependent on voluntary works by faithful people.

#### Floor:

I totally understand the importance of connecting various individuals and their skills and making synergies. How can we realize that?

#### Cole:

It will depend on whether we can convince them with the importance of heritage, and what aspects are important. One good example is the national library in Iraq. The national library was burnt down 3 days after the US army invasion started and the war broke out. The artefacts preserved were only limited within the religious properties. It is a good proof that heritage conservation depends on priorities of community people.

#### Rohit:

We need to enhance our communication skills as experts at different levels. In conservation sites, there are always various people from various fields who speak totally different languages, and communicating with them is sometimes very difficult. That is a very important aspect for us to achieve what Chiba mentioned: linking theories and practices.

#### Moe Chiba (floor):

Speaking of priorities and local values, there is a striking similarity in the situation in Bhutan and that of Toji. Some Bhutanese people are taking the monasteries as more important than their own houses and requesting funds from the government. What people think are important really counts. I am wondering if there are any cases where the values of people and the institutional definitions are offset.

#### Cole:

The terms we use in the registration of world heritage are set up for addressing the official definition of the universal values. We need to look at national values and local values each of which local people set up. Unless you have supports from the people around the site, and commitment of a local community, your management plan would be even more difficult.

#### Kai Weise (floor):

In connection with how to approach heritage properties, I think one aspect is much more specific, that is, there are so many properties that do not have communities to look after. It could be that, for example, there is a Buddhist site in Pakistan that has no community to look after it. That would be the first condition. You should think about what a site manager should do only after having a specific community to take care of a specific site.

#### Masuda:

Now I would like to close this session mentioning the importance of establishing an international network of experts. Currently ICORP is working on establishing a new platform on the web.

## ANNEX ICOMOS-ICORP MISSION STATEMENT

#### "ICOMOS-ICORP promotes the protection of cultural heritage places from the effects of disasters and armed conflict.

ICORP does this through activities related to preparedness, mitigation, response and recovery phases of disasters and armed conflicts by

- A Collaborating with international, national and non-governmental organisations to integrate the protection of cultural heritage places into disaster risk planning
- B Creating knowledge, delivering training and building capacity to reduce the loss of cultural heritage places.
- C Identifying, undertaking and reviewing scientific research on disaster risk planning for cultural heritage places and disseminating best practices
- D Developing the instruments to enable ICOMOS to meet its obligations under the 1972 World Heritage Convention regarding risk reduction
- E Representing ICOMOS in the Blue Shield organisations (http://archives.icom.museum/emergency.html)
- Coordinating and bringing to bear the full resources of ICOMOS in the face of disasters
- G Ensuring representation within ICORP of all cultures and regions in the world"

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- [PDF] Risk preparedness: a management manual for World Cultural Heritage
  - www.iccrom.org/pdf/ICCROM\_17\_RiskPreparedness\_en.pdf
- [PDF] Managing Disaster Risks for World Heritage whc.unesco.org/uploads/activities/documents/activity-630-1.pdf



INTERNATIONAL TRAINING COURSE ON DISASTER RISK MANAGEMENT OF CULTURAL HERITAGE 2010



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