

November 25, 2011

ISCARSAH Meeting Minutes in Havana, Cuba

18 and 19 May 2011

Those in attendance:

Görün Arun (Turkey)
Orestes M. del Castillo (Cuba)
Miloš Drdácký (Czech)
William Dupont (USA)
Lyne Fontaine (Canada)
Donald Friedman (USA)
Toshikazu Hanazato (Japan)
Stephen Kelley (USA)
Maya Segara Lagunes (Italy/Mexico)
Randolph Langenbach (USA)
Thomas Morrison (Canada)
Ramiro Sofronie (Romania)
Patrick Sparks (USA)
Daniel Torrealva (Peru)

Jan C. K. Anderson (USA) - guest

Regrets: Juan Carlos Araiza (USA/Mexico); Kari Avellan (Finland); Susan Balderstone (Australia); Luigia Binda (Italy); Maria Bostenaru Dan (Romania/Hungary); Patricia Emmett (South Africa); Wilfred Ferwerda (Canada); Pedro Hurtado (Peru); Yoshinari Iwasaki (Japan); Rohit Jigyasu (India); Claudio Modena (Italy); Pere Roca (Spain); Takayoshi Aoki (Japan); Alessandro Baratta (Italy); Nicolas Cheval (France); Insouk Cho (Korea); Ian Constantine (St Lucia); Dina D'Ayala (Italy); Tiziano Destino (Italy); Peter Elliott (United Kingdom); Mehrdad Hijazi (Iran); Mustafa Humo (B+H); Marcela Hurtado Saldias (Chile); Wolfram Jaeger (Germany); Debra Laefer (USA/Ireland); David Look (USA); Paulo Lourenco (Portugal); Giovanni Manieri Elia (Italy); Roberto Meli (Mexico); Androniki Miltiadou-Fezans (Greece); Berndt Mittnacht (Germany); Peter Phillips (Australia); Michael Pittas (Cyprus); Megan Reese (USA); Alexander Salenikovich (Canada/Russia); Ya'acov Schaffer (Israel); Christiane Schmuckle (France); Heinrich Schroeter (Germany); Marek Skłodowski (Poland); Pal Anders Stensson (Sweden); Dechen Tshering (Bhutan); Ahmet Turer (Turkey); Julio Vargas Neumann (Peru); Daniel Ureña Muñoz (Costa Rica); Meltem Vatan (Turkey/Bulgaria); Elizabeth Vintzelou (Greece); Wang Linan (China); Rachel Will (USA); and Gerry Zegerius (Canada)

Meeting Minutes

The meeting minutes from the Shanghai meeting in October 2010 and Edinburgh meeting in July of 2009 were ratified after comments were received from Arun and Teron. They will be posted on the ISCARSAH website.

Membership candidates

The following membership candidates were approved for membership

Valentin Feodorov (Romania) - associate member

Ils Verstrynghe (Belgium) - Associate Member

Anastasios Drougas (Greece) - Associate Member

Each will be sent an acceptance letter by the Executive Committee.

A successful two day Workshop - **Earthquakes and Hurricanes Response and Preparedness** - was held on May 16-17, 2011 at the College of San Geronimo, Havana, Cuba. A report on this workshop will be issued separately. The program of this workshop is attached at the end of the meeting minutes.

Lessons Learned from the Workshop

The following "lessons learned" were discussed following the workshop:

- Cultural heritage should be a natural (high) priority.
- Do historical buildings perform better than contemporary ones? In some cases traditional materials and constructions provide superior performance characteristics during earthquake and hurricane events. Historical buildings that have done well are generally predicated on weaker systems. They survive due to other factors of capacity other than just strength alone. They therefore should not be written off as inferior constructions. However this belief has not been supported by scientific study. Therefore further research is recommended in this area.
- Our built world around is a library and laboratory for us to perform research.
- It has been demonstrated in the case studies presented that the condition of a building will affect its performance in an earthquake or hurricane event. A few things done well in time will do much. Poor maintenance is a high predictor of low survivability.
- Confinement as a seismic retrofit technique is effective with unreinforced masonry as an energy dissipation device.
- The goal in preparedness is to reduce uncertainty. It must be accepted that historical buildings will sustain some damage during hurricane and earthquake events.
- Strategies to prepare buildings for earthquakes will not necessarily make them perform better during a hurricane and vice versa.
- Basic strategies need to be developed to effectively utilize collected data that are not dependent on specific software. During assessment of buildings as preparation or response provides large amounts of data that is rarely standardized and is sometimes difficult to store and access.
- Risk assessment - what does it mean? Risk = (threat x vulnerability) - capacity.
- There is knowledge elsewhere besides within the engineering profession about the performance of traditional structures such as with firemen and civil defense.
- What compromises are required to be taken to protect built heritage that is vulnerable

to natural disaster? Interventions are important to improve building performance but they must be compatible in material properties and behavior.

- Things that make a building survive a hurricane or surge may make it vulnerable to seismic.
- There is a concern in places such as Haiti where there is a response but no recovery.
- The concept of safety needs more supporting experiments and data.
- Should we re-evaluate whether the concept or the materials are important in protection of heritage?
- It is important to weigh in on the issue of overprotectiveness of people after disaster. Some of the management styles taking place around disasters are anathema to community rebuilding.
- Are we concerned by the apparent increased loading due to seismic and hurricane. Are we shying away from what the real forces are?

Recommendations for a position paper to follow the Workshop:

- Will focus on three items but respect humanity concerns: Preparedness, Response, and Recovery.
- Statement of why it is good to preserve heritage. “Survivability sustains cultural identity.”
- The audience would be ICOMOS National Committees to encourage their countries to include cultural heritage concerns in all aspects.

Update on the “Toolbox Handbook”

The following points were discussed:

It is understood that the book should include case studies
 The development of the book will be managed through social media
 A glossary will be added to the present proposed outline
 We will make every effort to include Associate Members
 It is agreed that the book is an ambitious project
 In the appendix the state of the art of each country
 We want to reflect our collective experiences
 The seismic aspect should be included
 We should try to be consistent with the standard ISO 13822 (Basis for Design, Evaluation of existing structures).

Motion: “ISCARSAH moves forward with the “Toolbox” handbook proposal dated May 13, 2011 in concept and let the executive committee inform the Committee of the next steps.” William Dupont

The motion was seconded by Görün Arun.

The motion passed unanimously.

Website

It was stated that the website was not up to date.

Inter-ISC Cooperation

Arun stated that we should be concerned with Twentieth Century Heritage - we need to explore our work with ISC20C in future meetings.

Planning for upcoming meeting venues and symposia

- Paris at end of November 2011 during the ICOMOS GA
- Cuzco or Lima Peru in October-December 2012 (Daniel Torrealva)
- San Antonio Texas USA in May 2012 during the US/ICOMOS Annual Conference (William Dupont)
- Prague, Czech State (Milos Drdacky)
- Bucharest, Romania (Ramiro Sofronie)
- Japan (Toshikazu Hanazato)
- Mexico - (Maya Segarra-Lagunes)

Adjournment

The meeting was adjourned on May 19.

Workshop: Earthquakes and Hurricanes Response and Preparedness

May 16-17, 2011; College of San Geronimo, Havana, Cuba

Cuban Steering Committee

Prof. Arch. José E. Fornés Bonavía, Ph.D., President, ICOMOS-Cuba
Prof. Arch. Orestes M. del Castillo del Prado, ISCARS AH Expert Member
Arch. Humberto Ramírez Salazar, ICOMOS-Cuba
Arch. Nilson Acosta Reyes, M.Sc., Vice President CNPC, Secretary, ICOMOS- Cuba
Prof. Arch. Angela Rojas Dávalos, Ph.D., Executive Committee,
ICOMOS International, Past President, ICOMOS-Cuba
Prof. Arch. Isabel Rigol Savio, Ph.D., Past President, ICOMOS-Cuba
Ms. Margarita Elorza Echevarría, International affaires, CNPC.

Honor Members of the Workshop

Lic. Abel Prieto Jiménez, Minister of Culture
Gen. Ramón Pardo Guerra, Chief of Staff, Cuban Civil Defense
Dr. Eusebio Leal Spengler, Historian of the City of Havana
Lic. Fernando Rojas Gutiérrez, Vice Minister of Culture
Dr. Margarita Ruiz Brandi, President, Cuban Council of Cultural Heritage (CNPC)
Jan C. K. Anderson, Vice President US/ICOMOS, RESTORE

International Scientific Committee

Arch. Gustavo Araoz, President - ICOMOS International
Eng, Lyne Fontaine, Secretary General ISCARS AH (Canada)
Toshikazu Hanazato (Japan)
Prof. Arch. Eng. Stephen Kelley, co-President ISCARS AH (USA)
Arch. Randolph Langenbach, PhD, ISCARS AH (USA)
Prof. Eng. Claudio Modena, co-President ISCARS AH (Italy)
Tom Morrison, ISCARS AH (Canada)
Arch. Maria Margarita Segarra Lagunes, ISCARS AH (Mexico)
Eng. Patrick Sparks, ISCARS AH (USA)Will Teron (Canada)



Program

16 May 2011

9,00 Opening Ceremony with Cuban Authorities

10,30 I Session: Tradition and Identity vs Risks

Survivability and Cultural Identity - William A. Dupont

Trinidad and its preparedness facing natural disasters - Yamilka Alvarez Martínez

Risk map of the declared World Cultural Heritage zone of the City of Camagüey - Ernesto Guzmán Lastre

In praise of tradition, or how history is the source of endless technical knowledge (and wisdom) - Maria Margarita Segarra Lagunes

Bioclimate and Demolitions. Techno-constructive state in the intervened urban contexts - Mario Garbayo Otaño

15,00 II Session Seismic Risk

Outlines of the damage to heritage structures by the Great East Japan Earthquake of March 11, 2011 - Toshikazu Hanazato

The 2009 Haiti Earthquake and aftermath - Randolph Langenbach

The 2011 Christchurch earthquake - Win Clark, Stephen Kelley

Geogrids as Seismic Reinforcement for Earthen Buildings - Daniel Torrealva

Pre-Hazard Risk Assessment of Monumental Historic Structures - Meltem Vatan, Görün Arun

Matanzas Bridges, a valuable testimony to be taken into account in the comprehensive heritage management - Ramón F. Recondo Pérez, Luis R. González Arestuche

The Study on Earthquake-Resistant Properties and Anti-seismic Strengthen Plan of Yingxian Timber Pagoda - Wang Lin an, Hou Weidong
Seismic performance of and a unique energy dissipation approach for existing concentrically braced steel frame structures - Thomas Morrison
Geogrids as Seismic Reinforcement for Earthen Buildings - Daniel Torrealva

17 May 2011

9,00 III Session Typhoon and Hurricane Risk

Typhoon and Earthquake Monitoring of Timber Heritage Structure – Case Study of Five-storied Pagoda in Japan - Toshikazu Hanazato, Chikahiro Minowa, Yasushi Niitsu, Kazuhiko Nitto

Structural Performance of Heritage Buildings during Tropical Cyclones - Patrick Sparks

Mitigation of flood damage to cultural heritage - Miloš Drdácký

Experiences in the protection of closing systems under the effect of extreme wind loads - Obdulio Coca Rodríguez, Jorge Arcos Méndez, Emilia Fors Garzón.

15,00 IV. Risk Reduction and Management of Risk

Structural Assessment for the Seismic Retrofitting of Earthen Historic Buildings after the 2007 Earthquake in Peru - Claudia Cancino, Sara Lardinois

Modeling and simulation as basic requirements of structural vulnerability in disaster study cases - Angel Martínez González

Geographical application to natural processes, menaces and risks in disaster study cases - Silvestre Elier Pacheco Moreno

Rethinking Resilience: Pacific Island Perspectives on Natural Hazard Risk Reduction - Karl Kim, Dean Sakamoto

Analysis of cost-profit in risk and vulnerability. Study case: Reloj Club bonded warehouse - David Nuño Gradaile

Implementation of safe hospitals strategy facing natural disasters - Carlos Llanes Burón, María Luisa Rivada Vázquez

UK Methodology for Cultural Heritage Disaster Response - Sue Cole, ICORP Vice President

The **International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH)** was founded by the Paris-based International Council on Monuments and Sites (ICOMOS) in 1996 as a forum and network for engineers involved in the restoration and care of the World's built heritage. Members of the ISCARSAH are internationally renowned engineers, architects, scientists, specialists, and educators with representation from Europe, Asia, Australia, North and South America. ISCARSAH has authored the **ICOMOS Charter - Principles for the Analysis, Conservation and Structural Restoration of Architectural Heritage** which was ratified in 2003.