May 2008

Around the Task Groups and Working Commissions

W089 - Building Research and Education

Report of the CIB W089 International Conference on Building Education and Research (BEAR), in conjunction with CIB W113, CIB TG53, CIB TG63, CIB TG67, CIB TG68, and CIB TG69

by

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Background

In February 2008, Sri Lanka was the setting for a major CIB international conference on building education and research (BEAR 2008), in conjunction with CIB W113 (Law and Dispute Resolution), CIB TG53 (Postgraduate Research Training in Building and Construction), CIB TG63 (Disasters and the Built Environment), CIB TG67 (Statutory Adjudication in Construction), CIB TG68 (Construction Mediation, and CIB TG69 (Green Buildings and the Law).

It was a landmark gathering for international academics, practitioners, professionals and policy makers concerned with the future of built environment education and research. The theme of the 2008 conference was to promote built environment related education and research towards a more expansive view of the life cycle of infrastructure projects, one that extends beyond the traditional cycle of feasibility analysis, planning, design, construction, operation, maintenance and divestiture. Particular emphasis was placed upon education and research towards preparing for, responding to, and recovering from disasters, such as the Indian Ocean Tsunami of December 2004, and other natural, man-made and environmental disasters. It provided a major occasion for delegates to investigate key issues around the globe on built environment education to support disaster preparation and reconstruction.

BEAR 2008 was a collaboration by a number of CIB commissions: CIB W089, W113, TG53, TG63, TG67, TG68 and TG69, CIB International Student Chapters, and EURASIA, a three year EU Asia-Link programme funded project that aims to improve capacity in training, teaching and research activities associated with the creation and long-term management of public and commercial facilities and infrastructure in selected Higher Educational Institutes in Asia and Europe. All EURASIA partners - University of Moratuwa and University of Ruhuna in Sri Lanka, Tallinn University of Technology in Estonia, and Vilnius Gediminas Technical University in Lithuania – were able to join the University of Salford for this event.

Organisation

In line with the Asia Link EURASIA concept, a major theme for the 2008 BEAR Conference was to promote built environment related education and research towards a more expansive view of the life cycle of infrastructure projects, one that extends beyond the traditional cycle of feasibility analysis, planning,
design, construction, operation, maintenance and divestiture. This revised life cycle should encompass the building and construction professional’s ability to anticipate and respond to unexpected events that damage or destroy an infrastructure project – from earthquakes and climate change to terrorist attacks – and reflect construction’s ongoing responsibility toward an infrastructure’s users. The role of building and construction industry professionals and local communities in developing resilience to these types of disasters can be viewed as two separate yet interrelated aspects: To create a built environment that is not vulnerable to a disaster or disruptive challenge.

This relates to the resilience of the physical state of infrastructure, buildings and cities as well as developing policies, legal and regulatory controls, and practices that govern the building industry to build safe structures. Essentially this means building cities or infrastructure that will not be affected by a disaster, and to develop organisational structures, capacities through education and training, and construction systems, that can react in the event a disruptive challenge does occur. This means responding to the immediate after effects of a disaster to restore operational conditions of infrastructure or the built environment as quickly as possible. This means also to aid in the speedy recovery of the region through sustainable reconstruction, post-disaster building or other related projects.

The conference was held in Kandalama, Sri Lanka, an island situated in the Indian Ocean, at the base of the Indian Sub-Continent. It is a multi-ethnic, multi-religious country with a diverse and rich culture. Sri Lanka was severely affected by the tsunami on 26 December 2004, which killed some 40,000 people and displaced 400 – 500 thousand people along two thirds of the north-east, south and south-west coastline. Half the fishing fleet was destroyed, and a quarter of hotels in the affected areas sustained serious damage. It is our hope that Sri Lanka will benefit greatly from the research and activities of W089 and commissions and task groups, and that the country provided an appropriate backdrop for tackling challenging questions on built environment education and research.

The conference was organised by the School of the Built Environment at the University of Salford, UK alongside CIB. The local organisers and hosts for the conference were the Department of Building Economics, University of Moratuwa, Sri Lanka, and Department of Civil and Environmental Engineering, University of Ruhuna, Sri Lanka. 168 papers were published with over 170 delegates participation. The conference was chaired by Salford’s Dr Richard Haigh and Professor Dilanthi Amaratunga. Dilanthi commented: ”much of the responsibility for building capacity in accordance with the latest requirements largely resides within the Higher Education institutions in Sri Lanka. In order to achieve the desired capacity and the expertise for public and commercial facilities re-creation and long term maintenance, teaching, training and research will have be strengthened. The Sri Lankan Institutions that acted as joint hosts are located within the Tsunami affected regions. Sri Lanka benefited greatly from the conference and it provided an appropriate backdrop for tackling challenging questions on built environment education and research. As a British Sri Lankan, I’m truly proud to have got the opportunity to hold the conference in Sri Lanka”. Dr Richard Haigh contributed: “Knowledge, information and technologies for preventing or reducing the effects of disasters, and for effectively addressing the consequences of those which cannot be prevented already exist. Thus, there is the need for developing countries such as Sri Lanka to be provided with education, training and technology transfer to build their capabilities in disaster management and BEAR 2008 has contributed in achieving this mission”.

Conference Programme

The Conference provided a forum for researchers worldwide to debate and exchange ideas and
experiences on a broad range of issues related to built environment research. All of the papers were selected on the basis of strict review by the Scientific Committee members to ensure a high standard. The conference had a broad scope and covered wide ranging topics which were organised around the following themes:

- Capacity Building
- Construction Management
- Cost Planning and Control
- Curriculum Development
- Design
- Developing the Law Curriculum in Built Environment Education
- Disaster Mitigation
- Education
- E-learning
- Environmental Management

- Facilities Management
- Information and Communication Technology
- International and Comparative Law in the Built Environment
- Legal Scholarship and Research within the Built Environment Discipline
- Post-Disaster Reconstruction
- Post-Disaster Relief
- Procurement
- Skill Development
- Sustainability

The conference program and the structure reflected these themes. The papers were developed by authors which included background issues, literature reviews, problem-solving processes, decisions and conclusions. All papers were reviewed in their entirety, prior to publication, by the International Scientific Committee comprising independent, qualified experts.

Keynote Speeches

There were five keynote presentations delivered. These keynote addresses provide a global perspective and vision for built environment research, as the “development of research and other skills” has permeated the whole higher education sector. Professor Peter Barrett, President of CIB, did seek to link thematically the areas of disaster management (DM), education in the built environment and the activities and aspirations of CIB.

Professor Malik Ranasinghe, Vice Chancellor, The University of Moratuwa, Sri Lanka, focused on the application of the developed framework to the conflicting issues related to clay mining in Sri Lanka for manufacture of bricks and roof tiles.

Professor John Ratcliffe, Director of the Faculty of the Built Environment, Dublin Institute of Technology, The Republic of Ireland emphasized that there is a challenge to the professions of the built environment to create a mindset and a skillset within its ranks that promotes a greater awareness of risk and an improved facility in hazard appraisal and disaster management.

Conrad De Tissera UN HABITAT Programme Manager for Sri Lanka, United Nations Human Settlements Programme Colombo, Sri Lanka focused on the International Communities commitment, their mandate and their interventions with regard to disaster mitigation in developing nations and the lessons learned in a case study where access to and application of advanced technology in natural disaster management was facilitated by such interventions.

Associate Professor Vasantha Abeysekera, Programme Leader Construction Management Programmes, AUT University, Auckland, New Zealand explored the notions of theory as science, and practice as science, in the pursuit of theory for the built environment.

Special Features

Awards

Papers under specific themes were selected by a panel of distinguished researchers and practitioners for Best Paper Awards. The criteria for the awards included originality and international relevance. The Awards were sponsored by Emerald, the world’s leading publisher of management research:

- Best Paper – Disaster Management – Dr B.R.Nikku
- Best Paper – Law in the Built Environment – Dr Pui Ting Chow & Sai On Cheung
- Best Paper – Property Management – Prof. Wes Janz, Dr. Timothy Gray and Dr. Thalia Mulvihill
Best Paper – Building Technology and Structural Surveying - Dr Andreas Nataatmadja

These awards were announced at the Conference Closing Ceremony. There was also a Best Paper Award for an outstanding paper published by an undergraduate or postgraduate researcher. This award was sponsored by Taylor and Francis, a leading international academic publisher.

- Best paper - N.M.N.W.K Nissanka, University of Moratuwa, Sri Lanka, paper titled “Study of factors affecting Post Disaster Housing Reconstruction”
- Best presentation – N.A.L.N. Nissanka, University of Moratuwa, Sri Lanka presentation based on the paper titled “Acceptability of Lean Concepts to Functions of Quantity Surveyor in Sri Lanka”

Journals and Books

Arrangements are in place for selected papers published and presented at the conference to be included in a special issue of the Journal for Education in the Built Environment. Authors of selected papers in the themes on disaster mitigation, post disaster recovery, and post disaster reconstruction have been invited to publish their papers in a special issue of the International Journal of Disaster Prevention and Management, guest edited by the Conference Chairs. In addition, authors of selected disaster management related papers will be invited to contribute to a book, edited by the Conference Chairs.

Student Competition

A competition was held among Sri Lankan undergraduate students at the University of Moratuwa and the University of Ruhuna offering an opportunity to publish and present their research at BEAR 2008. The places, that include conference fees and accommodation, were sponsored by the EU Asia-Link funded EURASIA project, which aims to improve capacity in training, teaching and research activities associated with the creation and long-term management of public and commercial facilities and infrastructure in selected HEIs in Asia and Europe. 17 places were awarded and a range of activities were organised for student delegates including: special presentation sessions for students to present and discuss their papers; a meeting of the CIB International Student Chapters and a research skills workshop in conjunction with CIB TG53. Selected student papers will also be published as a joint publication of CIB TG53 and CIB TG63.

Meetings and Workshops

Several meetings and workshops were also held as part of BEAR 2008, including:

- Meeting of CIB W089 Building Education and Research, in conjunction with CIB TG53 Postgraduate Research Training in Building and Construction
- Meeting of CIB W113 Law and Dispute Resolution, in conjunction with CIB TG67, TG68 and TG69
- Meeting of the International CIB Student Chapter
- CIB TG53 Postgraduate Research Skills Workshop
- Meeting of CIB TG63 Disasters and the Built Environment
- University of Moratuwa, Sri Lanka - Department of Building Economics’ 25th Anniversary Celebrations
- Electronic Classroom Communication Response System
- EURASIA Project Steering Committee
- Asia Link EURASIA themed sessions on Disaster Mitigation, Post-Disaster Reconstruction, and Post-Disaster Relief
- Forum of the Heads Group for Construction Property and Surveying (CHOBE) in the UK
- CIB Dean’s Forum

CIB Cross-Theme Discussion on the Built Environment community’s role in disaster preparedness and reconstruction, in association with EURASIA

In addition to the meetings and workshops listed above, BEAR 2008 also hosted a CIB Cross-Theme Discussion on the Built Environment community’s role in disaster preparedness and reconstruction, in association with EURASIA. The discussion was chaired by the President of CIB, Professor Peter Barrett. It presented an intriguing opportunity to bring together the interests and expertise of CIB’s wide-ranging Working Commissions and Task Groups to discuss and attempt to address the complex and global problems associated with anticipating and responding to
unexpected events that damage or destroy an infrastructure project. The Conference presented an ideal backdrop for CIB members to identify challenges and opportunities, develop synergy, and collaborate on future work. The panel included representation from CIB Working Commissions and Task Groups, and in discussing the revised lifecycle, focused upon the associated themes of: capacity building, education, research and training; law and regulatory systems; the needs of developing countries; and, sustainable reconstruction. A number of outcomes emerged from the discussion:

- A framework is needed upon which non-DM specialist research groups can map expertise. TG63 will lead this initiative
- There is a need for more information of good practices and less emphasis on poor examples – reinforce lessons
- Built environment researchers must work with practitioners and community based organisations
- It is important that CIB - when tackling these issues scope discussions - identifies what has been done already to avoid duplication
- There is a need to promote recognised centres of excellence from CIB - making the expertise visible

**Proceedings**

Two sets of publications were produced:

1. A book of executive summaries of keynotes and papers submitted to, peer reviewed and accepted for publication
2. Full conference proceedings of full papers of keynotes and papers submitted to, peer reviewed and accepted for publication

The contributions reflect the call for papers of the following CIB Working Commissions and Task Groups: CIB W089, CIB W113, CIB TG53, CIB TG63, CIB TG67, CIB TG68 and CIB TG69.

An article about these proceedings is also published in a separate news article (see [here](#)).

**Additional Information**

Pictures of the event can be viewed on the conference web site: [www.bear2008.org](http://www.bear2008.org)

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