5th i-Rec conference-workshop, 15-20 July 2010

Conference Proceedings

Authors:

Gonzalo Lizarralde
Rohit Jigyasu
Rabindra Vasavada
Susane Havelka
Jennifer Duyne Barenstein

organized by:

Information and research for reconstruction, i-Rec
Centre for Environmental Planning and Technology – CEPT, Ahmedabad, India.
The IF Research Group – grif, Université de Montréal

With the support of CIB TG63

We acknowledge the special support of:

The International Development Research Centre

IDRC CRDI

L'observatoire universitaire de la vulnérabilité* and *la reconstruction durable (Oeuvre durable),
a research program funded by *fonds de recherche du Québec, Société et culture (FQRSC).*

INTRODUCTION TO THE CONFERENCE PROCEEDINGS

Post disaster reconstruction allows us to reconsider safer planning, building design and technology to improve the resilience of communities from the next natural disaster that will inevitably strike in the future, even if we do not know exactly when. However the choice of what are appropriate design and technology for reconstruction is dependent on various factors that are embedded in the very fabric of the communities where the reconstruction is to be carried out.

Past experiences from disasters have shown that attempts at introducing different types of disaster resistant design and technology have met with different levels of successes and failures for a number of reasons. While some of these interventions may be state-of-the-art, others are based on traditional design and construction practices. Moreover the very process of developing and implementing these options; have also influenced the effectiveness of interventions. While some of the interventions are only designed by professionals and implemented by contractors, others evolve through collaborative processes by engagement of various stakeholders including homeowners and local craftsmen.

Therefore, no single approaches for shelter reconstruction can be considered merely as rigid packages to be transported to the victims. Rather these should be seen as processes where appropriateness of design and technology is dependent on a range of social, cultural, geographical, climatic and economic factors that need to be assessed for their effectiveness over time. Evaluation of the success or failure of these interventions requires considering the following questions:

- What kind of design and technology is more appropriate and why?
- How should this design and technology be introduced to maximize its effectiveness?
- Who are the key actors that need to be engaged in this process?
- How do we assess the performance of design and technology vis-à-vis the on-the-ground realities rooted in local contexts?

The 2001 Gujarat earthquake caused devastating impacts on lives and property. According to the official figures (on 1st April, 2001), the total population affected by it was a staggering 16.04 million. The numbers of dead and injured were placed at 20,083 and 166,836 respectively. 7,633 out of 18,356 villages were affected; of these some 450 were completely destroyed. Official figures put the total number of houses damaged to be around 1.2 million, out of which 370,000 were totally destroyed and 650,000 partially destroyed. The reconstruction process was initiated on a massive scale following the earthquake. In fact, for the first time, the government encouraged “owner-driven” reconstruction on a large scale through public private partnerships. Various governmental and non-governmental organizations initiated different approaches / solutions for the design and technology of the shelters.

More than nine years after the devastating earthquake, it was considered useful to revisit these initiatives and assess their performance taking advantage of a long-term perspective. In this context, the 5th i-Rec Conference aimed to provide a platform to share experience among academics, practitioners, government and civil society organizations and lessons learnt about various approaches of design and technology for long term disaster risk reduction. The conference was planned around a series of dynamic workshops and round tables, including a blend of formal and informal presentations, and field visits. As mentioned above, the conference used the Gujarat experience as the basis of learning from real on-the-ground experience. Although design and technology appear to be primarily the domains of architects and civil engineers, the conference brought together professionals and agencies / organizations from other disciplines.

Themes Addressed in The Conference

- Participatory approaches for design and building in a rural context
- Participatory approaches for design and building in an urban context
- Innovative design and technologies for post-disaster reconstruction
- Role of traditional knowledge for sustainable post-disaster reconstruction
- Sustainability of interventions from a long-term perspective
- Design and planning approaches for recovery and rehabilitation of towns and cities
- Securing cultural heritage during post-disaster reconstruction
- Role of communities in developing appropriate interventions in design and technology
- Role of various professionals in developing appropriate interventions in design and technology
- Role of aid agencies and non-governmental organisations in developing appropriate interventions

The publication

In 2012, the *observatoire universitaire de la vulnérabilité et la reconstruction durable*, a research program funded by *the fonds de la recherche du Québec, Société et culture (FQRSC)* assumed the publication of the conference proceedings. About thirty articles were considered for the publication but a selection of thirteen papers was finally made. Even though a series of practitioner and academic presentations were conducted during the conference, this publication contains only what the selection committee considered to be the most scientifically relevant contributions.

The process of publication included a blind peer-review of both abstracts and final papers and an editorial revision conducted in 2012. Only the papers that responded to these standards were published. We hope that this publication will contribute to the dissemination of knowledge in the field and that it will help bridge the existing gap between research and practice in post-disaster reconstruction.

ARTICLES PRESENTED AND ACCEPTED FOR PUBLICATION