The Earthquakes and Megacities Initiative (EMI)'s Contribution to the World Conference on Disaster Reduction

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"Addressing the Root Causes of Vulnerability of Human Settlements in Megacities" was the topic of a thematic session organized by EMI and its partner organizations UN-HABITAT, UNDP, Kobe University and the Pacific Disaster Center, under Theme 1 of the conference agenda related to governance. In addition, EMI and its collaborators organized a two day Symposium to enhance understanding of sound ways to go about disaster risk management (DRM) in megacities in Asia.

To provide some background and context to these activities, it is worth noting that between May and August 2004, EMI and its partner organization, the Earthquake Disaster Mitigation Research Centre (EdM), carried out a two-part survey related to disaster risk management organization and delivery in 20 world megacities which have been working together for the last 7 years under EMI's Cluster Cities Program (CCP).

Based on the information provided by six of these megacities, it is clear that the single greatest concern of local authorities in these cities relates to the high number of informal settlements and informal construction within their urban areas. Alarming figures such as "74% of the population living in slum colonies", or "60% of illicit construction" were reported in some cities, as summarized in the attached chart of issues. The human and material losses of a severe hazard are likely to be very high in these areas removed from the formal planning process, where almost no building quality measures can be enacted and enforced, lack of adequate provision of basic amenities, and in nearly all cases located in the most dangerous sites: steep and unstable hills, stream gullies, riverbeds and environmentally hazardous zones.

A second observation relates to the lack of appropriate inter-institutional coordination and a legal framework to facilitate DRM activities at the local levels, along with a vision that is more focused on response rather than on an enormous and rather unexplored field of preventive actions that in most of the cases will require a lot of creativity, persistence and sustained efforts to really take hold in the so called culture of prevention[3].

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[3] Fernandez J., Mattingly S., "3cd Program, A One-Year Implementation Progress Report", EMI-PDC-EdM, March 2005, www.earthquakesandmegacities.org

To address these and other related issues, leaders of four cities and one country, each having a different set of culture, size, population, institutions, demographics, economy and political organization, were invited to discuss local authorities' perspectives on how to address this common problem that can have catastrophic regional and global repercussions, should a disaster is triggered by any natural or man made hazard.

Key officials and academicians from the cities of Istanbul, Bogotá, Quito, Kathmandu and the Kingdom of Morocco made presentations in the thematic session on the above mentioned topics. For additional details, a complete report of this session can be downloaded from the ISDR web site[4].

To complement this initial discussion, during the next two days, the Symposium counted on additional presentations made by decision-makers and stakeholders from other cities in Asia which are also part of the EMI network: Dhaka, Mumbai, Tianjing, Kobe, and the national system for DRM In India was also presented.

Major conclusions and recommendations from these two activities can be summarized as follows:

1. Most cities and nations are fully aware of the urgent need to develop policies and strategies to reduce the number of people currently living on slums, improve their quality of living or reduce the number of informal settlements. A whole menu of different creative strategies and policies were introduced by the local and national officials, which range from legal frameworks, planning tools and instruments, land tenure regularization, relocation and incentive programs to join formal housing plans, provision of basic amenities such as water and sewerage, etc. Some of these initiatives have proved to be successful, nevertheless they take time, require huge human and economic resources, sustained efforts and political leadership.
2. Complex environments i.e. megacities have an additional and critical dimension that most of the time is not seen or is not well understood as a factor in disaster reduction and mitigation. Besides urbanization, aging of buildings and environmental degradation, an additional problem that contributes to risk creation, particularly in megacities, is an administrative one: the little coordination that these multi-autonomous-government agglomerations have. Agreed practices or mechanisms to reduce and mitigate common risks could significantly improve their capacity for DRM performance and delivery. So coordination among the lower administrative units inside the megacity organization is key.
3. Current mechanisms of knowledge transfer from researchers to end-users are too inefficient to adequately disseminate knowledge to policy-makers and practitioners in developing countries and have kept knowledge limited to a few experts. Considerable resources have been already invested in several cities in the developing world to identify the hazards that threaten the cities, their social and physical vulnerabilities, and the risk posed to people and assets; nevertheless, little has been done to translate this knowledge into concrete action.
4. EMI and its partnering research organizations and local researchers, practitioners and policy makers in each one in the 20-city network have the opportunity to take the

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[4] http://www.unisdr.org/wcdr/thematic-sessions/cluster1.htm#c1-10

lead in setting the agenda related to megacities in a joint effort that will impact not only the DRM process, but the sustainable development of these communities. This is a process that EMI has already started through its CCP program and most recently the Cross-Cutting Capacity Development –3cd-- Program launched in 2004 and which is completing its first year of implementation[5].

5. Political will, community involvement and good technical capabilities to understand hazards and its mitigation options seem to be a better approach to reducing the impacts of natural disasters in the long run, Technology is not the solution by itself, but it certainly constitutes a powerful tool to help us better understanding about how risk is generated and its possible impact. Using the appropriate technologies and making them accessible to different groups in the society through non expensive means such as the internet or cellular phones, is a challenge still to be addressed.
6. Around 50% of the cities engaged in the EMI network are ancient cities that constitute old cultural and historical centers recognized by UNESCO as World Heritage Sites. Ancient construction adds an additional burden to the cities given the vast amounts of money required for maintenance and eventually retrofitting, since they need to be preserved over time as a testimony for future generations.

Finally, the Earthquakes and Megacities Initiative (EMI) thematic session and symposium on megacity disaster risk reduction issues at the World Conference on Disaster Reduction resulted in the submission to the UN-ISDR of a tangible outcome: the Declaration to Support Earthquake Risk Reduction in Megacities that was signed by EMI's 20 partner cities, showing their full commitment to achieving the objectives of the Millennium Development Goals (MDG) as well as the goals established by the Conference.

Further, they make a call to attract the attention of regional and international organizations to support megacities in their efforts to reduce the potential losses from earthquakes and other natural hazards.

[5] www.earthquakesandmegacities.org

Summary Table, Major DRM issues in 6 EMI Megacities

Ref. EMI, DRM city profiles

Issue Category	# of Cities
Informal Settlements/Illegal Construction	**6**
Lack of Institutional Coordination	**4**
Weak Legal Framework	**4**
Need to Improve emergency response	**3**
Need to move from response to prevention and mitigation	**3**
Codes, norms and regulation enforcement	**3**
Review, create DRMMP rooted at local level	**3**
Risk transfer mechanisms	**3**
Funding and resource allocation	**2**
Education, Information, communication	**2**

Summary chart, Mayor DRM issues in 6 EMI Megacities

Ref. EMI, DRM city profiles