

## GDLN Seminar on Strengthening Disaster Risk Management in East Asia and the Pacific – Summary of March 6, 2009 Video Conference

*Local Government Approaches to Disaster Risk Management: Climate-Resilient Cities*

### Speakers:

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### Main moderator:

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### Key topics discussed:

1. How cities can adapt and respond to climate change
  2. Linkage of climate change and disaster risk management (DRM) in local development policies
  3. Capacity building, downscaling, coordination, and funding
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### Executive Summary

*This seminar on strengthening Disaster Risk Management in East Asia focused on how cities can become resilient against climate-related disasters and other natural hazards. *Climate Resilient Cities*, a [Primer](#) on Reducing Vulnerabilities to Disasters, published by the World Bank in 2009, served as a key document throughout the seminar and was used to explain how local governments can measure their city's resilience by adopting a so-called "Hot Spot" assessment.*

The following key points were discussed during the seminar:

- Firstly, the **Primer is an assessment tool** that focuses on the consequences of climate change and determines the resilience of a city to withstand a potential disaster. This tool is to be used to facilitate the development of sound practices at the local level and to enable local authorities to understand and become aware of where or which sectors of the city are at risk and most vulnerable to climate-related disasters in the future.
- Secondly, **sound urban management** needs to be facilitated at the local level, through a holistic integration of climate change adaptation/mitigation and DRM measures, since these two aspects are mutually dependent and interconnected with each other. For example, national-level projects need to be downscaled to the local level, as local authorities are the actual responsible bodies dealing with this matter.
- Finally, **capacities** need to be increased at local level in terms of the knowledge of staff and governmental bodies on how to reduce the vulnerability of a city, especially in light of the emerging trend of more frequent and intense climate-related disasters.

### Summary

#### 1. How Can Cities Adapt and Respond to Climate Change?

Throughout the seminar, presentations and discussions dealt with the right approaches, measures and responses to mitigate potential consequences of climate change that can affect cities and the relationship between current urban development and disaster risk management. This is particularly important since in the next decade scientists are predicting an increase in the frequency and severity of disasters such as

droughts, winds, floods, rain-induced landslides, and a rise in sea levels. Adaptation to climate change is most efficient when led at the local level. Cities are a primary concern, considering the pressures of rapid urbanization, which is happening at extremely rapid rates in Asia.

First, cities should aim to reduce their risk profiles by identifying areas which are vulnerable and at risk. This can be done, for instance, by applying the “Hot Spot” assessment, described in the World Bank’s [Primer](#) (2009). This self-assessment tool offers local governments the opportunity to identify the extent of risks and related impacts that their city faces from climate change and other natural hazards. This approach requires all relevant city departments to work together and to form a working group, tasked to develop a uniform information base, on which the hot spot analysis can be applied.

Secondly, this hot spot analysis highlights which sectors should be prioritized for additional support to increase resilience. Sound practices which take into consideration both, climate change mitigation and adaptation, and disaster risk reduction measures have recently been implemented in Makati City, Philippines. Among the others, the establishment of an efficient street lighting system using sodium lamps with programmable controls; the recycling and reuse of waste to minimize greenhouse gas emissions; the construction of elevated walkways; tree planting activities to green urban areas; improvements in the drainage system; relocation of informal settlers into designated housing areas (“zero informal settlers program” ongoing until 2010); the continued implementation of national building codes, and a revision of the zoning ordinance in 2006.

Various concerns emerged regarding the availability of reliable data needed for the assessment, especially on how to access Green House Gas (GHG) records and GIS-based hazards maps in order to achieve the intended results.

Although planning is dependent on the quality of data, the hot spot assessment does not necessarily require long-term data and does not rule out measures for improvement. For example, when the construction of a hospital is proposed, the local authorities should make sure the prospective building is not located in an area likely to be susceptible to future floods (for example, due to rises in sea level and storm surges). This information can be identified even with limited data availability (e.g. maps). Nevertheless, bigger cities should consider developing GIS-based hazard risk maps for better analysis.

Finally, the Primer is prepared as a guide for local governments to understand the consequences of climate change; to consider how climate change contributes to urban vulnerabilities; and to build awareness on how to become more resilient over time. The Primer is not intended for drawing comparisons between different cities, but rather to provide a self-assessment tool for individual cities.

## *2. Linkage of climate change and DRM in local development policies*

During this seminar, there was a common understanding that a holistic approach is needed to deal with climate change adaptation/mitigation and DRM, as both aspects mutually re-enforce each other. Therefore, they should be reflected in development policies/programs over the short to longer-term in order to have consistent policy frameworks. Moreover, they should be mainstreamed and interlinked in all policies from relevant sectors to encourage the development of sustainable cities. And finally, all relevant departments in a local government should address climate change and DRM, since most sectors will likely have to deal with these issues in the near future, due to an emerging trend of stronger, more intense hazards.

Global climate change has implication in East Asia and the Pacific region, already vulnerable to the impacts of natural disasters and extreme climatic events. Climate change management is linked to strengthening disaster risk management capacity in cities. Accordingly, the “no-regrets” approach explained in the Primer, shows that many measures taken with the intention of reducing the city’ vulnerability to climate change are

often also DRM measures. Therefore, it makes sense to initiate these programs regardless of whether or not the consequences of climate change turn out as projected.

In the case of Makati, the night-time population is only 0.5 million people. During the day, however, this number increases to 3.7 million, along with 0.4 million vehicles, which causes a huge concentration of people and poor air quality. In order to reduce the vehicular traffic and encourage walking within the business district, a public-private program has been launched to connect tall buildings with elevated pedestrian walkways. Makati's example stressed the importance of implementing sound measures involving various stakeholders, and to invest in new technologies and strategies.

Traffic jams in Makati cause not only avoidable emissions but also economic losses in term of wasted time. The use of walkways is expected to significantly reduce short-distance vehicle movements between neighboring buildings during business hours, resulting in the reduction of traffic congestion and a decrease in GHG emissions. Thus, solving this issue would not only improve the quality of air (as a climate change mitigation measure) but also reduce the number of traffic accidents and improve people's health (a DRM measure). This would in turn make the city more attractive for investors, and encourage development.

There is a common understanding that climate change and DRM should be handled simultaneously; Makati is a good example since relevant institutional bodies established at local level aim to implement both, climate change adaptation and disaster risk reduction measures. These institutions are the Makati City Disaster Coordinating Council (MCDCC) and the Makati City Environmental Protection Council (MCEPC), which is an advisory body for environmental policies and concerns. The institutional structure of the two bodies facilitates coordinated planning and ensures that the cross cutting issues are fully dealt within the two councils.

AusAID also recognizes the importance of interlinking climate change and DRM. In fact all project proposals across different sectors must cover both aspects in order to be financed. AusAID is currently implementing a [program](#) of activities worth \$150 million over three years to advance adaptation to climate change in the Asia Pacific region.

### *3. Capacity building, downscaling, coordination, and funding*

In order to implement the Primer and in general the integrative approach to climate change, DRM, and development policies at the local level, capacities have to be built and steadily increased.

Makati has set up strong institutional mechanisms for facilitating action on climate change and disaster risk management, however it still lacks city government staff with technical expertise to deal with the risks of climate change. As a result, the city is still in a reactive mode rather than being able to pro-actively promote sound practices.

However, e-learning courses on DRM were offered by the World Bank in 2007 to educate staff from Makati and other city governments of Metro-Manila. Furthermore, a joint study was conducted between 2002 and 2004 by the Philippine Institute of Volcanology and Seismology (PHIVOLCS), Metro Manila Development Authority (MMDA), and Japan International Cooperation Agency (JICA), which presented different possible scenarios that could happen in the event of an earthquake in the area, in terms of death tolls, numbers of injuries, etc.

Another critical issue in implementing programs at the local level was the fact that, often in developing countries, climate change adaptation/mitigation programs started at the national rather than local level. This situation might hinder the downscaling of efforts to the local level in countries like, for instance, the Philippines. However, the earlier-mentioned "no-regrets" approach is recommended to be used by local governments who should also attempt to push from the bottom up in order to make their interests heard.

Finally, donors and other development partners should harmonize their projects (climate change adaptation/mitigation and disaster risk management) which aim to reduce the vulnerability to climate-related disasters, so that the work is synergized and produces greater outcomes. This would mean that all actors and partners should work more closely together as part of a combined effort.

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## Further Information

For more information on how cities can become more climate resilient, visit the following links:

General information:

- Climate Resilient Cities – Primer, World Bank; guide for local governments:  
[http://siteresources.worldbank.org/EASTASIAPACIFICEXT/Resources/climatecities\\_fullreport.pdf](http://siteresources.worldbank.org/EASTASIAPACIFICEXT/Resources/climatecities_fullreport.pdf)
- Global Facility for Disaster Reduction and Recovery (GFDRR), World Bank – UNISDR Partnership; guidance on how to integrate risk reduction in development processes:  
<http://www.unisdr.org/eng/partner-netw/wb-isdr/wb-isdr.htm> (UNISDR webpage)  
and direct link GFDRR: <http://gfdr.org/index.cfm?Page=home&ItemID=200>
- UNISDR, Hyogo Framework for Action 2005-2015 (2005):  
<http://www.unisdr.org/eng/hfa/docs/Hyogo-framework-for-action-english.pdf>
- UNISDR, Hyogo Framework, Words into Action (2007):  
<http://www.unisdr.org/eng/hfa/docs/Words-into-action/Words-Into-Action.pdf>

Australian Agency for International Development (AusAID):

- Adaptation to Climate Change Initiative (three-year program, \$ 150 million) – overview:  
[http://www.ausaid.gov.au/keyaid/adaptation\\_initiative.cfm](http://www.ausaid.gov.au/keyaid/adaptation_initiative.cfm)

Metro Manila:

- Earthquake study by PHIVOLCS, MMDA and JICA. 2004:  
<http://www.pdc.org/mmeirs/html/mmeirs-home.jsp>