



Global Platform  
for Disaster Risk Reduction  
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**Name of Event: [Side Event] Cities and Flooding in the 21<sup>st</sup> Century**

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**Organizer: World Bank, Global Facility for Disaster Risk Reduction (GFDRR), World Meteorological Organization, Japan International Cooperation Agency**

**Speakers:**

- Abhas K. Jha, Program Leader, DRM, East Asia and the Pacific, World Bank and Lead Author of the Handbook
- Dr. Avinash Tyagi, Director, Climate and Water Department, World Meteorological Organization
- Dr. Hitoshi Baba, Senior Advisor, JICA

**1) Outline**

Urban flooding is one of the key development challenges facing city managers and policy-makers in developing countries. Just over the past two years a large number of cities in the developing and developed world have faced unprecedented flooding. The reasons behind this increase in urban flooding and flooding impacts are complex. Massive, and especially unplanned or poorly planned, urbanization is one of the key drivers. Cities, too often, are ill-equipped to invest in and deliver sustainable basic services like drainage and solid waste management, which increases the risks of flooding. Climate change may further increase the risks through more frequent and severe extreme-weather events, sea-level rise and stronger storm surges. In this context, the World Bank, in partnership with WMO and JICA, is producing a user-friendly Handbook, funded by the Global Facility for Disaster Reduction and Recovery (GFDRR), aimed at key technical specialists and/or decision-makers at the city, provincial or national levels. The panel discussion will be an opportunity to present the main recommendations/findings from the Handbook. The session will further two key objectives of the Global Platform 2011: harmonizing the frameworks for both disaster risk reduction and climate change adaptation and reducing risk at the community and local levels.

**2) Key messages, outcomes, recommendations**

- Effective flood risk management requires a wide and truly global pool of experts that includes decision makers, urban planners, engineers, city managers to consider the impact of their decisions on flood risk.

- Flood risk management principles need to become embedded or mainstreamed into thinking and practice and be set within an integrated city planning and management vision. Risk awareness needs to be engendered in communities which should be involved in decision making.
- The coordination of the efforts of national and local governments, international organizations, insurers and communities will lead to the most successful flood risk management regimes.
- The right balance between structural and non-structural measures to form an integrated management approach is likely to be the most effective approach in reducing flood risk.
- Due to the large uncertainties in projections of climate change, adaptation to the changing risk needs to be flexible to a wide range of future scenarios.

### **3) Conclusions**

The management of flood risk is a major challenge for city managers, local and national governments and policy makers worldwide but particularly for those in developing countries where urban growth is greatest and most rapid. While there are many known and tested measures for urban flood risk management, typically classified as structural (or engineered) measures, non-structural and management techniques, in the context of urban flooding, the right balance between structural and non-structural measures to form an integrated management approach is likely to be the most effective approach in reducing flood risk. In the longer term, climate scenarios are likely to be one of the most important drivers of future changes in flood risk. Due to the large uncertainties in projections of climate change, adaptation to the changing risk needs to be flexible to a wide range of future scenarios and to be able to cope with potentially large changes in sea level, rainfall intensity and snowmelt.

### **4) Reference**

- World Bank Working Paper: *Five Feet High and Rising: Cities and Flooding in the 21st Century*, by Abhas Jha et al (2011, May)