

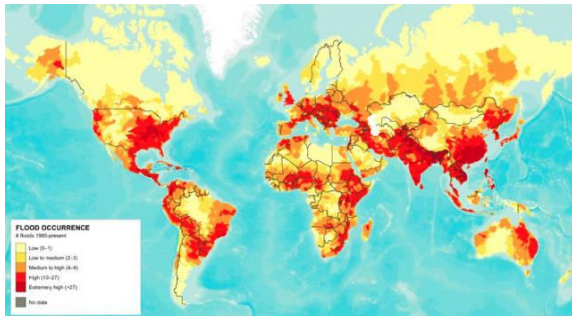
Urban Floods – Urban Droughts

Building Trust and Engagement for Climate Adaptation and Disaster Risk Reduction

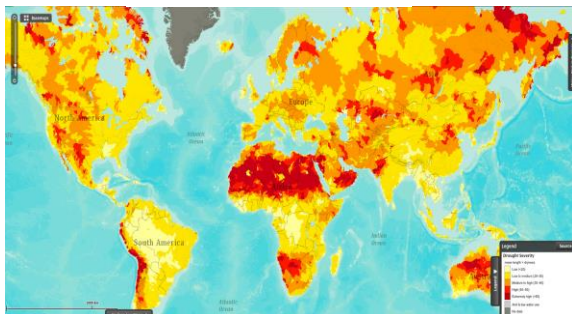
Dr. Ursula Schaefer – Preuss, Former GWP Chair
and Francois Brikke, GWP Senior Network Officer

Adaptation Futures Conference, Rotterdam
12 May 2016

Flood Occurrence Map



Drought Occurrence Map



Urban Water Security at Risk

Urban Challenges

- Rapid urban population growth and increased pressure on water sources
- Population highly concentrated in small areas and increased vulnerability
- Uncontrolled growth of cities and climate change not included in planning

Urban Floods

- Many major cities are by rivers and coast line in flood prone areas
- Increased frequency of precipitations is creating major damages specially affecting the poor

Urban Droughts

- As cities grow in water stressed areas, pressure on resources becomes a major challenge.
- Frequency of occurrence of droughts has significant impact on water security

All stakeholders are concerned, all stakeholders (men and women) should be involved

Kinshasa – An Integrated Approach *



- 12 Million inhabitants
- 62% water coverage
- 70% wastes not controlled
- Fragmented institutional coordination

* IUWM Master Plan development supported by the African Water Facility and GWP (2016)

Integrated approach

- Whole water cycle as one system
- Water source: surface and underground + rainwater + stormwater+ reuse
- Matching quality with intended use
- Waste water : an economic value
- Approach by cluster, decentralized systems
- Coordinated management among institutions
- Involvement of key stakeholders

- **Building trust, dialogue, and communication channels among key sector institutions has been the essential point of departure**

Windhoek – Managing Water Scarcity *



- 350,000 inhabitants
- One of the driest areas in the world
- Water : crucial innovation needs

Water Resources Management

Reclamation Plant, Use of Treated Water for Irrigation, Industries and Potable Water, Artificial Water Recharge, Dual Pipe System – Converted infrastructure

Water Demand Management

Lower Demand in Potable Water, Quotas, Formal Regulations, Irrigation time restriction, Water efficient plumbing mandatory, Fines for non-compliance, Tariff Structure, Public Campaigns, Educational Campaigns, Promotion of Alternative gardening & Landscaping

- **All consumers responsible and engaged in a common effort and goal**

* Pierre van Rensburg, City of Windhoek

Semarang City – Structural and non structural measures for flood management*



- Located in Java, Indonesia
- 1,2 Million inhabitants
- Floods worsened by sea level rise

* Dr. Mochammad Amron, GWP Steering Committee

- **Structural measures** include upstream reservoir development, rehabilitation of ponds and reforestation; downstream floodway development, river normalization, polder development, flood control infrastructure, coastal protection, land subsistence control.
- **Non-structural measures** include spatial and zoning control, community empowerment, early warning system, flood prone mapping, emergency response, housing plan, disaster management, watershed management, flood hazard information system, public information and campaign, socialization and community negotiation.

➤ **Community empowerment and negotiation is key**

Malaysia – The concept of living with Floods*



* Mr. Rozman Mohamad, Deputy Director, Flood Management Division, Depart. of Irrigation and Drainage, and Secretary, Malaysia Water Partnership

- The “Living with Floods” concept recognizes that it is not possible to completely eliminate floods in the context of climate change and due to design limitations.
- However, floods’ negative impacts can be reduced through **a multi stakeholder understanding of flood risks and by working towards modifying this risk-generation process** in a holistic manner.
- This has been presented and accepted at the Malaysian National Water Resources Council in 2011.

Karachi – Actively involving Women Groups *



- Hisaar Foundation is the host organization of WWN Pakistan since 2001
- The Karachi Water Partnership was established in 2007

- Karachi Water Partnership (KWP) is a citizen driven initiative aimed at partnering with the city government in solving the water related problems and challenges faced by the city.
- With over 250 members and several chapters across the country, the Women Water Partnership (WWN) Pakistan has emerged as a powerful voice of women in the water sector.

KWP and WWN are actively contributing to building trust and engagement of communities

* From Amina Siddiqui, Hisaar Foundation and Karachi Water Partnership