Nature in cities: drivers of change

- Rising investments in water infrastructure
- Climate change
- Environmental and social regulations
- Demand for multiple stakeholder solutions
- Agenda 2030
Need to value nature in cities
e.g. East Kolkata Wetlands, India

- 12,500ha Ramsar Site with **high biodiversity**
- **Food source** of fish and vegetables, plus irrigation for 4,700 ha agricultural lands
- **Livelihoods for 50,000** economically underprivileged population
- Treats 65% of Kolkata City’s **sewage waste**
- **Absorbs 60% carbon** from sewage
- Icon of **traditional knowledge**
Need to value nature in cities

Wetlands reduce Urban Heat Island (UHI) effect e.g. Central Park, New York
Nature Based Solutions are

... dynamic
... multi-functional
... innovative for dealing with water issues
... local and context-specific

...you need to **think**, **act** and **interact** differently
From Building *in* Nature  
To Building *with* Nature

Integrate ecosystems as natural solutions into water and marine engineering practice

Sustainable, multifunctional and climate-resilient solutions
A multi-sectoral and systems approach: enabling the resilience of ecosystems, societies and the economy
Managing water risks requires connection between:

- Technical plans
- Policies and regulations
- Societal buy-in
Overcoming silos: joint objectives and budgets based on multi-sectoral benefits

Well integrated urban wetlands – NbS as multi-purpose solutions can generate benefits across the board. Therefore, can be jointly funded by different relevant government budgets. But this requires collaboration and co-creation.
Stimulating adoption of Building with Nature at a national scale e.g. Indonesia

Building with Nature aligned with Government Program

Exploiting the broad range of benefits for a blue economy: coastal safety, sustainable aquaculture, recreation, carbon benefits

- Integrated in large-scale coastal development programmes
- Enabling multiple finance schemes
Participatory – inclusive approaches to design

Example – Water as Leverage for Resilient Cities: Asia

- Multi-sectoral “Design Teams” to develop transformative water infrastructure projects
- Advisory Board with MDBs, architecture orgs, NGOs
- In 4 cities a call for proposals – best design teams to compete
- 2 design teams per city engage stakeholders incl. communities in local workshops
- Regional workshops with MDBs to assure bankability
- Conceptual designs for next phase full project development
Participatory – inclusive approaches across landscape

Example – Water as Leverage for Resilient Cities: Asia (Semarang, Indonesia)
THANK YOU!

For more information: www.wetlands.org