Stimulating Climate Change
Adaptation across the Rural
to Urban Continuum

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Community driven, rural adaptation

The Flow Partnership

WASH Basins Toolkit

Managing WASH resources at a local scale

Shanghai Urban Drainage Masterplan

Integrated City-scale flood management
The Challenge – Climate Extremes

54% of India Faces High to Extremely High Water Stress

Water stress indicator (WI) in major basins:

- 0 = None
- 2 = Light
- 4 = Moderate
- 8 = Heavy
- 16 = Extreme

Source: Srinivas, Bajragovi and Dhillon 2012

Water stress: scarcer and scarcer resources.

WORLD RESOURCES INSTITUTE

www.indiawaterinfo.in
Existing Best Practice – Rajasthan, India

- **360km²** catchment with over **300** water retention features
- Up to **3** harvests a year
- Shift from subsistence farming to cash crops
- Increase in rates of education
- Female empowerment
- **15%** increase in vegetation cover
Constructing Water Retention Features
Constructing Water Retention Features

Saseri, Alwar – New Johad

Maharajpura, Alwar – Restored Johad
Creating Educational Materials
Global Dissemination

“85% of the global population has access to a mobile phone but almost 1/3 still lack access to safely managed drinking water”

Visit: virtualengage.arup.com/waterup
A Digital Toolkit for Integrated Water Resources Management in Rural WASH
Shanghai Stormwater Masterplan
Development of a digital masterplan

City characterisation

Integrating Green, Blue and Grey Infrastructure

Masterplan interventions
- Permeable paving
- Temporary floodable public realm
- Planting basins
- Multifunctional retention basins
- Restore network to its original capacity
- Extension to existing infrastructure (e.g. tunnels)
- Localised storage
- Optimise river network

Integrated strategy: district solutions
Solutions were identified for each one of Shanghai’s 285 districts.
Conclusions

• NBS have the same principles in rural to urban continuum
• Different types of opportunities
• Communities' are crucial to sustainability and action
• Education is crucial to empowerment
• Digital technology presents opportunities
• NBS achieve many SDGs
• Solutions to climate change action and living standard improvement are one and the same