



Challenges in Delta Cities

Urbanization

Urban areas of the world are expected to absorb all the population growth expected over the next four decades.
By 2050, urban dwellers will likely account for 86 % of the population in the more developed regions and for 64 % of that in the less developed regions.

Climate change

Climate change may worsen water services and quality of life in cities.

Water use & water scarcity

Water withdrawals have tripled over the last 50 years. In 2030, there will be a 40% supply shortage of water.

Sanitation

Currently, 2.5 billion people are without improved sanitation facilities.

Human health

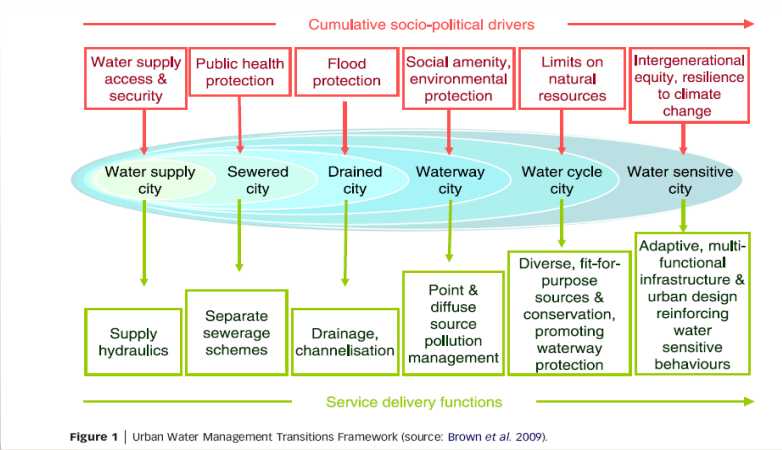
Currently, 3.4 million people - mostly children – die from water-borne diseases every year.

Hazards

Water-related hazards account for 90% of all natural hazards.

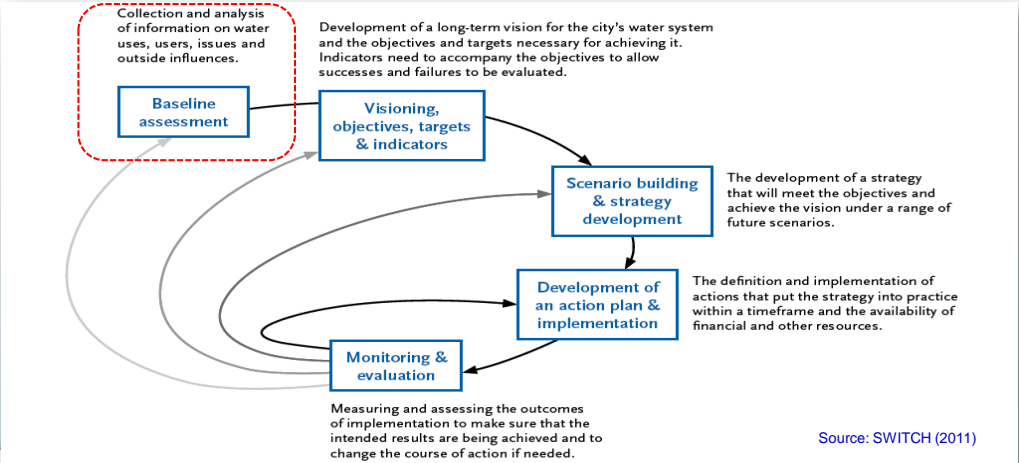
Development of urban water services

Transition



Planning cycle

Managing water in the cities of the future



City Blueprint	Baseline assessment of the sustainability of urban water services
Indicators	Twenty-four indicators divided over eight broad categories: 1. Water security 2. Water quality 3. Drinking water 4. Sanitation 5. Infrastructure 6. Climate robustness 7. Biodiversity and attractiveness 8. Governance
Data	Public data or data provided by the (waste) water utilities and cities based on a questionnaire for urban water cycle services
Scores	0 (concern) to 10 (no concern) (blue is good)
BCI	Arithmetic mean of 24 indicators which varies from 0 to 10
Stakeholders	Water utility, waste water utility, water board, city council, NGOs
Process	Interactive with all stakeholders involved early on in the process

City Blueprint assessments

30 cities/regions (June 2014)

- Algarve (Portugal)

Amsterdam (The Netherlands)

Ankara (Turkey)

Athens (Greece)

Belém (Brazil)

Berlin (Germany)

Bologna (Italy)

Bucharest (Romania)

Copenhagen (Denmark)

Dar es Salaam (Tanzania)
- Eindhoven (The Netherlands)

Genova (Italy)

Hamburg (Germany)

Ho Chi Minh City (Vietnam)

Istanbul (Turkey)

Jerusalem (Israel)

Kilamba Kiaxi (Angola)

Lyon (France)

Maastricht (The Netherlands)

Malmö (Sweden)
- Malta (Malta)

Manresa (Spain)

Melbourne (Australia)

Oslo (Norway)

Reggio Emilia (Italy)

Reykjavic (Iceland)

Rotterdam (The Netherlands)

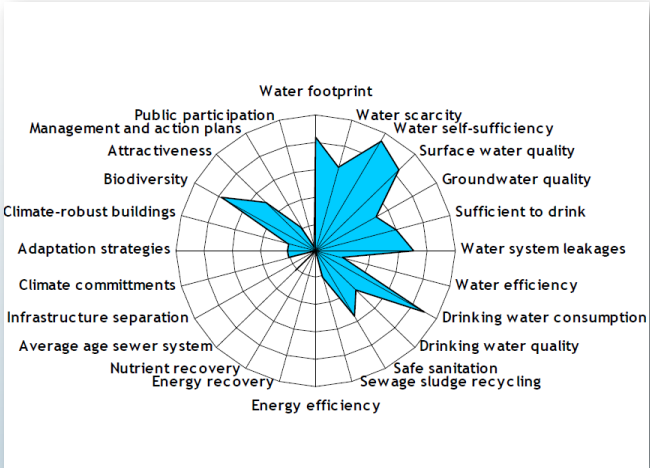
Scotland (UK)

Venlo (The Netherlands)

Zaragoza (Spain)

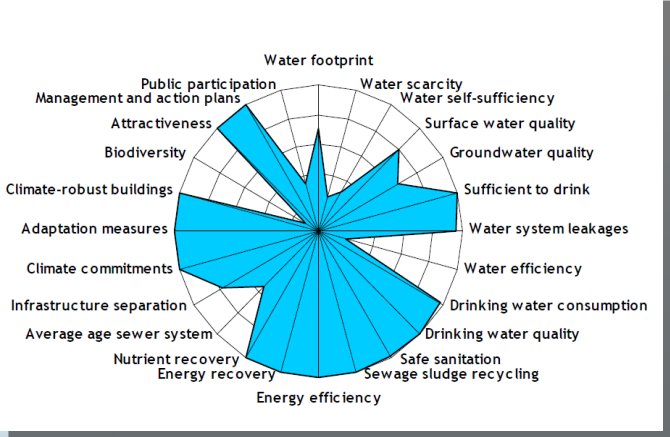
Dar es Salaam

City Blueprint



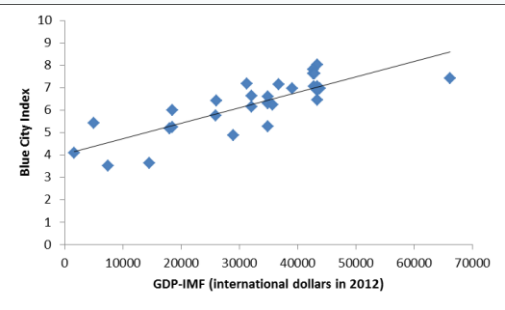
Hamburg

City Blueprint

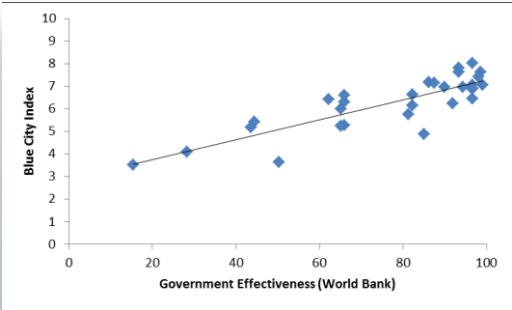


Blue City Index

GDP CORRELATION

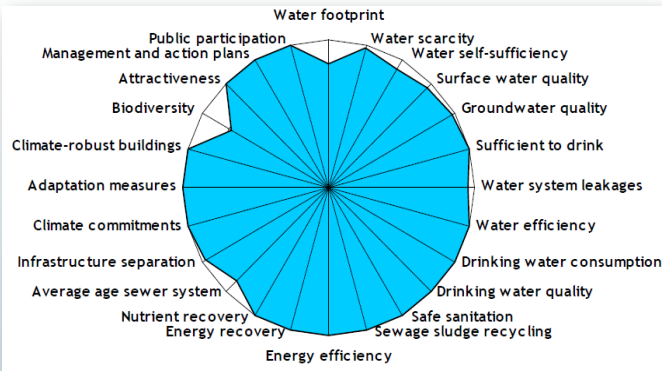


GOVERNMENT EFFECTIVENESS CORRELATION



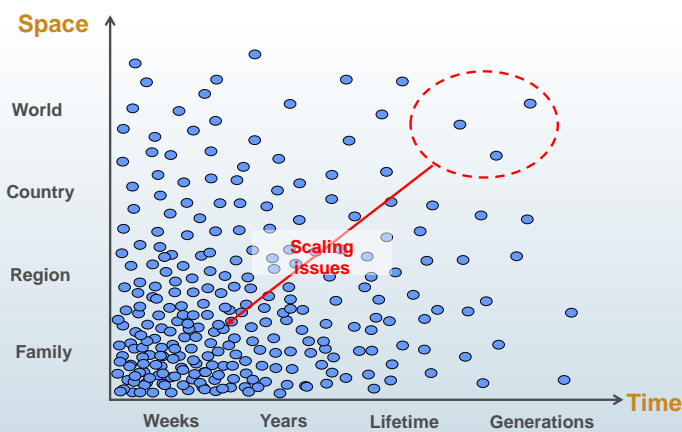
Learning from best practices

City Blueprints optimised



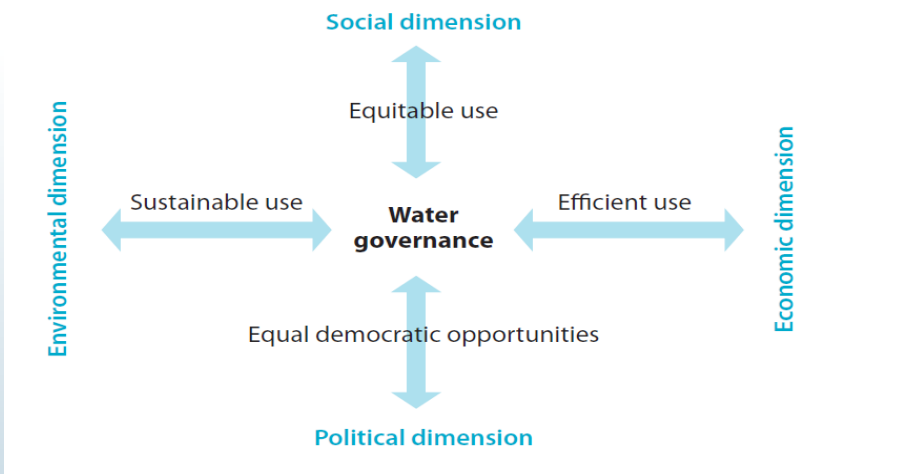
Source: Van Leeuwen, 2013

Wicked problems



- 'Wicked' water problems:**
- Complexity
 - Uncertainty
 - Diverse views and interpretations
- Management Responses:**
- Integrated
 - Adaptive
 - Participatory
- Examples:**
- Climate Change
 - (Un)sustainability
 - Poverty (MDGs)
 - IWRM

Integrated water governance



To conclude

Addressing sustainability

City Blueprint is a baseline sustainability assessment (quick scan):

- communicative instrument: dialogue between stakeholders
- learning from best practices
- first step towards integrated governance of urban water management

European Innovation Partnership on Water: City Blueprints Action Group

- facilitating cities in addressing the sustainability of urban water services
- platform for benchmarking and collaboration
- cross-sectoral: water in smart cities approach - BluesCities project (2015-2016)

CITY BLUEPRINTS

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