Sustainable Stormwater Management in Berlin – The Sponge City Concept
The Sponge City Concept

• Natural environment
  – Wet periods: infiltration and soil storage
  – Dry periods: evaporation from soil & plants

• Drained urban areas
  – Wet periods: high peak flows
  – Dry periods: heat island effect

• Sponge city concept
  – Wet periods: store water locally
  – Dry periods: evaporation with green infrastructure

Source: „Berlin is becoming a sponge city“
Video on Bloomberg Businessweek 2017
Sustainable Stormwater Management in Berlin

• Many good practice examples

• Rummelsburg
  – 130 hectare residential area
  – Build since 1997

• Hoppegarten
  – 160 hectare commercial area
  – Build since 1994

• Adlershof
  – 400 hectare science park
  – Build since 1999
Benefits for the city of Berlin

• Flood reduction
  – Severe flooding in 2017

• Treatment
  – Stormwater runoff can be polluted
  – Nature-based systems offer good treatment

• Cope with drought
  – Severe drought in 2018 and 2014-16
  – Dry creeks and lakes/ponds

• Improve urban climate
  – Reduce heat island effect
Recent Developments

• Political decisions
  – All new residential developments shall use “sponge city concept”
  – Area connected to combined sewer system shall be reduced by 1% per yr.
    => “Disconnection”
  – “Rainwater agency” will support this process

• Innovations
  – TreeDrain®: use stormwater to irrigate urban trees
  – Use rainfall forecast to control small storages e.g. green roofs
Discussion points

Central Question: What are the opportunities and benefits of nature-based systems / sponge city concepts?

• What need to be done or what steps would be necessary to promote the further implementation of the sponge city concept?
• Can the sponge city concept be used profitably in developing countries? Which requirements must be met?

We would like to welcome you in our discussion group!