



Carlos N.A. Salinas-Rodriguez,
Berry Gersonius,
Richard Ashley
[UNESCO-IHE Institute for Water Education]
B4.2: Socio-Technical Flood Resilience in Water Sensitive Cities – Adaptation across spatial and temporal scales

Adaptation Pathways for flood resilience and water sensitivity

Introduction

There is a need for managing and using water more effectively.

Water sensitive urbanism (WSU) demands the participation of water sector, the municipal sector or any other to develop synergies.

Risk management and uncertainty analyses are demanding more attention from water researchers and practitioners.

Research Questions

- RQ1. How can water sensitivity and flood/drought resilience be defined and understood in mutual relation? (Fig. 1)
- RQ2. Which indicators can be defined for the assessment of water sensitivity and flood/drought resilience to make these concepts operational and quantifiable?
- RQ3. How can the impact of climate change on water sensitivity and resilience be analyzed and responded to by Adaptation Pathways method?
- RQ4. How the identification and use of adaptation opportunities stemming from structural Adaptation Tipping Points influence on the adaptation pathways for water sensitivity and resilience?
- RQ5. Can a modelling approach be developed for adaptation pathways for water sensitivity and resilience? What type of processes should such approach include?

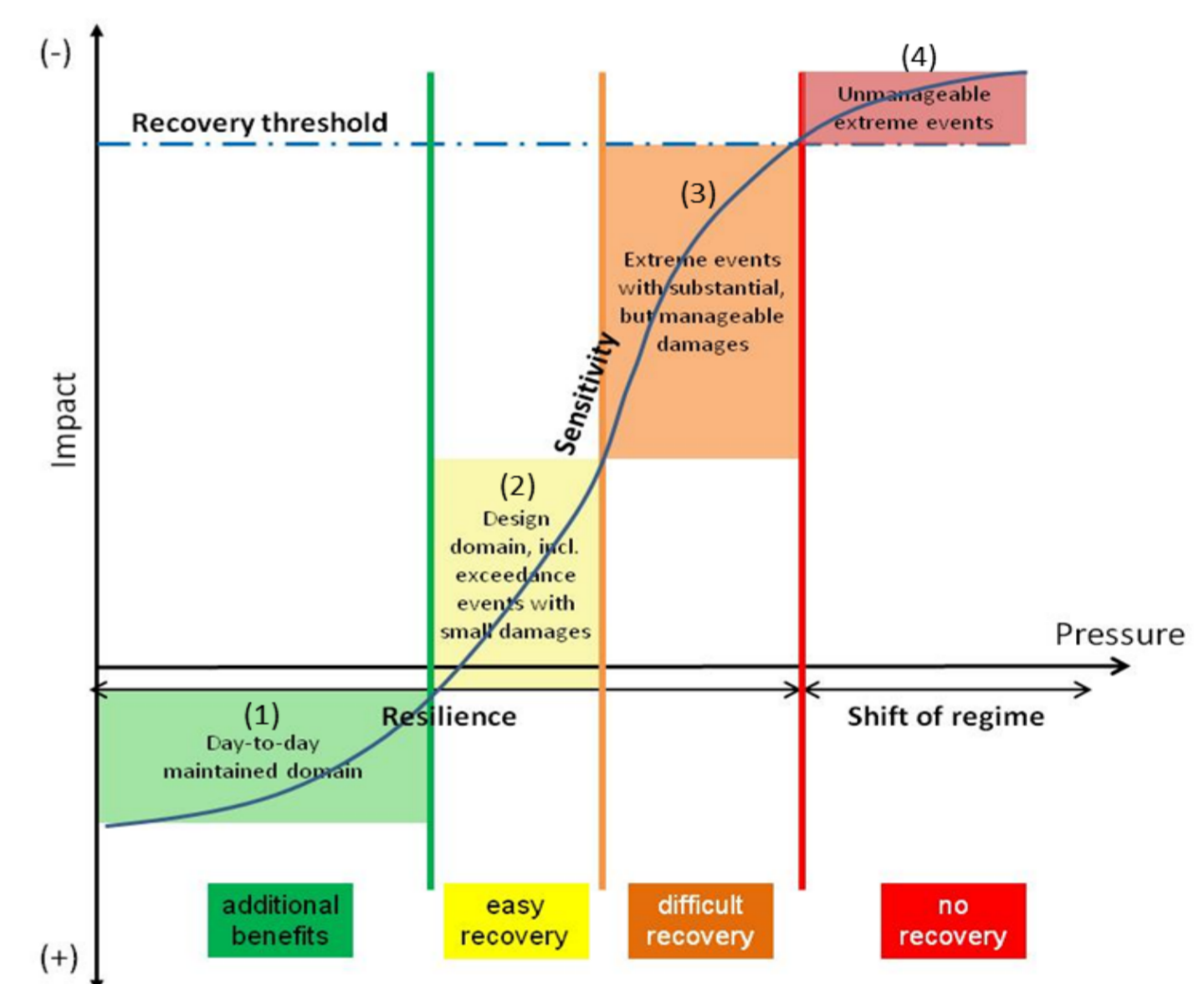


Fig 1. The four domains approach. Sensitivity and resilience in mutual relation (RQ1)

Adaptation Tipping Points (ATP) for Spaanse Polder, Kralingen and Center (Rotterdam-NL) (RQ4)

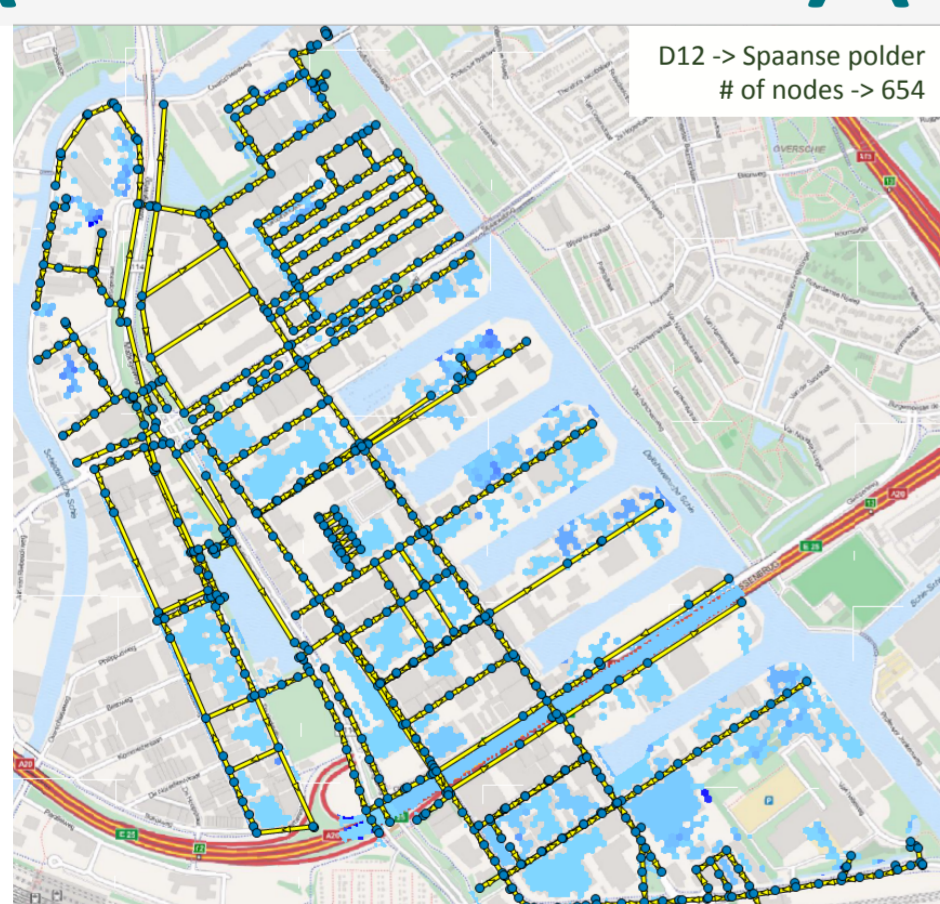


Fig 2. Sewer network for Spaanse Polder, Rotterdam (NL)

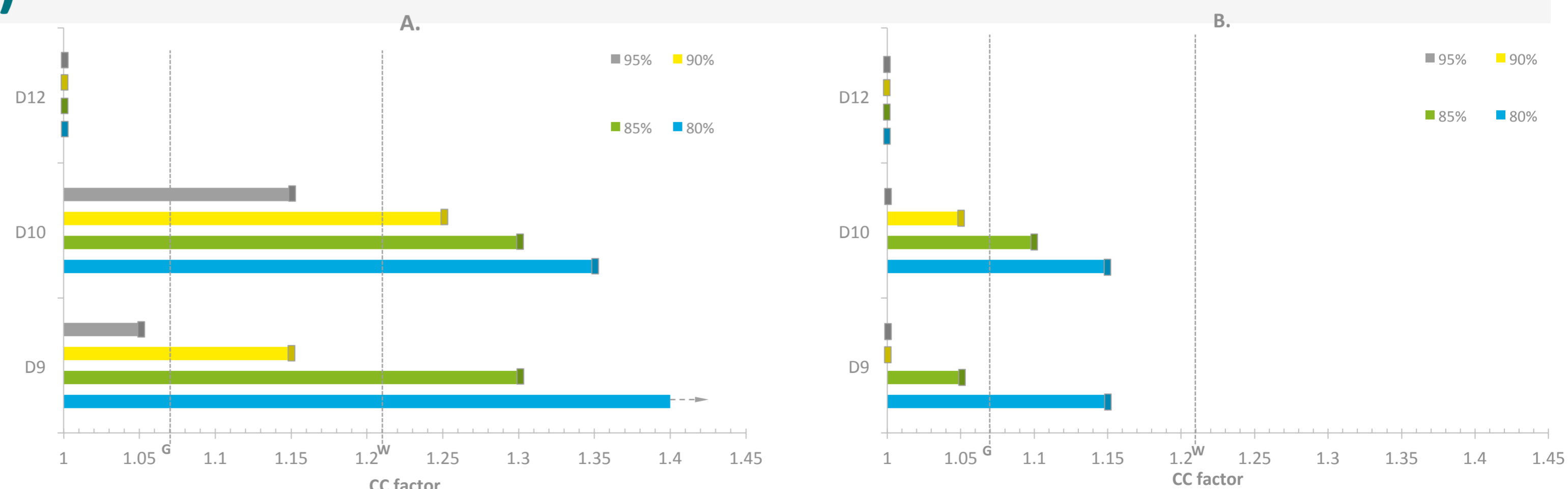


Fig 3. ATP for Spaanse Polder's sewer system. A. Return period of 1/1 B. Return period 1/2

