

# Improving risk reduction & contingency management

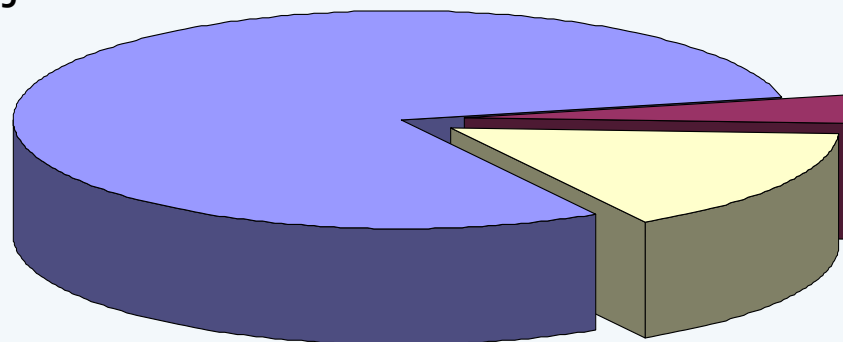
Water contingency plans

Roy Tummers  
Manager Strategy



# Sources drinking-water 170 Mm<sup>3</sup>

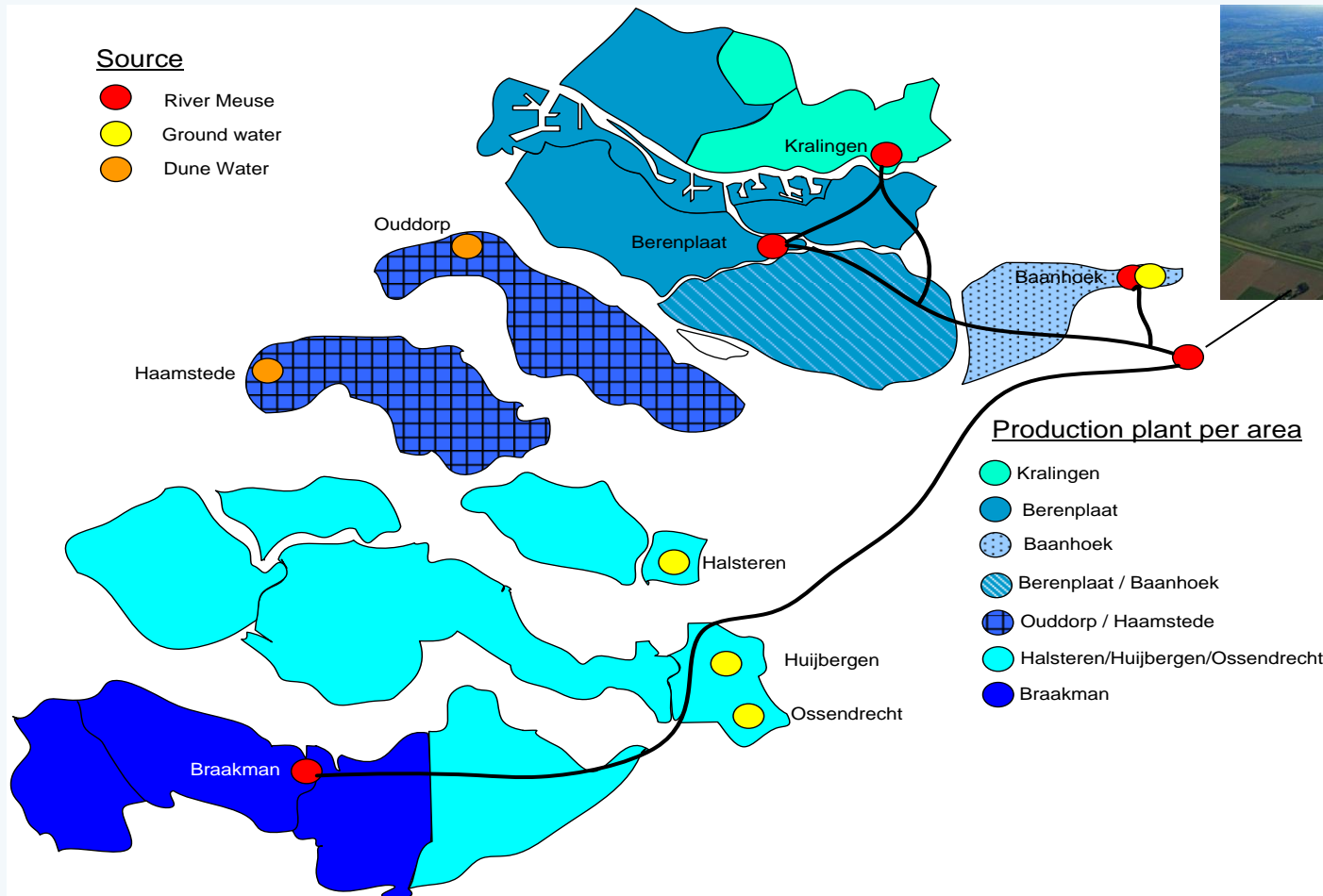
The river Meuse 80%  
136 Mm<sup>3</sup>/jaar



Dune water 4%  
7 Mm<sup>3</sup>/jaar

Ground water 16%  
27 Mm<sup>3</sup>/jaar

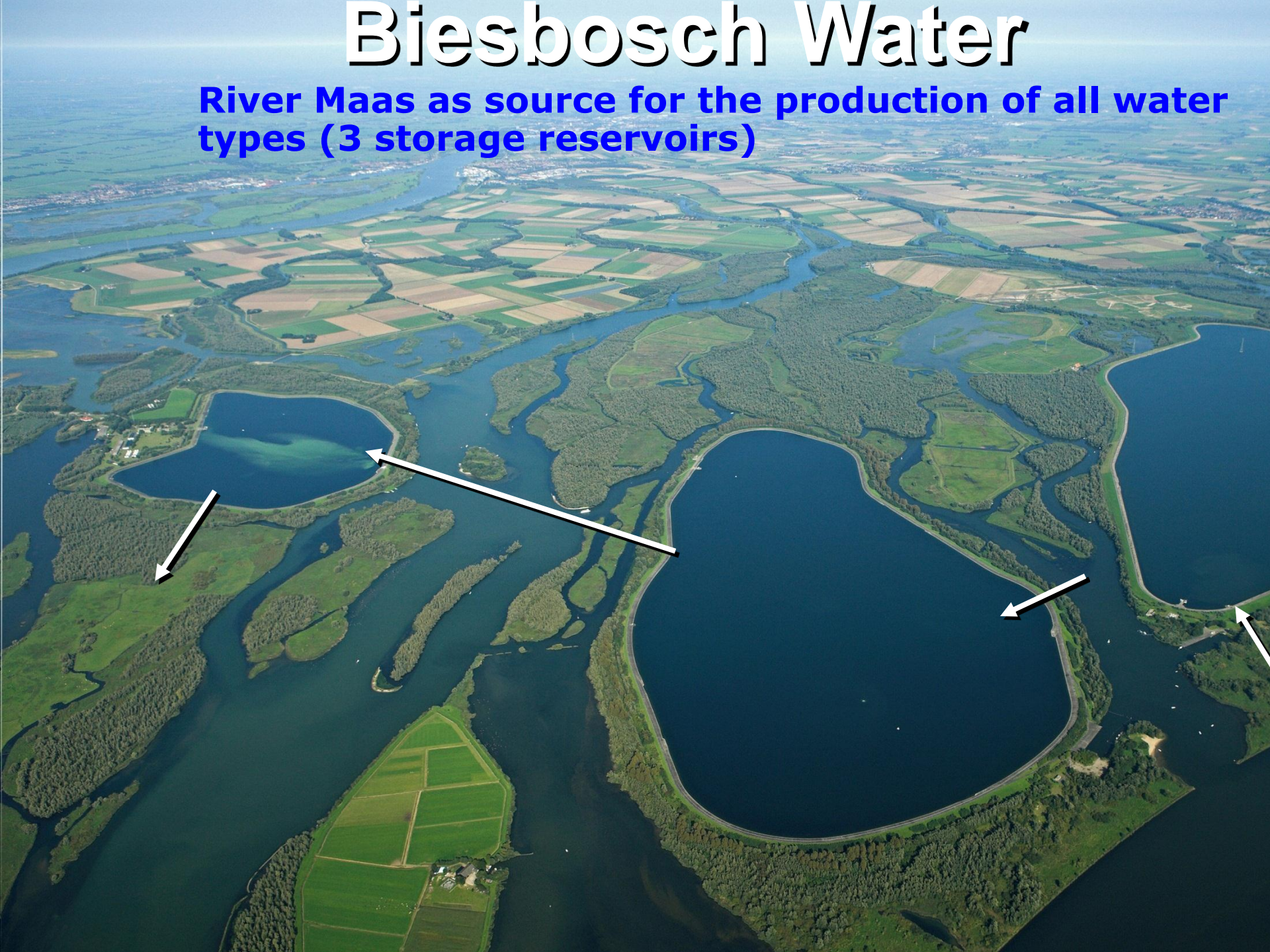
# Evides: production plants, supply areas and sources





# Biesbosch Water

**River Maas as source for the production of all water types (3 storage reservoirs)**

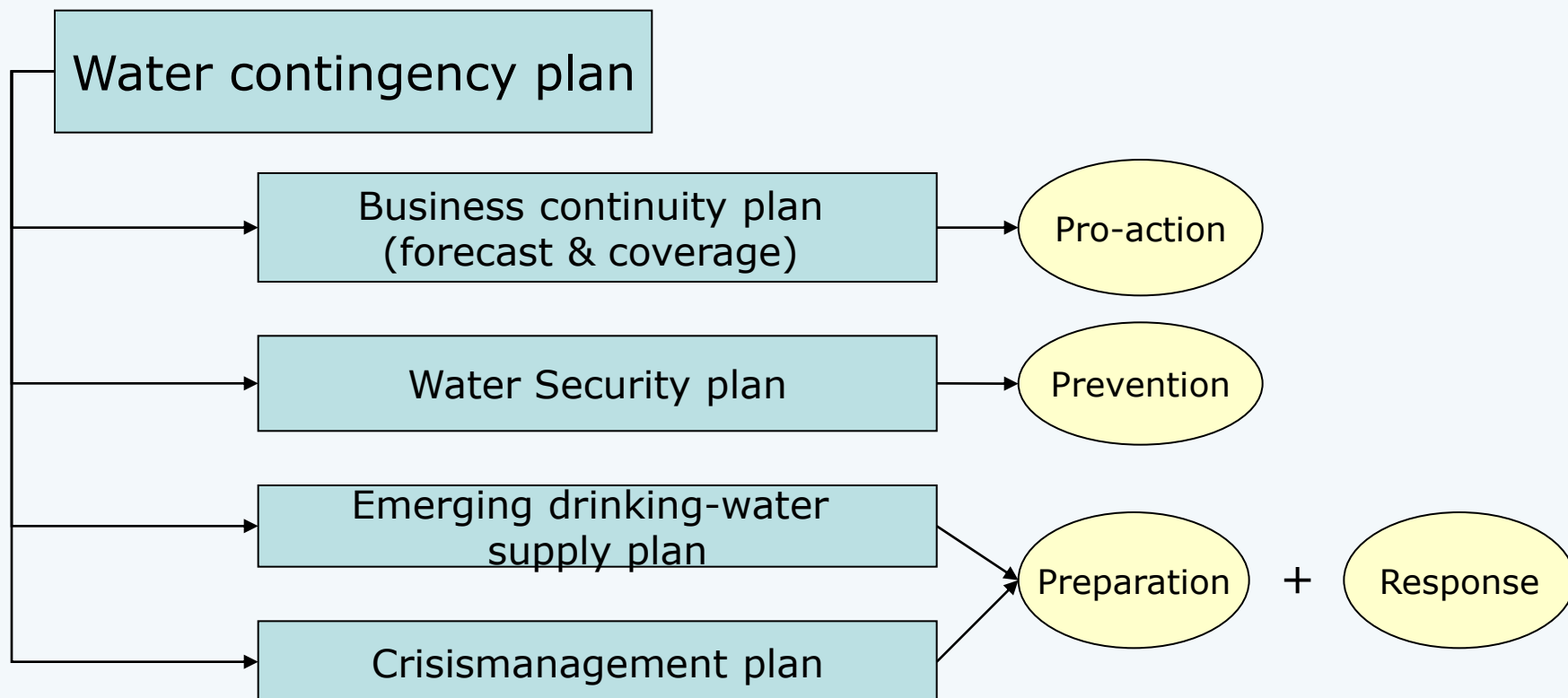




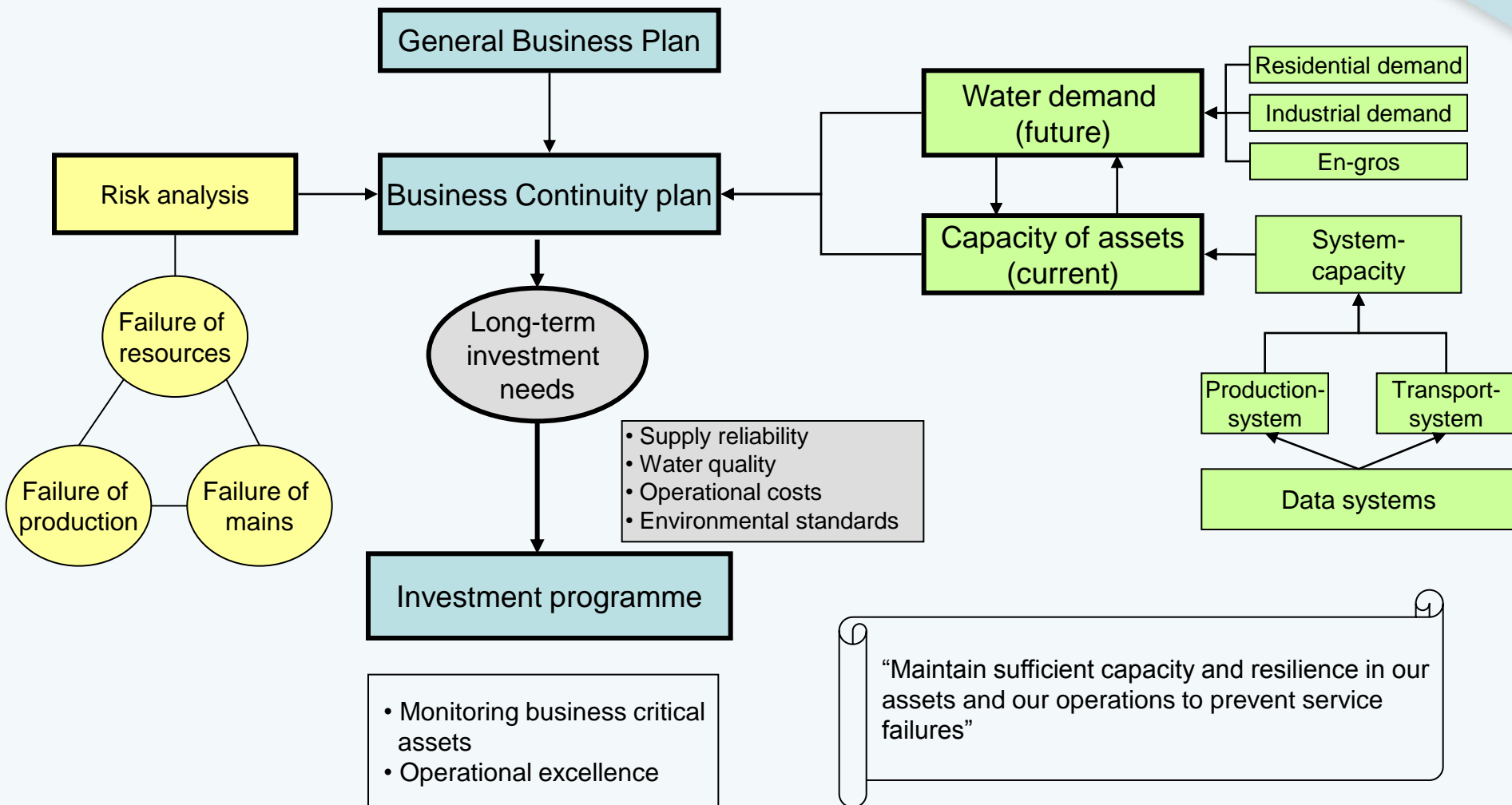
# Production plant Berenplaat



# Water contingency plan: multiple sections

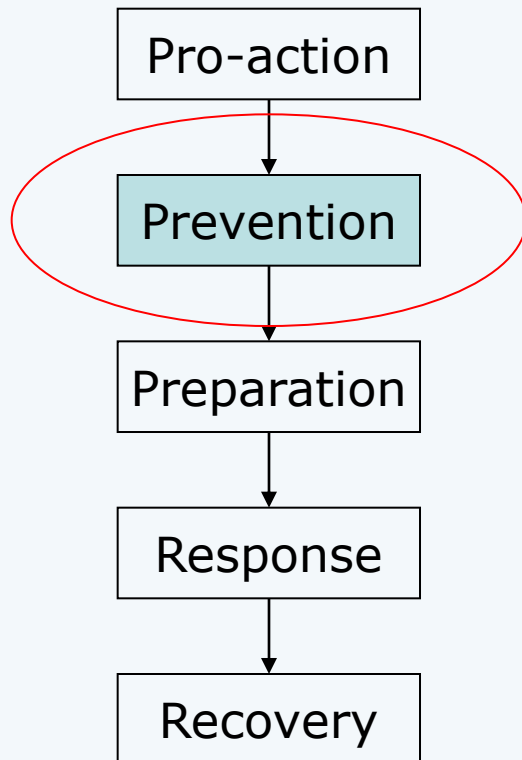


# Business continuity plan





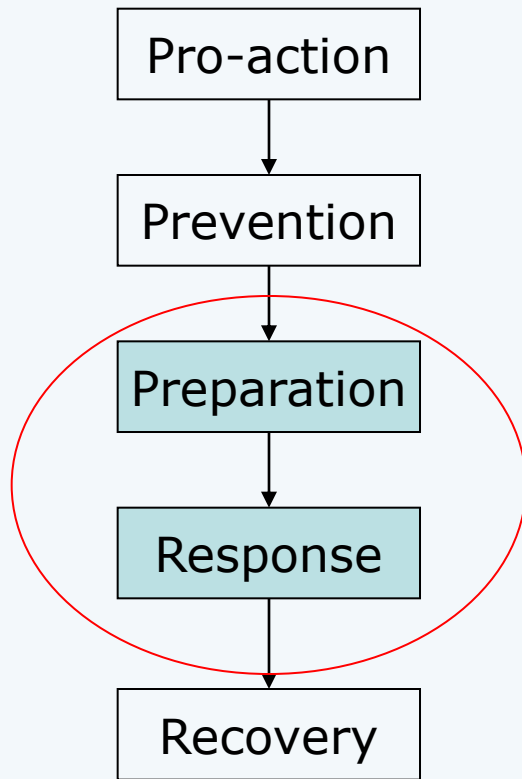
# Water security plan



- Security of drinking-water supply high on the agenda ever since 9/11
- Water companies implemented a standard for “Good Housekeeping” (basis security level)
- Combination of (preventive) measures: technical, organizational, personnel and information
- Audit by government (every 3 year)

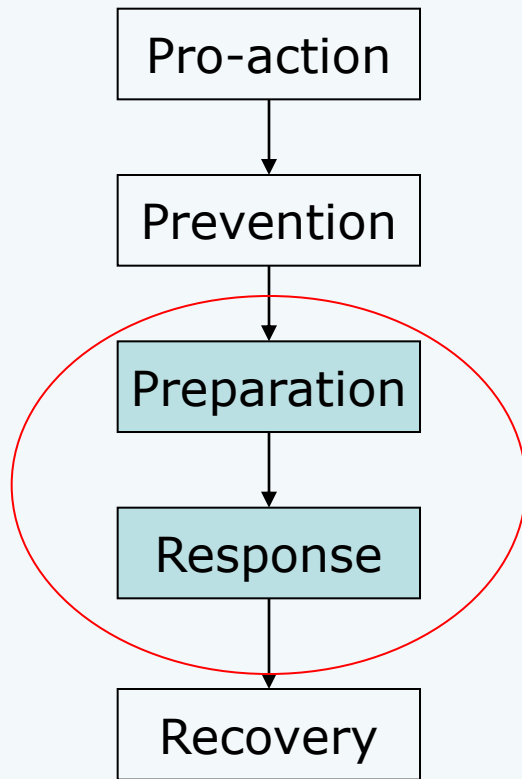


# Crisismanagement plan



- Adresses:
  - Roles and responsibilities
  - Standby procedures to enable the continuation of essential activities
  - Procedure to activate the response organization
  - Cooperation with the authorities
  - Management of communication
  - Manuals, checklists, action cards

# Emerging drinking-water supply plan



- When regular supply is not possible ( $> 24\text{h}$ )
- 3 liter per person per day
- Providence of flexible watertanks and emergency mains system
- Distribution at well defined distribution points
- For use at 1 distribution point and at 668 distributions points (worse case)
  - Nuclear fall out
  - Contamination of surface water



# Emerging drinking-water supply



Thank you for your attention!