Ministry of Infrastructure and the Environment

Sanitation in the Netherlands
situation and challenges

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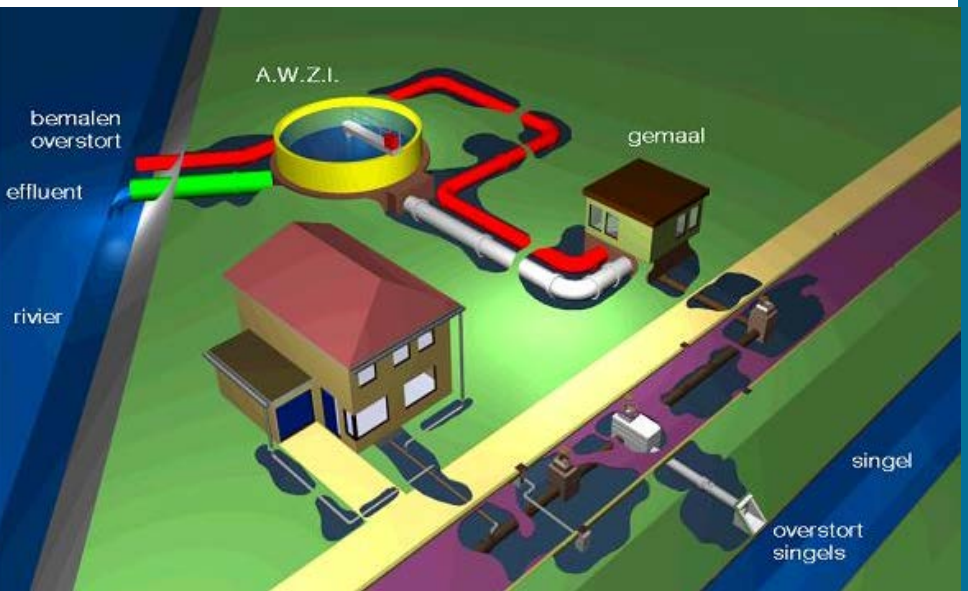
Jelka Appelman

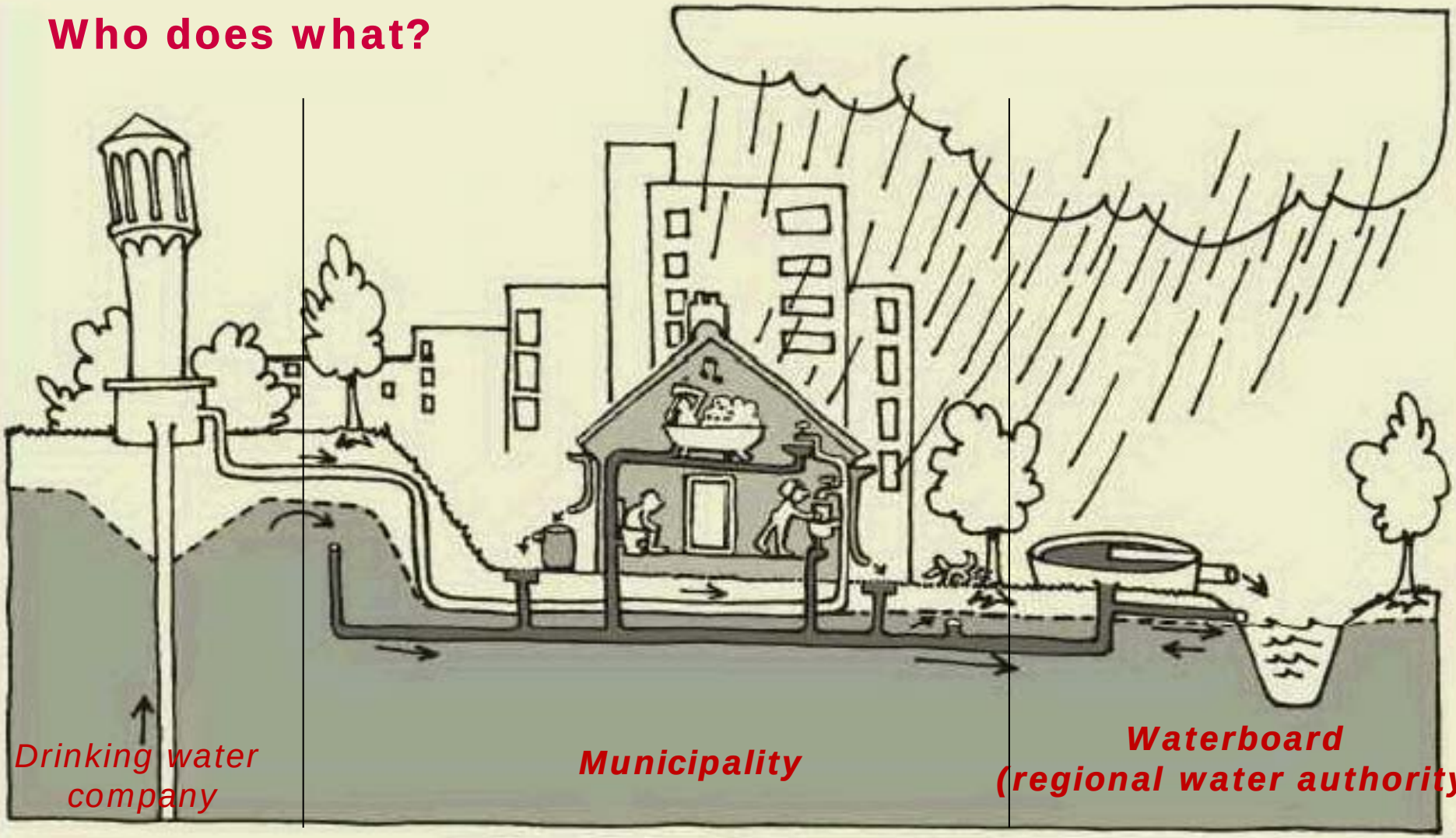


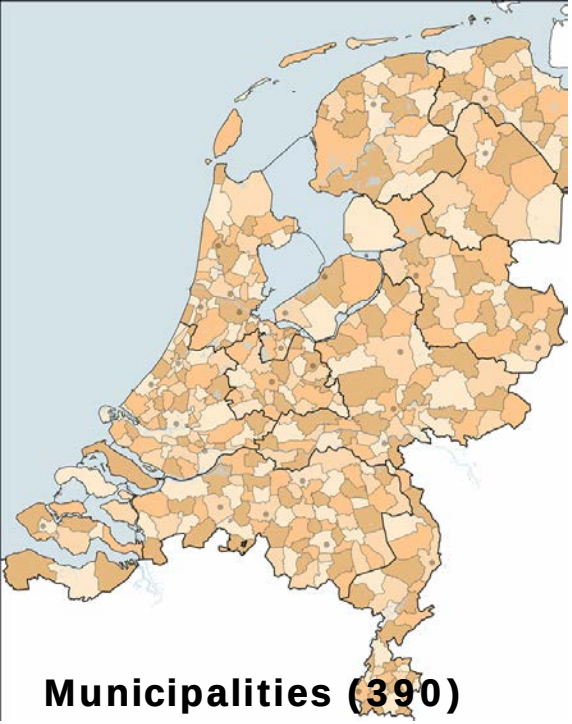
21 November 2016

Contents of the presentation

- Sanitation / 'waste water chain': tasks and responsibilities
- Costs of sanitation
- Collaboration in waste water chain
- Future challenges and opportunities

Who does what?





Municipalities (390)

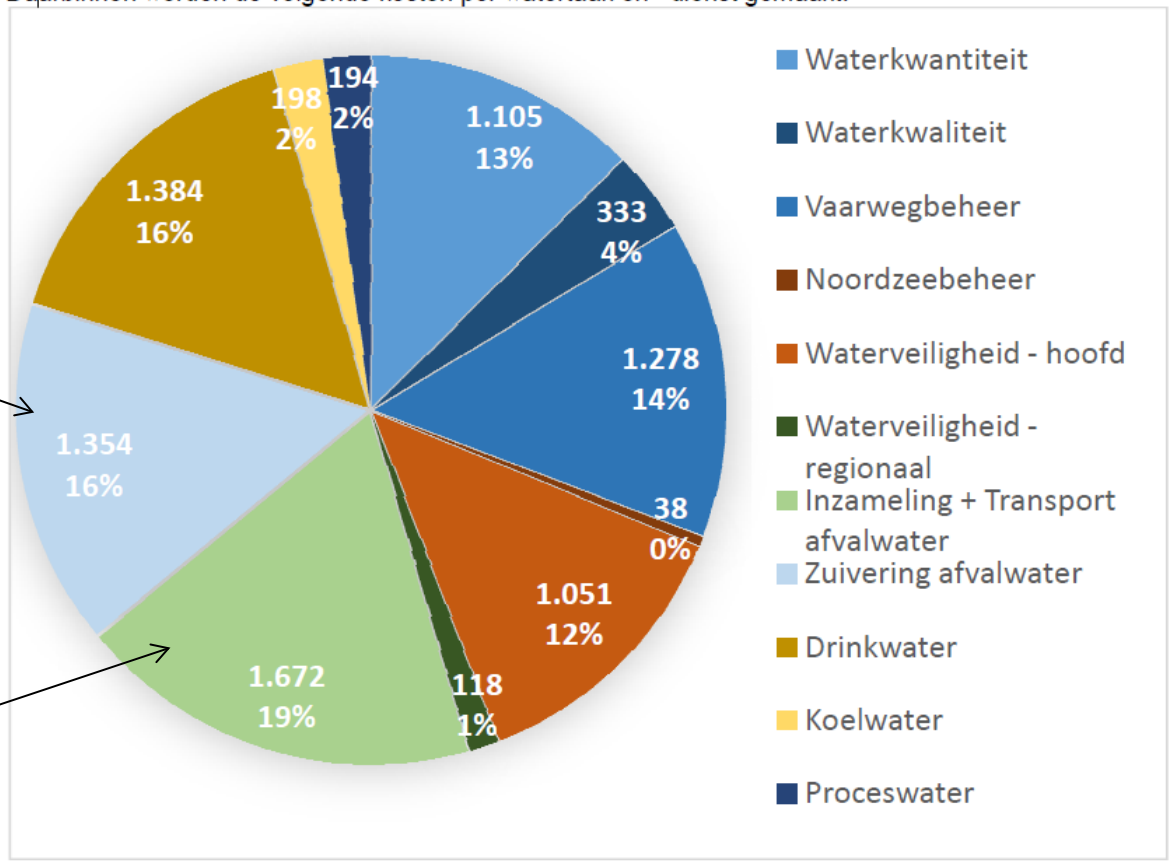
Waterboards (22)

Costs watermanagement in the Netherlands (2013)

Municipaties:
Sewerage levee/tax

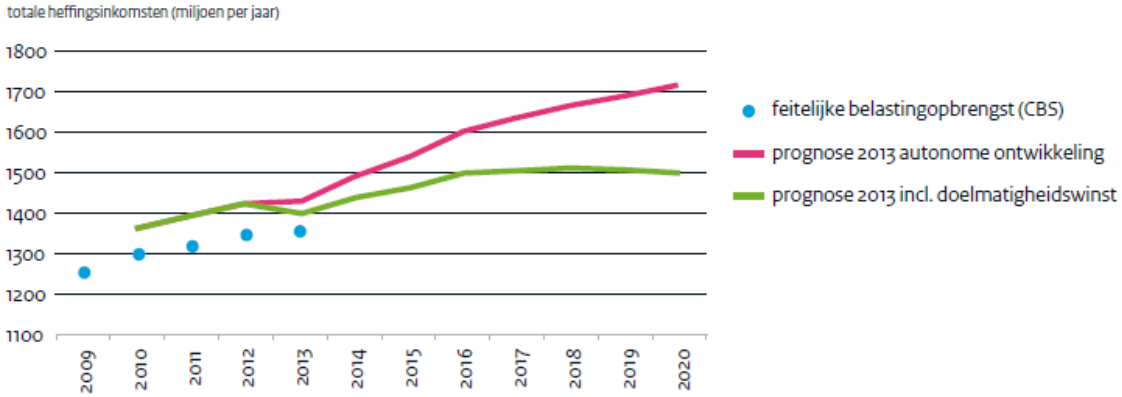
Waterboards:
Waste water treatment levee/tax

Daarbinnen worden de volgende kosten per watertaak en –dienst gemaakt:



Figuur 2.29. Kosten per waterdienst en -taak (jaar 2013[78]) in miljoen € en percentage van het totaal

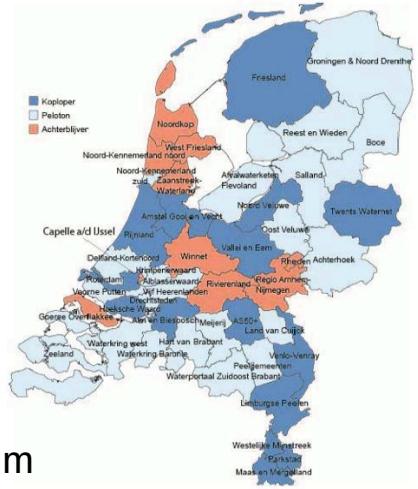
Costs of urban water management expected to increase



Levee sewerage system (prognosis + actual)

Levee waste water treatment (prognosis + actual)

Administrative Agreement on Water (2011), Gaining efficiency in water chain management. Goals:



- Costs: saving up to €450 mln/y in 2020
- Improve The quality of the management of the waste water system
- Reduce vulnerability of organizations, prevent knowledge of professionals is lost

Collaboration in 50 regional partnerships of municipalities + waterboards

- » *Sharing knowledge / experience*
- » *Improve insight of performance of existing infrastructure*
- » *Data collection and Assetmanagement*
- » *From 'driven by standards' to 'driven by performance'*
- » *Joint investment programming*

More effective and efficient management of the water chain

Future developments and challenges

- Cost of affordability of sewerage and waste water treatment deserves ongoing attention!

- Adaptation to climate change
  - How to adapt on extreme weather events (spatial planning and water management)?
  - To what extend does society accept damage caused by weather events?
  - How to build in (financial) incentives to activate citizens and private parties, f.i. green roofs and rainproof gardens?
  - Vulnerability of the waste water system system in case of regional and extreme flooding?

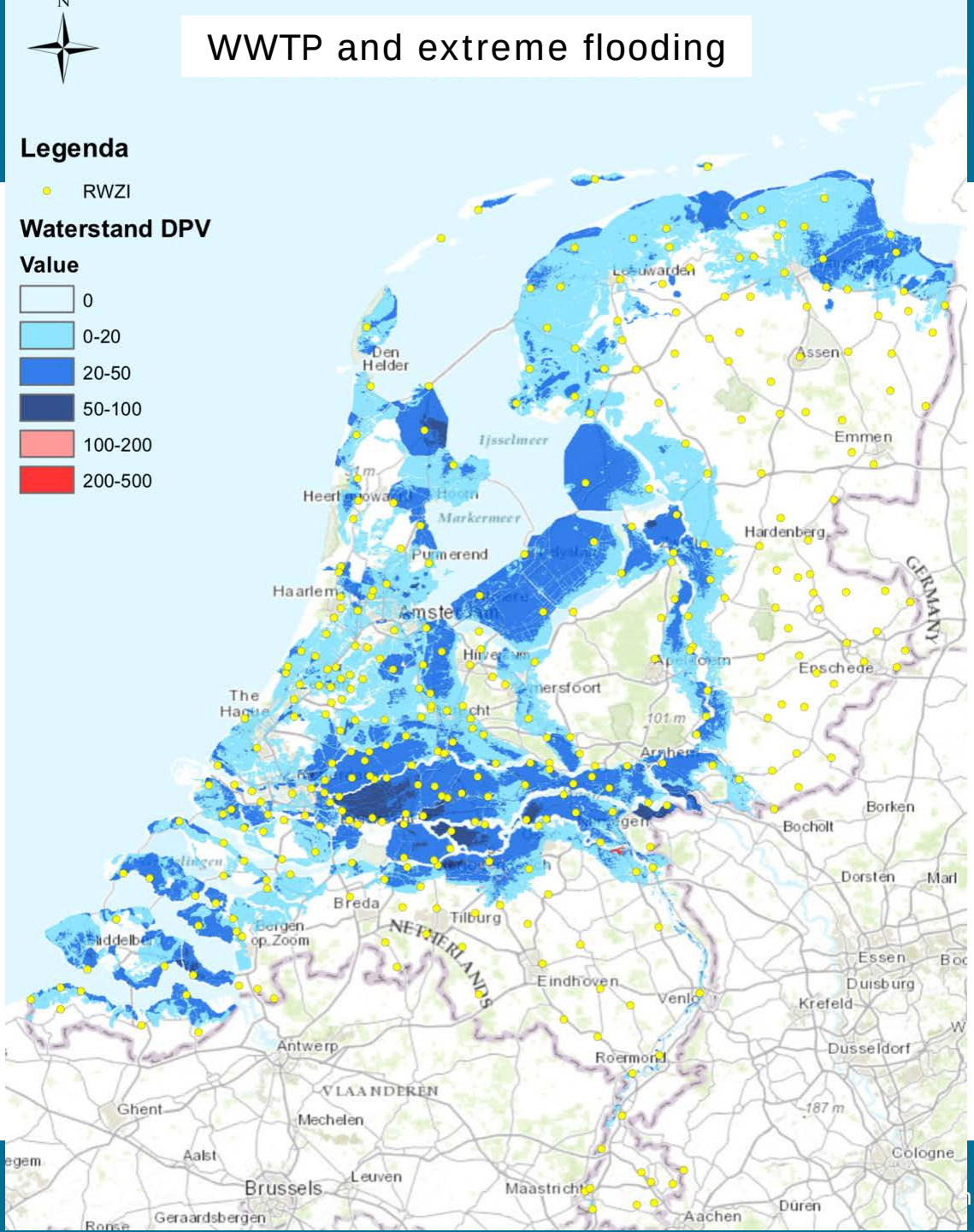
- Circulair economy
  - Energy recovery (biogas, heat recovery,..)
  - Recovery materials (sulphate, fosphate, cellulose, plastics, etc.)

- New forms of sanitation (tailor made and more flexible?). Health consequences?

- Upgrade waste water treatment plants (medicine residues, microplastics, unknow substances)? Prioritize?

Thank you!

WWTP and extreme flooding



Legal framework

Water Act : Water management (tasks and responsibilities)

Waterboard Act: tasks and finance waterboards/regional water authority

Environmental Management Act

- Environmental quality standards (surface water standards)
- Emission control regulations (discharge standards)

Soil Protection Act (soil and groundwater quality)

- Prevent and limitation measures
- Remediation of soil and groundwater pollution

Spatial Planning Act: Planning procedures

Drinking Water Act: Production and delivery of drinking water