



6th UNECWAS seminar, Tampere 8.6.2018

Views on Resiliency in Water Services – Commentary on the morning session

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Session presentations

- **Esteban Castro:** *“Decision-making and resilience: challenges and opportunities facing the right to essential water services”*
- **Klaas Schwartz:** *“Room for Failure? An Emerging Approach to Resilience in a Dutch Water Utility”*
- **Sara Ward:** *“Enhancing Water Services Resilience: Perspectives”*

Key messages of presentations

Esteban Castro: *“Decision-making and resilience: challenges and opportunities facing the right to essential water services”*

Challenges

- Failure to achieve MDGs, universalization of essential WSS services
 - Deficiencies in the process of democratization of the politics and management of essential WSS services
 - Past efforts have led to even deeper structural inequality ?
- Expectations on the new Sustainable Development Goals (SDGs) ?
 - More inclusive political process, make systems sustainable
- Human right to (essential) water (UN 2002, 2010)
- Substantive democratization of the government, management and access to essential WSS services -> various governance regimes

Key messages of presentations

Esteban Castro: *“Decision-making and resilience: challenges and opportunities facing the right to essential water services”*

Resilience

- Hard resilience vs. soft resilience
- Resilience of/to WHAT, by WHOM?
- Missing connections of resilience? -> relevant for WSS ?
 - R vs. structural social inequality
 - R vs. rights (citizenship, human, political, water, etc.)
- Expectations on the new Sustainable Development Goals (SDGs) ?
 - More inclusive political process, make systems sustainable
- Human right to (essential) water (UN 2002, 2010)
- Substantive democratization of the government, management and access to essential WSS services -> various governance regimes

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Opportunities & recommendations

- Extension of essential WSS to cover the unserved population must rely on heavy **state involvement** & heavy **public funding** (*re: Finland, municipalities...*)
- WSS not to be organized as a profit-making activity (whether private or public)
- SDG17: public-private partnerships -> public-public, public-community, community-community -> SDG6 targets
- Introduce radical socio-technical solutions (to involve local communities and citizens)
 - Social participation and control over the decision-making process by common citizens and users (-> legal and administrative mechanisms?)

Key messages of presentations

Klaas Schwartz: “ *Room for Failure? An Emerging Approach to Resilience in a Dutch Water Utility*” ->
Case of Vitens utility

- Long-term strategy addressing resilience:
 - ✓ **Robustness** – infrastructure can address challenges without adaptation
 - ✓ **Flexibility** – infrastructure is flexible to react to unexpected changes
- Cluster level: emphasis on robustness
- Sub-cluster level: room for flexibility

Key messages of presentations

Klaas Schwartz: “*Room for Failure? An Emerging Approach to Resilience in a Dutch Water Utility*” -> Case of Vitens utility

- Emphasis on “engineering resilience” -> quick recovery to normal operations after unexpected events
- Approach to resilience strongly linked to groundwater dependence / availability

Key messages of presentations

Sara Ward: *“Enhancing Water Services Resilience: Perspectives”* -> Views from the UK water sector

- Institutional set-up in UK is diverse / complicated: England, Wales, Scotland, Northern Ireland; public & private
- Look at resilience in:
 - governance (inter-organizational resilience)
 - water policy & regulation (Env.Agency, Defra, Ofwat)
 - water research (SETs)
 - practice (water operators): six utility examples

Key messages of presentations

Sara Ward: *“Enhancing Water Services Resilience: Perspectives”* -> Views from the UK water sector

Water UK: Long Term Water Resources Planning Framework and the 21st Century Drainage Programme

- Investment in waste and wastewater management
- Sludge management
- Sewer misuse, flooding and pollution
- Catchment management
- Climate change adaptation
- Energy use and renewable energy
- Water resources planning

Examples of resilience in UK water utilities

- South West Water, Bristol Water, Welsh Water, Anglian Water, United Utilities

Viewpoints to water resilience

Global water resilience issues

- ❑ By 2030, existing fresh water supplies will satisfy only 60 % of the global need -> impact of agricultural and industrial water use **(GRAPH)**
- ❑ 2015 -> 2030: 1,1 billion new city dwellers - huge pressure on URBAN water resilience
- ❑ By 2025 investment needs on (urban) water infrastructure exceed € 1 trillion **(GRAPH)**
- ❑ Role of decentralisation vs. centralisation in water resiliency
- ❑ Role of new technologies and digitalisation in assuring resilience in an increasingly complex environment

Utility level resilience issues

- ❑ Case by Klaas Schwartz from the Netherlands
- ❑ Examples of resilience strategies of UK water utilities
- ❑ Case studies from Finland – after lunch break

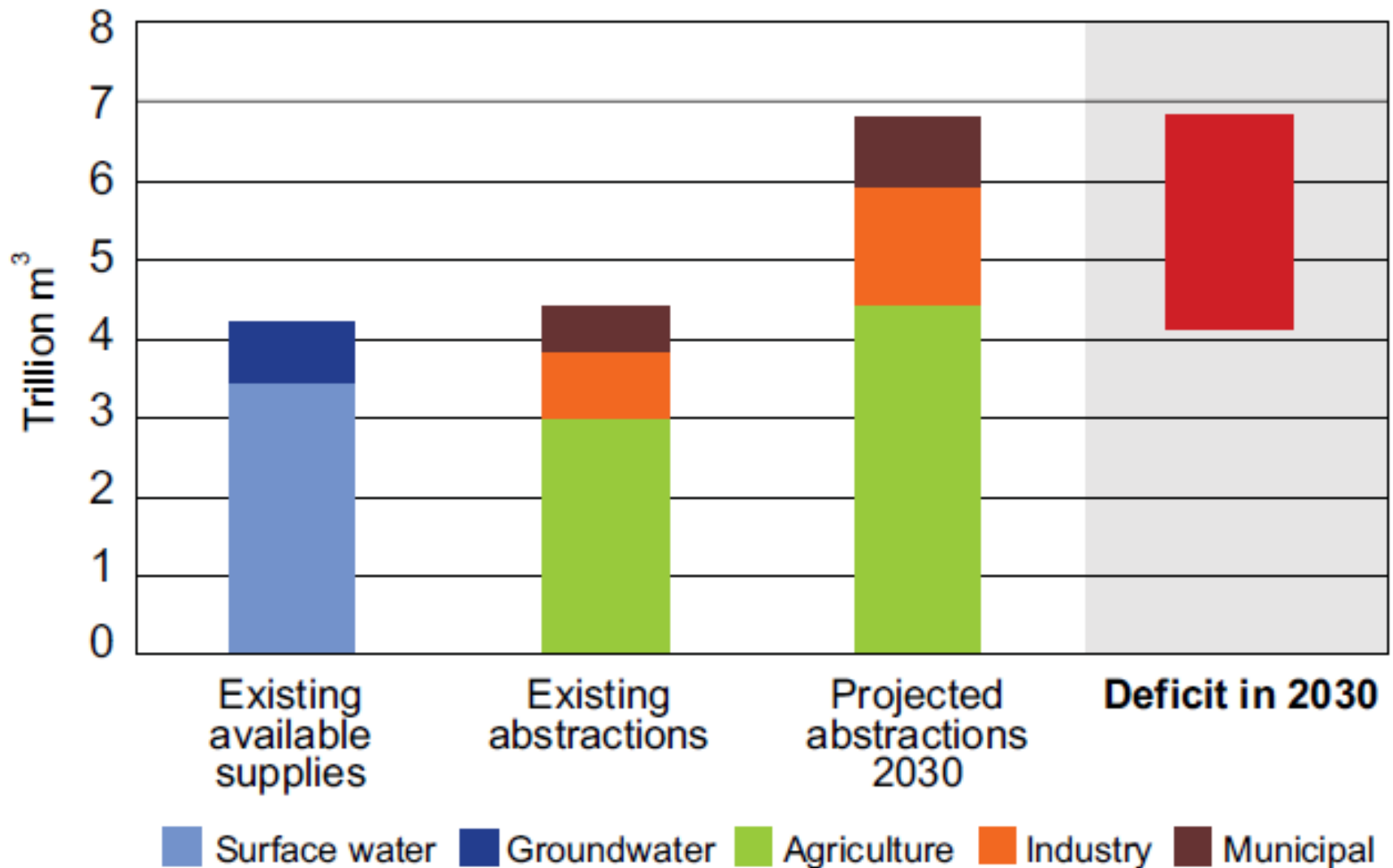


Figure 1. Water demand will exceed available supplies. Source: Global Water Intelligence, World Bank.

Achieving universal and equitable access to safe and affordable drinking water will cost



Hutton et al (2016)



Winpenny (2015)

Resilience ??

Sustainability

Resilience

Global level – main phenomena:

- **Climate change**
- **Population growth**
- **Urbanisation**

Utility level – main phenomena:

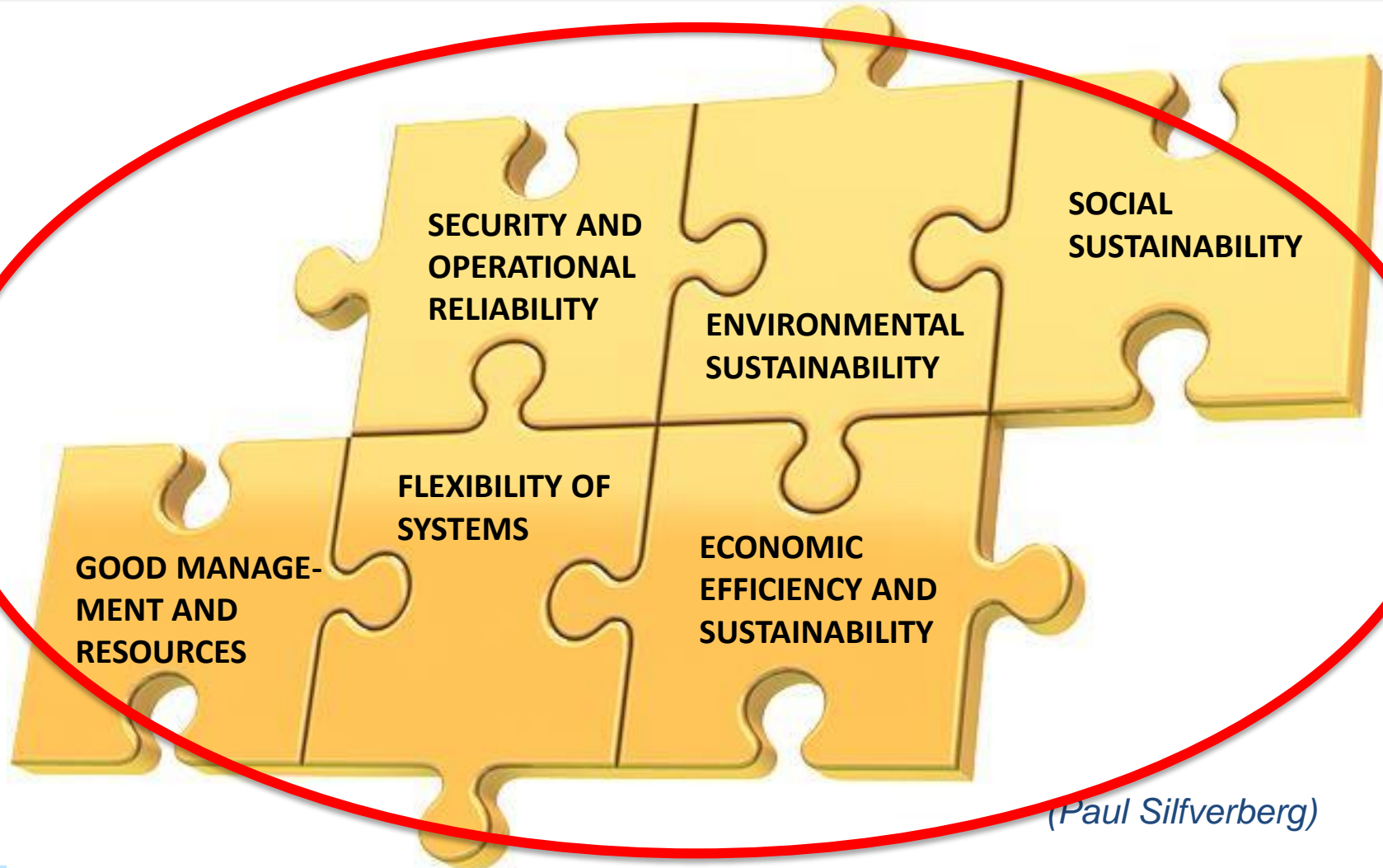
- **Climate change**
- **(Ageing) infrastructure**
- **Adequacy of resources ?**

Viability

Recovery

Survival

Key elements of good and resilient water services



(Paul Silfverberg)



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