

# The European Commission's science and knowledge service

Joint Research Centre



# Compounds of emerging concern in urban water cycle

*Contaminanti emergenti  
nel ciclo urbano*

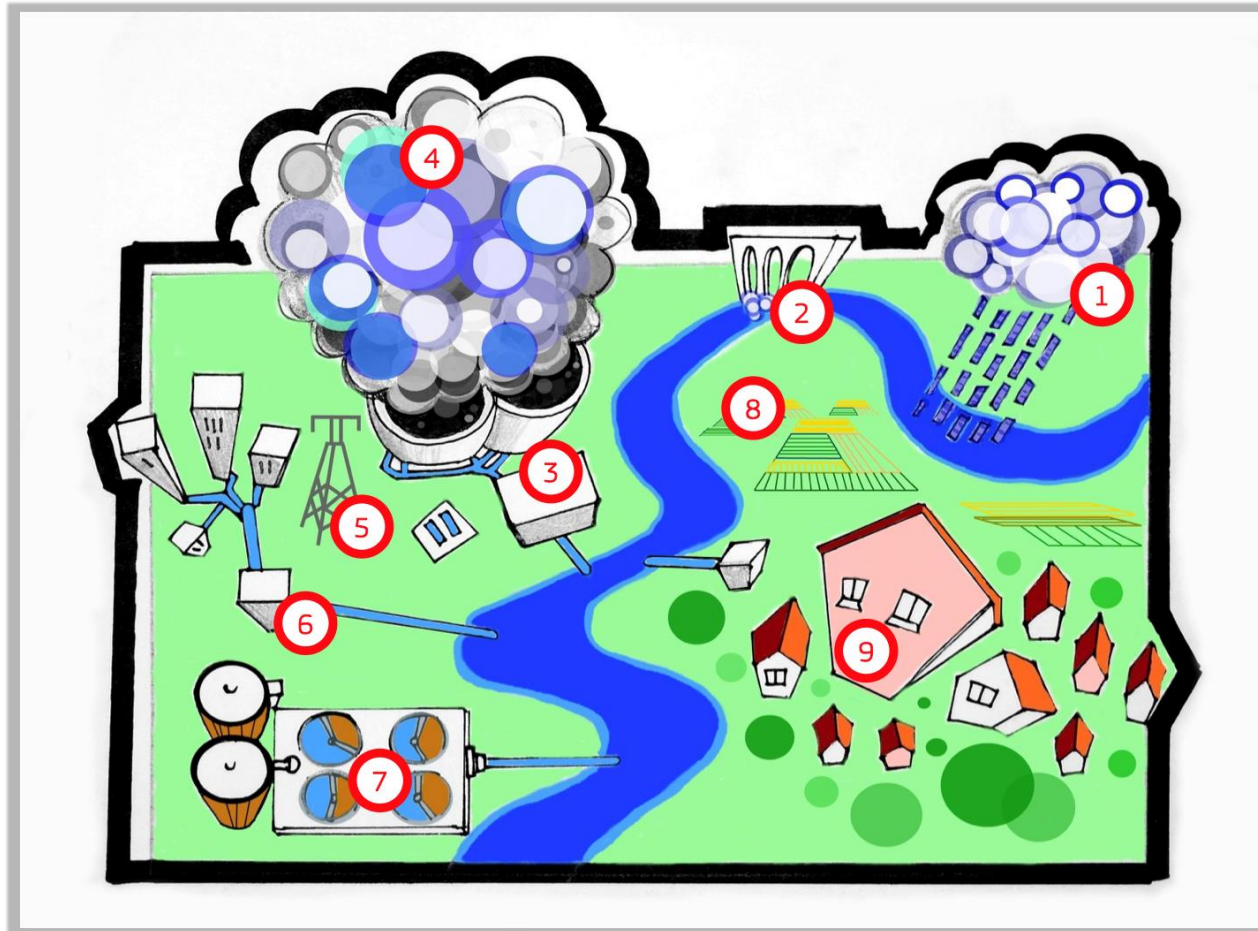
**Bernd Manfred Gawlik**

Convegno "Microinquinanti e contaminanti emergenti", June 11-12, 2018 Milan, Italy



# The Urban Water Cycle

## Connection between water and energy



### Legend

1. Precipitation involves natural energy from sun and wind
2. Electricity from hydro-power
3. Power plants cooling uses water
4. Water vapour from energy making
5. Energy grid distributes energy to users
6. Drinking water needs to be pumped and uses energy
7. Wastewater treatment plant needs energy to clean the used water
8. Energy is used for agricultural irrigation
9. Energy and water consumption are closely related in our homes, e.g. for heating and pumping

Illustrations taken from the Urban Water Atlas for Europe (2017)

Artist: N. Głowacka



JRC TECHNICAL REPORTS

# Potential chemical contaminants in the marine environment

*An overview of main contaminant lists*

Victoria Tomero, Georg Hanke

2017



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EUR 28925 EN



JRC TECHNICAL REPORTS

## iDRIP

### What goes down the drainpipes?

Illicit drugs, pollutants and other chemicals in recycled water and wastewater

*In-house single laboratory validation report of analytical methods for CECs and OPCs determination.*

S. Tavazzi, G. Mariani S., Skejo H., Lobo Vicente J., Chassaing H., Vandecasteele I., Comero S. and B. M. Gawlik

2017



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EUR 28573 EN



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# Residues of antimicrobial agents and related compounds of emerging concern in manure, water and soil

*Part 1 – Pilot-sampling campaign in Slovakia and first findings*

Tavazzi S, Mariani G, Skejo H, Comero S, Glowacka N, Gaduš J, Gawlik BM

2018



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EUR 30818 EN



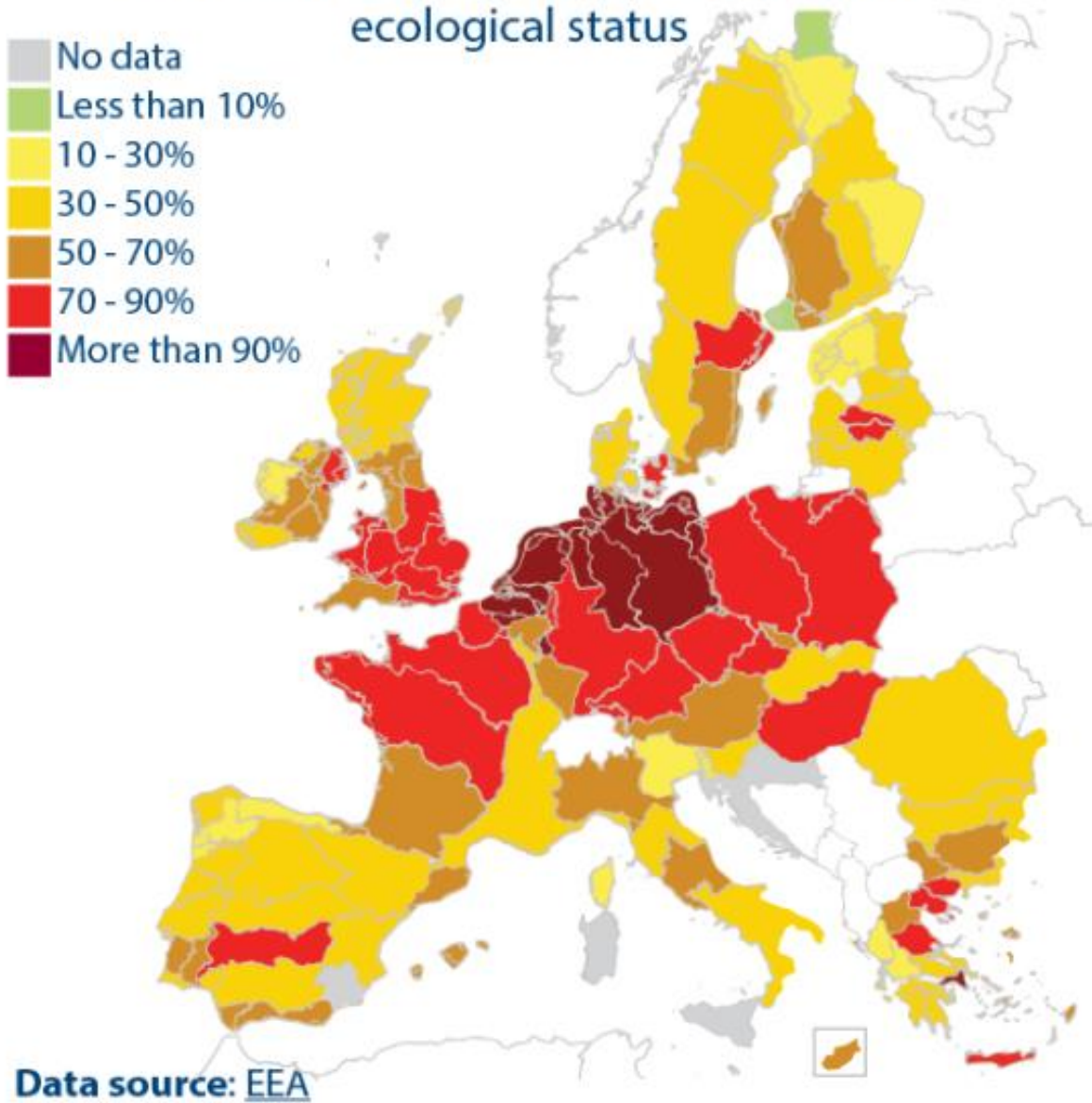
**“Micro-Inquinanti”**

**=**

**“Micro-Inquietanti”**

# Fresh water bodies with 'less than good' ecological status

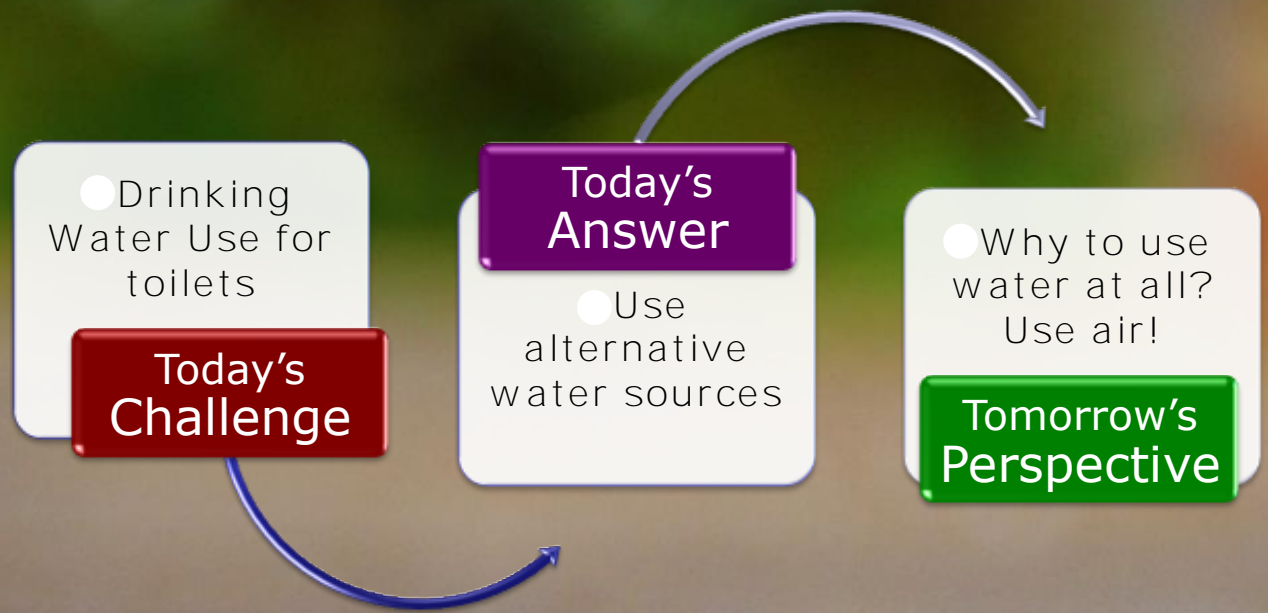
- No data
- Less than 10%
- 10 - 30%
- 30 - 50%
- 50 - 70%
- 70 - 90%
- More than 90%

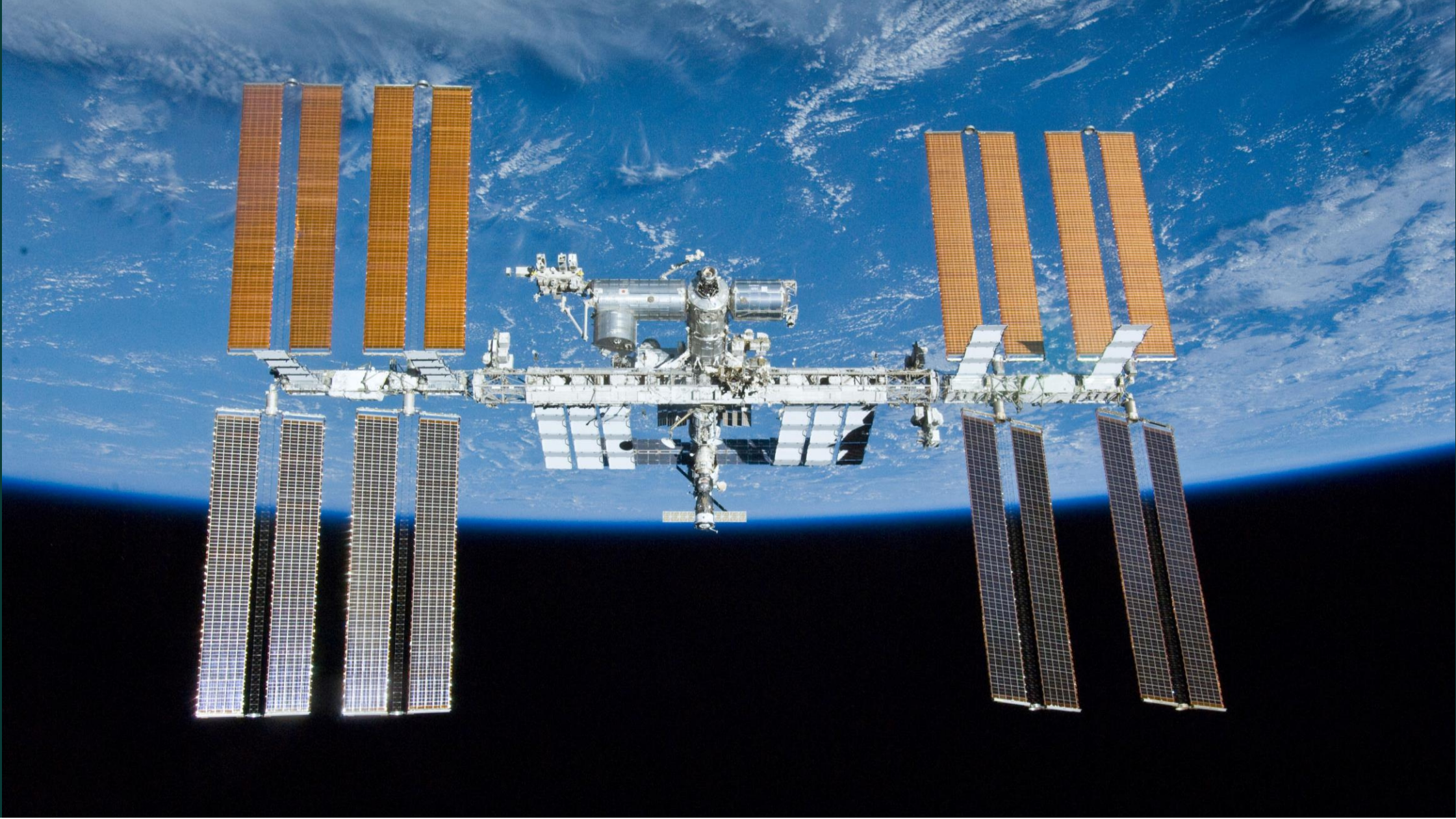


Data source: [EEA](#)



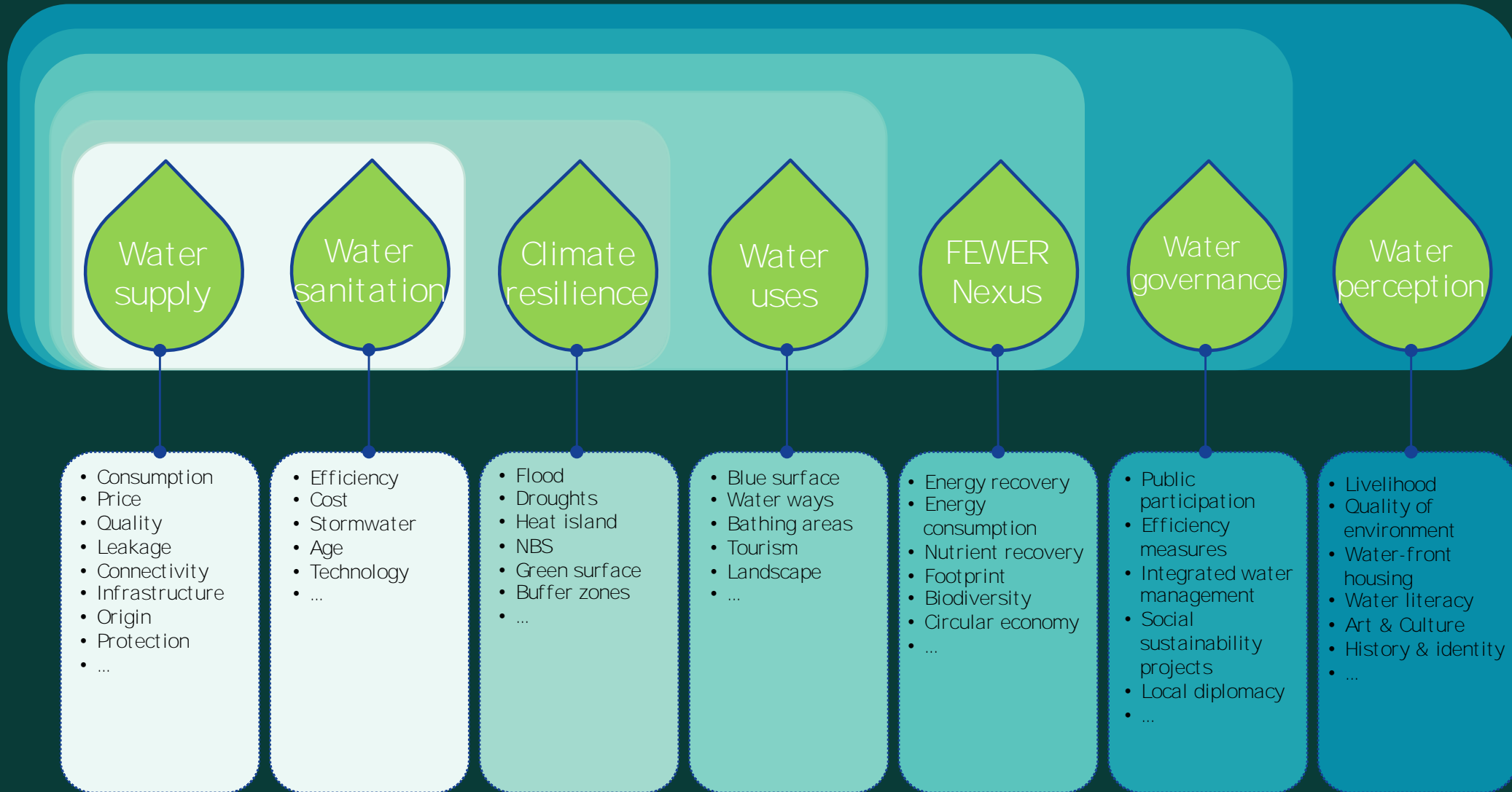
**Only 20% of Europeans  
found drinking water  
outside of their home country  
acceptable.**







# Socio-Economic Layers of Urban Water





# The UN SDGs







