



# The State of Wastewater Emissions Abatement in Europe

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# What sorts of emissions?

- Wastes ↔ reusable resources
  - treated water (REWATER)
  - by-products
  - Pollutants
- CO<sub>2</sub> (energy for transport + treatment)
- wasted resources ( leakage, inefficiency, residuals, end of life materials)



# What sorts of wastewaters – water related wastes

- municipal wastewater
- industrial wastewaters
- surface runoffs
- wasted bottles ↔ end of life materials



# Why do we reduce wastewater emission?

- legislative background (WFD-UWWD 271/91)
- emotional considerations
- rational considerations
- financial considerations





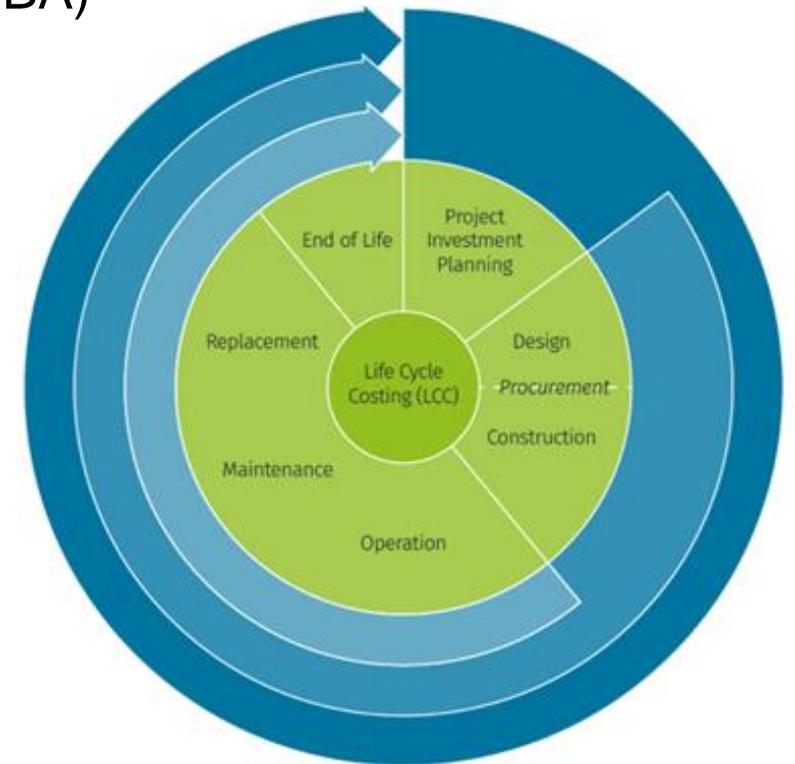
# Who is paying for?

- polluter pays principle
- full cost recovery
- monetisation of environmental resources costs
- definition of cost recovery



# How to improve water management?

- Life cycle costing (LCC) ↔ Life cycle assessment (LCA)
- Dynamic cost comparison (DCC) ↔ Cost benefit analyses (CBA)
- Improved Asset management based on LCC-DCC



# Thank you for your kind attention!

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