

# THE CONSEQUENCES OF PHARMACEUTICALS AS PRIORITARY SUBSTANCES FOR EUROPEAN WASTEWATER SERVICES

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**EUREAU – Joint Working Group on Priority  
Substances and REACH**

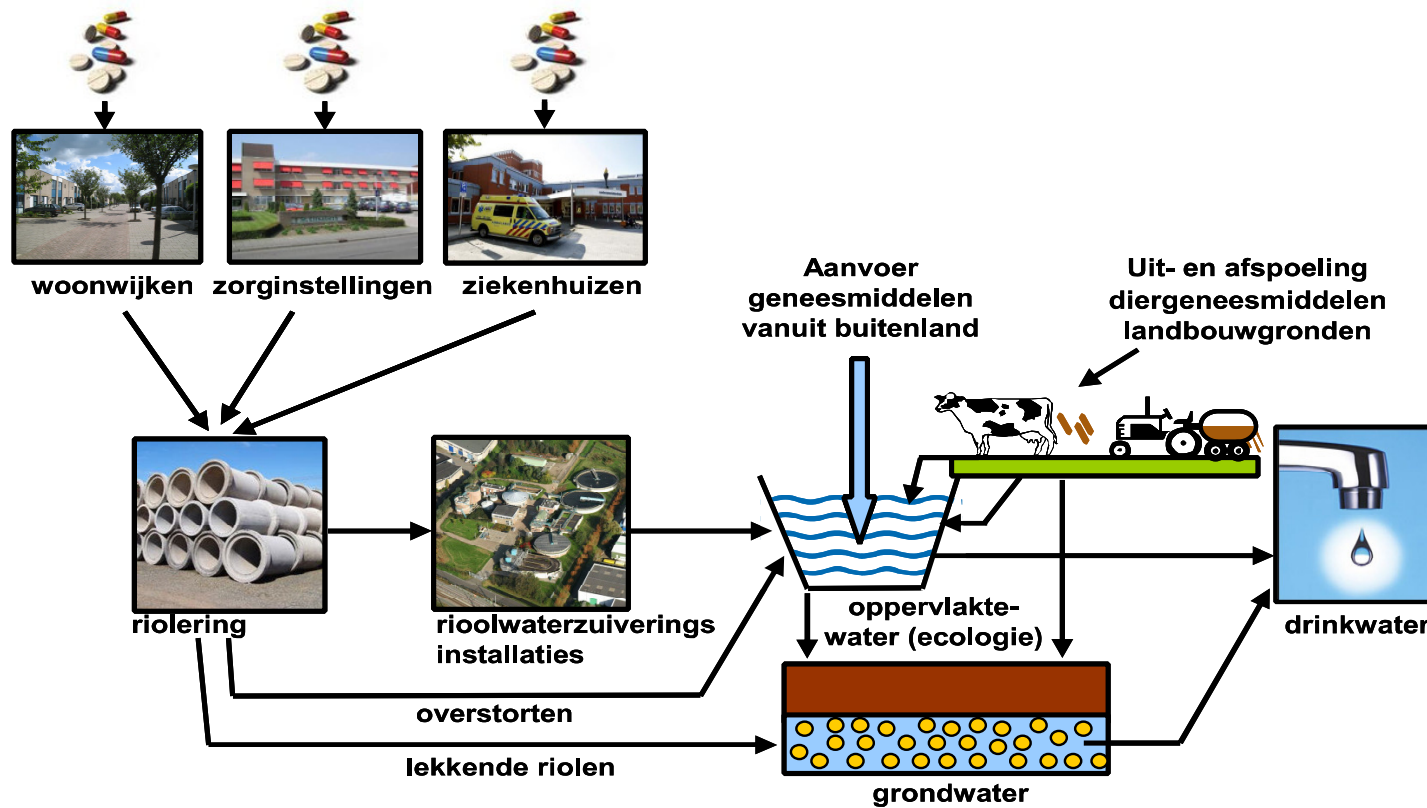


# A word about EUREAU

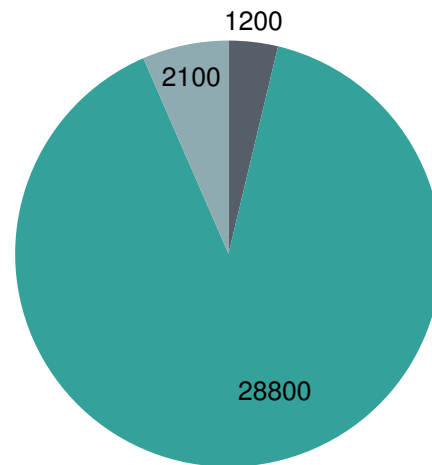
- **European umbrella Federation of national water and wastewater associations gathering +- 70.000 utilities**
- **Founded in 1975**
- **Consensus based decision-making**
- **Members:**
  - from 24 EU countries
  - from 2 EFTA countries (Norway, Switzerland)
  - 2 observer Member from EU Accession Countries (Croatia, Serbia)



# EMERGING POLLUTANTS : ROLE OF WASTE WATER CYCLE

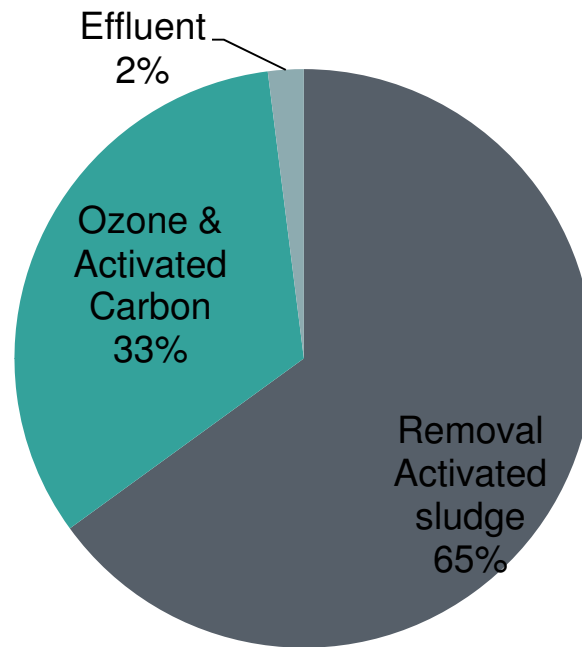


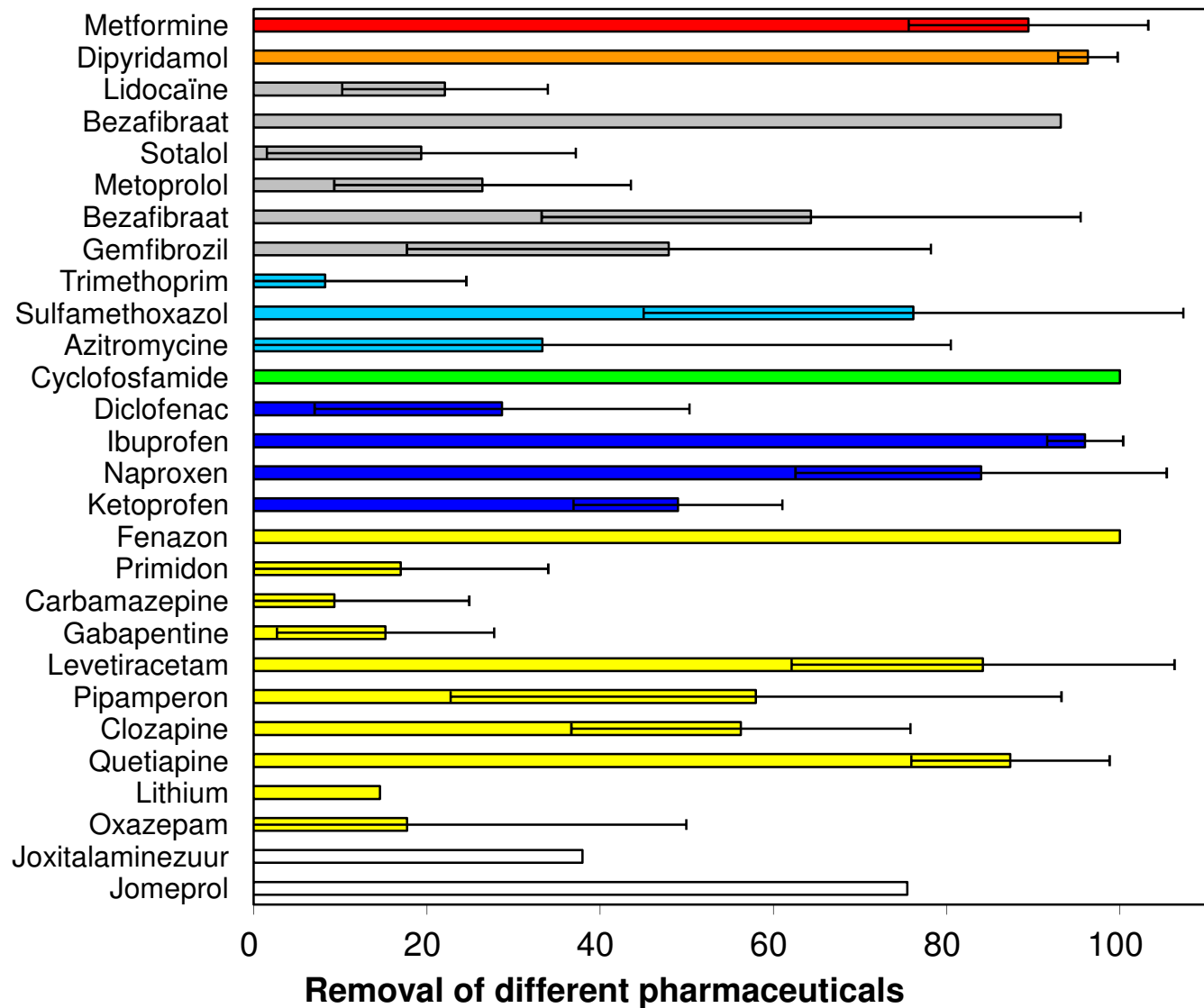
# contribution to the load of pharmaceuticals to wwtps in the Netherlands



Total load : 31 tons/y  
Hospitals: 1200 kg/y  
Households: 28.800 kg/y  
Care institutions: 2100kg/y

# FATE OF PHARMACEUTICALS IN A WWTP

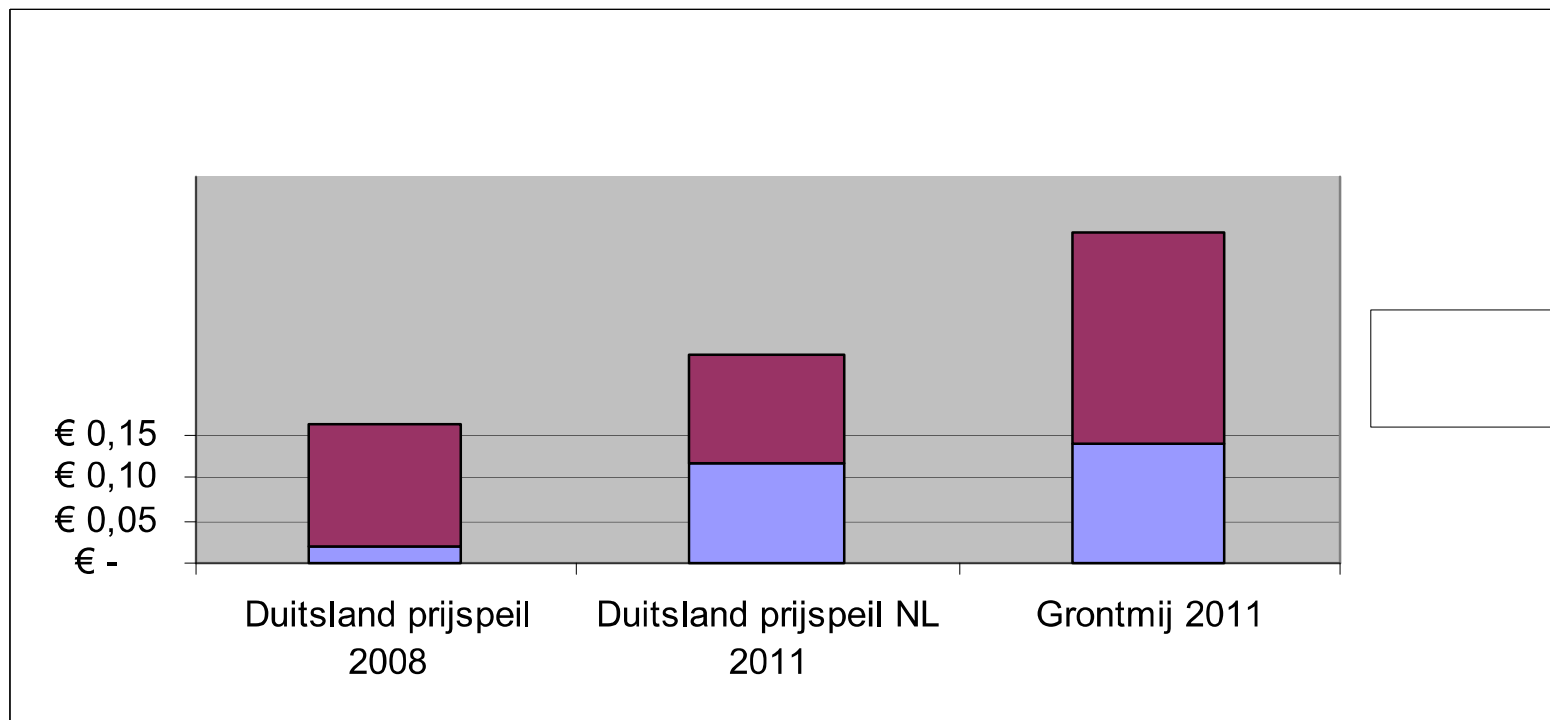




# EC DRAFT DIRECTIVE

- **European Quality Standards for Estradiol, Ethinylestradiol, Diclofenac**
- **Impact assessment: End-of-pipe treatment estimated at 18 € per capita per year**
- **« Many uncertainties regarding assessment of costs and benefits »**

# TREATMENT COSTS (€/M3) (GRONTMIJ, 2011)



**Figuur B5-5: Vergelijking kosten ozonisatie in combinatie met actiefkool filtratie**



# COSTS DIFFERENCES

**Dutch study :**

**No existing effluent filtration**

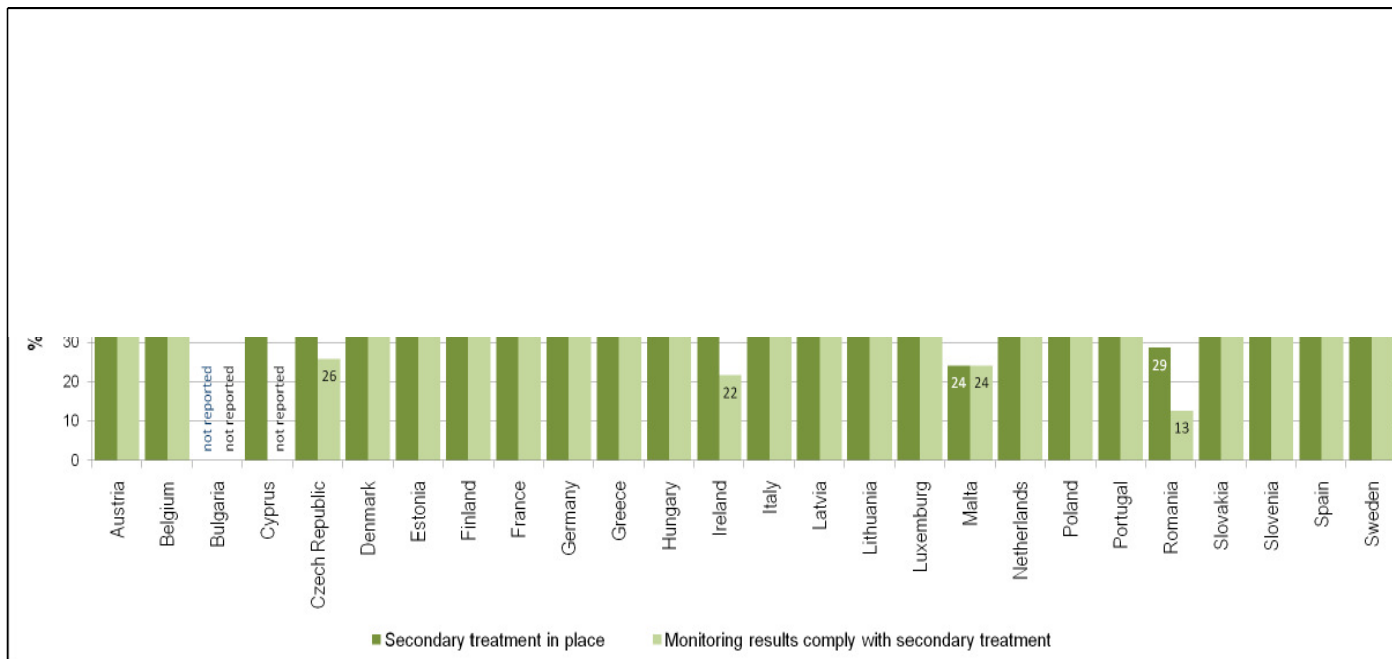
**VAT, insurances, miscellaneous have different level**

**No innovation subsidies included**

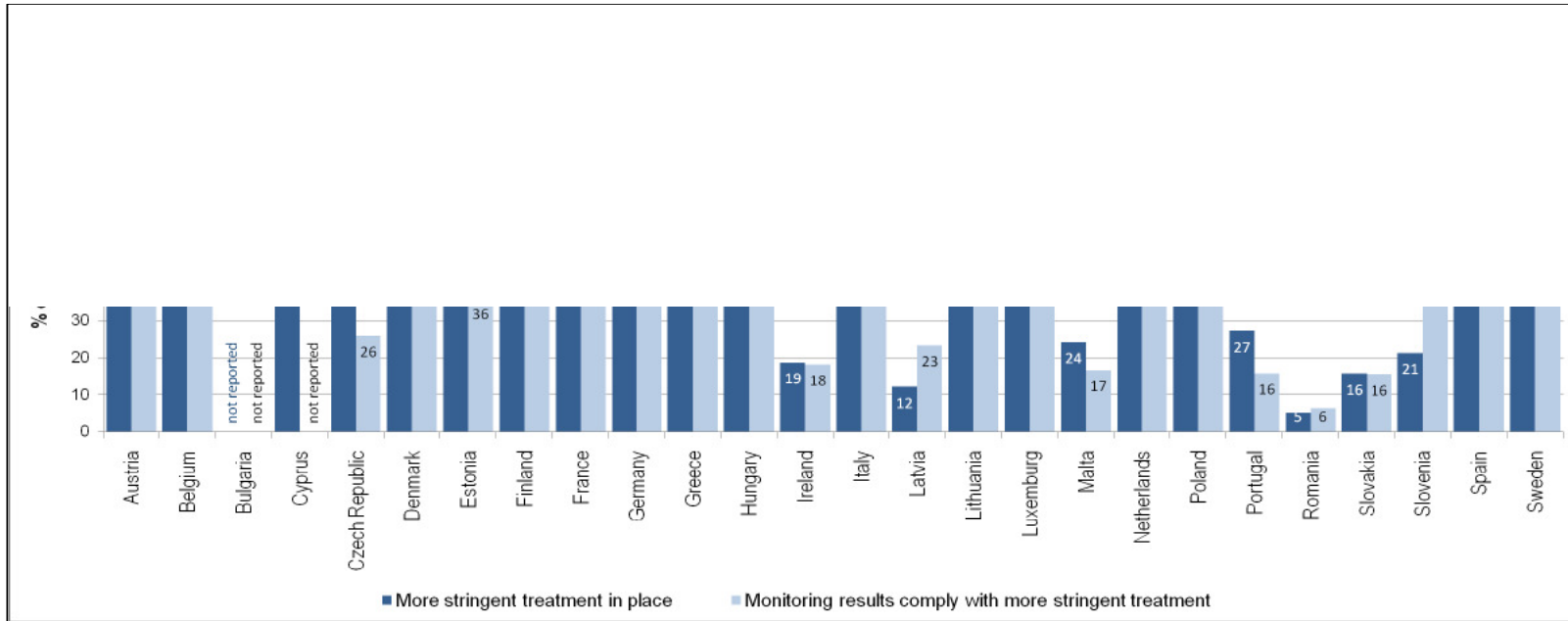
**Costs for energy (0,13 €/kWh) higher than  
Swiss/German prices**

**(grontmij 2011)**

# SECONDARY TREATMENT EU – MEMBER STATES



# MORE STRINGENT TREATMENT EU MEMBER STATES



# EUREAU POSITION # 1

- Eureau supports the efforts of the EC to improve water quality
- Eureau supports the Priority Substances Directive and REACH
- Eureau emphasises the importance of a good quality of drinking water resources, and safe and reliable drinking water
- Treatment of WWTP effluent will remove a wide range of substances

# EUREAU POSITION # 2

- **Concerns about lack of relevant data on emissions, possible measures & costs, policy options for Pharmaceuticals: urgency?**
- **Cost estimates in « impact assessment » are too optimistic**
- **Political awareness?**
- **Suggests not to apply EQS**
- **Suggests that MS should develop policy options and or action plans : e.g. action plan based on river basin management concept.**

# EUREAU PROPOSED POLICY OPTIONS

- **Measures at MS level: national bans, monitoring**
- **Measures at Municipal level: e.g. storm water management, CSO's**
- **Domestic user: consumers best practices on use of pharmaceuticals**
- **Industrial level**
- **Agricultural measures**
- **Water industry measures**

# EUREAU PROPOSED POLICY OPTIONS # 2

- **Source control in first place**
- **Pharmaceutical sector will have to start acting**
- **Examples;**
  - **Restricted use of pharmaceuticals**
  - **Collection of non-used medicines**
  - **New medication techniques**

# POSSIBLE STRATEGIES FOR WWTP-OPERATORS

- Consider the urgency and water quality priorities, follow RBMP procedures
- Pilot projects for wwtp's discharging on small, vulnerable surface waters
- Monitor effects on aquatic ecology and chemistry
- Find support from politics and public for extra investments



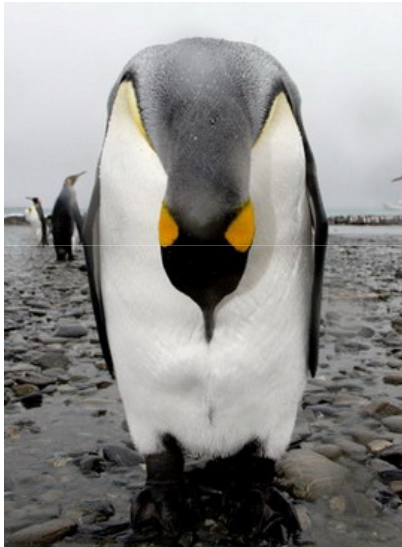
# REGIONAL APPROACH ?

**International Committee for the Protection of the Rhine  
( IKSR/CIPR) proposals**

**Approach like Rhine Action Plan for N, P could be  
adopted for micropollutants, but should include  
source control measures**

**Cooperation with wastewater sector is essential to do  
the right things!!**

■ Thank you for your attention!



■ Any questions?



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