



Ministry of Infrastructure
and Water Management

Waste Water Reuse

Regulation in the Netherlands
and on EU level – is there a
need?

Barry van de Glind
Policy Advisor

27 June 2018



Overview of Dutch regulation on waste water reuse



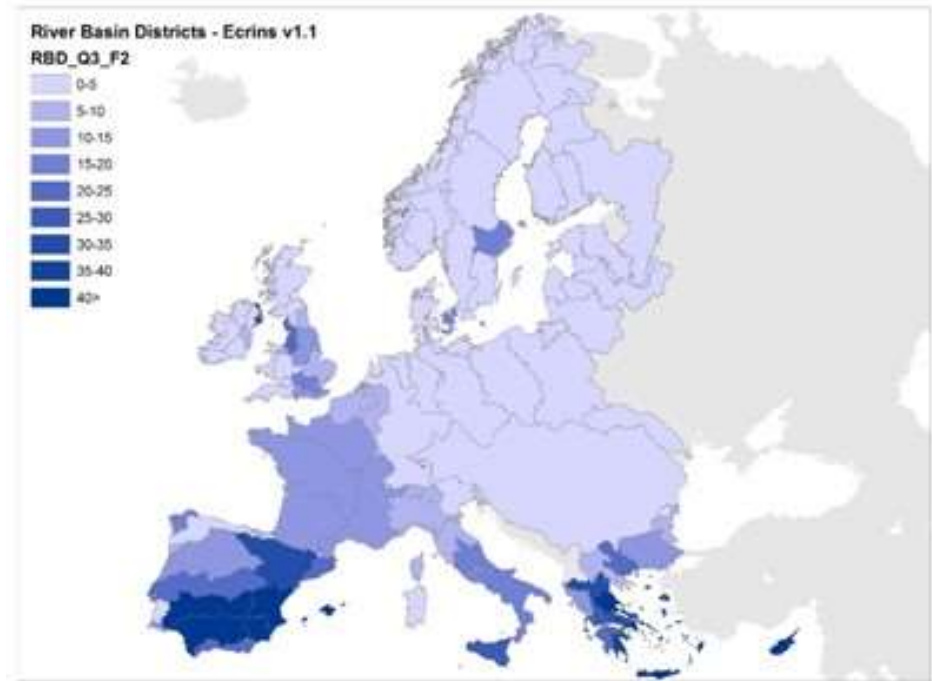
And in other EU Member States?

Parameters	Cyprus	France	Greece	Italy	Portugal	Spain
E coli (cfu/100ml)	5-10 ³	250-10 ⁵	5-200	10	-	0-10,000 ²⁴
Faecal coliforms	-	-	-	-	100-10 ⁴	-
TSS	10-30	15	2-35	10	60	5-35
Turbidity (NTU)	-	-	2-no limit	-	-	1-15
Biochemical oxygen demand (BOD 5) (mg/l)	10-70	-	10-25	20	-	-
Chemical oxygen demand (COD) (mg-l)	70	60	-	100	-	-
Total nitrogen (mg/l)	15	-	30	15	-	10

Source: Reproduced from JRC, 2014. '-' indicates that there is no value set for the parameter in the national legislation



Is this a problem?





Water scarcity, a problem of Southern Europe

13-06-2018



Droogte in Limburg ondanks hoosbuien: verbod op beregenen weilanden

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ANP

Het is vanaf maandag verboden om in Noord- en Midden-Limburg water uit beken en rivieren te halen om akkers en weilanden te beregenen. Dat heeft het

20-6-2017



Home

Achtergrond | 20 jun 2017 | 7427 x bekeken | 3 reacties

Droogte houdt aan: waterschappen breiden beregeningsverboden uit

De aanhoudende droogte en het warme weer zijn voor een aantal waterschappen aanleiding om beregeningsverboden in te stellen, of bestaande onttrekkingsverboden uit te breiden. Een overzicht.

Vooraf in Zuid-Nederland worden mogelijkheden om te beregenen uit oppervlaktewater steeds meer beperkt. In **Limburg** gold al sinds eind mei een onttrekkingsverbod voor delen van Noord- en Midden-Limburg. Dat is deze week uitgebreid met het stroomgebied van de Vlootbeek, die in Duitsland ontspringt en bij Linne in de Maas uitmondt. Het verbod geldt niet voor onttrekking van grondwater.

Het Brabantse waterschap **Aa en Maas** heeft het al eerder ingestelde



Aquafins case

**Aquafin biedt boeren gezuiverd afvalwater aan,
Boerenbond wil praten**



di 20/07/2017 10:07 Lys De Rey



How big is water reuse in Europe?

Country	Cyprus	Malta	Italy	Greece	Spain	Overall in EU
Effluent reclamation rate	89%	60%	5%	5%	12%	2,4%

Country	China	USA	Australia	Singapore	Israel
Effluent reclamation rate	14%	14%	15%	35%	87%

(2017)

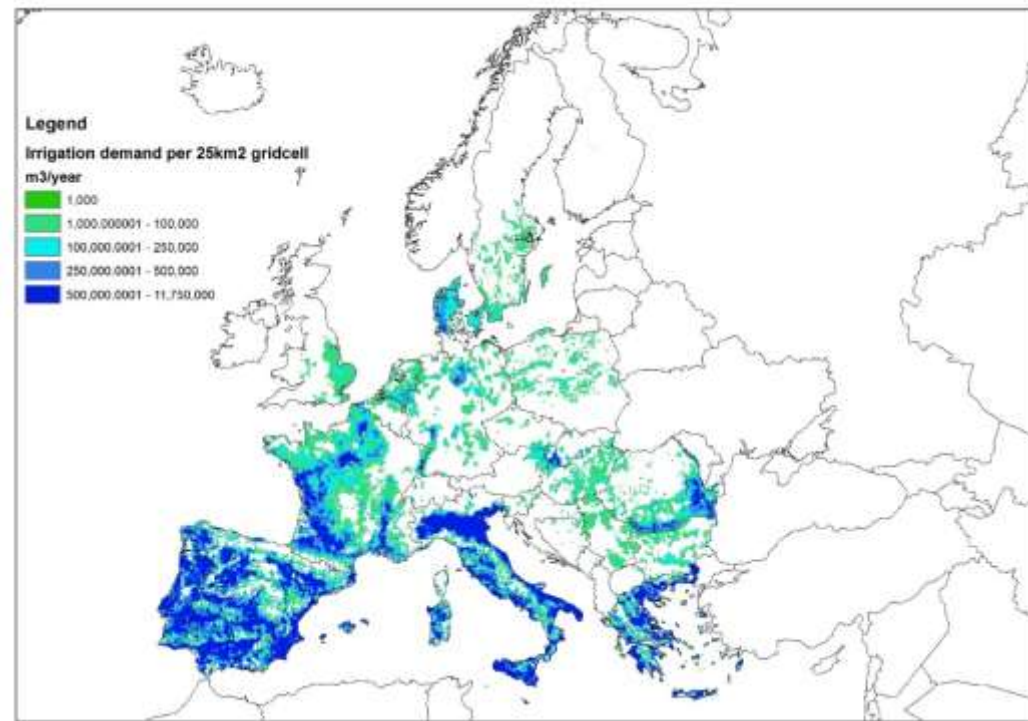
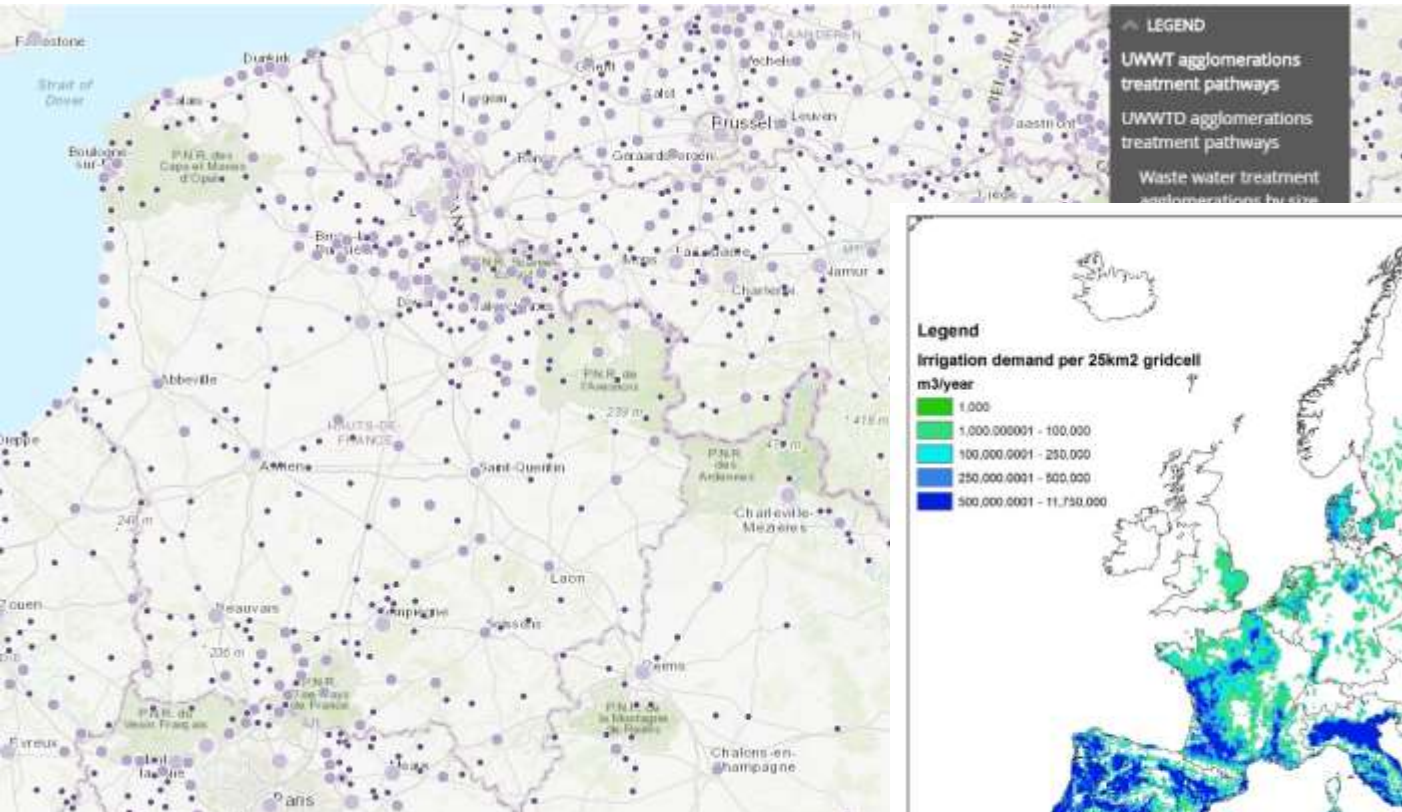


And the potential?

Treatment level	Below 0.5 €/m ³	Below 0.75 €/m ³	Below 1 €/m ³
"fit for purpose"	6.6	10.4	11.6



Based on?





To sum it up:

The EU concluded that there is no legislation regarding reuse in many Member States

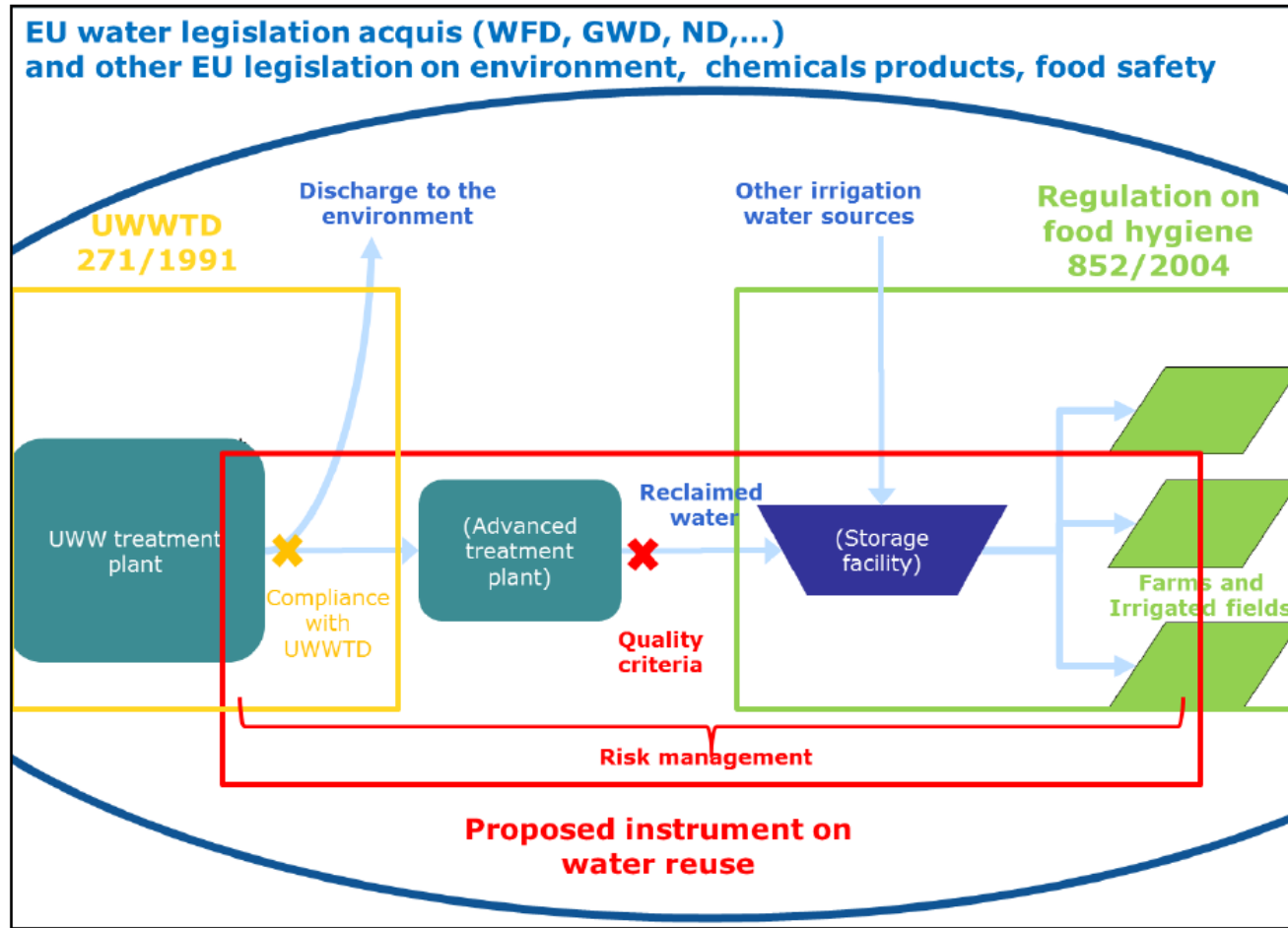
There is a potential for a wider uptake of reuse.

Reuse can potentially alleviate water stress

Reuse might be used more with EU wide minimum quality criteria



Proposal for an EU regulation – 28th May 2018

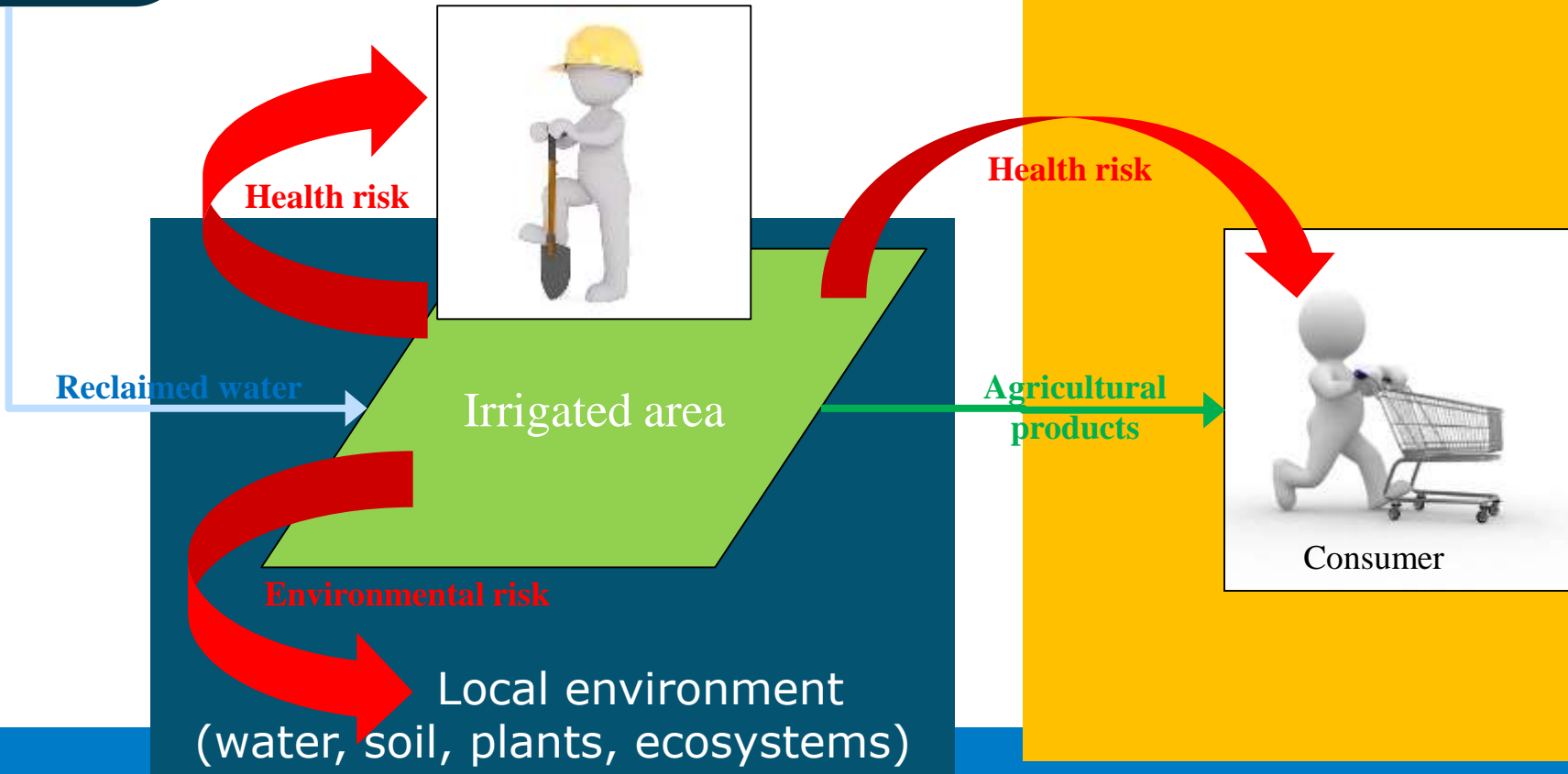




UWW
treatment
plant

Workers and other
public exposed

EU internal market



Health risk

Reclaimed water

Irrigated area

Health risk

Agricultural
products

Environmental risk

Local environment
(water, soil, plants, ecosystems)

Consumer



Proposal for an EU regulation – 28th May 2018

Health risk → EU wide standards!

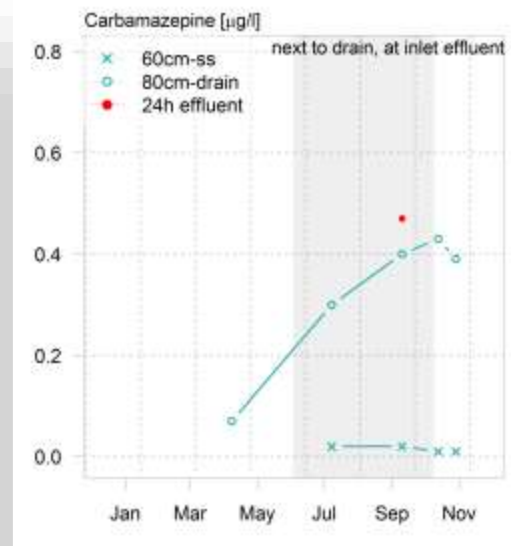
Reclaimed water quality class	Indicative technology target	Quality requirements				Other
		E. coli (cfu/100 ml)	BOD ₅ (mg/l)	TSS (mg/l)	Turbidity (NTU)	
A	Secondary treatment, filtration, and disinfection	≤10 or below detection limit	≤10	≤10	≤5	Legionella spp.: <1,000 cfu/l where there is risk of aerosolization in greenhouses
B	Secondary treatment, and disinfection	≤100	According to Council Directive 91/271/EEC ((Annex I, Table 1))	According to Directive 91/271/EEC ((Annex I, Table 1))	-	
C	Secondary treatment, and disinfection	≤1,000			-	Intestinal nematodes (helminth eggs): ≤1 egg/l for irrigation of pastures or forage
D	Secondary treatment, and disinfection	≤10,000			-	



But how to protect the environment?

What about:

- Heavy metals
- Compounds of Emerging Concern
- Anti-microbial Resistance
- Pharmaceuticals
- Disinfection by-products
- ...

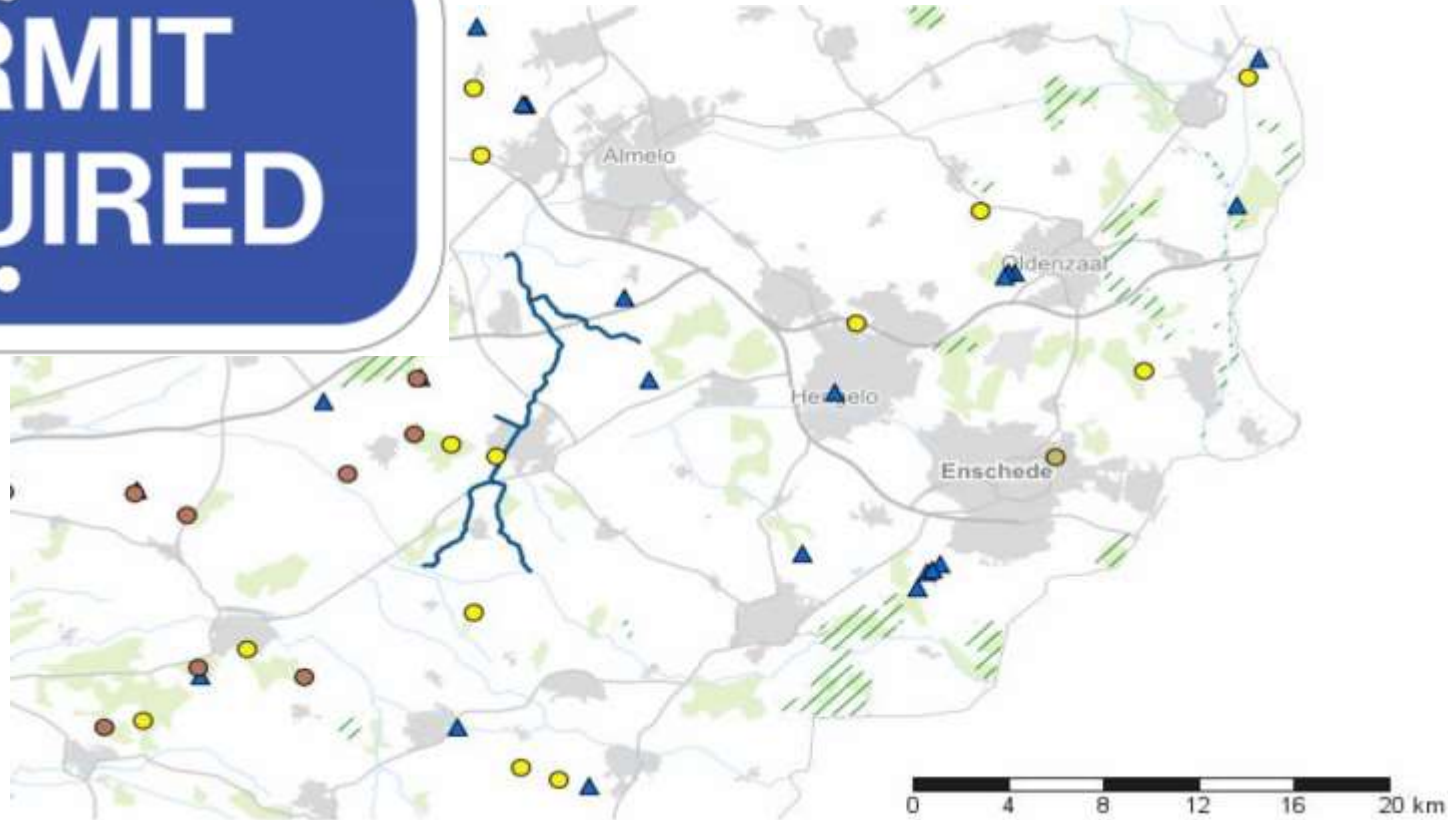


Pilot case Haaksbergen



Risk Management Plan

**PERMIT
REQUIRED**

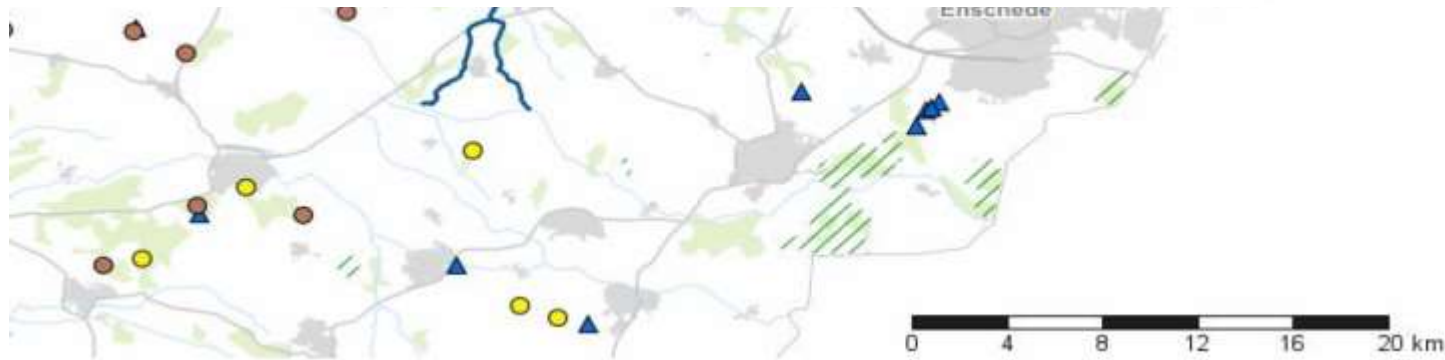




Risk Management Plan

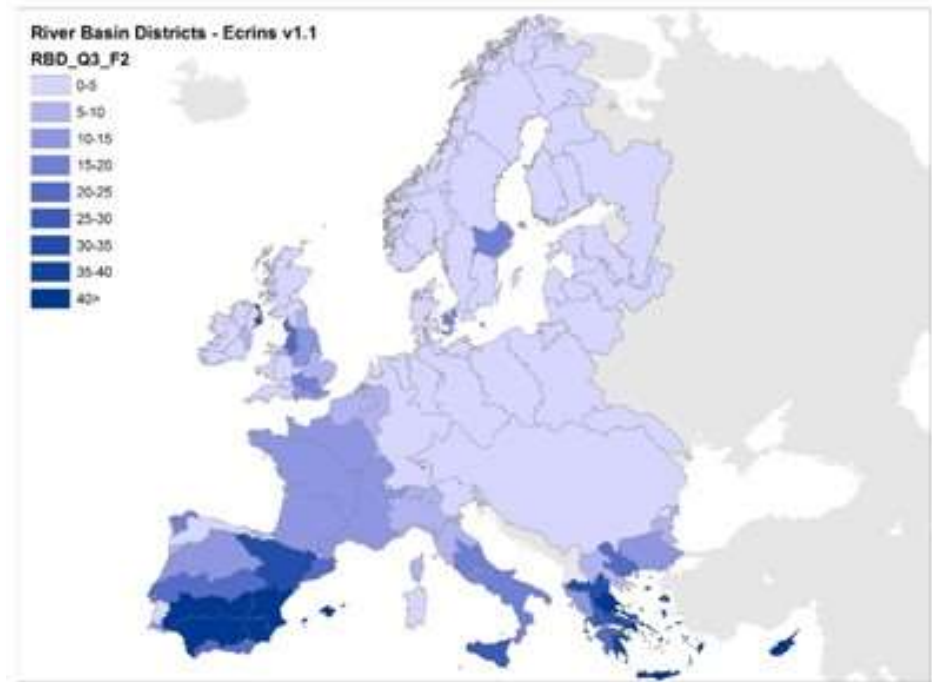
PERMIT
REQUIRED

**But how to take into account risks
of AMR, or pharmaceuticals?**





Are we really tackling the problem with this regulation?





Are we really tackling the problem with this regulation?



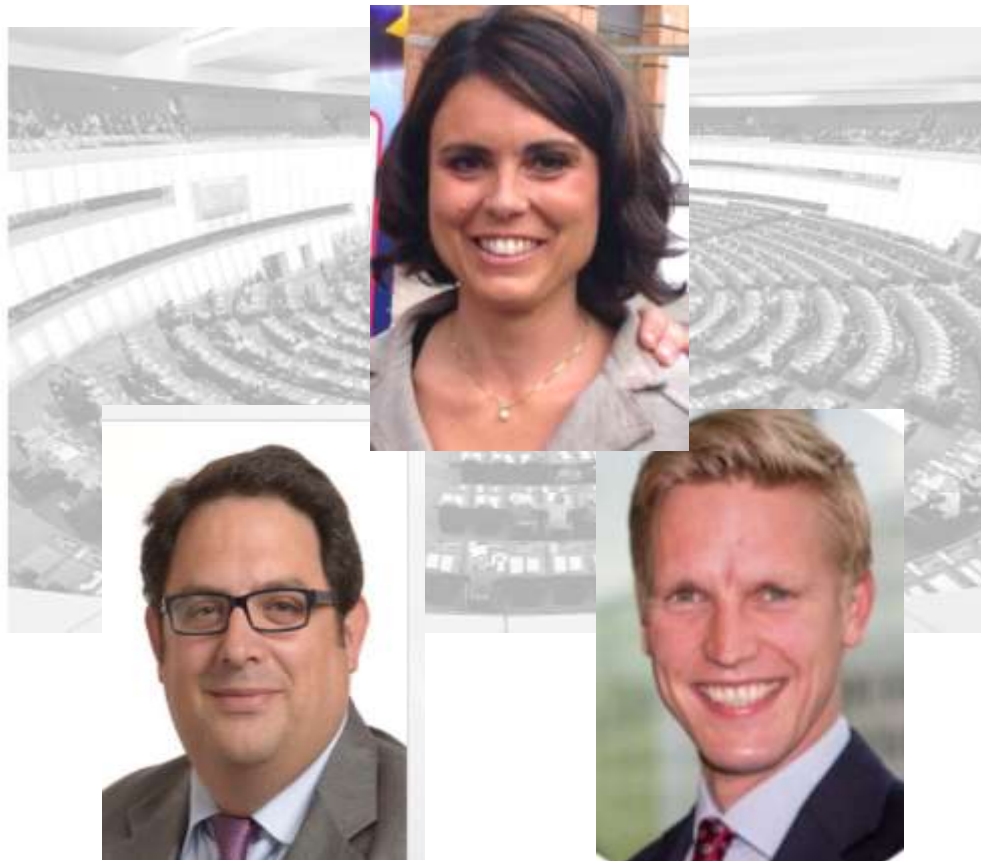


Now it's up to the Council and the Parliament





Now it's up to the Council and the Parliament



2017	Jul–Dec		 Estonia ^[note 3]
2018	Jan–Jun	T8	 Bulgaria
	Jul–Dec		 Austria
2019	Jan–Jun	T9	 Romania
	Jul–Dec		 Finland
2020	Jan–Jun		 Croatia
	Jul–Dec	T10	 Germany



What do you think legislation needs to tackle regarding waste water reuse?

Do we need legislation for waste water reuse at all?

Do we need it at European level?



Thank you for your attention

Barry.vande.glind@minienm.nl