9 November 2018

EurEau position on the Regulation on Minimum Requirements for Water Reuse

1 What is Water Reuse

Water services abstract groundwater and surface water, treat it if necessary, and distribute it as drinking water to citizens. Water services also collect and treat our waste water to return it safely to the environment. Even in Europe, water is a scarce resource and there is a lot of pressure on our water reserves, threatening some priority uses like drinking water supply. Furthermore, climate change will put more and more pressure on our precious water resources and alternative water sources will have to be increasingly taken into consideration.

One viable alternative water source is urban waste water that has undergone necessary treatment to avoid health and environmental risks. To this end, the European Commission presented a regulation to define the minimum requirements Member States have to comply with in order to ensure the safety of water reuse practices across the European Union.

Waste water treatment plants are designed to treat the waste water from households and sometimes industries, according to the requirements of the Urban Waste Water Treatment Directive (91/271/EEC) (figure 1). Water reuse means putting treated waste water to an intended beneficial use and is mentioned in Article 12 of this directive as part of the condition on waste water discharges: "*treated waste water shall be reused whenever appropriate*". To be able to reuse this water safely, additional treatment is required, depending on the foreseen use.

2 Why we need a European Regulation on water reuse for agricultural irrigation

Different applications consider water reuse as a solution for water scarcity or for sustainable water management. Most of these uses do not have a cross-border dimension (industrial applications, park irrigation, golf course irrigation…) and are therefore covered by subsidiarity.

Irrigation in agriculture is different, as processed or unprocessed crops may be traded within the EU. Currently, there is no obligation to control the quality of water abstracted for irrigation and during drier seasons, in some places, river flow can be composed of

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significant amounts of waste water treatment plant effluent. Thus, irrigation may be practiced with 'de facto' water reuse and without specific control. To limit this situation, promote safer practices and ensure the protection of human and the environment, the European Commission proposed a regulation that sets minimum requirements for water reuse in irrigation. Hence, the proposed regulation defines water quality according to target crops and irrigation systems together with a risk management plan for the water reuse practice.

Logically, the draft regulation does not impose any target on Member States to reuse water, as the needs vary substantially between them.

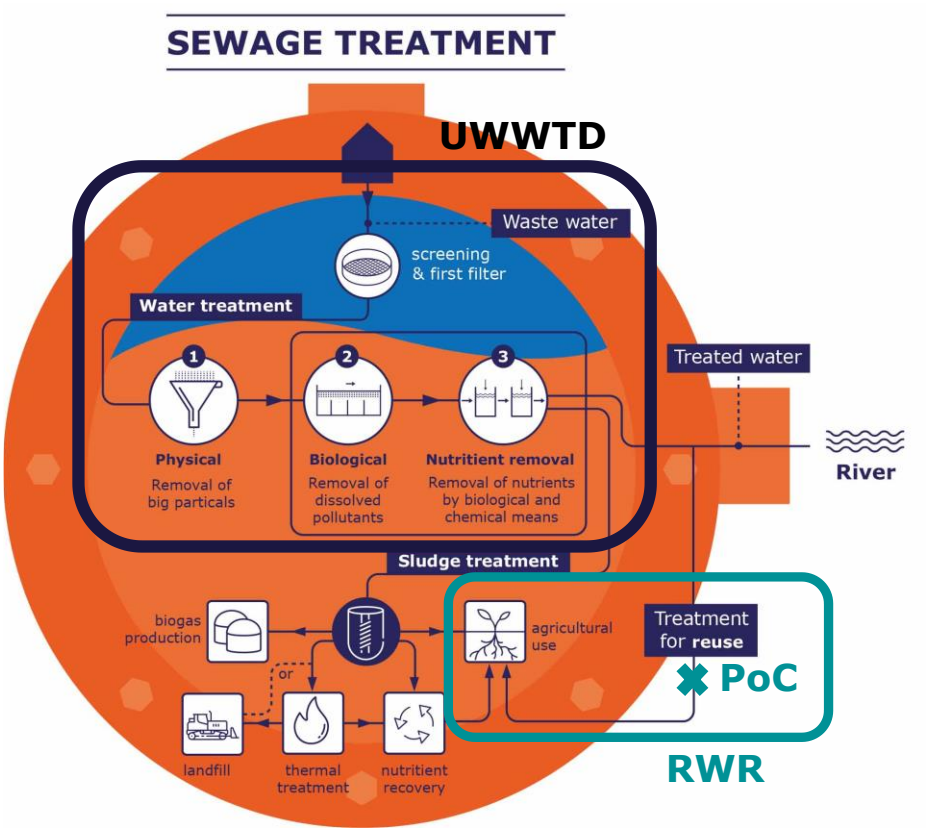

Figure 1: Scope of the Urban Waste Water Treatment Directive (UWWTD), the proposed Regulation on Water Reuse (RWR) and point of compliance of the regulation (PoC)

3 EurEau position on the proposed regulation on water reuse for agricultural irrigation

We welcome the legislative proposal which should contribute to increasing confidence in the reuse of treated waste water. It does not oblige Member States to reuse water as there is no need to in a number of them. When Member States want to implement it, it also allows them to add specific requirements to local conditions on the top of these minimum requirements when necessary through the delivery of the permit.



Regarding the requirements, Article 4 defines the point of compliance (PoC) at the outlet of the reclamation plant, where the performance of the treatment in place can be evaluated. The entire water reuse system (production, storage, distribution and use) has rightly to be assessed by the risk management plan described in Annex II of the regulation.

The water quality requirements described in Table 2 of Annex I section 2, although demanding for the reclamation plant operator in terms of costs, are strongly oriented towards food security, ensuring the strong protection of human health.

However, we see major points to be improved on to make this regulation applicable and effective on the ground.

In general terms, there is a lack of information and responsibilities regarding the users and the use of the reclaimed water. The proposal is basically based on the 'production' and distribution of the reclaimed water, but the stage of the use is missing.

Article 1: Purpose

Good irrigation practices will not have an impact on the aquifer. However, according to the precautionary principle, water reuse should not be authorised in Drinking Water Protected Areas (DWPAs).

Article 3: Definitions

The point of compliance (PoC) needs to be properly defined in this article and not in Article 4. The PoC also needs to be transferred to the point of delivery, which is where the reclamation facility operator gives the reclaimed water to the next actor in the chain (transport for irrigation or directly the end-user). This would clarify where the responsibility of the operator stops and where the responsibility of the next actor in the chain starts. The term 'reclamation plant' should be changed to 'reclamation facility'. It will mark a better distinction with the waste water treatment plants and promote better understanding. The term should be changed throughout the text.

We see confusion in the regulation between the water reuse project which is subject to the risk assessment and the physical infrastructure that is required to achieve a certain performance in terms of reclaimed water quality. In order to avoid this confusion, the 'water reuse project' should be defined. In order to better address the responsibilities of the different stakeholders involved, the water reuse system needs to be defined, considering the reclamation facility, the point of delivery, the distribution infrastructure and the point of use of reclaimed water. Article 4 should address the responsibilities of both the operator and the user for each part of this water reuse system.

Finally, depending on the Member State, the entity responsible for the water reuse project varies and this entity should take responsibility for the risk management plan instead of the reclamation facility operator as suggested in the proposed regulation. The risk management plan should be conducted in collaboration with all stakeholders

involved in the water reuse project, the reclamation facility operator being only one of them. We propose to use the term 'responsible body of the water reuse project' to define this entity and it could be a water authority, a municipality, an irrigation consortium, a group of farmers and eventually a reclamation facility operator, depending on the situation.

Article 4: Responsibility of the reclamation plant operator

In order to ensure that the safety of reclaimed water is guaranteed over the whole water reuse infrastructure, we believe that end-user responsibility should also be included in this article. It would enforce the involvement of all actors in the continuity of safety until the point of use and bring confidence of all stakeholders in the holistic risk management, for example in the case of changing the irrigation system.

Article 5: Risk Management

The responsibilities of the reclamation facility operator derived from the risk management plan are too large, as he is not the only stakeholder in the water reuse project. The operator can be responsible for the water quality delivered until the point of compliance as referred in Article 4, but the risk management plan should be conducted by the responsible body of the reuse project (see comments on Article 3). The responsibility of the evaluation and implementation of the risk management plan should be shared with the user of the reclaimed water, since the operator of the reclamation facility cannot control what happens with the reclaimed water once it leaves the facility. The operator must comply with the requirements established for the water quality at the PoC only. The subsequent control of these waters, when having left the reclamation facility in their storage, pipes, water mixtures, irrigation systems or type of irrigated crops, must be carried out by the user. Of course, to ensure good risk management and control of the quality of reclaimed water, the cooperation between the operator and the user must be very close.

Assigning the responsibility of the risk management until the point of use only to the operator, with the goal of ensuring that the quality of the reclaimed water is safeguarded, could result in very strict complementary requirements from the operator to the users. It would be counterproductive to the promotion of water reuse.

Article 6. Permit to supply reclaimed water

The permit mentioned in Article 6 is related only to the supply of reclaimed water, but there should also be a permit or authorisation for the use of the water.

Article 7: Granting of the permit

A permit or authorisation of use for reclaimed water is also missing in this article.

Article 10: Information to the public

Given the low level of understanding and acceptance regarding the reuse of water, it is fundamental to complement the information to be provided as requested in Article 10 of the proposal with awareness and information campaigns. Social acceptance and participation, as well as stakeholder involvement and engagement, are crucial for the success of water reuse projects, but they are also one of the main challenges. Therefore, when implementing water reuse projects, Member States have to ensure the development of active, deliberate and tailored communication strategies to make all stakeholders, including citizens, policy makers, opinion makers and operators aware of the water cycle, the need of water reuse and their associated benefits as well as its safety, and thus promoting acceptance and engagement. It is relevant to provide information on the permit granted to monitor the implementation of the regulation and to inform consumers. However, it would be counterproductive to flag the farmers using water reuse if the water reuse approach is not supported with proper communication to the consumers. It could lead to unbalanced competition between those reusing water and those who do not, without justification.

Article 17: Entry into force

Considering the number of adaptations required for existing facilities to comply with the regulation (by improving the existing equipment, by changing the operation and controls and, even more, by conducting the risk assessment and establishing the risk management plan and assigning responsibilities), we consider that the proposed time frame of one year is too short. A minimum of three years would be needed to be compliant.

Annex I, Section 2: Minimum requirements

The main issue here is the validation process for reclamation facilities providing 'Class A' water. The large scale proof of performance might be extremely difficult to obtain, especially with very diluted effluents. Some flexibility should be allowed if the indicator microorganism concentration in the raw waste water is low. It is not possible to justify 5 or 6 log removal if the concentration in the raw water is only of 4 log, which is very likely to happen, especially for coliphages or clostridium. As the Australian guidelines underline, this should be an overall theoretical log removal including additional measures, as suggested by the WHO in 2018 and ISO 16075. This can be obtained by applying theoretical log removal for each treatment step included in the treatment train. An alternative could be that the absence of the indicator microorganisms at the effluent can be assumed as the achievement of the validation, when concentration in the raw water cannot allow for obtaining the targeted log removal. The measurement for the validation should be kept at the outlet of the treatment facility as it is the treatment that needs to be validated.



If this solution cannot be supported for all reclamation facilities, it should be at least available for small facilities producing less than 1000m^3/d.

Annex II: Key risk management tasks

The Risk Management Task should be better described to clearly identify the responsibilities of each actor. For example, the compliance with the regulations listed in point 4 should be considered as a check-list for the authorities regarding the compliance to water acquis. There is no possibility for the reclamation facility operator to be held responsible for not complying with all the regulations listed, as he is not necessarily concerned by them (e.g. Nitrate Directive). Another point that presents a lack of definition is the scope of risk management in terms of the degree of detail which will be required (for each plot, community of users, representative plot, plot with the worst case, etc. ...). This can increase the cost of water reuse and, as long as it is not defined, it will not be possible to adequately evaluate all the costs and, therefore, the viability of carrying out the reuse project.

The requirements indicated in paragraph 5 of Annex II cannot be restricted to possible water reuse emissions. There is no information readily available for most of the substances listed nor is there evidence for impact following irrigation. Also, some of these compounds can originate from other products used in agriculture like pesticides or fertilisers, such as manures in the case of added nitrogenous compounds. The users of reclaimed water (or the operators of the reclamation facilities) cannot be the only ones to be held responsible for possible risks derived from this type of compounds.

Before considering establishing the extra water quality requirements in the risk management plan, many possible barriers to limit contamination of the irrigated products have always to be considered such as the time between the irrigation and the harvesting of the product, irrigation by sub-surface dripping, the subsequent storage of the water after leaving the reclamation facility, the use of surface covers that isolate the contact of reclaimed water with the plant, etc. These systems significantly reduce the risk of microbiological contamination of crops.

Finally in the list of preventive measures, some are under the competences of the reclamation facility operator (e.g. additional disinfection or pollutants removal measures) but others are under the competences of the user (e.g. pathogen die-off support before harvest). Some clarity is needed to address the right measures to the right actor.

Economic aspects:

A realistic assessment of the investment needs has not been carried out in the Impact Assessment. The mentioned amounts of €38/m^3/day for the 'fit-for-purpose' case are much lower than the actual costs that will be needed to adapt reclamation facilities to the required conditions, which are estimated at a minimum of €160-180 /m^3/day. The forecasted €700 million to reclaim other extra 6.6million m^3/year, would therefore be

completely insufficient.

In this sense, if water reuse is to be encouraged, economic aid through European funds must be promoted for the implementation of reclamation facilities.

As for the operating costs for reclaimed water of quality Class A, we consider that they could be of €0.2/m^3 in those case where the reclamation facilities are integrated with the waste water treatment plants. If this is not the case, and they are independent facilities, this cost could be increased significantly, since costs could not be shared.

About EurEau

EurEau is the voice of Europe's water sector. We represent drinking and waste water service providers from 29 countries in Europe, from both the private and the public sectors.

Our members are the national associations of water services in Europe. At EurEau, we bring national water professionals together to agree European water industry positions regarding the management of water quality, resource efficiency and access to water for Europe's citizens and businesses. The EurEau secretariat is based in Brussels, from where we coordinate the work of around 200 experts from member organisations and utilities and advocate common positions with EU decision makers.

Our members are fully committed to the continuous supply of clean water and its safe return into the water cycle. We have a role in raising awareness of threats to the water environment. With a direct employment of around 476,000 people, the European water sector makes a significant contribution to the European economy.