

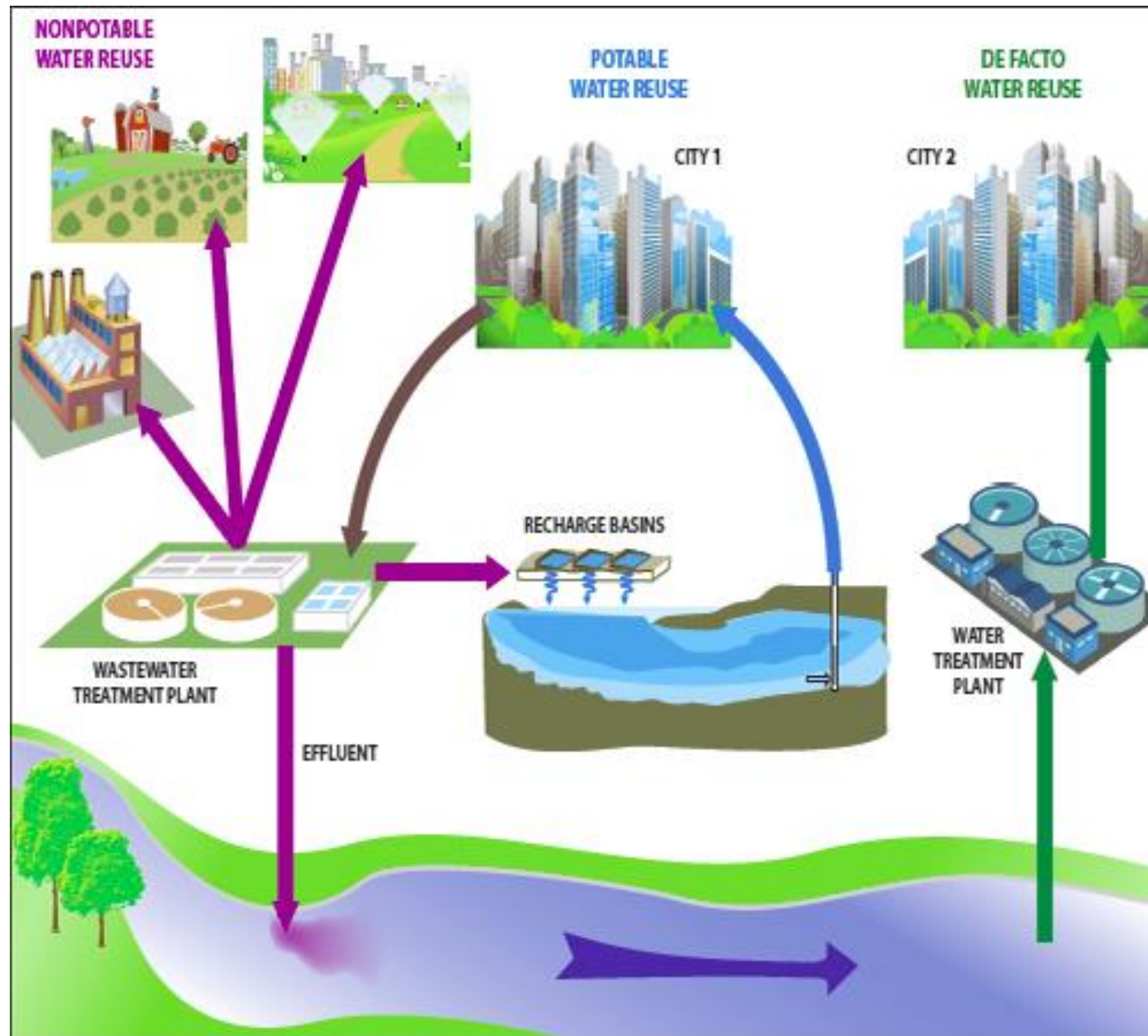
ΝΕΟΣ ΕΥΡΩΠΑΙΚΟΣ ΚΑΝΟΝΙΣΜΟΣ
ΕΠΑΝΑΧΡΗΣΙΜΟΠΟΙΗΣΗΣ
ΕΠΕΞΕΡΓΑΣΜΕΝΩΝ ΛΥΜΆΤΩΝ

Μάρκος Σκληβανιωτης

ΣΤΟΧΟΣ ΠΟΙΟΤΗΤΑΣ ΚΑΙ ΝΟΜΟΘΕΤΙΚΗ
ΑΠΑΙΤΗΣΗ ΓΙΑ ΤΟ ΜΕΛΛΟΝ



SMART TECHNOLOGY – SAFER WATER



Article 1 Subject matter and purpose

1. This Regulation lays down **minimum requirements** for water quality and monitoring, as well as provisions for **risk management**, for the **safe use** of reclaimed water in the context of integrated water management.
2. The purpose of this Regulation is to guarantee that reclaimed water is **safe for agricultural irrigation**, thereby ensuring a high level of protection of **human and animal health** and the environment, promoting the **circular economy** and supporting adaptation to **climate change**, contributing to the objectives of Directive **2000/60/EC** by addressing **water scarcity** and the resulting pressure on water resources, in a coordinated way throughout the Union, thus also contributing to the efficient functioning of the internal market.

Article 2 Scope

A Member State may decide that it is **not** appropriate to **reuse water for agricultural irrigation** in one or more of its river basin districts or parts thereof, taking into account the following criteria:

- a) **geographic and climatic conditions** of the district or districts or parts thereof;
- b)
 - the **pressures on and the status of other water resources**, including the quantitative status of **groundwater** as referred to in Directive 2000/60;
 - the **pressures on and the status of the surface water bodies** in which treated urban waste water is discharged;
 - the **environmental and resource costs** of reclaimed water and of other water resources.

By way of derogation, **research or pilot projects in relation to reclamation facilities do not need to comply with the provisions of this Regulation** where the competent authority establishes that the following criteria are met:

- a) the research or pilot project will **not** be carried out **within a body of water used for the abstraction of water intended for human consumption and/or relevant safeguard zones** designated pursuant to Directive 2000/60;
- b) the research or pilot project will be subject to **appropriate monitoring**.

Any decision taken pursuant to this paragraph shall be limited to a **maximum period of 5 years**. All crops resulting from a research or pilot project exempted in accordance with this paragraph shall **not be placed on the market**.

Article 4 Obligations of thereclamation facility operators and obligations regarding reclaimed water quality

Reclamation facility operators shall ensure that reclaimed water destined for agricultural irrigation as specified in section 1 of **Annex I**, shall, at the point of compliance, comply with the following:

- (a) the **minimum requirements** for water quality laid down in Section 2 of Annex I;
- (b) **any additional conditions** set by the **competent authority** in the relevant permit

Article 5 Risk management

1. For the purpose of producing, supplying and using reclaimed water, the competent authority shall ensure that a **Water Reuse Risk Management Plan** is established.
2. The Water Reuse Risk Management Plan shall be **developed by**
 - the reclamation facility operator,
 - other responsible party(ies), and
 - end-users as appropriate.

The responsible party(ies) preparing the Water Reuse Risk Management Plan shall **consult** all other relevant responsible party(ies) and the end-users, as appropriate.

The Water Reuse Risk Management Plan shall in particular:

- a) set out any **necessary requirements** for the reclamation facility operator **additional** to those specified in **Annex I** in accordance with point (b) of Annex II to further mitigate any risks before the point of compliance;
- b) identify **hazards, risks** and appropriate **preventive** and/or possible **corrective measures** in accordance with point (c) of Annex II;
- c) identify **additional barriers** in the water reuse system, and set out any additional requirements **after the point of compliance**, necessary to ensure the safety of the water reuse system, including conditions related to **distribution, storage** and **use** where relevant, and identify the party(ies) responsible for meeting those requirements.

Article 6 Obligations regarding reclaimed **water permit**

1. **Any production and supply** of reclaimed water destined for agriculture irrigation in section 1 of Annex I, shall be subject to a **permit**.
2. The **responsible party(ies) in the water reuse system**, including the end-user where relevant in accordance with national law, shall submit an **application for the permit** referred to in paragraph 1, or for a modification of an existing permit, to the competent authority of the Member State in which the reclamation facility operates or is planned to operate.
3. The permit shall set out the **obligations** of the reclamation **facility operator** and any **other responsible party(ies)**, where relevant. It shall be **based on the Water Reuse Risk Management Plan** and shall include, inter alia, the following:

Article 6 Obligations regarding reclaimed water permit

- a) the **quality class(es)** of the reclaimed water and allowed agricultural use for which, according to Annex I, the reclaimed water is permitted, the **place of use**, the **reclamation facility** or facilities and the estimated **yearly volume** of the reclaimed water to be produced;
- b) conditions in relation to the **minimum requirements for water quality** and **monitoring** set out in section 2 of Annex I;
- c) conditions in relation to **additional requirements** for the reclamation facility operator, if any, set out in the Water Reuse Risk Management Plan;
- d) **any other conditions** necessary to eliminate any unacceptable risks to human and animal health or the environment to an acceptable level;
- e) the **validity period**;
- f) **point of compliance**.

Article 7 Compliance check

The **competent authority shall verify compliance** of the reclaimed water with the conditions set out in the permit. The compliance check shall be performed using all of the following means:

- (a) **on-spot checks**;
- (b) use of **monitoring data** obtained in particular pursuant to this Regulation;
- (c) any other adequate means.

In the **event of non-compliance** with the conditions set out in the permit, the competent authority shall require the reclamation facility operator and, if relevant, the other responsible party(ies) to take any **necessary measures to restore compliance** without delay and immediately **inform the end-users** affected.

Article 7 Compliance check

Where **non-compliance** with the conditions set out in the permit causes a **significant risk** to the environment or to human or animal health, the reclamation facility operator or any other responsible party(ies) shall **immediately suspend** any further supply of the reclaimed water, until the competent authority determines that compliance has been restored, following **procedures defined in the Water Reuse Risk Management Plan**, in accordance with Annex I, section 2, point 2.1, point a (para 1).

If an **incident affecting compliance** with the conditions in the permit occurs, the reclamation facility operator or any other responsible party(ies) shall **immediately inform the competent authority and other parties** which may be potentially affected, and communicate to the competent authority the information necessary for assessing the impacts of such an incident.

The competent authority shall **regularly verify compliance** by the responsible party(ies) with the measures and tasks set out in the Water **Reuse Risk Management Plan**.

Article 8 Cooperation between Member States

Article 9 Information and awareness raising

Article 10 Information to the public

Article 11 Information on monitoring of implementation

Article 12 Evaluation and review

Article 13 Exercise of the delegation

Article 14 Committee procedure

Article 15 Penalties

MINIMUM REQUIREMENTS

Uses of reclaimed water as referred to in Article 2 Agricultural irrigation

Agricultural irrigation means irrigation of the following types of crops:

- **food crops consumed raw**, meaning crops which are intended for human consumption to be eaten raw or unprocessed;
- **processed food crops**, meaning crops which are intended for human consumption not to be eaten raw but after a treatment process (i.e. cooked, industrially processed);
- **non-food crops**, meaning crops which are not intended for human consumption (e.g. pastures, forage, fiber, ornamental, seed, energy and turf crops).

Table 1 Classes of reclaimed water quality and allowed agricultural use and irrigation method

Minimum reclaimed water quality class	Crop category*	Irrigation method
A	All food crops, including root crops, consumed raw and food crops where the edible part is in direct contact with reclaimed water	All irrigation methods
B	Food crops consumed raw where the edible part is produced above ground and is not in direct contact with reclaimed water, processed food crops and non-food crops including crops to feed milk- or meat-producing animals	All irrigation methods
C	Food crops consumed raw where the edible part is produced above ground and is not in direct contact with reclaimed water, processed food crops and non-food crops including crops to feed milk- or meat-producing animals	Drip irrigation** or other irrigation method that avoids direct contact with the edible part of the crop
D	Industrial, energy, and seeded crops	All irrigation methods***

(a) Minimum requirements for water quality

Table 2 Reclaimed water quality requirements for agricultural irrigation

Reclaimed water quality class	Indicative technology target	Quality requirements				
		<i>E. coli</i> (number/100 ml)	BOD ₅ (mg/l)	TSS (mg/l/g/l)	Turbidity (NTU)U	Other
A	Secondary treatment, filtration, and disinfection	≤10	≤10	≤10	≤5	<i>Legionella</i> spp.: <1,000 cfu/l where there is risk of aerosolization Intestinal nematodes (helminth eggs): ≤1 egg/l for irrigation of pastures or forage
B	Secondary treatment, and disinfection	≤100	According to Council Directive 91/271/EEC ¹ ((Annex I, Table 1)	According to Directive 91/271/EEC ((Annex I, Table 1)	-	
C	Secondary treatment, and disinfection	≤1,000			-	
D	Secondary treatment, and disinfection	≤10,000	¹ Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment (OJ L 135, 30.5.1991, p. 40).		-	

ANNEX I - USES AND MINIMUM REQUIREMENTS

Table 3 Minimum frequencies for routine monitoring of reclaimed water for agricultural irrigation

Reclaimed water quality class	<i>E. coli</i>	BOD ₅	TSS	Turbidity	<i>Legionella</i> spp. (when applicable)	Intestinal nematodes (when applicable)
A	Once a week	Once a week	Once a week	Continuous	Twice a month	Twice a month or frequency determined by the reclamation facility operator according to the number of eggs in waste water entering the reclamation facility
B	Once a week	According to Directive 91/271/EEC ((Annex I, Section D)	According to Directive 91/271/EEC (Annex I, Section D)	-		
C	Twice a month			-		
D	Twice a month			-		

ANNEX I - USES AND MINIMUM REQUIREMENTS

Table 4 Validation monitoring of reclaimed water for agricultural irrigation

Reclaimed water quality class	Indicator microorganisms (*)	Performance targets for the treatment chain (log ₁₀ reduction)
A	<i>E. coli</i>	≥ 5.0
	Total coliphages/ F-specific coliphages/somatic coliphages/coliphages(**)	≥ 6.0
	<i>Clostridium perfringens</i> spores/spore-forming sulfate-reducing bacteria(***)	≥ 4.0 (in case of <i>Clostridium perfringens</i> spores) ≥ 5.0 (in case of spore-forming sulfate-reducing bacteria)

ANNEX II Key elements of risks management

- **Description** of the entire water reuse system
- Identification of the **parties** involved in the water reuse system and identification of their **responsibilities**.
- Identification of potential **hazards**, in particular the presence of pollutants and pathogens, and the potential for **hazardous events**.
- Identification of the **environments and populations at risk** and the **exposure routes** to the identified potential hazards
- Assessment of **environmental risks and risks to human and animal health**
- Consideration of requirements for water quality and monitoring that are **additional to and/or stricter** than those specified in Annex I
- Identification of **preventive measures** that are already in place or that should be taken to **limit risks** so that all identified risks can be **adequately managed**.

ANNEX II Key elements of risks management

Table 1: Specific preventive measures

Reclaimed water quality class	Specific preventive measures
A	<ul style="list-style-type: none"> - Pigs must not be exposed to fodder irrigated with reclaimed water unless there is sufficient data to indicate that the risks for a specific case can be managed.
B	<ol style="list-style-type: none"> 1. <ul style="list-style-type: none"> - Prohibition of harvesting of wet irrigated or dropped produce. - Exclude lactating dairy cattle from pasture until pasture is dry. - Fodder has to be dried or ensiled before packaging. - Pigs must not be exposed to fodder irrigated with reclaimed water unless there is sufficient data to indicate that the risks for a specific case can be managed.
C	<ol style="list-style-type: none"> 2. <ul style="list-style-type: none"> - Prohibition of harvesting of wet irrigated or dropped produce. - Exclude grazing animals from pasture for five days after last irrigation. - Fodder has to be dried or ensiled before packaging. - Pigs must not be exposed to fodder irrigated with reclaimed water unless there is sufficient data to indicate that the risks for a specific case can be managed.
D	<ul style="list-style-type: none"> - Prohibition of harvesting of wet irrigated or dropped produce.

ANNEX II Key elements of risks management

Adequate **quality control systems** and procedures, including **monitoring** of the reclaimed water for relevant parameters, and adequate **maintenance** programmes for equipment.

Environmental monitoring systems to ensure that feedback from the monitoring is provided and that all **processes and procedures** are appropriately **validated and documented**.

Appropriate **system to manage incidents and emergencies**, including procedures to **inform** appropriately all relevant parties on such event, and regular update of **emergency response plan**.

ΤΕΛΟΣ

**ΕΥΧΑΡΙΣΤΩ
ΓΙΑ ΤΗΝ ΠΡΟΣΟΧΗ ΣΑΣ**