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Sustainability Growth Innovation*

Position Paper

SGI Europe Position on the Revision of the
Urban Waste-Water Treatment Directive (91/271/EEC)

20 July 2021

Brussels, 20 July 2021

High-Level Policy Recommendations

- SGI Europe welcomes the adaptation and the **alignment of the Directive with the political objectives of the EU Green Deal, the Zero Pollution Action Plan, and the Circular Economy Action Plan**. This is a crucial step for the holistic protection of the environment and resources, the reduction of pollution, and the guarantee of a sustainable and circular economy and society.
- SGI Europe recommends that **the new Directive should be compatible with the current EU legal framework in the areas of water, climate, energy, and industrial emissions policy**. In particular, the revision should take into account the implications of the EU Green Deal and its Zero Pollution ambition to support reducing microplastics, minimise pharmaceutical residues and other emerging pollutants.
- SGI Europe pleads for an **implementation of the precautionary and polluter-pays principles as well as the principle of control at the source to be established as guiding principles** in the revised Urban Waste-Water Treatment Directive.
- SGI Europe **welcomes the consideration of extended producer responsibility (EPR)**, since the current political and legal framework offers only limited and non-binding possibilities for reducing pollution at source and implementing the precautionary and polluter pays principle.
- The Directive should not lead to disproportionate costs for the waste-water disposal companies. SGI Europe is asking for a **coordination and harmonisation of both the Sewage Sludge Directive and the UWWTD whilst encouraging energy and resource efficiency opportunities**, with the priority to ensure full environmental protection first, as it will play a central role in its modernisation progress and work towards the objective of the EU Green Deal.
- SGI Europe is **asking to introduce an EU-wide common approach for stormwater overflow and urban runoff** to increase resilience against extreme weather events in affected areas and include aspects of local infiltration, evaporation, retention and use with the aim of minimising discharge.
- SGI Europe is calling upon the Commission to support the waste-water industry's efforts to meet the challenges of decreasing skilled work forces by revising the UWWTD accordingly, and to **launch initiatives that specifically promote the training and securing of European skilled workers for the waste-water sector**.

General Remarks

SGI Europe welcomes the European Commission's revision of the 1991 Urban Waste Water Treatment Directive (91/271/EEC) (UWWTD) and is particular very supportive of the intention to closely link the revision with the EU Green Deal, the Zero Pollution Ambition and the Circular Economy Action Plan. For this reason, the new directive should be compatible with the current EU legal framework in the areas of water, climate, energy, and industrial emissions policy.

The UWWTD has been successful in protecting the environment. Nevertheless, SGI Europe supports the Commission's intention to adapt the Directive to current developments, as the circumstances and environmental problems have significantly changed since its existence in 1991. This includes new challenges related to climate change, micropollutants, pharmaceuticals and other emerging pollutants.

In this regard, **SGI Europe highly welcomes the Commission's intention to focus on measures aimed at reducing pollution at source.** This requires a consequent implementation of the polluter pays principle. Therefore, **SGI Europe welcomes the consideration of Extended Producer Responsibility (EPR).** This would be a welcome addition since the current political and legal framework offers only limited and non-binding possibilities for reducing pollution at source and implementing the precautionary and polluter pays principle.

From **SGI Europe's point of view the evaluation of the Directive should not lead to disproportionate extensions of obligations and costs for the waste-water disposal companies without firstly applying the precautionary principle and secondly establishing financing solutions based on the polluter-pays principle.** Indeed, both principles are already established in Article 191 (2) sentence 2 TFEU. By revising the Directive, the EPR can be established as a decisive principle, thereby creating a balanced approach to the management of pollutants in waste-water whilst avoiding disproportionate costs for waste-water disposers. Otherwise, these costs would ultimately have to be passed on to the waste-water consumer.

Additionally, because of the waste-water disposal company's support of the re-use of sludge and treated waste-water, **SGI Europe calls for close links with the current evaluation of the Sewage Sludge Directive.** SGI Europe is particularly asking for a coordination and harmonisation of both Directives whilst encouraging energy and resource efficiency opportunities, with the priority to ensure full environmental protection first, as it will play a central role in its modernisation progress and work towards the objective of the EU Green Deal.

As an EU Social Partner and through SGI Europe's role as representative of European employers in the public services and services of general interest, **we must address the increasing challenge for many regions and Member States across Europe of hiring skilled workers and experts, especially outside of urban areas.** Due to a high proportion of the workforce retiring and the lack of interest from young skilled workers to make a career in this sector is becoming an increasing issue. **SGI Europe is therefore calling upon the Commission to support the industry's efforts to meet these challenges by revising the UWWTD accordingly, and to launch initiatives that specifically promote the training and securing of European skilled workers for the waste-water sector.** This could help these companies to continue their work in mitigating and adapting to climate change and to fulfil the expectations to provide safe water supply and waste disposal that is in line with the EU Green Deal.

In this regard, SGI Europe would like to promote in the following chapters its policy recommendation on how the UWWTD revision can meet the challenging targets set within the EU Green Deal whilst ensuring economic and social security.

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Implementation of the Precautionary and the Polluter-Pays principle

SGI Europe deems important that in the revision of the UWWTD the implementation of the precautionary and polluter pays principle as well as the principle of control at the source should be laid down as guiding principles.

With regard to the reduction of micropollutant inputs into water bodies, a systematic approach is required that takes a holistic view, related to the overall load and the effectiveness of possible measures. All polluters, including agriculture and industry, should be considered and the most cost-effective combination of measures selected. For this reason, SGI Europe advocates that all **polluter-related prevention at the source measures must have priority over other reduction measures.**

Introduction of mandatory Extended Producer Responsibility Schemes

The Extended Producer Responsibility (EPR) scheme is based on a life cycle approach, with one element being the financing of investment needs of Waste-Water Treatment Plant (WWTP). The financial contribution of relevant industries, such as the pharmaceutical industry, is essential. This means that producers remain responsible for their products even after the use phase. To this end, **funding mechanisms, including comprehensive EPR schemes, should be set up as a measure to avoid other actors, including WWTP, having to bear the financial burden of preventing the release of pharmaceuticals and other emerging substances in the environment.** Furthermore, such a scheme incentivises pharmaceutical companies to invest more in green manufacturing and biodegradable pharmaceutical substances. There is an issue of costs associated with the treatment of emerging pollutants that cannot be detached from the application of EPR mechanisms. In fact, it is not a sustainable approach to transfer all the responsibilities (and costs) of the treatment of these pollutants to the water operators.

When reviewing the UWWTD, it must be noted that the removal of trace substances through technological upgrading will unlikely be complete as there are substances that are only partially reduced by the current processes. **It is important to carefully check which technologies are available for an effective micropollutant reduction in terms of economy and sustainability and how effective optimisations of existing treatment stages are.** If measures must be taken at the sewage treatment plant, it is necessary to define basic target criteria for the design of sewage treatment plants with trace substance removal as well as monitoring solutions for the enforcement of water law at European or national level.

Further Treatment Efforts

SGI Europe rejects the disproportionate EU-wide mandatory introduction of a fourth treatment stage. Further treatment stages in WWTP should only be introduced where they are absolutely necessary and beneficial from an ecological or use-related point of view. An important criterion is to determine whether there is a corresponding load situation and pollution level in the water body and whether this situation can be improved through further treatment. **Before installing further treatment processes in a WWTP, it needs to be examined whether pollution of the receiving water is caused by other point or diffuse sources, and which measures should be taken at these sources in accordance with the polluter pays principle.** This applies, for example, to the runoff of rainwater that flows off roads and contains microplastics from tyre abrasion. **Other criteria for a further examination of the expansion of another treatment stage for the reduction of trace substances in WWTP should be sensibly included.** These include, for example, de minimis limits due to cost efficiency, size classes, local boundary conditions such as the condition of water bodies, synergy effects, further input paths, etc. Measures for a targeted reduction of micropollutant inputs into water bodies through the upgrading of WWTP must be adapted to the local situation in each case. It is also important to assess the ecological status of the affected water bodies (receiving waters). If the ecological

condition is poor, it remains to be clarified whether the discharge of trace substances via the WWTP is the reason for this condition at all.

A fourth treatment stage can help in individual cases to remove trace substances from waste-water. This includes, for example, the situation where sewage treatment plant outfalls and bathing waters are very close to each other, where sewage treatment plant outfalls can impair the quality of water extraction facilities (wells, springs, river abstractions, etc.), or where sewage treatment plant outfalls seep into sensitive drinking water catchment areas. However, many substances and their degradation products will only be partially reduced by a further treatment stage. Moreover, transformation products can arise in the course of such a waste-water treatment, which in turn are harmful to water bodies. It must be carefully examined which technologies are available for effective micropollutant reduction in terms of economic efficiency and sustainability, and how effective optimisations of existing treatment stages are. In the end, only the avoidance of these inputs can bring real relief to the aquatic environment.

If measures are to be taken at the WWTP, it is necessary to define fundamental target criteria for the design of WWTP with micropollutant removal as well as monitoring solutions for water law enforcement at European or national level.

Risk-Based Assessment Approach

Moreover, **further treatment stages are very cost- and energy-intensive and can counteract possible climate protection goals and energy efficiency considerations** if they are not applied in a targeted manner. An additional burden due to further treatment stages should therefore take a back seat if it is possible to avoid or reduce discharge at the source. Consequently, **SGI Europe advocates for targeted measures and a risk-based assessment approach with tailor-made solutions**. The necessary freedom must be granted to individual regional solutions and local actors, provided this is not at the expense of central waste-water disposal.

As manufacturers of substances are not affected by the wastewater levy, they have no incentives to design their substances to be less harmful to water bodies or to develop substitutes. Instead, the discharge of substances is tolerated without any incentive to change the discharge strategy. The resulting end-of-pipe measures and their corresponding costs are subsequently charged to consumers. In this context, trace substance levies, which in turn only burden wastewater customers through waste-water treatment, should not be regulated. Thus, if the use of additional treatment stages in WWTPs is necessary, they should be financed in accordance with the principle of EPR.

New requirements for pharmaceutical substances and microplastics

SGI Europe welcomes the fact that the Commission intends to focus the review on measures to prevent pollution from micropollutants that can directly or indirectly enter the water cycle through many pathways. In general, micro-pollutants, such as PFAS, drug residues and microplastics, are a burden on the ecosystem. Once in the water cycle, they can pose a risk to drinking water resources and the aquatic ecosystems. **New legal requirements on micropollutants should be based on the precautionary principle and the control at source principle, whilst the financing of measures should be primarily based on the polluter pays principle, in accordance with Art. 191(2) TFEU.**

Water quality standards can also be used. It will be for this reason essential to **establish a good coordination between the UWWTD, the Water Framework Directive, and the Priority Substances Directive** if Europe intends to meet its zero pollution goals under the EU Green Deal as this will enhance the relationship between emissions from the wastewater chain and water quality targets.

Furthermore, about the implementation of the **EU Strategy on Pharmaceuticals in the Environment, the revision of the UWWTD must not lead to measures being shifted unilaterally to WWTPs.** A holistic approach is needed for addressing the entire life cycle of pharmaceutical products, from design and production to prescription and use, to waste treatment.

Moreover, SGI Europe would also here **welcome the introduction of a risk-based approach**, which is closely linked with the decisions made on whether an upgrade of WWTPs is proportionate, relevant and brings added-value.

Overall, **the plans for a targeted reduction of micropollutant inputs into water bodies should always refer to the quality and management goals pursued for the entire river basin area. Those plans should also** address the usage requirements beyond the local water situation with the specific improvement and protection goals pursued, and harmonise these with one another. This requires a systematic approach in terms of a holistic view, based on the overall exposure and the effectiveness of possible measures. Reducing pollution at the source must have priority over other reduction measures.

New Candidate Priority Substances

Currently, the discussion at EU-level is focusing on new candidates for priority substances. **Some of these candidates are widely used pharmaceuticals and were removed from the watch list recently as they are regarded as a potential threat to European waters.** Once identified as new priority substances the connected environmental quality standards will set the frame for activities to reduce the input into water bodies including additional treatment steps at WWTP.

A Technological solution

A fourth treatment step in wastewater treatment by ozonation or the use of activated carbon may be appropriate, for example, where drinking water is produced downstream or very sensitive waters are affected. The distribution of costs according to the EPR and polluter pays principle is essential. Experiences with ozonation show successful removal (exactly: chemical transformation) of trace substances but some water bodies still suffer from other impacts such as hydromorphological shortcomings or discharge of stormwater overflows. Therefore, an improvement in the view of the WFD criteria may not be achieved.

Mixture effects of trace substances are still a matter of research and only little is known yet. Effect-based methods (EBM) like ecotoxicological tests may be a tool to capture mixture effects but their use is demanding and needs a lot of experience.

More stringent requirements for small agglomerations

SGI Europe advises the European Commission to take into account the population density in the different Member States and adjust this accordingly. A risk-based approach can be essential in this case. The Commission must take the large differences in population density in the EU into account. The benefits of including smaller agglomerations cannot motivate the higher costs and administration that comes with this, especially in sparsely populated regions in the EU or in Member States with low population density.

Overarching national minimum requirements for WWTPs (that do not fall under the scope of the UWWTD) in terms of environmental and health protection under the consideration of the risk-based approach and proportionality are welcome. In addition, cross border effects should be considered when dealing with the effects of smaller agglomerations downstream over the border.

The pressure on the environment from smaller agglomerations are relatively low compared to other pressures, such as larger UWWTPs, agriculture, industry etc. The requirements for IAS must be adjusted to what is environmentally motivated to meet the objectives of the Water Framework Directive and this kind of risk assessment must be made locally deepening on the local pressures on the environment. In respect to a holistic approach, the cost-effectiveness and the real impact needs to be taken into account.

Example:

In the Netherlands there are on average approximately 500 persons/km² whereas there are 25 persons/km² in Sweden on average. In some of the northernmost parts there are less than 1 person per km². Approximately 10% of the Swedish population are living in the countryside outside the agglomerations and 90 % of all generated wastewater in agglomerations derives from 426 plants that are bigger than 2000 p.e. The remaining 10% from agglomerations smaller than 2000 p.e. is treated by more than 1300 small UWWTPs.

Connection to centralised systems and exemptions for individual systems

SGI Europe suggests to **not extent the scope of the UWWTD to cover IAS**. If the Commission refers to the IAS waste-water treatment facilities outside defined agglomerations, it will be very difficult to regulate in the ways the Commission suggests. Due to the different geographic and demographic conditions in Europe, a one-size-fits-all approach for centralised sewer systems would not be beneficial and appropriate. For example, there are approximately 900.000 such facilities in the countryside of Sweden, which must be permitted as well as supervised by local supervisory authorities. They are regulated by national law and in most municipalities, there is a process of inventory presently taking place. In case the soil is sensitive, the systems are located close to water, the risk for eutrophication is higher etc, the authorities put a greater emphasis on IAS and inspects their function more regularly. Whereas in other parts of Sweden, where they do not pose the same risks for environment or human health, the authorities prioritise their resources over other pressures on the environment (agriculture, industry etc). **The supervising activities must be adjusted to what is environmentally motivated to meet the objectives of the Water Framework Directive (WFD)** and this kind of risk assessment must be made locally depending on the local pressures on the environment. The IAS are already regulated under the Water Framework Directive and the Programmes of Measures. The detailed regular reporting as suggested by the Commission is not proportionate to the risks the IAS systems pose, and the administration and the costs that comes with it are not in relation to the environmental benefit it would bring.

To bring a bit more clarity on this issue by showcasing an example. The IAS are regulated by the Swedish Environmental Code and its general rules of consideration. The property owner is responsible for minimizing the damage from their emissions and to reduce the risk for human health and for the environment.

The general advice from the Swedish Maritime Administration serves as guidelines when the local authorities are assessing the function of IAS. The assessment is made based on functional and treatment capacity and is not dependent on specific techniques. Drinking wells, groundwater and nearby lakes and rivers must be considered in the assessment. The requirements must also be reasonable in relation to the environmental benefit.

Another example in Germany shows that due to the high population density (233 inhabitants per km²), less than 3,0 % of the German population is not connected to sewer systems and uses IAS (including storage tanks with regular transport to a public WWTP). In general, 9.105 public WWTP are operated (2016).

In general, small systems should:

- Ensure hygienic safety (reduce infectious agents)
- Protect the environment and water (i.e., reduce emissions of nutrients and organic material (BOD))
- Enable a cycle of nutrients
- Be resource efficient, be user friendly and allow for control of level of treatment.

More stringent thresholds for nutrient removal (nitrate, phosphorous)

Wastewater treatment operators in the EU are continuously optimising the treatment performance of their WWTPs. The **aim is to reduce the input of nutrients and pollutants into water bodies as far as this is operationally, technically, and economically possible**. From our point of view, it is also important to assess the state of the ecology in the affected water bodies (receiving waters). If the ecological condition is poor, it remains to be clarified whether the input of nutrients via the WWTP is the reason for this condition.

The **introduction of stricter standards for nutrient treatment in WWTPs must therefore consider the local framework conditions** and be in line with the technical, operational and economic possibilities of the wastewater treatment operators. Criteria for this are, amongst others, a de minimis limit due to cost effectiveness across, for example, size classes, local boundary conditions such as water body status, synergy effects, further input pathways, etc.

The setting of limit values should be proportionate and target-oriented whilst making the links to the market authorisation of hazardous substances. **The primary focus needs to be on the control-at-source measures in order to implement the precautionary principle and not rely solely on end-of-pipe treatment**. Furthermore, input pathways from agriculture must also be considered in relation to nutrients like nitrate and phosphorus.

SGI Europe supports a risk-based, water body-specific approach that considers the quality of the receiving water body. Based on this, it must be decided whether further regulatory requirements are necessary. For example, there are plants for which phosphorus and nitrate inputs are not relevant. For such plants, it would not be relevant to increase the minimum requirements. Current thresholds (particularly the limit for WWTP > 100.000 PE) are sufficient. The choice should be subordinated to a cost-benefit analysis and an environmental risk assessment, associated with the more stringent limits and the treatment needed to reach such new goals. For example, lower limits could lead to an unjustified increase of chemicals dosage with related chemical sludge production. Additionally, this could possibly also result in an increase in CO2 footprint and presence of micropollutants present in trace in all the reagents used for nitrogen and phosphorus removal. In general, **SGI Europe is in favour of the risk-based approach including its threshold. We recommend however that such approaches should be adapted and tailormade where needed, in close coordination with the WFD.**

A combination of a set of minimum requirements depending on the size of WWTP and the demands resulting from the status of the receiving water body according to the WFD rules could be a useful tool, if a water body is not in good status and input of nutrients is the reason stricter limit values could be put on the effluent. This represents a local risk-based approach. Such an assessment could also be applied to smaller agglomerations and IAS.

Lastly, an exemption is needed for Nitrogen removal in a very cold climate. Today's threshold for Nitrogen is not technically achievable or very energy costly in very cold climate.

Furthermore, article 4.2 only acknowledges less stringent requirements for biological treatment in high mountain regions (over 1500 m above sea level). This article must be adjusted in order to ensure equal treatment for water service providers all over Europe, particularly in Nordic regions with a cold climate even at sea level.

The Importance of integrating skilled Workers into the Waste-Water Sector

Many waste-water industries across Europe, especially outside of urban areas, facing similar challenges with regard to an increase in the shortage of skilled workers, resulting from the retirement of a high proportion of the workforce and the lack of young, skilled workers entering the industry. For example, in Germany, estimates already indicate that around 40 % of companies in the wastewater sector are confronted with an acute shortage of skilled workers. This particularly applies to industrial staff at WWTPs. Without far-reaching measures, this trend will exacerbate in the future.

It should be noted that the sector of the wastewater industry can offer long-term prospects, secure jobs, an attractive working environment, and an enormously wide range of interesting fields of activity.

As an EU Social Partner, active in many promoting self-initiated and joint projects such as the “Green Skills in VET” in cooperation with EFEE and supported by the European Commission, SGI Europe is convinced that the Commission can play a decisive role to support this industry. **SGI Europe calls upon the Commission to meet these challenges of the waste-water Industry by revising the UWWTD accordingly to this specific issue and by launching initiatives that specifically promote the training and integration into the wastewater sector of European skilled workers.**

Otherwise, the waste-water industry predicts human health and occupational safety as well as settlements, commercial enterprises, and infrastructures to be jeopardised. These risks could arise from inadequate performance of monitoring, operation, maintenance and repair of waste-water disposal, flood protection, and coastal protection facilities or dams.

EU Climate reduction targets

SGI Europe supports the climate ambition of the European Commission to set the EU on a sustainable path to achieve climate neutrality by 2050 and the EU-wide net greenhouse gas emissions reduction target by 2030 compared to 1990 of at least 55%. In line with the Green Deal's overall ambition to holistically address climate and environmental protection at the same time, **the climate targets and the targets for environmental protection in general and water resources in particular also have to go hand in hand.** In this context, the primary goal of the UWWTD must remain to reduce the pollution of water bodies by waste-water discharges. New requirements for the energy efficiency of WWTP must not impede this goal. The energy demand depends largely on the specific composition of the waste-water and the technical requirements for waste-water treatment.

Waste-water operators want to take their responsibility to contribute to the Green Deal ambitions with regard to climate change, and also possess the tools to contribute to Europe's renewable energy targets. However, the climate mitigation potential differs greatly amongst water operators. **Water operators therefore need flexibility to maximise their mitigation efforts in a smart and sustainable way.**

Greenhouse Gas and Methane Emissions

The waste-water sector is aware of its contribution to GHG emissions and is already involved in reducing them. **We also want to highlight that the sector needs a concrete, simple and EU-wide methodology to determine current emissions covering all relevant steps in waste-water treatment and all significant types of emissions.** This is a pre-requisite for defining a baseline and plan the reduction of emissions for the future.

The quantification of greenhouse gas emissions of WWTP is still subject to research. The main source of methane is the anaerobic treatment of sewage sludge. This process is used at bigger WWTP via digestors, and the gained methane is transformed into electric power and heat using on site combined power plants or

into biomethane and injected into the national gas-grid. The aim of this technique is to collect as much methane as possible, and therefore the losses are reduced to an insignificant amount. The carbon dioxide produced in the biological treatment is regarded as climate-neutral because the organic carbon source can be put down to food consuming CO₂ from the atmosphere during growth. The removal of nitrogen from waste-water is a biochemical process with several intermediate steps. A by-product with low amounts could be nitrous oxide (N₂O), the exact details of these relations and conditions are still not fully understood. Despite the high greenhouse gas potential of N₂O, the share of waste-water treatment is small but a quantification is even more difficult than in the case of methane.

Furthermore, the main piece of legislation regulating the wastewater sector is currently under revision. **SGI Europe therefore asks for coordination between the UWWTD and the Methane Strategy, the Renewable Energy Directive, the Energy Efficiency Directive, and the regulation on Taxonomy to stimulate sustainable financing to reduce GHG emission in the water sector.**

Additionally, **the efforts in emission reductions already undertaken by some Member States should be considered.** At the same time, it needs to be highlighted that the level of treatment and the financial capacity to implement the UWWTD differs substantially between countries and regions, the capacity to implement GHG emission mitigation measures also shows significant differences.

Finally, intensive agriculture has an impact on both climate and water quality and quantity. As agriculture is a large contributor to GHG emissions, for **coherence with the environmental and water acquis, we also welcome the consideration of the GHG emissions from agriculture, especially concerning methane emissions.**

Energy Consumption/Energy Efficiency and Generation of Renewable Energies

In line with the Green Deal, the revision of the guidelines must also ensure that climate protection and environmental protection go hand in hand. This means that the goal of climate neutrality by 2050 must be closely interlinked with the European environmental and water protection goals. The primary goal of the UWWTD must remain to reduce the water pollution from waste-water discharge as much as possible. Further requirements for the waste-water treatment process, such as the energy efficiency of the systems, must not jeopardise this goal. The energy requirement depends largely on the specific composition of the waste-water and the technical requirements for waste-water treatment. General requirements for energy consumption and energy efficiency are therefore not expedient for wastewater treatment.

It might be contradictory that the Commission is discussing the introduction of a fourth treatment stage from an environmental policy point of view but is at the same time calling for a reduction in electricity consumption. Further demands on WWTPs lead directly to increased electricity demand. This should be considered when discussing energy reduction targets. Further treatment stages should only be introduced where they are technically and ecologically sensible.

An improvement of energy efficiency cannot be demanded across the board, as operators – which have been very efficient so far – can only achieve further improvements with considerably higher costs or are otherwise unable to achieve them at all. Therefore, efficiency efforts that have already been made and implemented must also be considered.

Any demand for increased energy efficiency reaches its limits where the prevention of infections and health protection is concerned, as they must be the priority. The COVID-19 pandemic has shown that the implementation of hygiene measures is essential to prevent infections. This means, for example, that hands

and laundry must not be washed with cold water in order to ensure sufficient cleaning. The same applies to the increasingly fine flow of water in shower heads. The COVID-19 pandemic has shown that aerosols are significant carriers of germs. This must be considered, for example, in the context of possible Legionella infections, which can be promoted by certain shower heads.

Example:

The usage of combined power plants at WWTP to gain electric power out of sewage sludge digestion is economically valuable only in bigger plants. With a modern facility, app. 60 to 80 % of the electric power needed in wastewater treatment could be produced by this technique. In biggest plants a share of 100 % is theoretically achievable but requires high investment.

In bigger WWTPs (over 100.000 PE) it is possible also to produce biomethane (to be injected into the grid or used to fuel cars) by means of biogas upgrading.

Creating fair additional funding tools for Energy Efficiency

Additionally, SGI Europe underlines the importance of additional funding tools for energy efficiency measures to reduce the overall energy consumption. However, under the current Energy Efficiency Directive there are still various obstacles to investment efficiency measures. The so-called SME Recommendation (2003/361/EC) is notably making this difficult. According to this definition, companies are not considered as SMEs (despite falling below the otherwise relevant thresholds) if 25% of their capital or voting rights are directly or indirectly controlled by one or more public bodies, individually or jointly. **Due to this discrimination many local public service enterprises (LPSEs) are excluded from various energy efficiency related EU funds and investment schemes.** This leads also to municipal SMEs - unlike private SMEs - not being able to draw advantage of certain support programmes (at all or only at worse conditions) meant to support energy efficiency. The use of, or reference to, the above-mentioned SME recommendation in the revision of the UWWTD should therefore be avoided to avoid further discrimination. Furthermore, the implementation of efficiency measures often fails due to the lack of qualified and skilled personnel available on the market. This is especially true for new technologies. **We therefore call for a fair and level-playing field between the private and public enterprises.** For further information on the implication of the SME Recommendation of 2003, please read SGI Europe's ["Rethinking the SME Definition-2020"](#).

Circular Economy and Sludge Reuse

SGI Europe supports the general goal that the collection and treatment of waste-water should become climate neutral, whilst taking the principle of environmental protection first, through the use of measures and the circular economy approach. Here, **SGI Europe calls for close links with the current evaluation of the Sewage Sludge Directive and asks for a coordination and harmonisation of both Directives whilst encouraging energy and resource efficiency opportunities, with the priority to ensure full environmental protection first**, as it will play a central role in its modernisation progress and work towards the objective of the EU Green Deal.

Example:

In line with circular economy principles many resources can be extracted from wastewater like biomethane (from biogas upgrading), organic chemicals (volatile fatty acids formed by sludge fermentations), sands from treatment, cellulose, phosphorus, and of course water for different purposes. Many projects are in place in different EU countries.

Phosphorous Recovery

SGI Europe urges the European Commission to introduce binding requirements that ensure market access for phosphorus recyclates, other sludge-based products and recovered materials is guaranteed (e.g., through a binding purchase quota).

Furthermore, a mechanism on end-of-waste criteria should be developed since it is the essential condition for establishing a European Market for products and resources, which are recovered through the waste-water treatment process. Without end-of-waste criteria in combination with the right market conditions, it would be detrimental to introduce obligatory recovery requirements for phosphorus and other secondary raw materials from sludge and waste-water.

Example:

Phosphorous recovery is the objective of the new sewage sludge regulation in Germany. Regaining Phosphorous from sludge with more than 2 % content is mandatory for WWTP > 100.000 i. e. from 2029 on (for WWTP > 50.000 i. e. from 2032 on). Therefore, many facilities for sewage incineration are planned because the resulting ash contains the highest Phosphorous concentration. There are different methods to extract phosphorous out of ash or sludge and even from water arising from sludge treatment. None of them is ready for the market yet but many of them are transformable to higher outputs.

EU-wide Common Approach for Stormwater Overflow and Urban Runoff

As a direct consequence of climate change, an increase in extreme weather events is to be expected, which is associated with high risks, especially in urban areas. On the one hand, flooding can occur due to heavy rainfall and, on the other hand, high temperatures in densely populated areas can lead to health risks for the population during summer heat waves. **A key to limiting the negative consequences of such extreme weather events is an overflow management adapted to local conditions stormwater**, and in line with the Programmes of Measures (PoMs) under the Water Framework Directive. The results could lead to minimising rainwater drainage and taking the water balance into account in urban planning (e.g., in urban land use planning measures such as adaptation for flood protection). This also addresses the increasingly severe drought conditions.

From SGI Europe's point of view, a **common EU approach for dealing with stormwater overflow and urban runoff, that considers the local conditions, would be appreciated**. Such an approach should in the future contribute to increasing resilience against extreme weather events in polluted areas and at the same time include aspects of local infiltration, evaporation, retention and use with the aim of minimising discharge. Thereby the local water balance is supported, and the consequences of increasing drought and heat are mitigated, whilst also significantly reducing flood risks. Local stormwater management could simultaneously counteract overloading of public waste-water facilities, such as sewers, pumping stations, WWTP and stormwater relief facilities.

Innovation/Adaptation to technological Progress

In order to meet the requirements of current and, above all, future challenges, it is vital to promote innovation in the waste-water management sector and to enable adaptation to technological progress. **Research projects should receive more financial support in the future, especially to achieve the ambitious goals of the Commission within the framework of the Green Deal and the Zero Pollution Action Plan**. For example, measures to combat droughts as well as water supply concepts to promote the climate resilience of the waste-water industry open up opportunities for action that can contribute to achieving the goals set by the Commission. Targeted cooperative research initiatives with companies from other sectors, such as the pharmaceutical industry, the cosmetics industry, and the food industry, should also be able to benefit more from EU funding. In this way, for example, pollution of waste-water treatment by individual substances or by fluctuations in the occurrence of pollution in waste-water can be better determined and counteracted.