

A STRATEGIC APPROACH TO POLLUTION IN THE CONTEXT OF THE UPCOMING EVALUATION OF EU WATER LEGISLATION

Executive summary

- **Precaution is the fundamental principle of drinking water legislation:** The current Drinking Water Directive (DWD) is centered on a health-based understanding of water quality as opposed to a mere technical assessment of parametric values and based on precaution as the leading regulatory principle. Any revision needs to maintain and strengthen this focus to preserve the high level of quality currently provided to citizens and preserve raw water resources for future generations.
- **Polluters need to be held responsible for the damage they cause:** Currently, the responsibility to ascertain low pollution of drinking water and the necessary resources lies almost exclusively with the water and sewage utilities. This “end-of-pipe” arrangement is both counter-productive and unsustainable: It leads to an externalization of the cost of pollution while the polluter is not taken into account, disincentivising any efforts to improve the situation. A stringent application of the “polluter pays” - principle throughout the value chain, including financial contributions by polluters as well as preventive and other measures is thus crucial to ensure a fair retribution of costs and the long-term sustainability of water services.
- **EU-water legislation should provide comprehensive protection from the source onwards:** The existing legislative framework encompasses a series of distinct directives designed to archive the same ends, thus offering a great potential for a comprehensive protection of “later-to be” drinking water at the source. Yet they are often not complementary, making a coherent implementation difficult. Improving overall coherence between the different elements of EU water legislation should thus be a priority during the upcoming or ongoing evaluation exercises, including but not limited to an alignment of relevant thresholds and taking into account not only individual pollutants, but also specific combinations thereof.
- **Poor implementation and enforcement hinders good policy outcome:** Incomplete or delayed implementation at Member State level is one of the major causes of pollution. Correct implementation and stringent enforcement at all levels of government should thus be made a priority by Member States. In case of non-compliance the EU-Commission should make more frequent use of disciplinary measures, especially if violation of duties under EU legislation continues over longer periods of time.

Context

The objective of the EU water legislation is to protect European aquatic ecosystems, secure the long term availability of raw water resources suitable for the provision of drinking water and protect human health from the adverse effects of any contamination of water intended for human consumption. Some of this legislation is already well implemented. Regarding the Drinking Water Directive (DWD), for instance, Member States already show a high level of compliance, although a couple of weaknesses remain.¹

However, the DWD only covers quality standards and protection measures for water that is already being prepared for human consumption and does not include requirements as to the protection of the source water, which at European level is incorporated in the Water Framework Directive (WFD), the complementing Groundwater (GWD) and Priority Substances Directive (PSD) as well as the Nitrates Directive (ND). With regard to these, in contrast, the current state of implementation shows that there is still considerable room for improvement and that the focus on the source protection indispensable to the long-term maintenance of the current high level of drinking water quality is yet insufficient.²

The upcoming or ongoing evaluation of the above mentioned directives – the *ex post* evaluation of the DWD has already been carried out in 2015 and the development of new policy options is currently under way³ – is well suited to explore which concrete measures may improve the positive impact of EU water legislation and to eradicate existing shortcomings. Against this backdrop, CEEP would like to seize the opportunity to express its views on a number of key issues that should be addressed during the evaluation exercise and possible revision.

The notion of pollution: Technical versus comprehensive understanding

According to art. 2 of the WFD, pollution in the context of water policy is defined as “the direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems, which result in damage to material property, or which impair or interfere with amenities and other legitimate uses of the environment.”⁴ While this definition is broadly accepted, any further characterization of the term is likely to entail not only a descriptive, but also a normative dimension, and thus a potential for conflicting interpretations. From a mere technical point of view, pollution may be assumed zero for any substance as long as its occurrence remains below a given threshold defined by regulation. In contrast, the “health-based” approach (also followed by the current DWD) focuses on a comprehensive understanding of water quality that not only considers individual parametric values, but the overall cleanliness and wholesomeness of the water provided as well as consumers’ perception of it (e.g. taste), fostering trust in high quality water services beyond technical minimum requirements.

¹ Cf. Synthesis Report on the Quality of Drinking Water in the EU examining the Member States' reports for the period 2008-2010 under Directive 98/83/EC. Commission Report COM(2014)363 final, June 2014.

² Cf. i.e.: A Blueprint to Safeguard Europe’s Water Resources. COM(2012) 673 final.

³ For more detailed positions on the DWD evaluation exercise cf. also.: [CEEP opinion on the review of the Drinking Water Directive 98/83/EC \(DWD\)](#), January 2016.

⁴ For the purpose of this document, we will generally follow this definition, especially regarding the man-made aspects of pollution, as opposed to natural pollution, which will not be covered by this opinion.

This understanding is also in line with the precautionary principle as stipulated by recital 13 and art. 7 of the DWD with regard to parametric values and monitoring requirements. “Precaution” in the context of water policy entails two notions: First, that human health and environmental considerations should prevail in case of doubt regarding the harmfulness of a certain substance. Secondly, it implies the necessity of a precautionary protection of water bodies that are or may be used in the future for the abstraction of water intended for human consumption irrespective of whether or not there is any present negative impact of a given substance in order to preserve access to high quality drinking water for future generations without the need for excessive treatment requirements and at a reasonable cost.⁵

Any reference in this document to the quality of (drinking) water should thus be understood as based on and supporting a comprehensive approach, taking into account the precautionary principle.

Status quo: why “end-of-pipe” is not a suitable option

Water and sewage services’ providers among CEEP members have contributed considerably to the attainment of European and national standards. Following the concept of water as a public good, rather than a commodity, the provision with which they have been entrusted with by their local communities, and a comprehensive understanding of its quality, they prevalently go beyond legal requirements to deliver safe, clean and wholesome drinking water and preserve raw water resources for future generations.

However, these efforts cannot balance a lack of responsibility taken by some other actors: Continuing – often even increasing – pollution from agriculture, the production and use of pharmaceuticals, commercial transport or other sectors undermine the positive impact on water quality both at the source as well as at the tap the improvement of water and sewage services has had during the last decades, putting at risk availability of suitable raw water and leading to rising costs of treatment and disposal services.

While a certain degree of conflicting priorities between economic activity and the protection of water resources may be inevitable, responsibility for the latter to date has mainly been left to those at the “end of the pipe”: Water and sewage utilities, rather than the polluter itself, are expected to ascertain low pollution of drinking water and the necessary raw water resources (mostly by treatment), thereby externalizing the cost of pollution while benefits remain with the polluter. In addition, the adverse effects caused by pollution often considerably outweigh these benefits, rendering the shift of burden from individual or corporate polluters to water utilities and ultimately, to the citizens, even less acceptable. The situation is likely to be further aggravated in the future, as new pollutants enter the production chains, the impact of which hasn’t been assessed yet and the removal from water and sewage of which may prove extremely costly.

Yet in order to guarantee the provision of high quality drinking water and sewage services will remain possible in the long-term, a strategic protection of our resources is essential. Polluters should thus be better held accountable – in financial as well as other terms – for the negative impact caused in order

⁵ On this point, cf. also: Memorandum regarding the protection of European rivers and watercourses in order to protect the provision of drinking water. IAWR, RIWA, AWE, IAWD, AWRW. 2013.

to incentivize prevention and optimize follow-up measures, including additional treatment, if inevitable (“polluter-pays-principle”).

The way forward: key points to address when revising the EU water directives

- **Better integration of different EU water directives**

Many provisions of the current EU water directives deal, in essence, with the same questions and follow the same goals, offering a great potential for a comprehensive protection of “later-to be” drinking water at the source. Yet they are often not complementary, making a coherent implementation difficult and unnecessarily burdensome. A CIS Workshop on Better Integration of drinking water resources into the elaboration of River Basin Management Planes (RBMPs) held in 2014 in Rome as well as a follow-up workshop dealing with similar questions held in January 2016 in Brussels addressed this issue, but have not yet resulted in concrete action so far.⁶ Improving overall legal coherence between the different elements of EU legislation including DWD, WFD, GWD, ND and the Priority Substances Directive should thus be a priority during the upcoming or ongoing evaluation exercises and possible revisions. This may include, in particular, alignments of drinking water relevant threshold values in the WFD and GWD as well as Environmental Quality Standards under the Priority Substances Directive to the demands of the DWD. In addition, a more holistic approach to parametric values should be adopted, taking into account not only the potentially harmful effects of a single substance, but also to a greater extend specific combinations of substances. Finally, the dissemination of best practices of successfully integrated water management should also be further supported.⁷

- **Improved implementation and enforcement of existing legislation**

A substantial part of pollution stems not from – allegedly unsuitable – European legislation, but from poor implementation and enforcement at national level (cf., for instance, the ongoing infringement proceedings against Germany for violation of the Nitrates Directive). This may be countered through the provision of more or improved implementation guidance, keeping in mind that enough possibilities to take into account local aspects should be maintained, as well as better integration of water utilities into the elaboration of RBMPs and the implementation of measures under the WFD, regarding for instance monitoring duties or the assessment of the effectiveness of measures taken to relieve a given pressure. However, in case of persistent noncompliance disciplinary measures vis-à-vis Member States, especially if violation of duties under EU legislation continues over longer periods of time, should more frequently be used.

⁶ Cf. Background Paper of the Workshop “Better Integration of Drinking Water Resources Protection Considerations into River Basin Management Planning.” Rome, 1-2 October 2014.

⁷ For example, within the Netherlands, there are drinking water protection files, the so called ‘gebiedsdossiers voor drinkwaterwinningen’. Within these files municipalities, provinces, drinking water companies and water managers (e.g. regional water authorities) map the possible risks for the water quality. By highlighting these possible risks, the responsible organisation has time to respond and implement the necessary measures to deal with these risks.

- **Enforcement and more extensive application of the “polluter-pays-principle”**

As argued above, the effective protection of European water resources requires a common effort throughout the entire production chain – including consumers – instead of putting unilateral emphasis on the responsibilities of water utilities at the “end of the pipe”. Measures to ensure and enhance polluter responsibility may include better cross-checking of policies from other policy fields for a possible negative impact on source water quality (e.g. Common Agricultural Policy), minimizing such impact by improving product design and handling throughout the value chain and assuring adequate information is available to consumers regarding water-related environmental impacts of a given substance. A legal ban on the use of chemical herbicides beyond agricultural use (for instance a ban on the use by municipalities, companies etc.) should also be envisaged. The use of chemical herbicides outside agricultural areas is often the biggest source of for instance glyphosate pollution (as shows for e.g. data for the Netherlands where a ban was therefore introduced by March 2016).⁸ Furthermore, an adaption of the Ecodesign Directive and dispositions on eco-labelling should be envisaged (e.g. for cosmetics, pharmaceuticals).

- **Example: nitrate-pollution stemming from agricultural**

In many Member States, municipal water management has been adversely affected by increasing nitrate concentrations and other pollutants stemming from agriculture, especially in areas with high farming intensity, despite European legislation seeking to curb the problem. The situation is a vivid example of the insufficient implementation of a generally well-designed policy described above: The threshold of max. 50 mg of nitrate per liter water stipulated by the EU Nitrates Directive and the EU Groundwater Directive is well suited to foster a more sustainable use of nutrients, yet poor national implementation and enforcement diminish the positive impact on water and soil quality in many regions, leading to lower overall status of the affected water bodies⁹ and a rise in costs for drinking water providers. It is thus essential that the European Commission improves Member States’ performance by ascertaining that national legislation is in fact apt to reduce nitrogen surpluses and allows for effective monitoring of fertilization practices by including i.e. a farm-gate balance, provisions for sufficient storage capacity and effective riparian zones, measures allowing for effective data-comparison, provisions limiting “manure tourism” and, in particular, effective sanctions.

However, CEEP also highlights that, in general, Member States should be able to prioritize their focus substances, going beyond the need to tackle the challenge of nitrate related pollution as a restricted focus on only one substance risks Member States using the Drinking Water Directive as an excuse not to also work on other substances.

⁸ In this context, the current discussions regarding the European Commission’s decision to extend the license of glyphosate for 18 months at the end of June 2016 illustrate the importance of such an approach, calling to also take into account the effects of the metabolite AMPA and other not yet sufficiently known metabolites.

⁹ Cf. i.a.: Commission Communication: "The Water Framework Directive (WFD) and the Floods Directive (FD): Actions towards the ‘good status’ of EU water and to reduce flood risks", March 2015.

- **Example: micro-pollutants stemming from pharmaceuticals**

The consumption of pharmaceutical products intended for human or veterinary use has been increasing considerably over the last few decades and will most likely continue to do so due to demographic change and medicinal advancement. While better and more readily available medication has considerably improved human and animal health and wellbeing, it also bears considerable risks: Recent evidence suggests that the residues of various types of products that have been detected in a range of environmental compartments), including surface and groundwater bodies, may have an important negative impact on exposed humans and biota¹⁰.

Swift action at EU-level is thus essential and should not be further delayed. An ambitious strategic approach is needed, covering both pharmaceuticals for human as well as for veterinary use and taking into account all steps of the product chain, from research to the waste-water treatment level, including individual product design, approval and post-approval stage. For nanoparticles – whose use is not limited to medical products, but particularly likely to increase considerably in the future in this field – the thorough assessment of possible risks to human health and the environment should be mandatory at a relatively early stage of the development process due to the, to date, considerable difficulties in removing nanoparticles residues should they prove harmful at a later stage. In addition, since over-use of medication for humans and animals or incorrect disposal are a major cause for the current pollution levels, handling of products by consumers and medical or veterinary personnel should also be accounted for in a well-designed strategic approach. Suitable measures could include compulsory take back schemes, better consumer information, improved cross-compliance under the Common Agricultural Policy and training for medical or veterinary staff and farmers.¹¹

¹⁰ Cf. Study on the environmental risks of medicinal products – final report, BIO Intelligence for EAHC, December 2013.

¹¹ The successful implementation of new technologies also shows a way forward. For instance, in the Netherlands, projects on pharma filters were introduced in order to clean waste water from hospitals. After the solid and liquid waste has been separated, the waste water flows through a biological reactor where air is introduced and where bacteria remove the organic substances thoroughly. A large part of the nitrogen and phosphorus compounds are also removed. The water is then further purified by means of ozonisation and filtration through activated carbon. In this way, the values of the classic waste water purification parameters are reduced to the same levels as in a conventional sewage system.