Catalogue: Measures for a Future-Proof Drinking Water Supply

Inducement: Regarding the future protection of water resources a number of decisions are currently being taken. At the level of the Rhine river basin the most particular ones are the Rhine Ministers Conference on 13 February 2020 in Amsterdam and the programme "Rhine 2040". **The International Association of Waterworks in the Rhine Basin (IAWR**) is therefore presenting the following catalogue of identified measures which are required to ensure that the needed drinking water resources can be transferred to the next generation. In addition, the emerging climate crisis is strongly associated with a water crisis, so that from now on the protection of the remaining water resources must be given a top priority. Damage to water bodies, especially to groundwater quality, is usually long-lasting. The transfer of contaminated water resources to the next generations - our children and grandchildren - cannot be an option, because only clean drinking water will continue to provide a livelihood for people, the economy and the environment in the future. There is no alternative.

1. Priority for public drinking water supply: In regulatory permitting procedures, the priority of the public drinking water supply must be expressed **in superior water permits** and **longer permit periods** than those granted for other uses.

In explanation: Starting from the human organism, - after breathing air - drinking water has the highest significance as a foodstuff. Food is only of subordinated importance. This can be seen from the length of time until death after withdrawal of different types of foodstuff. The priorisation of competing water uses must be based on this order, e.g. the priority of drinking water use over agricultural use for food. Water pollution must also be regarded as an - indirect - competing (water) use, which in principle must take a lower position than the supply of clean drinking water.

2. Meet the target values of the European River Memorandum: The target values of the European River Memorandum (ERM, river basins of Rhine, Danube, Elbe, Maas, Ruhr) **need to be met**. **An initial quantitative reduction target of at least 70 % for micropollutants is regarded as absolutely necessary until the Rhine Ministerial Conference following the 2020 conference (at the latest in 2027)**, unless the occurrence and properties of a substance requires a more short-term intervention.

Objective: Water quality "*must be such that the **drinking water supply is possible using only simple near-natural purification methods***" (see International Commission for the Protection of the Rhine (ICPR), "Rhine 2020" programme, p. 7 (own highlighting), https://www.iksr.org/fileadmin/user_upload/DKDM/Dokumente/Fachberichte/DE/rp_De_0116.pdf). It makes sense to add a quantitative control of the achievement of the objectives so that there is no increase in the treatment effort for the provision of drinking water.

3. Close gaps in authorisation procedures

3a. The current **REACH procedure** at EU level is not an authorisation procedure, but a **mere registration procedure** in which only random samples of the dossiers submitted are checked for data quality and correctness. **Authorisation procedures** require specific legislation that exists in some particular areas **(plant protection products, biocides, pharmaceuticals, food/feed)**, but not in any other area. **Therefore in all other areas there is a regulatory gap in authorisations existing which must be closed quickly by effective legislative measures**.

Although Environmental Risk Assessments (ERA) are required for **new pharmaceuticals** since 2006, they are carried out by the manufacturers themselves and generally without publication of the results. For this reason, an ERA publication obligation is needed at EU level and, building on this, precautionary regulation is required.

c/o Stadtwerke Karlsruhe GmbH, Daxlander Straße 72, 76185 Karlsruhe, Deutschland ● Tel. +49 721 599 3202 ● Fax +49 721 599 3209
iawr@iawr.org ● www.iawr.org ● Finanzamt Karlsruhe-Stadt, St.-Nr. 35022/06880
Sparkasse Karlsruhe, IBAN DE02 6605 0101 0108 2869 56, BIC/SWIFT: KARSDE66XXX

3b. **Specify and comply with authorisation requirements**: **Before new substances, mixtures of substances and/or products are placed on the market**, the possible impact and relevance for the water cycle in terms of the precautionary principle are to be examined. Degradation and transformation products need to be included. The properties/measures required to protect the water cycle must be demonstrated and defined for new substances, mixtures of substances and/or products before they are placed on the market. **Only when these prerequisites have been fulfilled authorisation can be granted**. The same applies if an authorisation is to be renewed or newly granted.

4. Prevent the emission of PM(T) substances: The emission of **persistent, mobile (toxic), PM(T), and very persistent, very mobile (vPvM) substances** registered under EU legislation **should be phased out**, see https://www.umweltbundesamt.de/publikationen/protecting-the-sources-of-our-drinking-water-from. The IAWR therefore supports the ICPR recommendation (Feb. 2019): "*The ICPR recommends that the states in the Rhine catchment area test a reduction requirement for persistent or persistent and mobile substances which initially appear less ecotoxicologically relevant but which are discharged into water in large quantities, e.g. polymers as additives in cooling water, benzotriazole, dioxane and diglyme, for precautionary reasons. Special attention should be paid to substances classified as substances of very high concern (REACH Regulation (EC) No. 1907/2006)*", see p. 15, https://www.iksr.org/fileadmin/user_upload/DKDM/Dokumente/Fachberichte/DE/rp_De_0253.pdf.

5. Close gaps in permitting procedures under water law

5a. Permitting procedures under water law require **sufficient water management competence**. In the case of discharge permits, individual substances **including by-products, transformation and degradation products** must be **assessed from a synthetic-chemical and toxicological point of view**. The water authorities must ensure that this evaluation is carried out. **At present, it is often not possible to carry out an assessment of the composition and quantity (load) of an emission. This serious gap must be closed.**

5b. The **discharge permits** shall be made available to the public in a **transparent** manner.

5c. For discharges, a **prohibition subject to permission** must apply and be enforced. Discharge permits for industrial and commercial direct dischargers may not contain a blanket approval for an unknown number of unknown substances ("substances not regulated under water law"). In accordance with the precautionary principle, no discharge permit should be granted for avoidable discharges.

5d. The IAWR supports the ICPR recommendation: "*The ICPR recommends for industrial or commercial locations, where an efficient reduction of micropollutants could be achieved through the **pre-treatment of wastewater sub-streams**, to discuss and **regulate** such pre-treatment **nationally***"., Feb. 2019, see p. 15 (own highlighting), https://www.iksr.org/fileadmin/user_upload/DKDM/Dokumente/Fachberichte/DE/rp_De_0253.pdf.

5e. **Climate change** and global warming lead - at least temporarily or locally - **to diminishing water resources**. Each scarcity increases the significance of the remaining water resources. At the same time**, the scarcity of water resources in principle leads to a decline in their water quality due to rising concentrations of substances when the input of substances remains constant**. This results in a double shortage of high-quality or usable water resources**. As climate change progresses, the level of protection of water quality must therefore also be increased**: According to the reduction of the water quantity (discharge), the officially permitted discharge (pollutant load) must be reduced if an increase in pollutant concentration and deterioration in water quality is to be avoided. Accordingly, **the granting of discharge permits must be based on the assumption of low water discharges**.

5f. Support the **establishment of a transparent European emissions register** (direct emitters) containing information on the composition of wastewater streams (discharge quantities, environmental behaviour, mineralisation/persistence, transformation/by-product formation, toxicity, ecotoxicity). The emissions register should record discharge quantities of 300 kg or more per day.

c/o Stadtwerke Karlsruhe GmbH, Daxlander Straße 72, 76185 Karlsruhe, Deutschland ● Tel. +49 721 599 3202 ● Fax +49 721 599 3209
iawr@iawr.org ● www.iawr.org ● Finanzamt Karlsruhe-Stadt, St.-Nr. 35022/06880
Sparkasse Karlsruhe, IBAN DE02 6605 0101 0108 2869 56, BIC/SWIFT: KARSDE66XXX

6. Support for organic farming

6a. The IAWR supports the ICPR recommendation: "*The support of environmentally and water-friendly agriculture (especially organic farming) is recommended by the ICPR*", Feb. 2019, https://www.iksr.org/fileadmin/user_upload/DKDM/Dokumente/Fachberichte/DE/rp_De_0253.pdf.

The advantages of organic farming over conventional agriculture are unambiguous regarding the lower use of nutrients and plant protection products, see Thünen Report 65, January 2019, https://www.thuenen.de/media/publikationen/thuenen-report/Thuenen_Report_65.pdf.

6b. **Reorientation of the EU's Common Agricultural Policy**: If water protection is to be effectively established, a preceding agricultural turnaround is a prerequisite. This **must be financed in the EU from funds for the Common Agricultural Policy (CAP)**. **Such a reorientation can be made reality if the EU Member States in the Rhine catchment area decide in favour of such a reorientation in the forthcoming CAP renewal and adopt this as their own position in the European Council. A further period of inappropriate financial incentives in EU agricultural policy is unacceptable from the point of view of water protection. The resulting damage would hardly be financially affordable and in many places irreparable.**

7. Enforce the polluter pays principle for plant protection products: The polluter pays principle must be fully implemented and effectively enforced with regard to the protection of water resources against plant protection products (see **EU Parliament resolution of 12 February 2019** (P8_TA(2019)0082) on the implementation of Directive 2009/128/EC on the sustainable use of pesticides).

8. The prophylactic use of antibiotics in animal husbandry must be stopped in the short term, as it poses an irresponsible threat to public health (multi-resistant microorganisms) as well as to water bodies - and not only when **reserve antibiotics** are given.

9. Extended product liability: **In the case of pharmaceuticals and their degradation and transformation products**, all financial beneficiaries of a product must make their financial contribution according to their own level of financial benefit in the value chain (**distribution of the costs of the subsequent removal of an unavoidable pollutant according to the distribution of the financial profit within the value chain of a product**). The IAWR therefore supports the decision of the **German Bundesrat of 28 June 2019** (printed matter 115/19) as well as the decision of the **92nd Conference of Environment Ministers of Hamburg of 10 May 2019** to ensure a cost allocation according to the polluter pays principle for the elimination of chemical residues and to establish an **extended product liability,** TOP 8, https://www.umweltministerkonferenz.de/Dokumente- UMK-Dokumente.html.

As a proposed solution, the study by Civity commissioned by BDEW together with Prof. Schitthelm's **fund approach** was brought into the discussion in Germany as part of the BMU/UBA financing workshop of the German "Spurenstoffdialog", https://www.bdew.de/wasser-abwasser/spurenstoffe-in-gewaessern/arzneimittelverbrauch-im-spannungsfeld-des-demografischen-wandels/.

Focusing solely on increasing the performance of wastewater treatment plants would not only be simply unjust and disregard the polluter-pays principle, but would also encourage pollution by other sources, e.g. industrial direct dischargers, and would generally be contrary to the precautionary principle.

10. Disposal of pharmaceuticals

10a. In the case of pharmaceuticals in Germany, for **a proper disposal** of empty containers and residual quantities an obligation to provide **specific disposal information on package inserts is lacking.** This must be regulated urgently. Subsequently, education of the general public must be further intensified and, when **dispensing in pharmacies, proper waste disposal information must be given to each customer.**

c/o Stadtwerke Karlsruhe GmbH, Daxlander Straße 72, 76185 Karlsruhe, Deutschland ● Tel. +49 721 599 3202 ● Fax +49 721 599 3209
iawr@iawr.org ● www.iawr.org ● Finanzamt Karlsruhe-Stadt, St.-Nr. 35022/06880
Sparkasse Karlsruhe, IBAN DE02 6605 0101 0108 2869 56, BIC/SWIFT: KARSDE66XXX

10b. Unused residual quantities of medicinal products can be reduced by adjusting **package size** to the durability and expected consumption rate when prescribing and selling the product respectively.

10c. **X-ray contrast media** can hardly be removed with the most commonly used methods in wastewater treatment and drinking water purification (ozone, activated carbon, ultrafiltration, etc.). Current research results have documented the success of **providing urine bags** to patients to reduce the input of substances into the environment (e.g. MERKMAL project, https://merkmal-ruhr.de/). The availability of urine bags should therefore quickly become mandatory. In Germany, this concept was introduced into the "Spurenstoffdialog".

11. Consider drinking water concerns in groundwater/environmental quality standards: Consideration of drinking water quality requirements in the **derivation of groundwater and environmental quality standards (EQS)**: Priorisation and derivation are currently carried out purely on a toxicological basis. Other quality aspects relevant to drinking water, such as acceptance and precaution, are explicitly not taken into account, e.g. the limit value for plant protection product Isoproturon in the Drinking Water Directive is 0.1 µg/L, the EQS is 0.3 µg/L.

The **adaptation of groundwater and environmental quality standards** must also be facilitated in order to be able to react more quickly and flexibly to new scientific findings and emerging substances.

12. Support for projects to increase the appreciation of water.

Concluding remarks on implementation

The proposed requirements for action and measures should be implemented **swiftly cross-departmental** - and in view of the advancing climate change - in **national legal/administrative requirements** and at EU level via the **Council positions of the EU Member States in the Rhine catchment area as well as the EU Commission. Management plans and programmes of measures** under the **Water Framework Directive** are available for further implementation of these measures in the EU. **International EU trade and investment protection agreements** must also fully substantively respect the precautionary principle and should make a binding declaration on this in the initial provisions.

Water protection equals drinking water and health protection, local drinking water equals water protection.

It is proposed to generally establish the **foresighted avoidance of problems (precautionary principle; avoidance before focusing on reducing problems)** as a **guiding principle** of future policy. In this way, **impulses for sustainable innovations** can also be set.

Water management and water protection in the Rhine catchment area have so far been a **success story with worldwide exemplary character**. With water being the central resource of life as well as the **progressing climate change**, this should be maintained unconditionally and this current challenge needs to seen as an **opportunity** that is considered as **feasible**.

Karlsruhe, 30 July 2019

c/o Stadtwerke Karlsruhe GmbH, Daxlander Straße 72, 76185 Karlsruhe, Deutschland ● Tel. +49 721 599 3202 ● Fax +49 721 599 3209
iawr@iawr.org ● www.iawr.org ● Finanzamt Karlsruhe-Stadt, St.-Nr. 35022/06880
Sparkasse Karlsruhe, IBAN DE02 6605 0101 0108 2869 56, BIC/SWIFT: KARSDE66XXX