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Subject: Proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption (recast)
– General approach

I. INTRODUCTION

1. On 1 February 2018, the Commission adopted its recast proposal for a Directive of the European Parliament and of the Council on the quality of water intended for human consumption ¹, the so-called Drinking Water Directive (DWD).

2. This recast proposal aims to update water quality standards, to introduce a risk-based approach to the monitoring of water, to improve the information on water quality and water services provided to consumers, to harmonise standards for materials in contact with drinking water and to improve access to water.

¹ 5846/18 + ADD 1 to ADD 5.

3. The Economic and Social Committee adopted its opinion on the proposal on 11 July 2018. The Committee of the Regions adopted its opinion on the proposal on 16 May 2018.
4. The European Parliament's plenary adopted its amendments to the Commission proposal on 23 October 2018 (with 300 votes in favour, 98 votes against and 274 abstentions).

II. WORK AT THE COUNCIL

5. The Commission presented its legislative proposal and the accompanying impact assessment to the Working Party on the Environment (WPE) on 13 February 2018. The WPE held substantive discussions on the proposal and its impact assessment over the course of several meetings. Two issues were identified as requiring political guidance from the Council: Materials in contact with drinking water and access to water. On 25 June 2018, the Council (Environment) held a policy debate on these two key issues of the proposal.
6. Discussions continued at expert level and substantial progress was made during the Romanian Presidency who put forward balanced compromises on several aspects of the recast proposal, notably, on food business, risk based approach to water safety, information to the public and Annexes I to IV. Nevertheless, some Member States remained apprehensive on several provisions of the recast proposal.
7. The Presidency held bilaterals with delegations, on 12 and 13 February 2019, to identify Member States most pressing concerns and red-lines. Taking these into account, the Presidency prepared a compromise text and submitted it to the Permanent Representatives Committee (Coreper) for discussion ².

² 6374/19.

8. On 22 February 2019, Coreper examined the Presidency compromise text. Following the discussion at Coreper, the Presidency agreed to introduce changes to Annex I Part B (value for Lead and Note), to Annex I Part C and Annex II Part A (*Clostridium perfringens* and somatic coliphages Notes) and to Annex III Part A point g) (on *Legionella*). In addition, the Presidency agreed to some editorial changes with the aim of improving the clarity of the text.

9. Discussions at Coreper also showed that there was wide support for reaching a general approach at the Environment Council on 5 March and that, in general, the Presidency compromise text provided a good basis for the discussion at Council. However, during Coreper's meeting some delegations still raised concerns over the two key issues of the recast proposal.

III. MAIN ISSUES OF CONCERN

Materials in contact with drinking water

10. The Commission's recast proposes to harmonise test methods for products in contact with drinking water through standardization under the Construction Products Regulation (CPR). A standardisation mandate, to be issued under the CPR, would define technical specifications and methods to test products in contact with drinking water for compliance with hygiene and safety requirements.

11. At the Council (Environment) debate on 25 June 2018, Ministers expressed preference for a different approach and suggested instead to set hygienic requirements in the DWD itself. Subsequently, a group of Member States put forward a text proposal where minimum hygiene requirements for materials in contact with drinking water would be established under the DWD through implementing acts. These implementing acts would lay down:
 - European positive lists of starting substances or compositions authorized to be used for manufacturing of materials;
 - Common methodologies for testing and accepting such substances or compositions;
 - Procedures and methods for testing and accepting materials in their final form;
 - The procedure for applications to include or remove starting substances and compositions from the European positive lists;
 - A marking for products in contact with drinking water indicating conformity with the DWD.
12. The Presidency's compromise text for the articles on materials in contact with drinking water relies heavily on these Member States proposal. At Coreper, the Presidency's compromise text was supported by a large majority of Member States. Nevertheless, some Member States that are not familiar with this approach have raised concerns over the possible consequences of its implementation and asked for more time to analyse the proposal. The Commission has also raised several concerns regarding this approach.

Access to water

13. The provisions to improve access to water have been prompted by the European Citizens initiative "Right2Water". The Commission's recast proposal introduces two new obligations for the Member States: 1) To improve access to and promote the use of drinking water and 2) to take all necessary measures to ensure access to drinking water for vulnerable and marginalized groups.
14. At the Council (Environment) debate on 25 June 2018, there was general agreement towards the principle of improved access to water but Member States views differed as to the means for achieving it. On the one hand, some Member States raised concerns over the suitability of regulating the obligation to assure access to water in a rather technical legislative instrument that is meant to oversee the quality standards for drinking water. On the other hand, other Member States have highlighted the importance of responding to European Citizens initiative by including provisions on access to water in the DWD.
15. Discussions at Coreper, have shown that the Presidency proposal on access to water is most likely to be accepted by Member States as it manages to strike a balance between the different positions of delegations by providing the necessary flexibility for Member States to adopt measures adequate to their geographic, social and cultural circumstances, in full respect of the principle of subsidiarity.

IV. CONCLUSION

16. On the two key issues, as discussions in COREPER showed that the compromise text set a delicate balance that could be accepted by most delegations, the Presidency decided to maintain the text of its compromise proposal, with the exception of some editorial adjustments.

17. The revised Presidency compromise text is set out in the Annex to this note. Changes compared to the previous version are marked in **bold underlined** and deletions with ~~strikethrough underlined~~ and changes compared to the initial Commission's proposal are marked in **bold** and deletions with ~~strikethrough~~).
 18. The Council is invited to address the identified issues of concern with a view to reach an agreement on the general approach set out in the Annex to this note. The general approach will constitute the Council's mandate for future negotiations with the European Parliament in the context of the Ordinary Legislative Procedure.
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Proposal for a
DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
on the quality of water intended for human consumption (recast)

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union and, in particular,
Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee³,

Having regard to the opinion of the Committee of the Regions⁴

Acting in accordance with the ordinary legislative procedure,

Whereas:

- (1) Council Directive 98/83/EC⁵ has been substantially amended several times⁶. Since further amendments are to be made, that Directive should be recast in the interests of clarity.

³ OJ C [...], [...], p. [...].

⁴ OJ C [...], [...], p. [...].

⁵ Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption (OJ L 330 5.12.1998, p. 32).

⁶ See Annex V.

- (2) Directive 98/83/EC set the legal framework to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean. This Directive should pursue the same objective. To that end, it is necessary to lay down at Union level the minimum requirements with which water intended for that purpose must comply. Member States should take the necessary measures to ensure that water intended for human consumption is free from any micro-organisms and parasites and from substances which, in certain cases, constitute a potential danger to human health, and that it meets those minimum requirements.
- (3) It is necessary to exclude from the scope of this Directive natural mineral waters and waters which are medicinal products, since these waters are respectively covered by Directive 2009/54/EC of the European Parliament and of the Council⁷ and Directive 2001/83/EC of the European Parliament and of the Council⁸. However, Directive 2009/54/EC deals with both natural mineral waters and spring waters, and only the former category should be exempted from the scope of this Directive. In accordance with the third subparagraph of Article 9(4) of Directive 2009/54/EC, spring waters should comply with the provisions of this Directive **and with regard to microbiological requirements spring water should satisfy the provisions of Article 5 of Directive 2009/54/EC**. In the case of water intended for human consumption put into bottles or containers intended for sale or used in the manufacture, preparation or treatment of food, the water should comply with the provisions of this Directive until the point of compliance (i.e. the tap), and should afterwards be considered as food, **if it is intended to be, or reasonably expected to be ingested by humans**, in accordance with the second subparagraph of Article 2 of Regulation (EC) No 178/2002 of the European Parliament and of the Council⁹.

⁷ Directive 2009/54/EC of the European Parliament and of the Council of 18 June 2009 on the exploitation and marketing of natural mineral waters (Recast) (OJ L 164, 26.6.2009, p. 45).

⁸ Directive 2001/83/EC of the European Parliament and of the Council of 6 November 2001 on the Community code relating to medicinal products for human use (OJ L 311, 28.11.2001, p. 67).

⁹ Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (OJ L 31, 1.2.2002, p. 1).

In addition, food business operators that have their own water source and use it for the specific purposes of their business, may be exempted from the provisions of this Directive provided they comply with relevant obligations regarding hazard analysis and critical control point principles and remedial actions under relevant Union legislation on food. The food business operators that have their own water source and act as water suppliers should comply with the provisions of this Directive as any other water supplier.

- (4) Following the conclusion of the European citizens' initiative on the right to water (Right2Water)¹⁰, a Union-wide public consultation was launched and a Regulatory Fitness and Performance (REFIT) Evaluation of Directive 98/83/EC was performed¹¹. It became apparent from that exercise that certain provisions of Directive 98/83/EC needed to be updated. Four areas were identified as offering scope for improvement, namely the list of quality-based parametric values, the limited reliance on a risk-based approach, the imprecise provisions on consumer information, and the disparities between approval systems for materials in contact with water intended for human consumption. In addition, the European citizens' initiative on the right to water identified as a distinct problem the fact that part of the population, especially marginalised groups, has no access to water intended for human consumption, which is also a commitment under Sustainable Development Goal 6 of UN Agenda 2030. A final issue identified is the general lack of awareness of water leakages, which are driven by underinvestment in maintenance and renewal of the water infrastructure, as also pointed out in the European Court of Auditors' Special Report on water infrastructure¹².

¹⁰ COM(2014) 177 final.

¹¹ SWD(2016) 428 final.

¹² Special report of the European Court of Auditors SR 12/2017: "*Implementing the Drinking Water Directive: water quality and access to it improved in Bulgaria, Hungary and Romania, but investment needs remains substantial*".

- (5) The World Health Organisation (WHO) Regional Office for Europe conducted a detailed review of the list of parameters and parametric values laid down in Directive 98/83/EC in order to establish whether there is a need to adapt it in light of technical and scientific progress. In view of the results of that review¹³, enteric pathogens and *Legionella* should be controlled, six chemical parameters or parameter groups should be added, and three representative endocrine disrupting compounds should be considered with precautionary benchmark values. **These three endocrine disrupting compounds should be included in a new watch list mechanism to be monitored with regard to their potential presence in water intended for human consumption.** For ~~three four~~ of the ~~six~~ new parameters, parametric values that are more stringent than the ones proposed by the WHO, yet still feasible, should be laid down in light of **recent scientific opinions** and the precautionary principle. **For one of the new parameters the number of representative substances has been reduced and the value adapted.** For lead, the WHO **recommended to retain the current parametric value, but** noted that concentrations should be as low as reasonably practical. **Therefore, this value has been maintained accompanied by minimisation measures that could support achieving a lower aspirational value within a transitional period of fifteen years should apply before the values become more stringent.** and f For chromium, the value remains under WHO review; therefore, ~~for both parameters~~, a transitional period of ~~ten~~ **fifteen** years should apply before the values becomes more stringent.
- (6) The WHO also recommended that three parametric values be made less stringent and five parameters be removed from the list. Nevertheless, not ~~those all of these~~ changes are **not** considered necessary as the risk-based approach introduced by Commission Directive (EU) 2015/1787¹⁴ allows water suppliers to remove a parameter from the list to be monitored under certain conditions. Treatment techniques to meet those parametric values are already in place.

¹³ Drinking Water Parameter Cooperation Project of the WHO Regional Office for Europe "Support to the revision of Annex I Council Directive 98/83/EC on the quality of water intended for human consumption (Drinking Water Directive) Recommendation", 11 September 2017.

¹⁴ Commission Directive (EU) 2015/1787 of 6 October 2015 amending Annexes II and III to Council Directive 98/83/EC on the quality of water intended for human consumption (OJ L 260, 7.10.2015, p. 6).

- (6a) The parametric values are based on the scientific knowledge available and the precautionary principle and are selected to ensure that water intended for human consumption can be consumed safely on a life-long basis, thus ensuring a high level of health protection;
- (6b) A balance should be struck to prevent both microbiological and chemical risks and to that end, in the light of a future review of the parametric values, the establishment of parametric values applicable to water intended for human consumption should be based on public-health considerations and on a method of assessing risk;
- (7) Where necessary to protect human health within their territories, Member States should be required to set values for additional parameters not included in Annex I .
- (7a) Safe water intended for human consumption means not only absence of harmful microorganisms and substances, but also the presence of certain amounts of natural minerals and essential elements, taking into consideration that long-term consumption of demineralized water or water very low in essential elements such as calcium and magnesium may compromise human health. Certain amount of these minerals is also vital in order to ensure the water is neither aggressive nor corrosive and to improve taste of water. Minimum concentrations of these minerals in softened or demineralised water could be considered in accordance with local conditions.

(8) Preventive safety planning and risk-based elements were only considered to a limited extent in Directive 98/83/EC. The first elements of a risk-based approach were already introduced in 2015 with Directive (EU) 2015/1787, which amended Directive 98/83/EC so as to allow Member States to derogate from the monitoring programmes they have established, provided credible risk assessments are performed, which may be based on the WHO's Guidelines for Drinking Water Quality¹⁵. Those Guidelines, laying down the so-called "Water Safety Plan" approach, **including for small communities**¹⁶, together with standard EN 15975-2 concerning security of drinking water supply, are internationally recognised principles on which the production, distribution, monitoring and analysis of parameters in water intended for human consumption are based. They should be maintained in this Directive. To ensure that those principles are not limited to monitoring aspects, to focus time and resources on risks that matter and on cost-effective source measures, and to avoid analyses and efforts on non-relevant issues, it is appropriate to introduce a complete risk-based approach **to water safety, throughout that covers the whole supply chain, from the catchment area, abstraction area, treatment, storage and to distribution until the tap to the point of compliance**. That approach should consist of three components: first, an assessment ~~by the Member State~~ of the hazards associated with **the catchment area(s)** for the abstraction area points ("hazard-risk assessment and risk management of the catchment area(s) for the abstraction points"), in line with the WHO's Guidelines and Water Safety Plan Manual¹⁷; second, a possibility for the water supplier to adapt monitoring to the main risks **and take the necessary measures to manage the risks identified in the supply chain from the abstraction, treatment, storage and distribution of water** ("supply risk assessment and risk management for the supply system"); and third, an assessment ~~by the Member State~~ of the possible risks stemming from the domestic distribution systems (e.g. *Legionella* or lead) ("domestic distribution risk assessment and risk management for domestic distribution system"). Those assessments should be regularly reviewed, *inter alia*, in response to threats from climate-related extreme weather events, known changes of human activity in the

¹⁵ Guidelines for drinking water quality, Fourth Edition, World Health Organisation, 2011
http://www.who.int/water_sanitation_health/publications/2011/dwq_guidelines/en/index.html.

¹⁶ http://www.euro.who.int/__data/assets/pdf_file/0004/243787/Water-safety-plan-Eng.pdf;
https://apps.who.int/iris/bitstream/handle/10665/75145/9789241548427_eng.pdf;jsessionid=2F74141084126319713559E5F4E854C2?sequence=1

¹⁷ Water Safety Plan Manual: step-by-step risk management for drinking water suppliers, World Health Organisation, 2009,
http://apps.who.int/iris/bitstream/10665/75141/1/9789241562638_eng.pdf.

abstraction area or in response to source-related incidents. The risk-based approach ensures a continuous exchange of information between competent authorities and water suppliers.

In order to reduce the potential administrative burden for the water suppliers supplying between 10 m³ and 100 m³ per day as an average or serving between 50 and 500 people, Member States could have the possibility to exempt them from performing a supply risk assessment provided that a regular monitoring in accordance with Article 11 is carried out.

(9) The hazard risk assessment and risk management of the catchment area(s) for the abstraction point(s) should be geared towards reducing the level of treatment required for the production of water intended for human consumption, for instance by reducing the pressures causing the pollution of water bodies used for abstraction of water intended for human consumption. To that end, Member States should identify characterize the catchment area(s) of the abstraction point(s), identify hazards and hazardous events that could deteriorate the quality of water, and e.g. possible pollution sources associated with those water catchment area(s); bodies and, when necessary for the identification of the hazards, monitor pollutants which they identify as relevant, for instance because of the hazards identified (e.g. microplastics, nitrates, pesticides or pharmaceuticals identified under Directive 2000/60/EC of the European Parliament and of the Council¹⁸), because of their natural presence in the abstraction area (e.g. arsenic), or because of information from the water suppliers (e.g. sudden increase of a specific parameter in raw water). Based on the risk assessment for the catchment area(s) for the abstraction point(s), management measures to prevent or control the risks identified should be taken to ensure the quality of the water intended for human consumption. Those parameters should be used as markers that trigger action by competent authorities to reduce the pressure on the water bodies, such as prevention or mitigating measures (including research to understand impacts on health where necessary), to protect those water bodies and address the pollution source, in cooperation with water suppliers and stakeholders. Where a Member State finds, via the identification of hazards and hazardous events, that a parameter is not present in catchment area(s) for the abstraction point(s) (for instance because that substance never occurs in groundwaters or surface waters), then the Member State should inform the relevant water suppliers and may allow them to decrease the monitoring frequency for that parameter, or remove that parameter from the list of parameters to be monitored, without carrying out a supply risk assessment.

¹⁸ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

(10) As regards the hazard assessment, Directive 2000/60/EC requires Member States to identify water bodies used for the abstraction of water intended for human consumption, monitor them, and take the necessary measures to avoid deterioration in their quality in order to reduce the level of purification treatment required in the production of water that is fit for human consumption. To avoid any duplication of obligations, Member States should, when carrying out the identification of hazards and hazardous events assessment, make use of the available monitoring carried out under Articles 7 and 8 of Directive 2000/60/EC and Annex V to that Directive and of the measures included in their programmes of measures pursuant to Article 11 of Directive 2000/60/EC or other relevant Union legislation, representative for the catchment area(s). Nevertheless, in cases where such monitoring data is not available, monitoring of relevant parameters, substances or pollutants could be put in place in order to support the characterization of the catchment area(s) and assess possible risks. Such monitoring should be put in place considering local situations and pollution sources.

(11) The parametric values used to assess the quality of water intended for human consumption are to be complied with at the point where water intended for human consumption is made available to the appropriate user. However, the quality of water intended for human consumption can be influenced by the domestic distribution system. The WHO notes that, in the Union, *Legionella* causes the highest health burden of all waterborne pathogens. It is transmitted by warm water systems through inhalation, for instance during showering. It is therefore clearly linked to the domestic distribution system. Since imposing a unilateral obligation to monitor all private and public premises for this pathogen would lead to unreasonably high costs, a domestic distribution risk assessment is therefore more suited to address this issue. In addition, the potential risks stemming from products and materials in contact with water intended for human consumption should also be considered in the domestic distribution risk assessment. The domestic distribution risk assessment should therefore include, *inter alia*, focusing monitoring on priority premises **as identified by Member States (such as hospitals, healthcare institutions, childcare facilities, schools, educational institutions, buildings with a lodging facility, restaurants, bars, sports and shopping centers, penal institutions and campgrounds)**, assessing the risks stemming from the domestic distribution system and related products and materials, ~~and verifying the performance of construction products in contact with water intended for human consumption on the basis of their declaration of performance in accordance with Regulation (EU) No 305/2011 of the European Parliament and of the Council¹⁹. The information referred to in Articles 31 and 33 of Regulation (EC) No 1907/2006 of the European Parliament and of the Council²⁰ is also to be supplied together with the declaration of performance.~~ On the basis of this assessment, Member States should take all necessary measures to ensure, *inter alia*, that appropriate control and management measures (e.g. in case of outbreaks) are in place, in line with the guidance of the WHO²¹, and that the migration from construction products does not

¹⁹ Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC (OJ L 88, 4.4.2011, p. 5).

²⁰ Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (OJ L 396, 30.12.2006, p. 1).

²¹ "Legionella and the prevention of Legionellosis", World Health Organisation, 2007, http://www.who.int/water_sanitation_health/emerging/legionella.pdf

endanger human health. However, without prejudice to Regulation (EU) No 305/2011, where these measures would imply limits to the free movement of products and materials in the Union, these limits need to be duly justified and strictly proportionate, and not constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.

- (12) The provisions of Directive 98/83/EC on quality assurance of treatment, equipment and materials did not succeed in addressing obstacles to the internal market when it comes to the free circulation of construction products in contact with water intended for human consumption. National product approvals are still in place, with different requirements from one Member State to another. This renders it difficult and costly for manufacturers to market their products all over the Union. The removal of technical barriers may only be effectively achieved by establishing harmonised **minimum requirements for materials** ~~technical specifications for construction products~~ in contact with water intended for human consumption ~~in this Directive under Regulation (EU) No 305/2011. That Regulation allows for the development of European standards harmonising the assessment methods for construction products in contact with water intended for human consumption and for threshold levels and classes to be set in relation to the performance level of an essential characteristic. To that end, a standardisation request specifically requiring standardisation work on hygiene and safety for products and materials in contact with water intended for human consumption under Regulation (EU) No 305/2011 has been included in the 2017 standardisation Work Programme²², and a standard is to be issued by 2018. The publication of this harmonised standard in the Official Journal of the European Union will ensure a rational decision making for placing or making available on the market safe construction products in contact with water intended for human consumption. As a consequence, the provisions on equipment and material in contact with water intended for human consumption should be deleted, partly replaced by provisions related to the domestic distribution risk assessment and complemented by relevant harmonised standards under Regulation (EU) No 305/2011.~~

²² SWD(2016) 185 final.

(12a) The nature of materials in contact with water intended for human consumption can have an impact on quality of such water by migration of potentially harmful substances, enhancing microbial growth and or by influencing odour, colour or taste of such water. The evaluation of Directive 98/83/EC found that the Article on quality assurance of treatment, equipment and materials provided too much legal flexibility that led to different national approval systems of materials that come into contact with water intended for human consumption across the EU territory. Therefore, there is a need to establish more specific minimum hygiene requirements for materials that are intended to be used for the abstraction, treatment or distribution of water intended for human consumption in new installations or in existing installations in case of repair works or reconstruction or new installations in order to ensure that they do not compromise either directly or indirectly human health, affect adversely the colour, odour or taste of the water, enhance microbial growth in the water or leach contaminants into the water at levels that are higher than necessary in view of the intended purpose.

For this purpose, this Directive should set out minimum hygiene requirements for materials, starting and substances or compositions, by establishing assessment methodologies, European positive lists, methods and (administrative) procedures for adding to or reviewing starting substances or compositions on positive lists, and assessment methodologies for final materials in their final form.

The European positive lists are the lists of starting substances or compositions, depending on the type of materials (organic, cementitious, metallic, enamels and ceramic or other inorganic materials) authorized to be used for manufacturing of materials, including, where appropriate, conditions for their use and migration limits. For the inclusion of a starting substance or composition in a positive list a risk assessment of the starting substance itself, relevant impurities and foreseeable reaction and degradation products in the intended use are required. The risk assessment should cover the potential migration under worst foreseeable conditions of use and the toxicity. Based on the risk assessment the authorisation has to, if necessary, set out specifications for the starting substance or composition and restrictions of use, quantitative restrictions or migration limits for the starting substance, possible impurities and reaction products or constituents to ensure the safety of the final material or article.

Starting substances and compositions used in the manufacture of materials or articles may contain impurities originating from their manufacturing or extraction process. These impurities are non-intentionally added together with other non-intended substance formed in the production of the material or in use (non-intentionally added substance – NIAS). As far as they are relevant as a result of the risk assessment the impurities or reaction products of a starting substance should be considered and if necessary be included in the specifications of a starting substance.

Metallic materials consist of alloying elements and impurities. They are approved by listing tested and approved compositions in a European Positive List. The compositions are defined by the content of alloying elements and maximum content of impurities.

In order to facilitate uniform compliance testing of products to the requirements in this Directive the Commission may request CEN to develop harmonized test standards and product standards. When updating the European positive lists the Commission shall ensure compatibility between this Directive and the product standards developed under EU products legislation.

The requirements of this directive will have to be considered in product regulation such as Regulation (EU) no. 305/2011. According to these regulations the assessment and verification of constancy of performance (AVCP) has to be issued. Commission Decision (2002/359/EC) requires the system 1 + for construction products in contact with drinking water. This system for the attestation of conformity should also apply for other products in contact with drinking water.

Furthermore, no later than ~~8~~ 9 years after the date of transposition of this Directive, the functioning of this system should be reviewed in order to assess whether the protection of human health is ensured throughout the Union and whether proper functioning of the internal market for materials in contact with water intended for human consumption is ensured. In addition, it should be assessed whether any further legislative proposal on the matter is needed, taking into account in particular the outcome of the evaluation of Regulation (EU) No 1935/2004 and Regulation (EU) No 305/2011.

(12 a new) Treatment chemicals and filter media could be used to treat the raw water in order to obtain a water which is suitable for human consumption. However, treatment chemicals and filter media may present risks for drinking water safety. Therefore, procedures for the treatment and disinfection of drinking water must ensure the use of treatment chemicals and filter media that are effective, safe and properly managed to avoid adverse effects on consumer health. In this perspective treatment chemicals and filter media need to be assessed with regard to their characteristics, hygienic requirements, and purity and should not be used more than necessary to avoid risks for human health. Treatment chemicals shall not enhance the microbial growth except it is intended (e.g. for enhancement of microbial denitrification). Member States should guarantee the quality assurance of treatment chemicals and filter media without prejudice to the Biocides Regulation (No. 528/2012) and using existing EN standards when available.

It is essential to ensure that each product, as well as containers of chemical reagents and filter media, in contact with drinking water placed on the market bear clearly legible and indelible marking informing consumers, water suppliers, installers, authorities and regulators that the item is fit for use in contact with drinking water (according to the conditions indicated in the related authorization).

- (12b) **With the aim to minimise the potential presence of lead content in water intended for human consumption, components made of lead in domestic distribution systems can be substituted whenever it is economically and technically feasible, in particular in case of repair or reconstruction works in existing installations. These components could be substituted by materials which comply with the minimum requirements for materials that come into contact with water as established by this Directive. In order to accelerate this process, Member States could envisage measures for the substitution of components made of lead in existing domestic distribution systems or take other appropriate measure to raise awareness about the risks identified .**
- (13) Each Member State should ensure that monitoring programmes are established to check that water intended for human consumption meets the requirements of this Directive. Most of the monitoring carried out for the purposes of this Directive is performed by water suppliers. A certain flexibility should be granted to water suppliers as regards the parameters they monitor for the purposes of the **supply risk assessment and risk management of the supply system**. If a parameter is not detected, water suppliers should be able to decrease the monitoring frequency or stop monitoring that parameter altogether. The **supply risk assessment of the supply system** should be applied to most parameters. However, a core list of parameters should always be monitored with a certain minimum frequency. This Directive mainly sets provisions on monitoring frequency for the purposes of compliance checks and only limited provisions on monitoring for operational purposes. Additional monitoring for operational purposes may be necessary to ensure the correct functioning of water treatment, at the discretion of water suppliers. In that regard, the water suppliers may refer to the WHO's Guidelines and Water Safety Plan Manual.

- (14) The risk-based approach should gradually be applied by all water suppliers, including small water suppliers, as the evaluation of Directive 98/83/EC showed deficiencies in its implementation by those suppliers, which were sometimes due to the cost of performing unnecessary monitoring operations. When applying the risk-based approach, security concerns should be taken into account.
- (15) In the event of non-compliance with the standards imposed by this Directive the Member State concerned should immediately investigate the cause and ensure that the necessary remedial action is taken as soon as possible to restore the quality of the water. In cases where the water supply constitutes a potential danger to human health, the supply of such water should be prohibited or its use restricted. ~~In addition, it is important to clarify that failure to meet the minimum requirements for values relating to microbiological and chemical parameters should automatically be considered by Member States as a potential danger to human health.~~ In cases where remedial action is necessary to restore the quality of water intended for human consumption, in accordance with Article 191(2) of the Treaty, priority should be given to action which rectifies the problem at source.

(15 bis)-(16) Member States should no longer be authorised to grant derogations from this Directive. Derogations were initially used to allow Member States up to nine years to resolve a non-compliance with a parametric value. This procedure proved to be burdensome for Member States and Commission alike. In addition, in some cases, it led to delays in remedial actions being taken, as the possibility for derogation was considered as a transitional period. The provision on derogations should therefore be deleted. For reasons of protection of human health, when parametric values are exceeded, the provisions related to remedial actions should apply immediately without the possibility of granting a derogation from the parametric value. **Member States should be authorised, under certain conditions, to continue to grant derogations from this Directive and in this regard it is necessary to establish a proper framework for such derogations, provided that they must not constitute a potential danger to human health and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable means.** Derogations granted by Member States pursuant to Article 9 of Directive 98/83/EC and still applicable at the date of entry into force of this Directive should, however, continue to apply until the end of the derogation but should not be and renewed under this Directive only where the second derogation has not yet been granted.

(16) (17) The Commission, in its reply to the European citizens' initiative 'Right2Water' in 2014²³, invited Member States to ensure access to a minimum water supply for all citizens, in accordance with the WHO recommendations. It also committed to continue to "improve access to safe drinking water [...] for the whole population through environmental policies"²⁴. This is in line with UN Sustainable Development Goal 6 and the associated target to "achieve universal and equitable access to safe and affordable drinking water for all". The European Parliament, in its Resolution on the "follow-up to the European citizens' initiative Right2Water"²⁵, "requested that Member States should pay special attention to the needs of vulnerable groups in society"²⁶. The concept of equitable access covers a wide array of aspects such as availability (due for instance to geographic reasons, lack of infrastructure or the specific situation of certain parts of the populations), quality, acceptability, or financial affordability. Concerning affordability of water, it is important to recall that, when setting water tariffs in accordance with the principle of recovery of costs set out in Directive 2000/60/EC, Member States may have regard to the variation in the economic and social conditions of the population and may therefore adopt social tariffs or take measures safeguarding populations at a socio-economic disadvantage. This Directive deals, in particular, with the aspects of access to water which are related to quality and availability. To address those aspects, as part of the reply to the European citizens' initiative and to contribute to the implementation of Principle 20 of the European Pillar of Social Rights²⁷ that states that "everyone has the right to access essential services of good quality, including water", Member States should be required to tackle the issue of access to water at national level whilst enjoying some discretion as to the exact type of measures to be implemented. This can be done through actions aimed, *inter alia*, at improving access to water intended for human consumption for all, for instance with freely accessible fountains in cities, and promoting its use by encouraging the free provision of water intended for human consumption in public buildings and restaurants.

²³ COM(2014)177 final.

²⁴ COM(2014)177 final, p. 12.

²⁵ P8_TA(2015)0294.

²⁶ P8_TA(2015)0294, paragraph 62.

²⁷ Interinstitutional Proclamation on the European Pillar of Social Rights (2017/C 428/09) of 17 November 2017 (OJ C 428, 13.12.2017, p. 10).

(17) The Union and the Member States have committed themselves, within their respective competences, to the Sustainable Development Goals, whilst recognising the primary responsibility of Member States in the follow-up and review at national, regional and global levels of progress towards the SDGs. Some of the SDGs, including the right to water, do not fall within the Union's environment policy or the Union's social policy, which is limited and complementary in nature. Whilst bearing in mind the limits of Union competence, it is nevertheless appropriate to ensure that MS' continued commitment to the right to water should be in accordance with this Directive, whilst respecting the principle of subsidiarity.

In this regard, Member States currently undertake considerable efforts to improve access to water intended for human consumption. In addition, the Protocol on Water and Health of the UNECE Water Convention that many Member States are also parties to, and WHO EURO, aims to protect human health by better water management and by reducing water-related diseases. Member States could make use of the guidance documents developed under the remit of this Protocol to assess the policy background²⁸ and the baseline situation on access to water²⁹ and define the necessary actions³⁰ to improve equitable access to all.

²⁸ https://www.unece.org/env/water/publications/ece_mp.wh_6.html

²⁹ https://www.unece.org/env/water/publications/ece_mp.wh_8.html

³⁰ <https://www.unece.org/environmental-policy/conventions/water/envwaterpublicationspub/brochuresabout-the-protocol-on-water-and-health/2016/guidance-note-on-the-development-of-action-plans-toensure-equitable-access-to-water-and-sanitation/doc.html>

(18) The European Parliament, in its Resolution on the "follow up to the European citizens' initiative Right2Water"³¹, "requested that Member States should pay special attention to the needs of vulnerable groups in society"³². The specific situation of minority cultures, such as Roma, Sinti, Travellers, Kalé, Gens du voyage etc., whether sedentary or not in particular their lack of access to drinking water was also acknowledged in the Commission Report on the implementation of the EU Framework for National Roma Integration Strategies³³ and the Council Recommendation on effective Roma integration measures in the Member States³⁴. In light of that general context, it is appropriate that Member States pay particular attention to vulnerable and marginalised groups by taking the necessary measures to ensure that those groups have access to water. Without prejudice to the right of the Member States to define those groups, they should at least include refugees, nomadic communities, homeless people and minority cultures such as Roma, Sinti, Travellers, Kalé, Gens du voyage, etc., whether sedentary or not. Such measures to ensure access, left to the appreciation of the Member States, might for example include providing alternative supply systems (individual treatment devices), providing water via tankers (trucks and cisterns) and ensuring the necessary infrastructure for camps.

³¹ P8_TA(2015)0294.

³² P8_TA(2015)0294, paragraph 62.

³³ COM(2014) 209 final.

³⁴ Council Recommendation (2013/C 378/01) of 9 December 2013 on effective Roma integration measures in the Member States (OJ C 378, 24.12.2013, p. 1).

(19) The 7th Environment Action Programme to 2020 ‘Living well, within the limits of our planet’ ³⁵, requires that the public have access to clear environmental information at national level. Directive 98/83/EC only provided for passive access to information, meaning that Member States merely had to ensure that information was available. Those provisions should therefore be replaced to ensure that up-to-date information **on the quality of water** is easily accessible, for instance on a website whose link should be actively distributed **or by other means as appropriate**. The up-to-date information should **not only include, as a minimum the price or cost of water supplied per litre or cubic metre, as well as results from the monitoring programmes, types of water treatment and disinfection applied, information on exceedance of the parametric values relevant for human health, relevant information on risk assessment and risk management of the supply system, advice on how to reduce water consumption and avoid health risks due to stagnant water**, but also additional information that the public may find useful, such as information on indicators (iron, hardness, minerals, etc.), which often influence consumers' perception of tap water. **In addition, as a response to consumers interests on water issues, they should be given access, upon request, to available historical data on monitoring results and types of treatment.** To that end, the indicator parameters of Directive 98/83/EC that did not provide health-related information should be replaced by on-line information on those parameters. For very large water suppliers, additional information on, *inter alia*, energy efficiency, management, governance, cost structure, and treatment applied, should also be available on-line. It is assumed that better consumer knowledge and improved transparency will contribute to increasing citizens' confidence in the water supplied to them. This in turn is expected to lead to increased use of tap water, thereby contributing to reduced plastic litter and greenhouse gas emissions, and a positive impact on climate change mitigation and the environment as a whole.

³⁵ Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 ‘Living well, within the limits of our planet’ (OJ L 354, 28.12.2013, p. 171).

- (20) For the same reasons, and in order to make consumers more aware of the implications of water consumption, they should also receive information (for instance on their invoice or by smart applications) on the volume consumed, the cost structure of the tariff charged by the water supplier, including variable and fixed costs, as well as on the price per litre of water intended for human consumption, thereby allowing a comparison with the price of bottled water.
- (21) The principles to be considered in the setting of water tariffs, namely recovery of costs for water services and polluter pays, are set out in Directive 2000/60/EC. However, the financial sustainability of the provision of water services is not always ensured, sometimes leading to under investment in the maintenance of water infrastructure. With the improvement of monitoring techniques, leakage rates – mainly due to such under investment – have become increasingly apparent and reduction of water losses should be encouraged at Union level to improve the efficiency of water infrastructure. In line with the principle of subsidiarity, that issue should be addressed by increasing transparency and consumer information on leakage rates and energy efficiency.

(22) Directive 2003/4/EC of the European Parliament and of the Council ^{[36](#)} aims at guaranteeing the right of access to environmental information in the Member States in line with the Aarhus Convention. It encompasses broad obligations related both to making environmental information available upon request and actively disseminating such information. Directive 2007/2/EC of the European Parliament and of the Council ^{[37](#)} is also of broad scope, covering the sharing of spatial information, including data-sets on different environmental topics. It is important that provisions of this Directive related to access to information and data-sharing arrangements complement those Directives and do not create a separate legal regime. Therefore, the provisions of this Directive on information to the public and on information on monitoring of implementation should be without prejudice to Directives 2003/4/EC and 2007/2/EC.

(23) Directive 98/83/EC did not set out reporting obligations for small water suppliers. To remedy this, and to address the need for implementation and compliance information, a new system should be introduced, whereby Member States are required to set up, keep up-to-date and make accessible to the Commission and the European Environmental Agency data sets containing only relevant data, such as exceedances of parametric values and incidents of a certain significance. This should ensure that the administrative burden on all entities remains as limited as possible. To ensure the appropriate infrastructure for public access, reporting and data-sharing between public authorities, Member States should base the data specifications on Directive 2007/2/EC and its implementing acts.

^{[36](#)} Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC (OJ L 41, 14.2.2003, p. 26).

^{[37](#)} Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) (OJ L 108, 25.4.2007, p. 1).

- (24) Data reported by Member States is not only necessary for the purposes of compliance checking but is also essential to enable the Commission to monitor and assess the performance of the legislation against the objectives it pursues in order to inform any future evaluation of the legislation in accordance with paragraph 22 of the Interinstitutional Agreement between the European Parliament, the Council of the European Union and the European Commission on Better Law-Making of 13 April 2016³⁸. In that context, there is a need for relevant data that will allow better assessment of the efficiency, effectiveness, relevance, and EU value added of the Directive, hence the necessity to ensure appropriate reporting mechanisms that can also serve as indicators for future evaluations of this Directive.
- (25) Pursuant to paragraph 22 of the Interinstitutional Agreement on Better Law-Making, the Commission should carry out an evaluation of this Directive within a certain period of time from the date set for its transposition. That evaluation should be based on experience gathered and data collected during the implementation of the Directive, on relevant scientific, analytical, epidemiological data, and on any available WHO recommendations.
- (26) This Directive respects the fundamental rights and observes the principles recognised by the Charter of Fundamental Rights of the European Union. In particular, this Directive seeks to promote the principles relating to health care, access to services of general economic interest, environmental protection and consumer protection.

³⁸ OJ L 123, 12.5.2016, p. 1.

(27) **The aim of this Directive is to protect human health and the environment.** As the Court of Justice has held on numerous occasions, it would be incompatible with the binding effect which the third paragraph of Article 288 of the Treaty ascribes to a Directive to exclude, in principle, the possibility of an obligation imposed by a Directive from being relied on by persons concerned. That consideration applies particularly in respect of a Directive which has the objective of protecting human health from the adverse effects of any contamination of water intended for human consumption. Therefore, in accordance with the Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental matters³⁹, members of the public concerned should have access to justice in order to contribute to the protection of the right to live in an environment which is adequate for personal health and well-being. In addition, where a large number of persons are in a 'mass harm situation', due to the same illegal practices relating to the violation of rights granted by this Directive, they should have the possibility to use collective redress mechanisms, where such mechanisms have been established by Member States in line with Commission Recommendation 2013/396/EU⁴⁰.

³⁹ OJ L 124, 17.5.2005, p. 4.

⁴⁰ Commission Recommendation of 11 June 2013 on common principles for injunctive and compensatory collective redress mechanisms in the Member States concerning violations of rights granted under Union law (OJ L 201, 26.7.2013, p. 60).

- (28) In order to adapt this Directive to scientific and technical progress or to specify monitoring requirements for the purposes of the ~~hazard and domestic distribution risk~~ **risk based approach to water safety**, the power to adopt acts in accordance with Article 290 of the Treaty should be delegated to the Commission to amend Annexes ~~III I to IV~~ to this Directive. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts. In addition, the empowerment laid down in Annex I, part C, Note 10, of Directive 98/83/EC, to set monitoring frequencies and monitoring methods for radioactive substances has become obsolete due to the adoption of Council Directive 2013/51/Euratom⁴¹ and should therefore be deleted. The empowerment laid down in the second subparagraph of part A of Annex III to Directive 98/83/EC concerning amendments of the Directive is no longer necessary and should be deleted.
- (29) In order to ensure uniform conditions for the implementation of this Directive, implementing powers should be conferred on the Commission ~~for the adoption of the format of, and modalities to present, the information on water intended for human consumption to be provided to all persons supplied~~, as well as for the adoption of the format of, and modalities to present, the information to be provided by Member States and compiled by the European Environmental Agency on the implementation of this Directive, **as well as to establish a watch list mechanism**. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council⁴².

⁴¹ Council Directive 2013/51/Euratom of 22 October 2013 laying down requirements for the protection of the health of the general public with regard to radioactive substances in water intended for human consumption (OJ L 296, 7.11.2013, p. 12).

⁴² Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

(30) Without prejudice to the requirements of Directive 2008/99/EC of the European Parliament and of the Council⁴³, Member States should lay down rules on penalties applicable to infringements of the provisions of this Directive and ensure that they are implemented. The penalties should be effective, proportionate and dissuasive.

(30a) In order for water suppliers to have a full set of data available when they start applying the supply risk assessment, a transition period of 3 years should be introduced for new parameters. This will allow Member States to carry out the identification of hazards and hazardous events during those first 3 years after application date of this Directive, thereby already providing data to water suppliers on these new parameters, and avoiding any unnecessary monitoring by water suppliers, if it is found that a parameter does not need to be monitored via this first identification of hazards and hazardous events. During those initial 3 years, water suppliers should nevertheless carry out the supply risk assessment (or use existing risk assessments already carried out under Directive (EU) 2015/1787) for those parameters that were part of Annex I to Directive 98/83/EC, given that data will already be available for those parameters when this Directive enters into force.

(31) Directive 2013/51/Euratom lays down specific arrangements for the monitoring of radioactive substances in water intended for human consumption. Therefore, this Directive should not set out parametric values on radioactivity.

(32) Since the objective of this Directive, namely the protection of human health, cannot be sufficiently achieved by the Member States but can rather, by reason of the scale and effects of the action, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on the European Union. In accordance with the principle of proportionality as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives.

⁴³ Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law (OJ L 328, 6.12.2008, p. 28).

- (33) The obligation to transpose this Directive into national law should be confined to those provisions which represent a substantive amendment as compared to the earlier Directives. The obligation to transpose the provisions which are unchanged arises under the earlier Directives.
- (34) This Directive should be without prejudice to the obligations of the Member States relating to the time-limits for the transposition into national law of the Directives set out in Annex V, Part B,

HAVE ADOPTED THIS DIRECTIVE:

Article 1

Objective

1. This Directive concerns the quality of water intended for human consumption.
2. The objective of this Directive shall be to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.

Article 2

Definitions

For the purposes of this Directive:

1. ‘water intended for human consumption’ shall mean:
 - a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation ~~or production~~, or other domestic purposes in both public and private premises, regardless of its origin and whether it is supplied from a distribution network, supplied from a tanker or, ~~for spring waters~~, put in bottles **or containers, including spring waters.**
 - b) **all water used in any food business for the manufacture, processing, preservation or marketing of products or substances intended for human consumption unless the competent national authorities are satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form.**

2. 'domestic distribution system' shall mean the pipework, fittings and appliances which are installed between the taps that are normally used for human consumption in both public and private premises and the distribution network but only if they are not the responsibility of the water supplier, in its capacity as a water supplier, according to the relevant national law.
3. 'water supplier' shall mean an entity supplying ~~at least 10 m³~~ of water intended for human consumption ~~a day as an average~~.
4. 'small water supplier' shall mean a water supplier supplying less than 500 ~~1000~~ m³ per day ~~as an average or serving less than 5 000 people~~.
5. 'large water supplier' shall mean a water supplier supplying at least 500 ~~1000~~ m³ per day ~~as an average or serving at least 5 000 people~~.
6. 'very large water supplier' shall mean a water supplier supplying at least 5 000 ~~10000~~ m³ per day ~~as an average~~ or serving at least 50 000 people.
7. 'priority premises' shall mean large premises with many users potentially exposed to water-related risks, ~~in particular large premises for public use, such as hospitals, healthcare institutions, buildings with a lodging facility, penal institutions and campgrounds~~, as identified by Member States.
8. '~~vulnerable and marginalised groups~~' shall mean people isolated from society, as a result of discrimination or of a lack of access to rights, resources, or opportunities, and who are more exposed to a range of possible risks relating to their health, safety, lack of education, engagement in harmful practices, or other risks, compared to the rest of society.
8. '**food business**' shall mean food business as defined in Article 3(2) of Regulation 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety

9. ‘**food business operator**’ shall mean food business operator as defined in Article 3 (3) of Regulation 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety
10. ‘**hazard**’ shall mean biological, chemical, physical or radiological agent in, or condition of water, with the potential to cause harm to public health through water consumption.
11. ‘**hazardous event**’ shall mean event that introduces hazards to, or fails to remove them from, the drinking water supply system.
12. ‘**risk**’ shall mean combination of the likelihood of a hazardous event and the severity of consequences, if the hazard and hazardous event occurs in the drinking water supply system.

Article 3

Exemptions

1. This Directive shall not apply to:
 - (a) natural mineral waters recognised as such by the responsible authority, as referred to in Directive 2009/54/EC;
 - (b) waters which are medicinal products within the meaning of Directive 2001/83/EC.
2. Member States may exempt from the provisions of this Directive:
 - (a) water intended exclusively for those purposes for which the competent authorities are satisfied that the quality of the water has no influence, either directly or indirectly, on the health of the consumers concerned;

- (b) water intended for human consumption from an individual supply providing less than 10 m³ a day as an average or serving fewer than 50 persons, unless the water is supplied as part of a commercial or public activity.
3. Member States that have recourse to the exemptions provided for in paragraph 2(b) shall ensure that the population concerned is informed thereof and of any action that can be taken to protect human health from the adverse effects resulting from any contamination of water intended for human consumption. In addition, when a potential danger to human health arising out of the quality of such water is apparent, the population concerned shall promptly be given appropriate advice.
4. **Member States may exempt food business operators from the provisions of this Directive, as regards the water used for the specific purposes of the food business, if the competent national authorities are satisfied that the quality of that water cannot affect the safety of the foodstuff in its finished form and provided their water supply complies with relevant obligations under the procedures on hazard analysis and critical control point principles and remedial actions under relevant Union legislation on food.**
5. **Water suppliers supplying less than 10m³ a day as an average or servicing fewer than 50 persons as part of a commercial or public activity shall only be subject to Articles 1, 2, 3, 4, 5, 6, 11, 12 and 12a of this Directive, as well as relevant Annexes.**

Article 4

General obligations

1. Without prejudice to their obligations under other Union provisions, Member States shall take the measures necessary to ensure that water intended for human consumption is wholesome and clean. For the purposes of the minimum requirements of this Directive, water intended for human consumption shall be wholesome and clean if it meets all the following conditions :
- (a) it is free from any micro-organisms and parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health;

- (b) it meets the minimum requirements set out in Annex I, Parts A, **and B and D**;
- (c) Member States have taken all other measures necessary to comply with the requirements set out in Articles 5 to 12 of this Directive.

The minimum requirements set out in Annex I, Part A, do not apply to bottled spring water as referred to in Directive 2009/54/EC.

2. Member States shall ensure that the measures taken to implement this Directive in no circumstances have the effect of allowing, directly or indirectly, any deterioration of the present quality of water intended for human consumption or any increase in the pollution of waters used for the production of water intended for human consumption.

Article 5

Quality standards

1. Member States shall set values applicable to water intended for human consumption for the parameters set out in Annex I, **Part A, B, C and D**, which shall not be less stringent than the values set out therein.
2. **As regards the parameters set out in Annex I, Part C, the values need be fixed only for monitoring purposes and for the fulfilment of the obligations imposed in Article 12.**
3. A Member State shall set values for additional parameters not included in Annex I where the protection of human health within its national territory or part of it so requires. The values set shall, as a minimum, satisfy the requirements of Article 4(1)(a).

Article 6
Point of compliance

1. The parametric values set in accordance with Article 5 ~~for the parameters listed in Annex I, parts A and B,~~ shall be complied with:
 - (a) in the case of water supplied from a distribution network, at the point, within premises or an establishment, at which it emerges from the taps that are normally used for human consumption;
 - (b) in the case of water supplied from a tanker, at the point at which it emerges from the tanker;
 - (c) in the case of water, **including spring water, put into bottles or containers**, at the point at which the water is put into the bottles **or containers**.
 - (d) **in the case of water used in a food business, at the point where the water is used in the business.**
2. **In the case of water covered by paragraph 1(a), Member States shall be deemed to have fulfilled their obligations under this Article and under Articles 4 and 12(2) where it can be established that non-compliance with the parametric values set in accordance with Article 5 is due to the domestic distribution system or the maintenance thereof except in priority premises covered by Article 10.†**
3. **Where paragraph 2 applies and there is a risk that water covered by paragraph 1(a) would not comply with the parametric values established in accordance with Article 5, Member States shall nevertheless ensure that:**
 - (a) **appropriate measures are taken to reduce or eliminate the risk of non-compliance with the parametric values, such as advising property owners of any possible remedial action they could take, and**

if necessary, other measures, such as appropriate treatment techniques, are taken to change the nature or properties of the water before it is supplied so as to reduce or eliminate the risk of the water not complying with the parametric values after supply;

and

- (b) the consumers concerned are duly informed and advised of any possible additional remedial action that they should take.**

Article 7

Risk-based approach to water safety

1. Member States shall ensure that the supply, treatment and distribution of water intended for human consumption is subject to a risk-based approach **that covers the whole supply chain from the catchment area, abstraction, treatment, storage and distribution of water to the point of compliance specified in Article 6.**

The risk-based approach shall entail composed of the following elements:

- a) a hazard assessment of bodies of water used a risk assessment and risk management of the catchment area(s) for the abstraction point(s) of water intended for human consumption, in accordance with Article 8;**
- b) a supply-risk assessment and risk management for the supply system that includes the abstraction, treatment, storage and distribution of water to the point of supply carried out by the water suppliers for the purposes of monitoring the quality of the water they supply, in accordance with Article 9 and Annex II, part C;**
- c) a risk assessment for the domestic distribution systems risk assessment, in accordance with Article 10;**

2. **The first risk assessment and risk management of the catchment area(s) for the abstraction point(s)** hazard assessments shall be carried out by [3 6 years after the end date for the transposition of this Directive]. It They shall be reviewed every 3 years at regular intervals of no longer than 6 years, and updated where necessary.
3. **The first risk assessment and risk management for the supply system** risk assessments shall be carried out by very large water suppliers and large water suppliers by [3 years after the end date for transposition of this Directive], and by small water suppliers by [6 years after the end-date for transposition of this Directive]. They It shall be reviewed at regular intervals of no longer than 6 years, and updated where necessary.
4. **The first risk assessment for the domestic distribution systems** risk assessments shall be carried out by [3 6 years after the end-date for transposition of this Directive]. They shall be reviewed every 3 6 years, and updated where necessary.
5. **The deadlines specified in paragraphs 2, 3, 4 shall not prevent Member States to ensure that measures are taken as soon as possible once the risks are identified and assessed.**

Article 8

Risk assessment and risk management of the catchment area(s) for the abstraction point(s) of water intended for human consumption

Hazard assessment of bodies of water used for the abstraction of water intended for human consumption

1. Without prejudice to Articles 6 and 7 of Directive 2000/60/EC, Member States shall ensure that a hazard assessment a risk assessment and risk management of the catchment area(s) for the abstraction point(s) is performed covering the bodies of water used for the abstraction of water intended for human consumption that provide more than 10 m³ a day as an average. The hazard assessment It shall include the following elements:

- (a) characterisation of the catchment area(s) for the abstraction point(s) including:
- (i) identification and mapping of the catchment area(s) for the abstraction point(s);
 - (ii) mapping of the safeguard zones when those zones have been established in accordance with Article 7(3) of Directive 2000/60/EC,
 - (iii) geo-references of all abstraction points in the catchment area(s);
 - (iv) description of land-use, runoff, and recharge processes in the catchment areas(s) for the abstraction point(s).

To that end, Member States may use information collected in accordance to Articles 5-and 7 of Directive 2000/60/EC;

- (b) identification of and geo-references for all abstraction points in the bodies of water covered by the hazard assessment;
- (b) mapping of the safeguard zones, where those zones have been established in accordance with Article 7(3) of Directive 2000/60/EC, and the protected areas referred to in Article 6 of that Directive;

- (b) an identification of hazards **and hazardous events** and the assessment of the risk they may pose to the quality of water intended for human consumption, including their possible consequences that might deteriorate the quality affecting the bodies of water in the catchment area(s) for the abstraction point(s) of water covered by the hazard assessment to the extent that it may constitute a risk for human health through water consumption or may lead to unacceptable deterioration of the water quality of water intended for human consumption, considering the level of purification treatment used **or needed** in the production of water intended for human consumption. To that end, Member States may use the review of the impact of human activity undertaken in accordance with Article 5 of Directive 2000/60/EC and information on significant pressures collected in accordance with points 1.4, **1.5 and 2.3 to 2.5** of Annex II to that Directive;
- (c) ~~regular~~ when considered necessary with respect to the identification of hazards and hazardous events, monitoring in surface water and/or groundwater in the catchment area(s) for the abstraction point(s) or in raw water ~~the bodies of water covered by the hazard assessment~~ of relevant parameters, substances or pollutants selected from the following lists:
- (i) parameters listed in parts A and B of Annex I **or established in accordance with Article 5 (3) to** ~~of~~ this Directive;

- (ii) groundwater pollutants listed in Annex I to Directive 2006/118/EC of the European Parliament and of the Council⁴⁴, and pollutants and indicators of pollution for which threshold values have been established by Member States in accordance with Annex II to that Directive;
- (iii) priority substances and certain other pollutants listed in Annex I to Directive 2008/105/EC of the European Parliament and of the Council⁴⁵;
- (iv) **river basin specific pollutants established by Member States in accordance with the Directive 2000/60/EC;**
- (iv) other relevant pollutants **for water intended for human consumption, such as microplastics, or river basin specific pollutants established by Member States on the basis of the review of the impact of human activity undertaken in accordance with Article 5 of Directive 2000/60/EC and information on significant pressures collected in accordance with paragraph 1(b) of this Article point 1.4 of Annex II to that Directive.**
- (vi) **naturally occurring substances that may pose a hazard for human health through water intended for human consumption;**

⁴⁴ Directive 2006/118/EC of the European Parliament and of the Council of 12 December 2006 on the protection of groundwater against pollution and deterioration (OJ L 372, 27.12.2006, p. 19).

⁴⁵ Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Council Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC of the European Parliament and of the Council (OJ L 348, 24.12.2008, p. 84).

(vii) substances and compounds included in the watch list as established in accordance with Article 11 (7) of this Directive.

Member States shall select from points (i) to (i-vii) for monitoring the parameters, substances or pollutants that are considered relevant in light of the hazards identified under point (e b) or in light of the information provided by the water suppliers in accordance with paragraph 2.

For the purpose of ~~the regular~~-monitoring, Member States may use **available the** monitoring carried out in accordance with **Articles 7 and 8 of Directive 2000/60/EC** **or other Union legislation relevant for the catchment area(s) for the abstraction point(s).**

2. ~~Those W~~water suppliers that **perform monitoring in the catchment area(s) for the abstraction point(s) or in their raw water for the purposes of operational monitoring** shall be required to inform the competent authorities of trends and of unusual concentrations of monitored parameters, substances or pollutants.
3. Member States shall ensure that water suppliers and competent authorities have access to the available information specified in paragraphs 1 and 2, and that relevant ~~inform water supplier using the body of~~ water suppliers ~~of have access to~~ covered by the hazard assessment of the results of the monitoring ~~results obtained carried out~~ under paragraph 1(d c). and may, on the basis of those monitoring results:
 - (a) ~~require water suppliers to carry out additional monitoring or treatment of certain parameters;~~

- (b) On the basis of this information, Member States may allow water suppliers to decrease the monitoring frequency of certain parameters, or remove a parameter from the list of parameters to be monitored by the water supplier in accordance with the provisions of Article 11 (2) (a), without being required to carry out a supply risk assessment of the supply system, provided that:
- (i) they are not core parameters within the meaning of Annex II, part B, point 1, and provided that
 - (ii) no factor that can be reasonably anticipated is likely to cause deterioration of the quality of the water.
4. In such cases where a water supplier is allowed to decrease the monitoring frequency as referred to in paragraph 2-3(b), Member States shall continue to regularly monitor those parameters in the body of water covered by the hazard assessment.
54. On the basis of the outcome of the risk assessment performed in accordance with paragraph 1, information collected under paragraphs 1 and 2 and gathered under Directive 2000/60/EC, Member States shall ensure that management take the following measures to prevent or control the risks identified are taken such as: in cooperation with water suppliers and other stakeholders, or ensure that those measures are taken by the water suppliers:
- (a) defining and implementing preventive or mitigation measures in the catchment area(s) for the abstraction point(s) in addition to the ones foreseen or taken in accordance to prevention measures to reduce the level of treatment required and to safeguard the water quality, including measures referred to in Article 11(3)(d) of Directive 2000/60/EC, where required to ensure the quality of the water intended for human consumption. Where appropriate, those measures shall be included in the programs of measures referred to in Article 11(3) of Directive 2000/60/EC;

- (b) ensuring appropriate monitoring of parameters, substances or pollutants in surface water and/or groundwater in the catchment area(s) for the abstraction point(s) or in the raw water that may constitute a risk for human health through water consumption or lead to unacceptable deterioration of the quality of water intended for human consumption and that have not been taken into consideration in the monitoring performed in accordance to Article 7 and 8 of Directive 2000/60/EC. Where appropriate, this monitoring shall be included in the monitoring programs referred to in Articles 7 and 8 of Directive 2000/60/EC. ~~mitigating measures, which are considered necessary on the basis of the monitoring carried out under paragraph 1(d), in order to identify and address the pollution source.~~
- (c) ~~mapping evaluation of the need for the establishment or adaptation of the safeguard zones for groundwater and surface water, according to Article 7(3) of Directive 2000/60/EC, and any other relevant zones.~~

~~Member States shall regularly review any such measure.~~

Article 9

Risk assessment and risk management for the supply system *Supply risk assessment*

1. Member States shall ensure that ~~a risk assessment and risk management for the supply system~~ water suppliers perform a supply risk assessment that include the whole water supply chain from the catchment area through abstraction, treatment, storage and distribution of water to the compliance point specified in Article 6 is performed by the water supplier.

2. Member States shall ensure that the risk assessment and risk management for the supply system:

- (a) takes into account the results of the risk assessment and risk management carried out in accordance with Article 8 of this Directive;**
- (b) entails a description of the supply system from the abstraction point, treatment, storage and distribution of water to the point of supply, an identification of the hazards and hazardous events in the supply system and an assessment of the risks they may pose to the quality of water intended for human consumption;**
- (c) defines and implements control measures for the prevention and mitigation of the risks identified in the supply chain system that may compromise the quality of water intended for human consumption;**
- (d) defines and implements control measures in the supply system in addition to the measures taken or foreseen under Article 8(4) of this Directive or under Article 11(3) of Directive 2000/60/EC for the mitigation of risks in the catchment area(s) for the abstraction point(s) that may compromise the quality of water intended for human consumption;**
- (e) entails a supply-specific operational monitoring programme according to Article 11;**

- (f) ensures that, where disinfection forms part of the preparation or distribution of water intended for human consumption, the efficiency of the disinfection treatment applied is validated, and that any contamination from disinfection by-products is kept as low as possible without compromising the disinfection and any contamination from treatment chemicals is kept as low as possible and any substances remaining in the water do not jeopardise the achievement of the general obligations set out in Article 4;
 - (g) includes a verification of whether materials, treatment chemicals and filter media in contact with water intended for human consumption used in the supply chain are in line with the requirements as specified in Articles 10a and 10b.
3. ~~The~~ On the basis of the results of the risk assessment for the supply system, Member States shall:
- a) allow ~~providing for the possibility to~~ removing of a parameter from the list of parameters to be monitored or adjust the monitoring frequency in the following cases:
 - i. on the basis of the occurrence of a parameter in the raw water, in accordance with the risk assessment for the catchment area(s) for the abstraction point(s) as set out in Article 8(3);
 - ii. when a parameter can only result from the use of certain treatment technique or disinfection method, and that technique or method is not used by the water supplier; or
 - iii. on the basis of the specifications set out in Annex II, part C.

- b) ensure the list of parameters to be monitored in the water intended for human consumption in accordance with article 11 is extended or the monitoring frequency increased on the basis of the specifications set out in Annex II, part C.

The supply risk assessment shall concern for any parameters listed in Annex I, parts A, and B and C that are not core parameters according to part B of Annex II, parameters set in accordance with Article 5(3), substances or compounds included in the watch list as established in accordance with Article 11(7), depending on their occurrence in the raw water.

For those parameters Member States shall ensure that water suppliers can deviate from the sampling frequencies set out in Annex II, part B, in accordance with the specifications set out in Annex II, part C.

To that end, water suppliers shall be required to take into account the results of the hazard assessment carried out in accordance with Article 8 of this Directive and of the monitoring carried out pursuant to Article 7(1) and Article 8 of Directive 2000/60/EC.

4. Supply risk assessment shall be approved by the competent authorities. Member States shall ensure that water suppliers perform the risk assessment for the supply system in accordance with the paragraphs 1 and 2 of this Article.
5. Member States may exempt water suppliers supplying between 10 m³ and 100 m³ per day as an average or serving between 50 and 500 people from performing supply risk assessment and management. In case of such exemption, those water suppliers shall carry out regular monitoring in accordance with Article 11.

Article 10

Risk Assessment for the Domestic Distribution Systems Risk Assessment

1. Member States shall ensure that a **risk assessment for the domestic distribution systems risk assessment** is performed, comprising the following elements:
 - (a) **an general analysis assessment** of the potential risks associated with ~~the domestic distribution systems, and with the related products and materials, and whether they affect the quality of water at the point where it emerges from the taps normally used for human consumption, in particular where water is supplied to the public in priority premises;~~
 - (b) **regular surveillance** monitoring of the parameters listed in Annex I, part **D E**, in **priority** premises where the potential danger to human health is considered highest. Relevant parameters and **priority** premises for monitoring shall be selected on the basis of the **assessment general analysis** performed under point (a).

With regard to the **regular surveillance** monitoring referred to in the first subparagraph, Member States may set up a monitoring strategy focusing on priority premises;

For the purpose of this paragraph, Member States may include in the risk assessment other premises whose domestic distribution systems could pose a risk to human health.

- (c) ~~a verification of whether the performance of construction products in contact with water intended for human consumption is adequate in relation to the essential characteristics linked to the basic requirement for construction works specified in point 3(e) of Annex I to Regulation (EU) No 305/2011.~~

2. Where Member States **conclude consider**, on the basis of the **assessment analysis** carried out under paragraph 1(a), that there is a risk to human health stemming from **the domestic distribution systems or from the related products and materials**, or where monitoring carried out in accordance with paragraph 1(b) demonstrates that the parametric values set out in Annex I, part **D E**, are not met, they **Member States** shall **consider the following measures**:
- (a) take appropriate measures to eliminate or reduce the risk of non-compliance with the parametric values set out in Annex I, part **D E**;
 - (b) take all necessary measures to ensure that the migration of substances or chemicals from construction products used in the preparation or distribution of water intended for human consumption does not, either directly or indirectly, endanger human health;
 - (c) ~~take other measures, such as appropriate conditioning techniques, in cooperation with water suppliers, to change the nature or properties of the water before it is supplied so as to eliminate or reduce the risk of non-compliance with the parametric values after supply;~~
 - (d) duly inform and advise consumers about the conditions of consumption and use of the water and about possible action to avoid the risk from reoccurring;
 - (e) **organise promote organisation of** training for plumbers and other professionals dealing with domestic distribution systems and the installation of construction products;
 - (f) for *Legionella*, ensure that effective control and management measures are in place to prevent and address possible disease outbreaks;:-
 - (g) **for lead, establish as soon as possible measures to address the identified risks for consumers, such as raising awareness measures and, if economically and technically feasible, measures for early substitution of components made of lead in existing domestic distribution systems.**

Article 10a

Minimum requirements for materials that come into contact with water intended for human consumption

1. For the purposes of Article 4, Member States shall ensure that materials that are intended to be used in new installations or, in case of major repair works or reconstruction, in existing installations for abstraction, treatment or distribution of water intended for human consumption and that come into contact with such water do not:
 - (a) directly or indirectly compromise human health protection as provided for by this Directive;
 - (b) adversely affect the colour, odour or taste of the water;
 - (c) enhance microbial growth;
 - (d) leach contaminants into the water at levels that are higher than necessary in view of the intended purpose.
2. For the purpose of ensuring the uniform application of paragraph 1, the specific minimum hygiene requirements for materials shall be established through implementing acts laying down:
 - (a) common methodologies for testing and accepting starting substances and compositions to be included in European positive lists, including substance or material related specific migration limits and scientific pre-conditions (e.g. scientific knowledge of food contact materials, 10 % allocation factor in relation to tolerable daily intake);
 - (b) European positive lists of starting substances or compositions for each group of materials (organic, cementitious, metallic, enamels, ceramic or other inorganic material) authorized to be used for manufacturing of materials, including, where appropriate, conditions for their use and migration limits, determined on the basis of the common methodologies adopted pursuant to subparagraph (a).

- (c) procedures and methods for testing and accepting final materials in their final form, made from materials or combinations of starting substances on the European positive lists, including:
- i) the identification of relevant substances and other parameters (such as turbidity, flavour, odour, colour, total organic carbon, the release of unsuspected substances and enhancement of microbial growth) to be tested in migration water;
 - ii) test methods on the effects on water quality, having regard to any appropriate EN standards;
 - iii) pass/fail criteria of the test results which take into account, inter alia, conversion factors of substances migration into levels estimated at the tap, conditions of application or use, where appropriate.
3. The implementing acts referred to in paragraph 2 shall be adopted in accordance with the examination procedure referred to in Article 20 on the basis of the principles set out in Annex VII. They shall be adopted according to the following timetable and include transitional provisions where appropriate:
- a) The common methodologies and procedures and methods referred to in paragraph 2(a) and (c) no later than 3 years after entry into force of this Directive;
 - b) The European positive lists referred to in paragraph 2(b) shall be adopted on the basis of the methodologies referred to in paragraph 2(a) no later than 4 years after entry into force of this Directive.
4. The first European positive lists of substances shall be based, among others, on existing national positive lists of starting substances and on the risk assessments that led to the establishment of such national lists. For this purpose, Member States shall notify the Commission of any existing national positive lists and available assessment document(s). The Commission shall regularly review and update the European positive lists of starting substances in line with the latest scientific and technological developments.

5. The Commission shall adopt implementing acts, in accordance with the examination procedure referred to in Article 20, laying down a procedure for applications from economic operators, or relevant authorities to include or remove starting substances and compositions from the European positive lists. These applications shall be submitted by the Member States to the Comission. The procedure shall ensure that applications are accompanied by risk assessments and that operators deliver the necessary information for the risk assessment to the authorities in a specific format.
6. Member States shall consider that final materials in their final form, approved in accordance with specific requirements set out in paragraphs 2 and 9 are compliant with the requirements set out in paragraph 1.
This shall not prevent Member States from adopting more stringent protective measures for the use of materials in specific or duly justified circumstances, in accordance with Article 193 TFEU. Such measures shall be notified to the Commission.
7. In the absentee Pending the adoption of rules adopted pursuant referred to in paragraph 2, Member States shall be entitled to maintain or adopt national measures on specific minimum hygiene requirements for starting substances or materials referred to in paragraph 1, provided they comply with the rules of the Treaty.
8. Products in contact with drinking water pursuant to article 3 and Annex I (3(e)) to Regulation (EU) No 305/2011 and other product related EU legislation, as well as non-harmonised products, shall respect the requirements of this Directive. The Commission may request one or several European standardisation organisations to draft a European standard for uniform compliance testing of the final product in order to facilitate compliance with this article, in accordance with Article 10 of Regulation (EU) No 1025/2012.

9. To the extent that Union legislation does not exhaustively harmonise rules relating to products that consist of materials referred to in paragraph 1, Member States may apply national measures related to these products, in order to satisfy the requirements of Article 4 and 10a.
10. The Commission shall adopt an implementing act establishing harmonised specifications for a conspicuous, clearly legible and indelible marking for products in contact with drinking water that may be used to indicate conformity with this Article.
11. The Commission shall, no later than ~~8~~ 9 years after the date of transposition of this Directive, based in particular on experience gained with the application of Regulation (EU) No 1935/2004 and Regulation (EU) No 305/2011, review the functioning of the system as set out in this Article and present a report to the European Parliament and the Council assessing whether:
 - (a) the protection of human health is adequately ensured throughout the Union;
 - (b) the proper functioning of the internal market for materials in contact with water intended for human consumption is ensured;
 - (c) there is a need for any further legislative proposal on the matter.
12. For the national implementation of the requirements of this Article, Article 4 (2) shall apply accordingly.
13. For the purpose of this Article:

‘starting substance’ shall mean an intentionally added substance for the production of organic materials, or of admixtures for cementitious materials;

‘composition’ shall mean the chemical composition of a metal, enamel, ceramic or other inorganic material.

Article 10b (new)

Minimum requirements for treatment chemicals and filter media that come into contact with water intended for human consumption

1. For the purposes of Article 4, Member States shall ensure that treatment chemicals and filter media that come into contact with water intended for human consumption do not:
 - a) directly or indirectly compromise human health protection as provided for by this Directive;
 - b) adversely affect the colour, odour or taste of the water;
 - c) enhance microbial growth unintentionally;
 - d) contaminate the water at levels that are higher than necessary in view of the intended purpose.
2. For the national implementation of the requirements of this Article, Article 4 (2) shall apply accordingly.
3. Pursuant to paragraph 1, and without prejudice to Regulation 528/2012 and relevant existing EN standards for specific treatment chemicals or filter media, Member States shall ensure that the characteristics and purity of treatment chemicals and filter media is verified and guaranteed.

Article 11
Monitoring

1. Member States shall take all measures necessary to ensure that regular monitoring of the quality of water intended for human consumption is carried out **in accordance with this Article and Annex II part A and B**, in order to check that the water available to consumers meets the requirements of this Directive and in particular the parametric values set in accordance with Article 5. Samples shall be taken so that they are representative of the quality of the water consumed throughout the year.

~~In addition, Member States shall take all measures necessary to ensure that, where disinfection forms part of the preparation or distribution of water intended for human consumption, the efficiency of the disinfection treatment applied is verified, and that any contamination from disinfection by-products is kept as low as possible without compromising the disinfection.~~

2. To meet the obligations imposed in paragraph 1, appropriate monitoring programmes shall be established in accordance with Annex II, Part A for all water intended for human consumption. Those monitoring programmes shall be **supply-specific, taking into account the outcomes of the risk assessment for the catchment area(s) of the abstraction point(s) and for the supply systems, and shall** consist of the following elements:
 - (a) monitoring of the parameters listed in Annex I, parts A, ~~and B, and C~~, and of the parameters set in accordance with Article 5(2-3), in accordance with Annex II, and, where a ~~supply~~ risk assessment **for the supply system** is performed, in accordance with Article 9 **and Annex II part C, unless a Member State decides that one of these parameters can be removed from the list of parameters to be monitored, in accordance with Article 8(3);**
 - (b) **surveillance** monitoring of the parameters listed in Annex I, part ~~C~~ **D**, for the purposes of the **risk assessment for the domestic distribution systems** ~~risk assessment~~, as provided for under Article 10(1)(b);

- (c) monitoring of the substances and compounds included in the watch list as established in accordance with Article 11 (7) of this Directive with regard to their potential presence in raw water, as provided for under Article 8(1) (c);
 - (d) monitoring for the purposes of the hazard assessment identification of hazards and hazardous events, as provided for under Article 8(1)(c d);
 - (e) operational monitoring shall be conducted in accordance with Annex II, part A, point 3.
3. The sampling points shall be determined by the competent authorities and shall meet the relevant requirements set out in Annex II, part D.
4. Member States shall comply with the specifications for the analyses of parameters set out in Annex III, in accordance with the following principles:
- (a) methods of analysis other than those specified in Annex III, Part A, may be used, provided that it can be demonstrated that the results obtained are at least as reliable as those produced by the methods specified by providing the Commission with all relevant information concerning such methods and their equivalence;
 - (b) for those parameters listed in Annex III, Part B, any method of analysis may be used provided that it meets the requirements set out therein.
5. Member States shall ensure that additional monitoring is carried out on a case-by-case basis of substances and micro-organisms for which no parametric value has been set in accordance with Article 5, if there is reason to suspect that they may be present in amounts or numbers which constitute a potential danger to human health.

6. The Commission shall, 3 years after entry into force of this Directive, develop technical guidelines regarding the analytical methods, including detection limits and parameter values and frequency of sampling for monitoring of the substances included in Annex III, Part B, point 3.
7. Commission may adopt implementing acts to establish and updating of a watch list of substances or compounds of emerging concern to health through water intended for human consumption. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 20.

The watch list shall indicate the possible methods of analysis not entailing excessive costs for each substance or compound. The substances or compounds to be included in the watch list shall be selected from amongst those for which the information available indicates that they may pose a significant risk for human health through water intended for human consumption.

Beta-estradiol (50-28-2), Bisphenol A and Nonylphenol shall be included in the watch list having in view their endocrine disrupting properties and their risk to human health.

Member States shall put in place monitoring requirements with regard to the potential presence of the substances or compounds included in the watch list in the catchment area(s) for the abstraction points of water intended for human consumption as referred to in Article 8 (1) (c) of this Directive. For this purpose, Member States may use the monitoring data collected in accordance with Article 8b) of the Directive 2013/39/EU, Directive 2008/105/EC, Directive 2000/60/EC or other Union legislation in order to avoid overlapping of monitoring requirements. The results of analysis should be communicated to the Commission.

Article 12
Remedial action and restrictions in use

1. Member States shall ensure that any failure to meet the parametric values set in accordance with Article 5 is immediately investigated in order to identify the cause.
2. If, despite the measures taken to meet the obligations imposed in Article 4(1), water intended for human consumption does not meet the parametric values set in accordance with Article 5, **and subject to Article 6(2)** the Member State concerned shall ensure that the necessary remedial action is taken as soon as possible to restore its quality and shall give priority to their enforcement action, having regard *inter alia* to the extent to which the relevant parametric value has been exceeded and **to the associated** potential danger to human health.

In case of non-compliance with the parametric values set out in Annex I, part **D E**, remedial action shall include **relevant the** measures **as** set out in points (a) to (f g) of Article 10(2).

3. Regardless of whether any failure to meet the parametric values has occurred, Member States shall ensure that any supply of water intended for human consumption which constitutes a potential danger to human health is prohibited or its use restricted and that any other **remedial** action is taken that is necessary to protect human health.

~~Member States shall automatically consider any failure to meet the minimum requirements for parametric values set out in Annex I, parts A and B, as a potential danger to human health.~~

4. **Where In** the cases described in paragraphs 2 and 3, **are considered as relevant for human health**, Member States shall as soon as possible take all of the following measures:
 - (a) notify all affected consumers of the potential danger to human health and its cause, of the exceedance of a parametric value and of the remedial actions taken, including prohibition, restriction or other action;

- (b) give, and regularly update, the necessary advice to consumers on conditions of consumption and use of the water, taking particular account of **potential vulnerable population groups with increased water related health risks**;
 - (c) inform consumers once it has been established that there is no longer a potential danger to human health and inform them that the service has resumed back to normal.
5. The competent authorities or other relevant bodies shall decide what action under paragraph 3 shall be taken, bearing in mind the risks to human health which would be caused by an interruption of the supply or a restriction in the use of water intended for human consumption.
6. **In the event of non-compliance with the parametric values or with the specifications set out in Annex I, Part C, Member States shall consider whether that non-compliance poses any risk to human health. They shall take remedial action to restore the quality of the water where that is necessary to protect human health.**
7. **Where Member States consider the non-compliance with a parametric value to be trivial, they do not need to take the measures set out in paragraph 4.**

Article 12a bis

Derogations

1. **In duly justified circumstances, Member States may provide for derogations from the parametric values set out in Annex I, Part B, or set in accordance with Article 5(3), up to a maximum value to be determined by them, provided no derogation constitutes a potential danger to human health; and provided that the supply of water intended for human consumption in the area concerned cannot otherwise be maintained by any other reasonable means.**

The derogation shall be limited to as short a time as possible and shall not exceed three years, towards the end of which a review shall be conducted to determine whether sufficient progress has been made.

In exceptional circumstances, Member States may grant a second derogation for a period not exceeding three years.

2. Any derogation granted in accordance with paragraphs 1 shall specify the following:

- (a) the grounds for the derogation;**
- (b) the parameter concerned, previous relevant monitoring results, and the maximum permissible value under the derogation;**
- (c) the geographical area, the quantity of water supplied each day, the population concerned and whether or not any relevant food business would be affected;**
- (d) an appropriate monitoring scheme, with an increased monitoring frequency where necessary;**
- (e) a summary of the plan for the necessary remedial action, including a timetable for the work and an estimate of the cost and provisions for reviewing;**
- (f) the required duration of the derogation.**

3. If the competent authorities consider the non-compliance with the parametric value to be trivial, and if action taken in accordance with Article 12 is sufficient to remedy the problem within 30 days, the requirements of paragraph 2 need not be applied.

In that event, only the maximum permissible value for the parameter concerned and the time allowed to remedy the problem shall be set by the competent authorities or other relevant bodies.

- 4. Recourse may no longer be had to paragraph 3 if failure to comply with any one parametric value for a given water supply has occurred on more than 30 days on aggregate during the previous 12 months.**
- 5. Any Member State which has recourse to the derogations provided for in this Article shall ensure that the population affected by any such derogation is promptly informed in an appropriate manner of the derogation and of the conditions governing it. In addition the Member State shall, where necessary, ensure that advice is given to particular population groups for which the derogation could present a special risk.**

These obligations shall not apply in the circumstances described in paragraph 3 unless the competent authorities decide otherwise.

- 6. Except where paragraph 3 applies, a Member State shall inform the Commission within two months of any derogation concerning an individual supply of water exceeding 1000 m³ a day as an average or serving more than 5000 persons, including the information specified in paragraph 2.**
- 7. This Article shall not apply to water intended for human consumption offered for sale in bottles or containers.**

Article 13
Access to water intended for human consumption

Member States shall take necessary measures to improve or maintain access to water intended for human consumption for all, in particular for vulnerable and marginalised groups, as defined by the Member States, and to promote the use of tap water intended for human consumption by choosing the most appropriate measures, taking into account local, geographical and cultural circumstances.

1. ~~Without prejudice to Article 9 of Directive 2000/60/EC, Member States shall take all necessary measures to improve access for all to water intended for human consumption and promote its use on their territory. This shall include all of the following measures:~~

- (a) **To this end, Member States shall ensure that identifying people without access to water intended for human consumption and reasons for lack of access (such as belonging to a vulnerable and marginalised group) are identified, assessing possibilities to improve access for those people and informing them about possibilities of connecting to the distribution network or about alternative means to have access to such water;**
- (b) ~~setting up and maintaining outdoors and indoors equipment for free access to water intended for human consumption in public spaces;~~
- (c) ~~promoting water intended for human consumption by:~~

Measures to promote tap water intended for human consumption may include:

- (i) launching campaigns to inform citizens about the quality of such water;
- (ii) encouraging the provision of such water in administrations and public buildings;

- (iii) encouraging the free provision of such water in restaurants, canteens, and catering services.
2. ~~On the basis of the information gathered under paragraph 1(a), Member States shall take all necessary measures to ensure access to water intended for human consumption for vulnerable and marginalised groups.~~

~~In case those groups do not have access to water intended for human consumption, Member States shall immediately inform them of the quality of the water they are using and of any action that can be taken to avoid adverse effects on human health resulting from any contamination of that water.~~

Article 14
Information to the public

1. Member States shall ensure that adequate and up-to-date information on **the quality of** water intended for human consumption is available online **or by other means** to all persons supplied, in accordance with Annex IV.
2. Member States shall ensure that all persons supplied receive regularly and at least once a year, and in the most appropriate form (for instance on their invoice or by **digital means such as** smart applications) without having to request it, **information on the price or cost of water intended for human consumption supplied per litre and or cubic metre and relevant information on the quality of water supplied including the following information:**
 - (a) ~~information on the cost structure of the tariff charged per cubic metre of water intended for human consumption, including fixed and variable costs, presenting at least costs related to the following elements:~~
 - (i) ~~measures taken by water suppliers for the purposes of the hazard assessment pursuant to Article 8(5);~~

- (ii) ~~treatment and distribution of water intended for human consumption;~~
- (iii) ~~waste water collection and treatment;~~
- (iv) ~~measures taken pursuant to Article 13, in case such measures have been taken by water suppliers;~~
- (b) the price of water intended for human consumption supplied per litre and cubic metre;
- (c) ~~the volume consumed by the household, at least per year or per billing period, together with yearly trends of consumption;~~
- (d) ~~comparisons of the yearly water consumption of the household with an average consumption for a household in the same category;~~
- (e) a link to the website containing the information set out in Annex IV.

~~The Commission may adopt implementing acts specifying the format of, and modalities to present, the information to be provided under the first subparagraph. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 20(2).~~

3. Paragraphs 1 and 2 are without prejudice to Directives 2003/4/EC and 2007/2/EC.

Article 15

Information on monitoring of implementation

1. Without prejudice to Directive 2003/4/EC and Directive 2007/2/EC, Member States, assisted by the European Environment Agency, shall:
 - (a) set up by ... [6 years after the end-date for transposition of this Directive], and update every 6 years thereafter, a data set containing information on **measures taken to improve access to and to promote the use of water intended for human consumption, measures taken under Article 13**, and on the share of their population that has access to water intended for human consumption. **This does not include bottled water;**
 - (b) set up by ... [~~3~~ 6 years after the end-date for transposition of this Directive], and update every ~~3~~ 6 years thereafter, a data set containing the ~~hazard risk assessment and risk management of the catchment area(s) for the abstraction point(s)~~ and ~~risk assessment of the domestic distribution systems~~ risk assessments performed in accordance with Articles 8 and 10, respectively, including the following elements:
 - (i) ~~the abstraction points identified~~ **information on catchment areas for the abstraction point(s)** under Article 8(1)(a);
 - (ii) the monitoring results collected in accordance with Article 8(1)(c ~~d~~) and Article 10(1)(b); and
 - (iii) concise information on measures taken pursuant to Article 8(~~§ 4~~) and Article 10(2);

- (c) set up, and update annually thereafter, a data set containing monitoring results, in cases of exceedances of the parametric values set in Annex I, parts A and B, collected in accordance with Articles 9 and 11 and information about the remedial actions taken in accordance with Article 12;
- (d) set up, and update annually thereafter, a data set containing information on drinking water incidents that have caused potential danger to human health, regardless of whether any failure to meet the parametric values occurred, that lasted for more than 10 consecutive days and that affected at least 1 000 people, including the causes of those incidents and remedial actions taken in accordance with Article 12.
- (e) **set up, and update annually thereafter, a data set containing information on all derogations granted in accordance with Article 12bis(1), including the information foreseen in Article 12bis(2).**

Where possible, spatial data services as defined in Article 3(4) of Directive 2007/2/EC shall be used to present those data sets.

2. Member States shall ensure that the Commission, the European Environment Agency and the European Centre for Disease Prevention and Control have access to the data sets referred to in paragraph 1.
3. The European Environment Agency shall publish and update a Union-wide overview on the basis of the data collected by the Member States on a regular basis or following receipt of a request from the Commission.

The Union-wide overview shall include, as appropriate, indicators for outputs, results and impacts of this Directive, Union-wide overview maps and Member State overview reports.

4. The Commission may adopt implementing acts specifying the format of, and modalities to present, the information to be provided in accordance with paragraphs 1 and 3, including detailed requirements regarding the indicators, the Union-wide overview maps and the Member State overview reports referred to in paragraph 3.

The implementing acts referred to in the first subparagraph shall be adopted in accordance with the examination procedure referred to in Article 20(2).

5. **Member States may derogate from this ~~§ Article~~ on any of the grounds referred to in Article 13(1) of Directive 2007/2/EC.**

Article 16

Access to justice

1. ~~Member States shall ensure that, natural or legal persons or their associations, organisations or groups, in accordance with national legislation or practice, have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, actions or omissions related to the implementation of Articles 4, 5, 12, 13, and 14, when one of the following conditions is fulfilled:~~
 - (a) ~~they have a sufficient interest;~~
 - (b) ~~they maintain the impairment of a right, where the administrative procedural law of the relevant Member State requires this as a precondition.~~
2. ~~Member States shall determine at what stage decisions, acts or omissions may be challenged.~~
3. ~~What constitutes a sufficient interest and impairment of a right shall be determined by Member States, consistently with the objective of giving the public concerned wide access to justice.~~

~~To that end, the interest of any non-governmental organisation promoting environmental protection and meeting the requirements under national law shall be deemed sufficient for the purposes of paragraph 1(a).~~

~~Such organisations shall also be deemed to have rights capable of being impaired for the purposes of paragraph 1(b).~~

4. ~~Paragraphs 1, 2 and 3 shall not exclude the possibility of a preliminary review procedure before an administrative authority and shall not affect the requirement of exhaustion of administrative review procedures prior to recourse to judicial review procedures, where such a requirement exists under national law.~~
5. ~~Any such review procedure referred to in paragraph 1 and 4 shall be fair, equitable, timely and not prohibitively expensive.~~

~~Member States shall ensure that information is made available to the public on access to administrative and judicial review procedures.~~

Article 17
Evaluation

1. The Commission shall, by [12 years after the end-date for transposition of this Directive], carry out an evaluation of this Directive. The evaluation shall be based, *inter alia*, on the following elements:
 - (a) the experience gathered with the implementation of this Directive;
 - (b) the data sets from Member States set up in accordance with Article 15(1) and the Union-wide overviews compiled by the European Environment Agency in accordance with Article 15(3);

- (c) relevant scientific, analytical and epidemiological data;
 - (d) World Health Organisation recommendations, where available.
2. In the context of the evaluation, the Commission shall pay particular regard to the performance of this Directive concerning the following aspects:
- (a) the risk-based approach set out in Article 7;
 - (b) ~~provisions related to access to water set out in Article 13;~~
 - (b) (e) provisions concerning the information to be provided to the public under Article 14 and Annex IV.

Article 18

Review and amendment of Annexes

1. At least every five years, the Commission shall review Annexes I and II in the light of scientific and technical progress **as well as the Member States' risk-based approach to water safety contained in the data sets established pursuant to Article 15 and, where appropriate, shall make legislative proposals for amendments in accordance with the Treaty.**

~~The Commission shall, on the basis of Member States' hazard and domestic distribution risk assessments contained in the data sets set up pursuant to Article 15, review Annex II and assess whether there is a need to adapt it or to introduce new monitoring specifications for the purposes of those risk assessments.~~

2. The Commission is empowered to adopt delegated acts in accordance with Article 19 amending Annexes III to IV where necessary, to adapt ~~it them~~ to scientific and technical progress ~~or to specify monitoring requirements for the purposes of the hazard and domestic distribution risk assessments pursuant to Article 8(1)(d) and Article 10(1)(b).~~

Article 19
Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.
2. The power to adopt delegated acts referred to in Article 18(2) shall be conferred on the Commission for ~~an indeterminate period of time from [date of entry into force of this Directive]~~ a period of 5 years from [date of entry into force of this Directive]. The Commission shall draw up a report in respect of the delegation of power no later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension no later than three months before the end of each period.
3. The delegation of power referred to in Article 18(2) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the Official Journal of the European Union or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.
4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement on Better Law-Making of 13 April 2016.
5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. A delegated act adopted pursuant to Article 18(2) shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

Article 20

Committee procedure

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.
2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Where the Committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation 182/2011 shall apply.

Article 21

Penalties

Member States shall lay down the rules on penalties applicable to infringements of national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. Member States shall, by ... [2 years after entry into force of this Directive], notify the Commission of those rules and those measures and shall notify it of any subsequent amendment affecting them.

Article 22
Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 2 and 5 to 21 and Annexes I to IV by ... [2 years after entry into force of this Directive]. They shall immediately communicate the text of those measures to the Commission. When Member States adopt those measures, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to the Directives repealed by this Directive shall be construed as references to this Directive. Member States shall determine how such reference is to be made and how that statement is to be formulated.
2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

Article 22bis
Transitional period

1. **Member States shall take the measures necessary to ensure that water intended for human consumption complies with the parametric values set in Annex I, part B, for the following parameters: Chlorate, Chlorite, Haloacetic Acids, Microcystin-LR, Sum of PFASs, Uranium, by [3 years after end-date for transposition].**
2. **During this transitional period, water suppliers shall not be obliged to monitor the water intended for human consumption in accordance with the provisions of Article 11 for the parameters listed in the first paragraph.**

Article 23

Repeal

1. Directive 98/83/EC, as amended by the instruments listed in Annex V, Part A, is repealed with effect from [day after the date in the first subparagraph of Article 22(1)], without prejudice to the obligations of the Member States relating to the time-limits for the transposition into national law of the Directives set out in Annex V, Part B.

References to the repealed Directive shall be construed as references to this Directive and shall be read in accordance with the correlation table in Annex VI.

2. Derogations granted by Member States in accordance with Article 9(1) of Directive 98/83/EC that are still applicable by [end-date for transposition of this Directive] shall remain applicable until the end of their duration. They may **be renewed in accordance with Article 12bis only where a second derogation has not yet been granted. ~~not be renewed further. The right to ask the Commission for a third derogation in accordance with Article 9(2) of Directive 98/83/EC shall remain applicable for those derogations already granted by Member States at the time of the entry into force of this Directive.~~**

Article 24

Entry into force

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 25
Addressees

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament
The President

For the Council
The President

ANNEX I

**MINIMUM REQUIREMENTS FOR PARAMETRIC VALUES USED TO ASSESS THE
QUALITY OF WATER INTENDED FOR HUMAN CONSUMPTION**

PART A

Microbiological parameters

Parameter	Parametric value	Unit	Notes
<i>Clostridium perfringens</i> spores	0	Number/100 ml	
Coliform bacteria	0	Number/100 ml	
Intestinal Enterococci	0	Number/100 ml	For water put into bottles or containers the unit is number/250 ml
<i>Escherichia coli</i> (<i>E. coli</i>)	0	Number/100 ml	For water put into bottles or containers the unit is number/250 ml
Heterotrophic plate counts (HPC) 22°	No abnormal change		
Somatic coliphages	0	Number/100 ml	
Turbidity	<4	NTU	

PART B

Chemical parameters

Parameter	Parametric value	Unit	Notes
Acrylamide	0,10	µg/l	The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.
Antimony	5,0 20	µg/l	
Arsenic	10	µg/l	
Benzene	1,0	µg/l	
Benzo(a)pyrene	0,010	µg/l	
Beta-estradiol (50-28-2)	0,001	µg/l	
Bisphenol A	0,01	µg/l	
Boron	1,0 2,4	mg/l	
Bromate	10	µg/l	
Cadmium	5,0	µg/l	

Chlorate	0,25	mg/l	<p>Parametric value of 0,7 mg/l shall be applied when a disinfection method that generates chlorate, in particular chlorine dioxide, is used for disinfection of water intended for human consumption. Where possible, without compromising disinfection, Member States shall strive for a lower value.</p> <p>This parameter shall be measured only if such disinfection methods are used.</p>
Chlorite	0,25	mg/l	<p>Parametric value of 0,7 mg/l shall be applied when a disinfection method that generates chlorite, in particular chlorine dioxide, is used for disinfection of water intended for human consumption.</p> <p>Where possible, without compromising disinfection, Member States shall strive for a lower value.</p> <p>This parameter shall be measured only if such disinfection methods are used.</p>
Chromium	25	µg/l	<p>The value shall be met, at the latest, by [15 θ years after the entry into force of this Directive].</p> <p>The parametric value for chromium until that date is 50 µg/l.</p>

Copper	2,0	mg/l	
Cyanide	50	µg/l	
1,2-dichloroethane	3,0	µg/l	
Epichlorohydrin	0,10	µg/l	The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.
Fluoride	1,5	mg/l	
Haloacetic acids (HAA5s)	8 60	µg/l	This parameter shall be measured only when disinfection methods that can generate HAAs are used for the disinfection of water intended for human consumption. Sum of the following five nine representative substances: monochloro-, dichloro-, and trichloro-acetic acid, mono- and dibromo-acetic acid- bromo chloroacetic acid, bromo dichloroacetic acid, dibromo chloroacetic acid and tri bromoacetic acid.

Lead	<u>§ 10</u>	µg/l	<u>This maximum value is accompanied by the minimisation measures according to Article 10 of this Directive. Member State should use their best endeavours to achieve a lower aspirational value of 5 µg/l by 15 years after the entry into force of this Directive.</u> <u>The value shall be met at the latest, by [15 0 years after the entry into force of this Directive]. The parametric value for lead until that date is 10 µg/l.</u>
Mercury	1,0	µg/l	
Microcystin-LR	1,0	µg/l	This parameter needs not to be measured only in case of potential blooms in source water (increasing cyanobacterial cell density or bloom forming potential).
Nickel	20	µg/l	
Nitrate	50	mg/l	Member States shall ensure that the condition $[\text{nitrate}]/50 + [\text{nitrite}]/3 \leq 1$, where the square brackets signify the concentrations in mg/l for nitrate (NO_3) and nitrite (NO_2), is complied with and that the value of 0,10 mg/l for nitrites is complied with ex water treatment works.

Nitrite	0,50	mg/l	Member States shall ensure that the condition $[\text{nitrate}]/50 + [\text{nitrite}]/3 \leq 1$, where the square brackets signify the concentrations in mg/l for nitrate (NO_3) and nitrite (NO_2), is complied with and that the value of 0,10 mg/l for nitrites is complied with ex water treatment works.
Nonylphenol	0,3	$\mu\text{g}/\text{l}$	
Pesticides	0,10	$\mu\text{g}/\text{l}$	<p>'Pesticides' means:</p> <ul style="list-style-type: none"> – organic insecticides, – organic herbicides, – organic fungicides, – organic nematocides, – organic acaricides, – organic algicides, – organic rodenticides – organic slimicides, – related products (<i>inter alia</i>, growth regulators) <p>and their relevant metabolites as defined in Article 3(32) of Regulation (EC) No 1107/2009¹, that are considered relevant for water intended for human consumption.</p> <p>A pesticide metabolite is deemed relevant for water</p>

¹ Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC (OJ L 309 24.11.2009, p. 1).

		<p>intended for human consumption if there is reason to consider that it has intrinsic properties comparable to those of the parent substance in terms of its pesticide target activity or that it generates (itself or its transformation products) a health risk to the consumer.</p> <p>The parametric value applies to each individual pesticide.</p> <p>In the case of aldrin, dieldrin, heptachlor and heptachlor epoxide, the parametric value is 0,030 µg/l.</p> <p>Member States may define a guidance value to manage the presence of non-relevant metabolites of pesticides in drinking water or, in the absence of such value, Member States should use the value of 0,75 µg/l.</p> <p>Only those pesticides which are likely to be present in a given supply need be monitored.</p> <p>Based on the data reported by Member States, Commission may establish a database of pesticides and their relevant metabolites taking into account their possible presence in water intended for human</p>
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			consumption.
Pesticides — Total	0,50	µg/l	'Pesticides — Total' means the sum of all individual pesticides, as defined in the previous row, detected and quantified in the monitoring procedure.
PFAS	0,10	µg/l	'PFAS' means each individual per- and polyfluoroalkyl substance (chemical formula: $C_nF_{2n+1}-R$).
PFASs — Total	0,50	µg/l	'PFASs Total' means the sum of per- and polyfluoroalkyl substances (chemical formula: $C_nF_{2n+1}-R$).
Sum of PFASs	0,10	µg/l	'Sum of PFASs " means the sum of all per- and polyfluoroalkyl substances considered a concern for water intended for human consumption. This is a subset of PFAS substances that contain a perfluoroalkyl moiety with three or more carbons (i.e. $-CnF_{2n-}$, $n \geq 3$) or a perfluoroalkylether moiety with two or more carbons (i.e. $-CnF_{2n}OCmF_{2m-}$, n and $m \geq 1$). Specification for the selected PFASs and analysis of this parameter is included in Annex III Part B, point 3.

Polycyclic aromatic hydrocarbons	0,10	µg/l	Sum of concentrations of the following specified compounds: benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, and indeno(1,2,3-cd)pyrene.
Selenium	40 30	µg/l	
Tetrachloroethene and Trichloroethene	10	µg/l	Sum of concentrations of specified parameters
Trihalomethanes — Total	100	µg/l	Where possible, without compromising disinfection, Member States shall strive for a lower value. Sum of concentrations of the following specified compounds: chloroform, bromoform, dibromochloromethane, bromodichloromethane.
Uranium	30	µg/l	
Vinyl chloride	0,50	µg/l	The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

PART C

Indicator parameters

Parameter	Parametric value	Unit	Notes
Aluminium	200	µg/l	
Ammonium	0,50	mg/l	
Chloride	250	mg/l	The water should not be corrosive.
<i>Clostridium perfringens</i> including spores	0	Number/100 ml	<u>This parameter is to be measured if the risk assessment indicates it. This parameter needs not to be measured unless the water originates from or is influenced by surface water.</u>
Colour	Acceptable to consumers and no abnormal change		
Conductivity	2500	µS cm ⁻¹ at 20 °C	The water should not be aggressive.

Hydrogen ion concentration	$\geq 6,5$ and $\leq 9,5$	pH units	The water should not be aggressive. For still water put into bottles or containers, the minimum value may be reduced to 4,5 pH units. For water put into bottles or containers which is naturally rich in or artificially enriched with carbon dioxide, the minimum value may be lower.
Iron	200	$\mu\text{g/l}$	
Manganese	50	$\mu\text{g/l}$	
Odour	Acceptable to consumers and no abnormal change		
Oxidability	5,0	mg/l O₂	This parameter need not be measured if the parameter TOC is analysed.
Sulphate	250	mg/l	The water should not be corrosive.
Sodium	200	mg/l	
Taste	Acceptable to consumers and no abnormal change		

Colony count 22°	No abnormal change		
Coliform bacteria	0	number/100 ml	For water put into bottles or containers the unit is number/250 ml.
Total organic carbon (TOC)	No abnormal change		This parameter need not be measured for supplies of less than 10 000 m³ a day.
Turbidity	Acceptable to consumers and no abnormal change		

Waters should not be aggressive or corrosive. This applies particularly to waters undergoing treatment (demineralization, softening, membrane treatment, reverse osmosis, etc.)

Where water intended for human consumption is derived from such treatment that significantly demineralizes or softens water, calcium and magnesium salts could be added to condition the water in order to reduce possible negative health impact, as well as corrosion or aggression of water and to improve taste. Minimum concentrations of calcium and magnesium or total dissolved solids in softened or demineralized water could be established taking into account the characteristics of water that enters these processes.

PART D

Parameters relevant for the domestic distribution risk assessment

Parameter	Parametric value	Unit	Notes
<i>Legionella</i>	<1000	NumberCFU/l	<p>In case the parametric value <1000/l is not met for <i>Legionella</i>, resampling for <i>Legionella pneumophila</i> shall be done. If <i>Legionella pneumophila</i> is not present, the parametric value for <i>Legionella</i> is <10 000/l.</p> <p>This parametric value is not set as a health target, but as a trigger value that can determine risk assessment and remedial action. Such actions could be considered even below the parametric value, e.g. in case of infections and outbreaks. In these cases the source of infection should be confirmed and the species to which it belongs should be identified.</p>

Lead	<u>§ 10</u>	µg/l	<p><u>This maximum value is accompanied by the minimisation measures according to Article 10 of this Directive.</u> Member State should use their best endeavours to achieve a lower aspirational value of 5 µg/l by 15 years after the entry into force of this Directive. The value shall be met, at the latest, by [15 0 years after the entry into force of this Directive]. The parametric value for lead until that date is 10 µg/l. Member States shall strive to meet a value of 5 µg/l earlier than 15 years after the entry into force of this Directive.</p>
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ANNEX II

MONITORING

PART A

General objectives and monitoring programmes for water intended for human consumption

1. Monitoring programmes established pursuant to Article 11(2) for water intended for human consumption shall :
 - (a) verify that the measures in place to control risks to human health throughout the water supply chain from the abstraction area through treatment and storage to distribution are working effectively and that water at the point of compliance is wholesome and clean;
 - (b) provide information on the quality of the water supplied for human consumption to demonstrate that the obligations set out in Article 4 and the parametric values set in accordance with Article 5 are being met;
 - (c) identify the most appropriate means of mitigating the risk to human health.
2. Monitoring programmes established pursuant to Article 11(2) shall include one **or a combination** of the following :
 - (a) collection and analysis of discrete water samples;
 - (b) measurements recorded by a continuous monitoring process.

~~Monitoring programmes shall also include an operational monitoring programme complementary to verification monitoring, providing rapid insight in operational performance and water quality problems, and allowing rapid pre-planned remedial action. Such operational monitoring programmes shall be supply specific, taking into account the outcomes of the hazard and supply risk assessments, and intended to confirm the effectiveness of all control measures in abstraction, treatment, distribution and storage. The operational monitoring programme shall include the monitoring of the parameter turbidity to regularly control the efficacy of physical removal by filtration processes, in accordance with the parametric values and frequencies indicated in the following table:~~

Parameter	Parametric value
Turbidity	0.3 NTU (95%) and not >0.5 NTU for 15 consecutive minutes

Volume (m^3) of water distributed or produced each day within a supply zone	Minimum frequency
$\leq 10\ 000$	Daily
$>10\ 000$	Online

In addition, monitoring programmes may consist of:

- (a) inspections of records of the functionality and maintenance status of equipment;
- (b) inspections of the abstraction area, and of the treatment, storage and distribution infrastructure without prejudice to monitoring requirements provided under Article 8(1)(c) and Article 10(1)(b).

3. Monitoring programmes shall also include an operational monitoring programme, providing rapid insight in operational performance and water quality problems, and allowing rapid pre-planned remedial action. Such operational monitoring programmes shall be supply-specific, taking into account the outcomes of the identification of hazards and hazardous events and supply risk assessments, and intended to confirm the effectiveness of all control measures in abstraction, treatment, distribution and storage.

The operational monitoring programme shall include the monitoring of the parameter turbidity at the water supply plant to regularly control the efficacy of physical removal by filtration processes, in accordance with the reference values and frequencies indicated in the following table (not applicable for groundwater sources where turbidity is caused by iron and manganese):

Operation parameter	Reference value
Turbidity	0.3 NTU (in 95% of samples and none to exceed not >0.51 NTU for 15 consecutive minutes

Volume (m³) of water distributed or produced each day within a supply zone	Minimum frequency
≤ 1000	Weekly
> 1000 to ≤ 10 000	Daily
>10 000	Online

The operational monitoring programme shall also include the monitoring of the following parameters in the raw water to control the efficacy of the treatment processes against microbiological risks:

Operational Parameter	Reference value	Unit	Notes
<i>Clostridium perfringens</i> including spores			<p>This parameter is to be measured if <u>the risk assessment indicates it water originates from or is influenced by surface water.</u></p> <p>If it is found in raw water, it should be analysed after steps of the treatment train in order to determine log removal by the barriers in place and to assess whether the risk of breakthrough of parasite spores (Cryptosporidia and Giardia) is sufficiently under control.</p> <p>This parameter is to be measured in finished drinking water if it is chlorinated.</p>

Somatic coliphages	50 (for raw water)	Plaque Forming Units (PfU) /100 ml	<p>This parameter is to be measured if <u>the risk assessment indicates it originates from or is influenced by surface water.</u></p> <p>If it is found in raw water at concentrations > 50 PfU /100 ml, it should be analysed after steps of the treatment train in order to determine log removal by the barriers in place and to assess whether the risk of breakthrough of pathogenic viruses is sufficiently under control.</p>
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4. Member States shall ensure that monitoring programmes are reviewed on a continuous basis and updated or reconfirmed at least every 6 years.

PART B

Parameters and sampling frequencies

1. Core List of parameters

Group A

The following parameters (Group A) shall be monitored in accordance with the monitoring frequencies set out in Table 1 of point 2:

- (a) *Escherichia coli (E. coli)*, intestinal enterococci, coliform bacteria, colony count 22 °C, colour, turbidity, taste, odour, pH, conductivity;
- (b) other parameters identified as relevant in the monitoring programme, in accordance with Article 5(3) and, where relevant, through a risk assessment of the supply system as set out in Article 9 and Annex II Part C.

Under specific circumstances, the following parameters shall be added to the Group A Parameters:

- (a) ammonium and nitrite, if chloramination is used;
- (b) aluminium and iron, if used as water treatment chemicals.

Escherichia coli (E. coli) and intestinal enterococci ~~Clostridium perfringens spores, and somatic e.coliphages~~ are considered 'core parameters' and may not be subject to a reduction due to a supply risk assessment in accordance with Article 9 and part C of this Annex. They shall always be monitored at the frequencies set out in Table 1 of point 2.

Group B parameters

In order to determine compliance with all parametric values set out in this Directive, all other parameters not analysed under Group A and set in accordance with Article 5, except for parameters in Annex I, Parts D and E, shall be monitored at least at the frequencies set out in Table 1 of point 2, unless a different sampling frequency is determined on the basis of a supply risk assessment carried out in accordance with Article 9 and part C of this Annex.

2. Sampling frequencies

All parameters set in accordance with Article 5 shall be monitored at least at the frequencies set out in the following Table, unless a different sampling frequency is determined on the basis of a supply risk assessment carried out in accordance with Article 9 and part C of this Annex:

<i>Table 1</i>			
<i>Minimum frequency of sampling and analysis for compliance monitoring</i>			
Volume of water distributed or produced each day within a supply zone (See Notes 1 and 2) m³	Group A parameter number of samples per year	Group B parameter number of samples per year	
	≤ 10	> 0 (See Note 4)	> 0 (See Note 4)
> 10	≤ 100	2 (See Note 5)	1
> 100	≤ 1000	4	1
> 1000	≤ 10000	4 for first 1000 m ³ /d + 3 for each additional 1000 m ³ /d and part thereof of the total volume (See Note 3)	1 for first 1000 m ³ /d + 1 for each additional 4500 m ³ /d and part thereof of the total volume (See Note 3)
> 10000	≤ 100000		3 for first 10000 m ³ /d + 1 for each additional 10000 m ³ /d and part thereof of the total volume (See Note 3)
> 100000			12 for first 100000 m ³ /d + 1 for each additional 25000 m ³ /d and part thereof of the total volume (See Note 3)

Table 1

<i>Minimum frequency of sampling and analysis for compliance monitoring</i>	
Volume (m³) of water distributed or produced each day within a supply zone	
	Minimum number of samples per year
≤ 100	10 ^a
> 100	≤ 1 000
> 1 000	≤ 10 000
> 10 000	≤ 100 000
	>100 000
	365
	365

a: all samples are to be taken during times when the risk of treatment breakthrough of enteric pathogens is high.

b: at least 10 samples are to be taken during times when the risk of treatment breakthrough of enteric pathogens is high.

Note 1: A supply zone is a geographically defined area within which water intended for human consumption comes from one or more sources and water quality may be considered as being approximately uniform.

Note 2: The volumes are calculated as averages taken over a calendar year. The number of inhabitants in a supply zone may be used instead of the volume of water to determine the minimum frequency, assuming water consumption of 200 l/(day*capita).

Note 3: The frequency indicated is calculated as follows: e.g. 4300 m³/d = 16 samples for group A parameters (four for the first 1000 m³/d + 12 for additional 3300 m³/d).

Note 4: For water suppliers, where an exemption has not been granted under Article 3(2)(b), Member States shall lay down the minimum sampling frequency for parameters of group A and B, provided that core parameters are monitored at least once per year. Member States that have decided to exempt individual supplies under Article 3(2)(b) shall apply these frequencies only for supply zones that distribute between 10 and 100 m³ per day.

Note 5: Member States may reduce the sampling frequency, provided that all parameters set in accordance with Article 5 are monitored at least once every ten years as well as in cases where a new water source is integrated or changes to the water supply system, where a potentially adverse effect on the quality of water is to be expected, are made.

PART C

Risk assessment of the supply system ~~Supply risk assessment~~

1. The ~~supply risk assessment referred to in Article 9 shall be based on the general principles of risk assessment set out in international standards such as standard EN 15975-2 concerning ‘security of drinking water supply, guidelines for risk and crisis management’.~~

1.2. Based on the outcome of the risk assessment for the supply system-as referred to in Article 9, Following a ~~supply risk assessment~~, the list of parameters considered in the monitoring shall be extended and the sampling frequencies set out in Part B increased, where any of the following conditions is fulfilled:

- (a) the list of parameters or frequencies set out in this Annex is not sufficient to fulfil the obligations imposed under Article 11(1);
- (b) additional monitoring is required for the purposes of Article 11(5);
- (c) it is necessary to provide the assurances set out in point (1)(a) of Part A;
- (d) increasing the sampling frequencies is necessary pursuant to Article 8(3)(a).

3.2. Following a **risk assessment for the supply system** ~~supply risk assessment~~, the list of parameters considered in the monitoring and the sampling frequencies set out in Part B may be reduced provided all of the following conditions are met:

- (a) the location and frequency of sampling is determined in relation to the parameter's origin, as well as the variability and long-term trend of its concentration, taking into account Article 6;

- (b) for reducing the minimum sampling frequency of a parameter the results obtained from samples collected at regular intervals over a period of at least 3 years from sampling points representative of the whole supply zone are all less than 60 % of the parametric value;
 - (c) for removing a parameter from the list of parameters to be monitored the results obtained from samples collected at regular intervals over a period of at least 3 years from points representative of the whole supply zone are all less than 30 % of the parametric value;
 - (d) for removing a parameter from the list of parameters to be monitored, the decision is based on the result of the risk assessment, informed by the results of monitoring of sources of water intended for human consumption and confirming that human health is protected from the adverse effects of any contamination of water intended for human consumption, as laid down in Article 1;
 - (e) for reducing the sampling frequency of a parameter or for removing a parameter from the list of parameters to be monitored, the risk assessment confirms that no factor that can be reasonably anticipated is likely to cause deterioration of the quality of the water intended for human consumption.
43. Where monitoring results, demonstrating that the conditions set out in paragraph 3 2, points (b) to (e) are met, are already available by [the date of entry into force of this Directive], those monitoring results may be used to adapt the monitoring following the **risk assessment for the supply system** ~~risk assessment~~ from that date.

Where adjustments of monitoring have already been implemented following the supply risk-assessment in accordance, inter alia, to Part C of the Commission Directive 2015/1787, Member States may provide for the possibility for confirming their validity without requiring monitoring according to paragraphs 2(b) and 2(c) over another period of at least 3 years from points representative of the whole supply zone.

PART D

Sampling methods and sampling points

1. Sampling points shall be determined so as to ensure compliance with the points of compliance as defined in Article 6. In the case of a distribution network, a Member State may take samples within the supply zone or at the treatment works for particular parameters if it can be demonstrated that there would be no adverse change to the measured value of the parameters concerned. As far as possible, the number of samples shall be distributed equally in time and location.
2. Sampling at the point of compliance shall meet the following requirements:
 - (a) compliance samples for certain chemical parameters (in particular copper, lead, *Legionella* and nickel) shall be taken at the consumer's tap without prior flushing. A random daytime sample of one litre volume is to be taken. As an alternative, Member States may use fixed stagnation time methods that better reflect their national situation, **such as the average weekly intake by consumers**, provided that, at the supply zone level, this does not result in fewer cases of non-compliance than using the random daytime method;
 - (b) compliance samples for microbiological parameters at the point of compliance shall be taken and handled according to EN ISO 19458, sampling purpose B.

Samples for *Legionella* in domestic distribution systems shall be taken at risk points for proliferation of and/or points representative for systemic exposure to *Legionella*.

Member States shall establish guidelines for sampling methods for *Legionella*.

3. Sampling in the distribution network, with the exception of sampling at the consumers' tap, shall be in accordance with ISO 5667-5. For microbiological parameters, sampling in the distribution network shall be taken and handled according to EN ISO 19458, sampling purpose A.

ANNEX III

SPECIFICATIONS FOR THE ANALYSIS OF PARAMETERS

Member States shall ensure that the methods of analysis used for the purposes of monitoring and demonstrating compliance with this Directive, **with the exception of online turbidity**, are validated and documented in accordance with EN ISO/IEC 17025 or other equivalent standards accepted at international level. Member States shall ensure that laboratories or parties contracted by laboratories apply quality management system practices in accordance with EN ISO/IEC 17025 or other equivalent standards accepted at international level.

For the purposes of assessing the equivalence of alternative methods with the methods laid down in this Annex, Member States may use standard EN ISO 17994, established as the standard on the equivalence of microbiological methods or standard EN ISO 16140 or any other similar internationally accepted protocols, to establish the equivalence of methods based on principles other than culturing, which are beyond the scope of EN ISO 17994.

In the absence of an analytical method meeting the minimum performance criteria set out in Part B, Member States shall ensure that monitoring is carried out using best available techniques not entailing excessive costs.

PART A

Microbiological parameters for which methods of analysis are specified

The methods for microbiological parameters are:

- (a) *Escherichia coli* (*E. coli*) and coliform bacteria (EN ISO 9308-1 or EN ISO 9308-2)
- (b) **Intestinal** enterococci (EN ISO 7899-2)
- (c) ~~*Pseudomonas aeruginosa* (EN ISO 16266)~~

(d) colony count or heterotrophic plate counts at 22 °C (EN ISO 6222)

(e) *Clostridium perfringens* including spores (EN ISO 14189)

(f) ~~Turbidity (EN ISO 7027)~~

(g) *Legionella* (EN ISO 11731)

In case of outbreak, quick test could be used as a complement to the culture methods.

(h) Somatic coliphages (EN ISO 10705-2; **EN ISO 10705-3**)

PART B

Chemical and indicator parameters for which performance characteristics are specified

1. *Chemical and indicator parameters*

For the parameters set out in Table 1, the method of analysis used shall, as a minimum, be capable of measuring concentrations equal to the parametric value with a limit of quantification, as defined in Article 2(2) of Commission Directive 2009/90/EC¹, of 30 % or less of the relevant parametric value and an uncertainty of measurement as specified in Table 1. The result shall be expressed using at least the same number of significant figures as for the parametric value considered in **Parts B and C** of Annex I.

The uncertainty of measurement laid down in Table 1 shall not be used as an additional tolerance to the parametric values set out in Annex I.

Table 1		
Minimum performance characteristic ‘Uncertainty of measurement’		
Parameters	Uncertainty of measurement (See Note 1) % of the parametric value (except for pH)	Notes
Aluminium	25	
Ammonium	40	
Acrylamide	30	
Antimony	40	
Arsenic	30	
Benzo(a)pyrene	50	See Note 2
Benzene	40	

¹ Commission Directive 2009/90/EC of 31 July 2009 laying down, pursuant to Directive 2000/60/EC of the European Parliament and of the Council, technical specifications for chemical analysis and monitoring of water status (OJ L 201, 1.8.2009, p. 36).

Beta-estradiol (50-28-2)	50	
Bisphenol A	50	
Boron	25	
Bromate	40	
Cadmium	25	
Chloride	15	
Chlorate	<u>340</u>	
Chlorite	<u>340</u>	
Chromium	30	
Copper	25	
Cyanide	30	See Note 3
1,2-dichloroethane	40	
Epichlorohydrin	30	
Fluoride	20	
HAA _s	50	
Hydrogen ion concentration pH	0,2	See Note 4
Iron	30	
Lead	<u>25</u> 30	
Manganese	30	
Mercury	30	
Microcystin-LR	30	
Nickel	25	
Nitrate	15	
Nitrite	20	
Nonylphenol	50	
Oxidability	50	See Note 5
Pesticides	30	See Note 6 4
PFASs	50	
Polycyclic aromatic hydrocarbons	<u>340</u>	See Note 7 5
Selenium	40	
Sodium	15	
Sulphate	15	

Tetrachloroethene	3 40	See Note 8 6
Trichloroethene	40	See Note 8 6
Trihalomethanes — total	40	See Note 7 5
Total organic carbon (TOC)	30	See Note 9
Turbidity	30	See Note 10
Uranium	30	
Vinyl chloride	50	

2. *Notes to Table 1*

<i>Note 1</i>	Uncertainty of measurement is a non-negative parameter characterising the dispersion of the quantity values being attributed to a measurand, based on the information used. The performance criterion for measurement uncertainty ($k = 2$) is the percentage of the parametric value stated in the table or any stricter value . Measurement uncertainty shall be estimated at the level of the parametric value, unless otherwise specified.
<i>Note 2</i>	If the value of uncertainty of measurement cannot be met, the best available technique should be selected (up to 60 %).
<i>Note 3</i>	The method determines total cyanide in all forms.
<i>Note 4</i>	The value for the uncertainty of measurement <u>are</u> is expressed in pH units.
<i>Note 5</i>	Reference method: EN ISO 8467.
<i>Note 6</i>	The performance characteristics for individual pesticides are given as an indication. Values for the uncertainty of measurement as low as 30 % can be achieved for several pesticides, higher values up to 80 % may be allowed for a number of pesticides.
<i>Note 7</i>	The performance characteristics apply to individual substances, specified at 25 % of the parametric value in Part B of Annex I.
<i>Note 8</i>	The performance characteristics apply to individual substances, specified at 50 % of the parametric value in Part B of Annex I.
<i>Note 9</i>	The uncertainty of measurement should be estimated at the level of 3 mg/l of the total organic carbon (TOC). CEN 1484 Guidelines for the determination of TOC and dissolved organic carbon (DOC) shall be used for the specification of the uncertainty of the test method.

Note 10	The uncertainty of measurement should be estimated at the level of 1,0 NTU, (nephelometric turbidity units) in accordance with EN ISO 7027 or other equivalent standard method.
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3. Sum of PFASs

The following relevant substances could be analysed based on the technical guidelines developed in accordance with art. 11 (6) of this Directive:

- Perfluorohexanesulfonic acid Perfluorhexansulfonate (PFHxS)
- Perfluoroheptane sulfonic acid (PFHpS)
- Perfluorooctanesulfonic acid Perfluoroktansulfonate (PFOS)
- Perfluorononane sulfonic acid (PFNS)
- Perfluorodecane sulfonic acid (PFDS)
- Perfluoroundecane sulfonic acid
- Perfluorododecane sulfonic acid
- Perfluorotridecane sulfonic acid
- Perfluorohexanoic acid Perfluorhexanoate (PFHxA)
- Perfluoroheptanoic acid Perfluorheptanoate (PFHpA)
- Perfluorooctanoic acid Perfluoroktanoate (PFOA)
- Perfluorononanoic acid Perfluornonanoate (PFNA)
- Perfluorodecanoic acid Perfluordekanoate (PFDA)
- Perfluoroundecanoic acid (PFUnDA)
- Perfluorododecanoic acid (PFDoDA)
- Perfluorotridecanoic acid (PFTrDA)

These substances shall be monitored when the risk assessment and risk management of the catchment area(s) performed in accordance with Article 8 of this Directive conclude that these substances are likely to be present in a given water supply.

ANNEX IV

INFORMATION TO THE PUBLIC

The following information shall be accessible to consumers on-line in a user-friendly and customized way **or by other means**:

- (1) identification of the relevant water supplier;
- (2) the most recent monitoring results for parameters listed in Annex I, parts A, ~~and~~ B and C, including frequency ~~and location~~ of sampling points, ~~relevant to the area of interest to the person supplied~~, together with the parametric value set in accordance with Article 5. The monitoring results must not be older than **one year**:
 - (a) ~~one month, for very large water suppliers;~~
 - (b) ~~six months for large water suppliers;~~
 - (c) ~~one year for small water suppliers;~~
- (3) **general information on types of water treatment and disinfection applied;**
- (4) ~~(3)~~ in case of exceedance of the parametric values set in accordance with Article 5 **and which are considered as relevant for human health by the competent authorities or other relevant bodies**, information on the potential danger to human health and the associated health and consumption advice or a hyperlink providing access to such information;
- (5) ~~(4)~~ **a summary of the relevant information on supply risk assessment;**

(5) information on the following indicator parameters and associated parametric values:

(a) Colour;

(b) pH (Hydrogen ion concentration);

(c) Conductivity;

(d) Iron;

(e) Manganese;

(f) Odour;

(g) Taste;

(h) Hardness;

(i) Minerals, anions/cations dissolved in water:

— Borate BO_3^{2-}

— Carbonate CO_3^{2-}

— Chloride Cl^-

— Fluoride F^-

— Hydrogen Carbonate HCO_3^-

— Nitrate NO_3^-

— Nitrite NO_2^-

— Phosphate PO_4^{3-}

— Silicate SiO_2

— Sulphate SO_4^{2-}

— Sulphide S_2^-

— Aluminium Al

— Ammonium NH_4^+

— Calcium Ca

— Magnesium Mg

— Potassium K

— Sodium Na

~~Those parametric values and other non-ionised compounds and trace elements may be displayed with a reference value and/or an explanation;~~

- (6) advice to consumers including on how to reduce water consumption **and avoid health risks due to stagnant water;**

- (7) for very large water suppliers, annual information on:
- (a) the overall performance of the water system in terms of efficiency, including **for instance** leakage rates and energy consumption per cubic meter of delivered water;
 - (b) ~~information on management and governance of the water supplier, including the composition of the board;~~
 - (b) ~~water quantity supplied yearly and trends;~~
 - (c) ~~information on the cost structure of the tariff charged to consumers per cubic meter of water, including fixed and variable costs, presenting at least costs related to energy use per cubic meter of delivered water, measures taken by water suppliers for the purposes of the hazard assessment pursuant to Article 8(4), treatment and distribution of water intended for human consumption, waste water collection and treatment, and costs related to measures for the purposes of Article 13, where such measures have been taken by water suppliers;~~
 - (e) ~~the amount of investment considered necessary by the supplier to ensure the financial sustainability of the provision of water services (including maintenance of infrastructure) and the amount of investment actually received or recouped;~~
 - (d) ~~types of water treatment and disinfection applied;~~
 - (e) ~~summary and statistics of consumer complaints, and of timeliness and adequacy of responses to problems;~~
- (8) Upon justified request, consumers shall be provided with the information under points (1) to (5) in hard copy or shall be given access to historical data for information under points (2) and (3), dating back up to 10 years **if available, upon request.**

ANNEX V

Part A

Repealed Directive
with list of the successive amendments thereto
(referred to in Article 23)

Council Directive 98/83/EC (OJ L 330, 5.12.1998, p. 32)	
Regulation (EC) No 1882/2003 of the European Parliament and of the Council (OJ L 284, 31.10.2003, p. 1)	Only point 29 of Annex II
Regulation (EC) No 596/2009 of the European Parliament and of the Council (OJ L 188, 18.7.2009, p. 14)	Only point 2.2 of the Annex
Commission Directive (EU) 2015/1787 (OJ L 260, 7.10.2015, p. 6)	

Part B

Time-limits for transposition into national law
(referred to in Article 23)

Directive	Time-limit for transposition
98/83/EC	25 December 2000
(EU) 2015/1787	27 October 2017

ANNEX VI

CORRELATION TABLE

Directive 98/83/EC	This Directive
Article 1	Article 1
Article 2, introductory wording	Article 2, introductory wording
Article 2 pts. 1 and 2	Article 2 pts. 1 and 2
-	Article 2 pts. 3 to 8
Article 3(1), introductory wording	Article 3(1), introductory wording
Article 3(1)(a) and (b)	Article 3(1)(a) and (b)
Article 3(2) and (3)	Article 3(2) and (3)
Article 4(1), introductory wording	Article 4(1), introductory wording
Article 4(1)(a) and (b)	Article 4(1)(a) and (b)
Article 4(1), 2 nd subparagraph	Article 4(1)(c)
Article 4(2)	Article 4(2)
Article 5(1) and (2)	Article 5(1)
Article 5(3)	Article 5(2)
Article 6(1) pts (a) to (c)	Article 6, pts (a) to (c)
Article 6(1), pt (d)	-
Article 6(2)	-
Article 6(3)	-
-	Article 7
-	Article 8
	Article 9
-	Article 10

Article 7(1)	Article 11(1)
Article 7(2)	Article 11(2) introductory wording
-	Article 11(2), pts (a) to (c)
Article 7(3)	Article 11(3)
Article 7(4)	-
Article 7(5)(a)	Article 11(4) introductory wording
Article 7(5)(b)	Article 11(4)(a)
Article 7(5)(c)	Article 11(4)(b)
Article 7(6)	Article 11(5)
Article 8(1)	Article 12(1)
Article 8(2)	Article 12(2), 1st subparagraph
-	Article 12(2), 2nd subparagraph
Article 8(3)	Article 12(3), 1st subparagraph
-	Article 12(3), 2nd subparagraph
-	Article 12(4), pts (a) to (c)
Article 8(4)	Article 12(5)
Article 8(5) to (7)	-
Article 9	-
Article 10	-
-	Article 13
-	Article 14
-	Article 15
-	Article 16
-	Article 17

Article 11(1)	Article 18(1), 1 st subparagraph
-	Article 18(1), 2nd subparagraph
Article 11(2)	-
-	Article 18(2)
-	Article 19
Article 12(1)	Article 20(1)
Article 12(2), 1 st subparagraph	Article 20(1)
Article 12(2), 2 nd subparagrah	-
Article 12(3)	-
Article 13	-
Article 14	-
Article 15	-
-	Article 21
Article 17(1) and (2)	Article 22(1) and (2)
Article 16(1)	Article 23(1)
Article 16(2)	-
	Article 23(2)
Article 18	Article 24
Article 19	Article 25
Annex I, part A	Annex I, part A
Annex I, part B	Annex I, part B
Annex I, part C	-
-	Annex I, part C
Annex II, Part A (1)(a) to (c)	Annex II, Part A (1)(a) to (c)

Annex II, Part A (2) 1 st subparagraph	Annex II, Part A (2) 1 st subparagraph
-	Annex II, Part A (2) 2nd subparagraph and table
Annex II, Part A (2) 2nd subparagraph	Annex II Part A (2) 3rd subparagraph
Annex II, Part A (3)	-
Annex II, Part A (4)	Annex II, Part A (3)
Annex II, Part B (1)	-
Annex II, Part B (2)	Annex II, Part B (1)
Annex II, Part B (3)	Annex II, Part B (2)
Annex II, Part C (1)	-
Annex II, Part C (2)	Annex II, Part C (1)
Annex II, Part C (3)	-
Annex II, Part C (4)	Annex II, Part C (2)
Annex II, Part C (5)	Annex II, Part C (3)
-	Annex II, Part C (4)
Annex II, Part C (6)	-
Annex II, Part D, pts (1) to (3)	Annex II, Part D, pts (1) to (3)
Annex III, 1 st and 2 nd subparagraphs	Annex III, 1 st and 2 nd subparagraphs
Annex III, part A, 1 st and 2 nd subparagraphs	-
Annex III, part A, 3 rd subparagraph, points (a) to (f)	Annex III, part A, 3 rd subparagraph points (a) to (h)
Annex III, part B, (1), 1 st subparagraph	Annex III, part B, (1), 1 st subparagraph
Annex III, part B, (1), 2 nd subparagraph	-

Annex III, part B, (1), 3 rd subparagraph and Table 1	Annex III, part B, (1), 2 nd subparagraph and Table 1
Annex III, part B, (1), Table 2	-
Annex III, part B, (2)	Annex III, part B, (2)
Annex IV	-
Annex V	-
-	Annex IV
-	Annex V
-	Annex VI

ANNEX VII
PRINCIPLES FOR SETTING COMMON METHODOLOGIES

Groups of materials

1 *Organic materials*

Organic materials may only be made of the starting substances given in the positive list and in general for substances for which it can be ruled out that the substance and its reaction products are present at levels exceeding 0.1 µg/l in water for human consumption unless - for specific substances a more stringent value is needed taking into account their toxicity. Where applicable practice for materials in contact with drinking water can be based on what is already in operation at the European level for materials in contact with food (positive list) (Commission Regulation (EU) No 10/2011, hereinafter referred to as: 10/2011/EC). The Union list of Commission Regulation (EU) No 10/2011 shall form the basis of the European positive List for organic materials.

Organic materials shall be tested according to table 1 in line with specified EN testing methods and must satisfy the requirements stipulated therein. For this purpose, the test results in terms of substance migration shall be converted into levels expected at the tap.

2 *Metallic materials*

Only metallic materials included in the positive list of compositions under this Directive shall be used. The limitations stipulated in the European positive list in respect of the composition of these materials, their use for certain products and the use of these products shall be complied with.

Compositions shall be tested according to table 1 in line with specified EN testing methods and must satisfy the requirements stipulated therein.

3 *Cementitious materials*

Cementitious materials are made of constituents (inorganic or organic). The organic constituents are made from starting substances. Cement-bound materials in contact with water for human consumption may only be made of the constituents' types given in the European positive list (approved constituent list). Certain constituent types may only be made of the starting substances given in the positive lists and substances for which it can be ruled out that the substances and their reaction products are present at levels exceeding 0.1 µg/l in water for human consumption. Other constituent types must comply with appropriate European Standards.

Cement-bound materials shall be tested according to table 1 in line with specified EN testing methods and must satisfy the requirements stipulated therein. For this purpose, the test results in terms of substance migration shall be converted into levels expected at the tap.

4 *Enamels and ceramic materials*

Enamels and ceramic materials in contact with water for human consumption may only be made of the starting substances types given in the European positive list (approved composition list) under this Directive.

There has to be an assessment of the metallic elements used in the composition of these materials.

Enamels and ceramic materials shall be tested according to table 1 in line with specified EN testing methods and must satisfy the requirements stipulated therein. For this purpose, the test results in terms of substance migration shall be converted into levels expected at the tap.

5 *Exceptions for assessment of materials used in minor and assembled components*

Describing the tests, requirements, and procedure for approval of assembled components, specifically detailing the definition and evaluation of minor components, parts, and materials. For this goal 'minor' refers to a level of influence on the drinking water quality that does not require the full testing.

Table 1. Testing related to material types

Criteria	Organic (1)	Metallic (2)	Cementitious	Enamels and ceramic materials
European Positive lists				
Positive lists of starting substances organic materials	X	N.N.	X	N.N
Positive lists of accepted metallic compositions	N.N.	X	N.N.	N.N
Approved Constituent list Cementitious materials	N.N.	N.N.	X	N.N.
Positive list of accepted enamels and ceramic compositions	N.N	N.N	N.N	X

Organoleptic tests				
Odour and flavour	X	N.N.	X	N.N.
Color and Turbidity	X	N.N.	X	N.N.
General hygiene assessments				
Leaching of total organic carbon	X	N.N.	X	N.N.
Surface residues (metals)	N.N.	X	N.N.	N.N.
Migration testing				
Relevant DWD parameters	X	X	X	X
SML of PL substances	X	N.N.	X (3)	N.N.
Unsuspected substances (GCMS)	X	N.N.	X (3)	N.N.
CL compliance	N.N.	X	N.N.	X
Enhancement of microbial growth	X	N.N.	X (3)	N.N.

N.N: Not necessary

SML: Specific Migration Limit

GCMS: Gas Chromatography – Mass Spectrometry (screening method)

(1) Specific exceptions to be determined in line with paragraph 5 of this Annex;

(2) Metals will not be subject to organoleptic testing because it is generally accepted that if DWD limits are met, organoleptic problems are unlikely to arise;

(3) Depending on the existence of organic substances in the composition.