

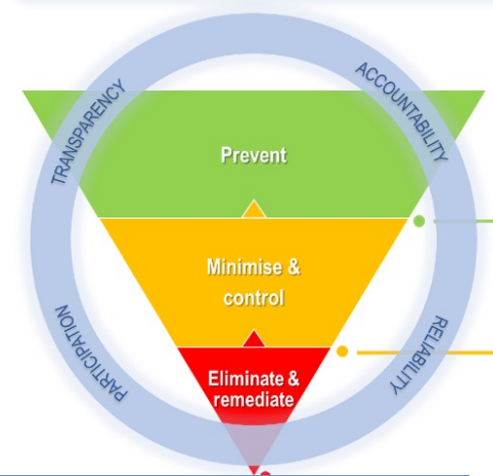
European approaches to regulating PFAS in drinking water

*Xenia Trier, M.Sc., Ph.D.
Expert on chemicals, environment and health
European Environment Agency*

*3rd PFAS national meeting
Wilmington, US
June 17th 2022*



European Commission strategy on PFAS



- **PFAS are a concern**
 - Chemicals Strategy for Sustainability (CSS)
 - Prevention main focus, more effective than minimise/control or eliminate/remediate to avoid harm of accumulation of pollution/effects
- **PFAS 'strategy'**: staff working document (SWD) in support of the CSS
https://ec.europa.eu/environment/pdf/chemicals/2020/10/SWD_PFAS.pdf
- **Ban all non-essential uses of PFAS** under REACH
 - ECHA to prepare a restriction dossier on all PFAS in fire-fighting foams
 - Preparatory work for a group restriction on all non-essential uses of PFAS: NL, DE, SE, DK and NO
- **Zero Pollution Action Plan** for air, water and soil



PFAS: food and water related EU legislation

On-going revision of many water related EU regulations:

- Recast DWD → adopted in December 2020
- UWWTD: under revision → contaminants of emerging concern
- SSD: under revision → assessment of contaminants in sewage sludge
- WFD, GWD, EQSD → under revision

UWWTD: Urban Waste Water Treatment Directive

SSD: Sewage Sludge Directive

EQSD: Environmental Quality Standards Directive

GWD: Groundwater directive

WFD: Water Framework Directive

Credit: Adapted based on slides by Bert Leehmans, DG Environment, October 2021



PFAS food and water related EU legislation

Leaning on Food Contaminants Regulation

- *EFSA opinion: <https://www.efsa.europa.eu/en/news/pfas-food-efsa-assesses-risks-and-sets-tolerable-intake>*
Tolerable Weekly Intake of 4.4 ng/kg bw
- *Discussion started with EU member states (MS) to **set maximum levels (MTC) in food***
- *Intention of some MS to **'translate' EFSA opinion for food into drinking water parametric values (e.g. limits) for group of 4 PFAS (PFOS, PFHxS, PFOA, PFNA)**, e.g. Denmark 2 ng/L (8/6-2021)*
[Skærpede krav til PFAS-stoffer i drikkevand \(mst.dk\)](#)

Credit: Adapted based on slides by Bert Leehmans, DG Environment, October 2021

Provisions on PFAS in the recast DWD

Recast Drinking Water Directive

- *'Sum of PFAS': 0.1 µg/L for 20 specific PFAS (compliance by Jan 2026)*
- *'PFAS Total': 0.5 µg/L (compliance by Jan 2026)*
- *By January 2024: COM to establish technical guidelines on analytical methods – work is ongoing*
- *MS can decide to use or both parameters after establishment of technical guidelines*
- *Review Annex I & II (parametric values): at least every 5 years*
 - *In light of technical and scientific progress / results of risk-based approach (data sets MS)*
 - *Legislative proposal (no Implementing/Delegated Act)*
- *Amend Annex III (PFAS substances): Delegated Act (COM empowered)*



Directive (EU)2020/2184 on the quality of water intended for human consumption

'Review Annex I & II (parametric values): at least every 5 years'

Annex I, Part B

PFASs Total: 0,50 µg/L	'Sum of PFAS: 0,10 µg/L
'PFAS Total' means the totality of per- and polyfluoroalkyl substances. This parametric value shall only apply once technical guidelines for monitoring this parameter are developed in accordance with Article 13(7). Member States may then decide to use either one or both of the parameters 'PFAS Total' or 'Sum of PFAS'.	'Sum of PFAS' means the sum of per- and polyfluoroalkyl substances considered a concern as regards water intended for human consumption listed in point 3 of Part B of Annex III. This is a subset of 'PFAS Total' substances that contain a perfluoroalkyl moiety with three or more carbons (i.e. $-\text{C}_n\text{F}_{2n}-$, $n \geq 3$) or a perfluoroalkylether moiety with two or more carbons (i. e. $-\text{C}_n\text{F}_{2n}\text{OC}_m\text{F}_{2m}-$, n and $m \geq 1$).

<https://eur-lex.europa.eu/eli/dir/2020/2184/oj>



Directive (EU)2020/2184 on the quality of water intended for human consumption

'Amend Annex III (PFAS substances)'

Sum of PFAS

Annex III, Part B

Perfluorobutanoic acid (PFBA)	Perfluorobutane sulfonic acid (PFBS)
Perfluoropentanoic acid (PFPA)	Perfluoropentane sulfonic acid (PFPS)
Perfluorohexanoic acid (PFHxA)	Perfluorohexane sulfonic acid (PFHxS)
Perfluoroheptanoic acid (PFHpA)	Perfluoroheptane sulfonic acid (PFHpS)
Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)
Perfluorononanoic acid (PFNA)	Perfluorononane sulfonic acid (PFNS)
Perfluorodecanoic acid (PFDA)	Perfluorodecane sulfonic acid (PFDS)
Perfluoroundecanoic acid (PFUnDA)	Perfluoroundecane sulfonic acid
Perfluorododecanoic acid (PFDoDA)	Perfluorododecane sulfonic acid
Perfluorotridecanoic acid (PFTrDA)	Perfluorotridecane sulfonic acid

<https://eur-lex.europa.eu/eli/dir/2020/2184/oj>

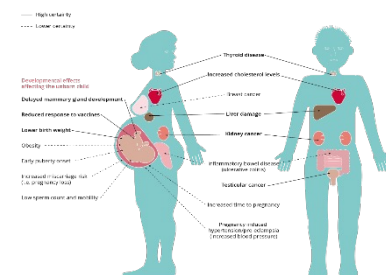
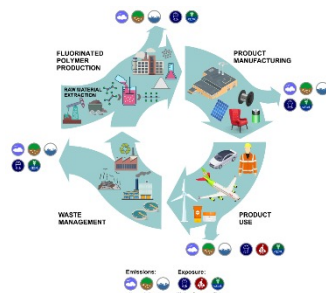
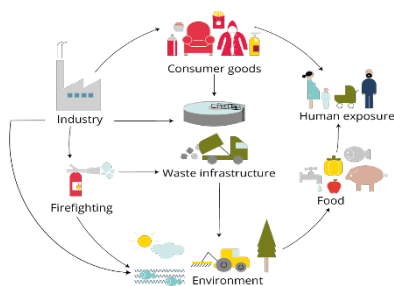
Credit: Adapted based on slides by Valentina Bertato, DG Environment, 2022

European Environment Agency



Summary and outlook

- **Prevention** of PFAS pollution works best, **by avoiding use of PFAS**
- **Revision of many water related legislations**
 - => Class/groups of PFAS to avoid regrettable substitution
 - => Combined with single PFAS monitoring
 - => methods to support implementation of regulations on Total PFAS and (sums of) single PFAS
- Ongoing: **Identify potentially contaminated sites** in countries
- **Upcoming:** Human biomonitoring, drinking and ground water for monitoring for more PFAS



Thanks for listening!

Questions?

Xenia Trier, Ph.D.

Chemicals, Environment and Human Health Expert
Air Pollution, Environment and Health (HSR1)
Health and Sustainable Resource Use
Kongens Nytorv 6, 1050 Copenhagen K, Denmark
xenia.trier@eea.europa.eu

eea.europa.eu

eionet.europa.eu

Phone: (+45) 33367100 / Direct: (+45) 33367102

Read our Report [Europe's environment – State and Outlook](#)

[Sign up](#) to receive EEA products

