

The background of the slide features a large European Union flag on the left, with its characteristic blue field and twelve yellow stars. To the right, a modern building with a white, grid-like facade is visible against a clear blue sky.

bdew

Energie. Wasser. Leben.

Die Wasserwirtschaft
im BDEW

The EU Water Sector's Perspective: Why Pollution must be stopped at the Source

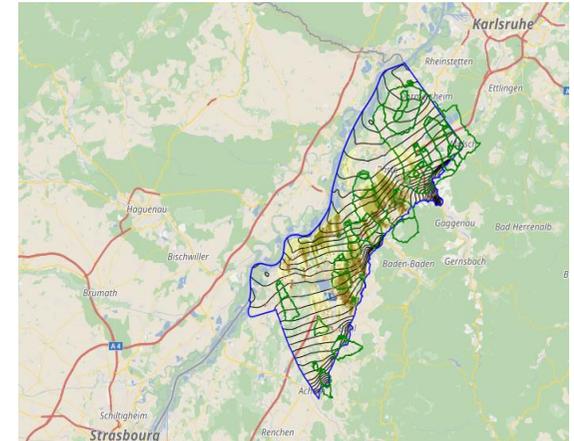
Sandra Olbrechts, BDEW – German Association of Energy and Water Industries

About BDEW

- German Association of Energy and Water Services
- Membership over **2000 companies**, roughly 1000 water and wastewater companies
- Large part of the membership consists of **public companies**
- Two sides of the association:
 - Energy (electricity, gas, renewable energies, hydrogen, heat)
 - **Water** (drinking water and wastewater)
 - 80 percent of drinking water extraction
 - Around a third of wastewater disposal in Germany.

Real World Learnings: the Case of Rastatt

- Massive site of heavy PFAS pollution
 - Roughly size of Loch Ness or 18.000 football fields (127km²)
 - Irreparable damage to soil and groundwater
 - 490 million m³ groundwater
- Consequence:
 - Decommissioning of some water works
 - Extensive installation of further treatment
 - CAPEX: 24 Mio €
 - OPEX: 0,25 Mio €
 - Water price doubled



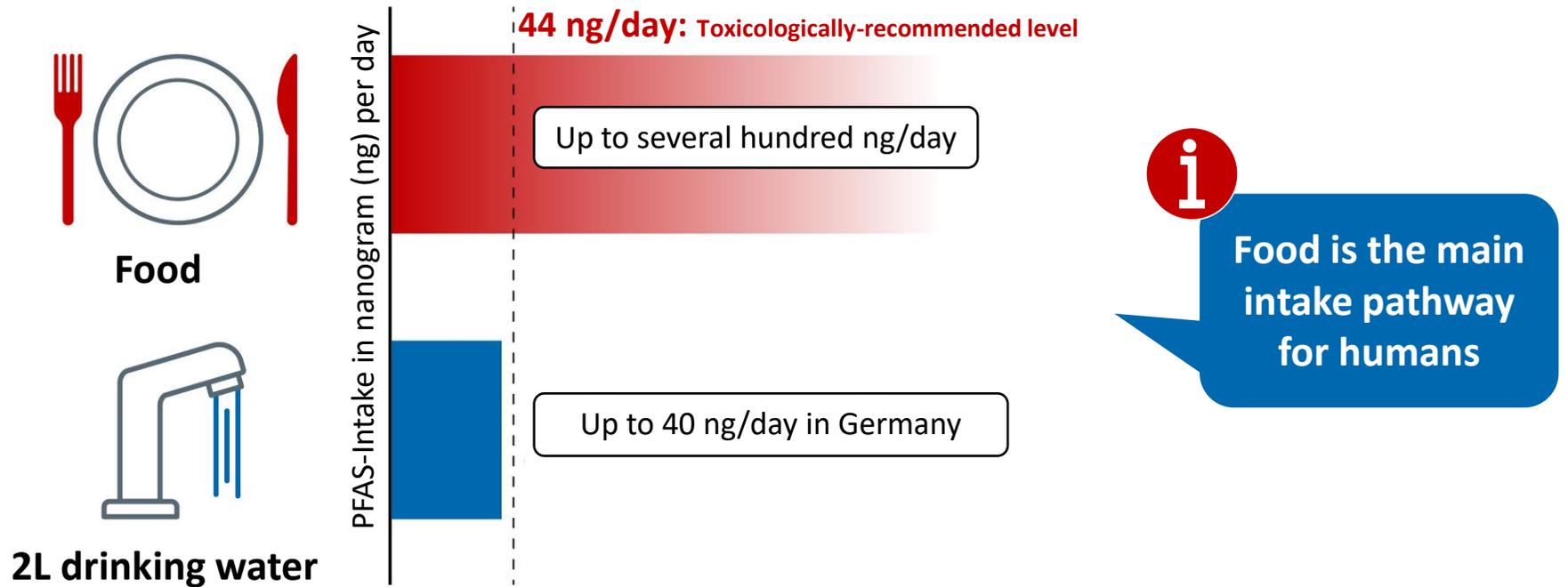
Treatment of Drinking Water against PFAS: What is possible?

- The shorter the PFAS-chain, the more difficult the treatment
 - TFA is therefore extremely difficult to impossible to remove completely
- Active charcoal, ion exchange and reverse osmosis (or a combination thereof) can reduce PFAS in drinking water

HOWEVER

- Practically impossible to achieve 100% removal
- Costly: double amount of energy required, double amount of materials for treatment required, requires 30% more raw water despite declining water resources due to climate change
- And how to deal with resulting waste with high PFAS-concentrations?

Comparison of daily PFAS-Intake from Food and Drinking Water



Source: Scientific elaboration by Institute for Hygiene and Public Health, University Hospital Bonn
Figure: German Association of Energy and Water Industries

What follows?

Further drinking water treatment will not lower the overall intake of PFAS of humans significantly



Treatment is costly (energy, materials) and those costs are born by households

Control at Source

Costs for PFAS treatment and clean up have to be born according to the polluter-pays-principle

