



**mouvement
écologique**

Alarming EU-wide water pollution by PFAS uncovered - Luxembourg's waters are also contaminated

Luxembourg, 29 May 2024

A study presented on Monday by the Pesticide Action Network Europe (PAN Europe) and the environmental organisation Global 2000 has revealed an alarming contamination of groundwater and rivers by the little-known and largely unregulated "perennial chemical" trifluoroacetic acid (TFA). The Mouvement Écologique contributed water samples from Luxembourg to this study, which unfortunately are also part of the alarming statistics: All ground and surface waters tested in the study from ten EU countries (6 and 23 respectively) show house-high TFA levels. Political action is now urgently needed to achieve pollutant-free waters!

Widely used PFAS chemicals lead to centuries of pollution

TFA is a very long-lasting and highly mobile degradation product of PFAS pesticides, F-gases and other perpetual chemicals (PFAS). These PFAS - per- and polyfluoroalkyl substances - have very welcome properties in industry: they are water-, grease- and dirt-repellent as well as being chemically and thermally very stable. However, this also makes them harmful to the environment, as they can last for centuries and accumulate in groundwater, soil and our bodies. PFAS are released into the environment during production, but especially during use and disposal. The more than 10,000 PFAS compounds on the market are used in rain-repellent clothing, cosmetics, dental floss and non-stick pots and pans. However, pesticides are also a major area of application.

Although TFA is the persistent end product of an estimated 2,000 PFAS compounds, its toxicity to the environment and humans has only been studied to a very limited extent. The few PFAS that have been researched more intensively have all proved to be very toxic. They exhibit reproductive toxicity, carcinogenic, immunotoxic and endocrine-disrupting properties. These harmful effects can occur even at

very low concentrations. Thousands of people have already fallen ill or died as a result of contact with these substances.

Finally, it is also clear that the toxicity of each of the more than 10,000 PFAS chemicals does not need to be proven, as their ultimate longevity is sufficient to justify a blanket ban. This toxic legacy for future generations is irresponsible and self-destructive.

High concentrations of TFA in all waters - including in the Alzette and Dommeldinger spring

For this study, rivers and groundwater from 10 EU countries were analysed separately, with one sample being submitted per country. Luxembourg had a sample of the Alzette and a sample from a publicly accessible drinking water source near Dommeldange analysed.

The samples from all countries contained TFA, with concentrations ranging from 370 nanograms per litre (ng/l) to 3,300 ng/l.

The concentration of TFA in the Luxembourg Alzette near Mersch was around the European average of 1,220 ng/l.

The TFA concentration of the Luxembourg drinking water source was just under 1000 ng/l, the average of all groundwater samples was 1,025 ng/l.

In 23 of the 29 water samples (79 %), the TFA concentrations exceeded the proposed limit value for "PFAS total" of the EU Drinking Water Directive, which is 500 ng/l.

As PFAS chemicals are not completely filtered by sewage treatment plants, these values are all the more alarming. The release of these substances into the environment must be avoided at all costs.¹

The results of the study refute the decades-old assumption that PFAS contamination is limited to industrial hotspots. It is now clear that the pollution is widespread and occurs particularly in rural, agricultural areas.

PFAS pesticides are also used in Luxembourg

²The figures updated by the Ministry of Agriculture in 2024 on the use of pesticides in agriculture show that almost half of the 38 PFAS pesticides currently authorised in the EU are also used in Luxembourg. Only a few of these substances are listed as "big movers" and are therefore set to be withdrawn from the market in the foreseeable future.

Double failure of authorities and politics

The German Federal Environment Agency (UBA) recently identified PFAS pesticides as the likely main source of TFA water pollution in rural areas. The EU Pesticide Regulation requires that pesticides are only authorised if their active substances and "relevant metabolites" (= degradation products) do not exceed concentrations of 100 ng/l in groundwater. The fact that all water samples far exceed this limit and yet PFAS pesticides remain authorised can be traced back to a fatal decision by the European Food

¹ <https://www.eureau.org/resources/briefing-notes/5612-briefing-note-on-pfas-and-waste-water/file>

² <https://agriculture.public.lu/de/veroeffentlichungen/agrarstatistik/liste-big-movers.html>

Safety Authority (EFSA) over 20 years ago: In 2003, the authority concluded that TFA was considered a "non-relevant metabolite", exempting it from all monitoring obligations and limits. According to PAN Europe, this was a disastrous decision that led to what is believed to be the largest and most pervasive contamination of European surface and groundwater by a man-made chemical in history.

However, the EU Water Framework Directive should also have prevented this contamination. The prohibition of deterioration enshrined in Article 4 should have prevented a decades-long escalation of TFA pollution, but it did not. The necessary measures required by the law would undoubtedly have included a ban on PFAS pesticides and another group of PFAS, the so-called F-gases, thousands of tonnes of which are released into the atmosphere from industrial refrigerants and then enter the global water cycle as TFA via rain.

As far as the authors of the study are aware, most of the 27 EU countries do not monitor TFA levels in surface, ground or drinking water, nor is such data publicly available. Notable exceptions are Germany, Belgium, Denmark, the Netherlands, Norway and Sweden.

The extent of the TFA contamination identified requires swift and decisive action. The authors of the study and the Mouvement Ecologique are therefore calling for this:

- a rapid ban on PFAS pesticides;
- the introduction of the new hazard classes Persistent, Mobile and Toxic (PMT) and very Persistent and very Mobile (vPvM) in the EU Pesticides Regulation,
- the implementation of the general PFAS ban in accordance with the REACH Chemicals Regulation;
- the categorisation of TFA as a "priority substance" under the Water Framework Directive and
- Monitoring obligations and limit values for TFA.

Sources:

- Press release from PAN Europe dated 27/05/2024
<https://pan-europe.email-provider.eu/web/3xt9c0vpiv/rvq7tvgnndn/zhegtcuwvw/fw2q4ajput>
(Retrieved 28/05/2024)
- Study "TFA in water - dirty PFAS legacy under the radar"
https://www.global2000.at/sites/global/files/Report_TFA-in-Wasser_Final_DE.pdf
(Retrieved 28/05/2024)
- Article BUND:
<https://www.bund.net/service/presse/pressemitteilungen/detail/news/bedenkliche-pfas-verschmutzung-in-europaeischen-gewaessern/>
(Retrieved 28/05/2024)