

# ECHA CONSULTATION PFHxA - DEADLINE 07.09.2021

## A proposal of PFAS banning «without further delay» by PFAS.land platform

### GENERAL COMMENTS

Retegas Vicentina is an officially registered non-profit organization, based in the Province of Vicenza, whose purpose is to promote socially beneficial activities, in particular to promote local fair trade consumer groups. We strive for a change in consumers' attitudes and behaviour that will lead to a more responsible economical organization, where respect for the Earth and its inhabitants - people and animals alike - will be at the centre of consumers' choices.

Retegas Vicentina is part of the PFAS.land platform (<https://pfas.land/>), information body of the No Pfas Movement in Veneto Region", resulting from the citizens' own initiative and a prime example of "citizen science".

The western area of the Veneto Region, Northeast Italy, is the place where the third-largest PFASs contamination ever recorded worldwide has occurred (WHO, 2017). However, if we consider the impact on drinking and irrigation waters, it can be considered the worst contamination in the world. Here, in the lower Agno Valley, in the Trissino municipality (nearby Vicenza), the Pfas production site of MITENI SpA (Ltd) - former RIMAR Ltd. - has been active since 1964, providing chemicals to customers nationwide, among which the local leather tanning industry, which represents 35% of the overall European production. The contamination occurred mainly in underground waters which spread over 200 square kilometers and involved at least 350.000 people in 87 municipalities of 3 Provinces through the use of drinking water from the municipal waterworks. However, if we take into consideration the contamination of the food chain (the area affected is one of the main agricultural areas of the Italian peninsula) the number of the estimated affected people rises to 800.000. PFOA serum concentrations in farmers residing in the worst impacted areas of the Veneto Region are among the highest found worldwide. Due to the groundwater flow velocities of a few meters/day in the high permeable aquifer of the lower Agno valley, the contaminated water plume is becoming wider and wider.

Pfas.land has published the first GIS map of the water pollution:

[https://qgiscloud.com/davide\\_ttk/PFASLAND\\_GIS\\_19/](https://qgiscloud.com/davide_ttk/PFASLAND_GIS_19/) [here the explanation]

The discovery of pollution dates back to 2011. In fact, 2013 is the year when granular activated carbon (GAC) filters were installed at the main drinking water treatment plant in Lonigo and when the public alarm was officially raised. In 2018 the MITENI SpA shut down and declared bankruptcy. The contaminated public waterworks are being rebuilt at a cost of 140 M €, but the contamination is going on through the food chain in its various steps: agriculture, animal farming and fishing. Another source of continuous contamination is represented by the burning of sewage sludges and the regeneration of exhausted carbon filters, to which the burning of surgical masks (containing PFNA and PFBA) has been added due to the pandemic.

Miteni Ltd. interrupted the manufacturing of PFOA and PFOS in 2011. However, at that time it started the production of the C6 PFAS and, in 2013-2014, the processing of the GenX technology, in cooperation with the Solvay plant in Spinetta Marengo Alessandria

(Northwestern Italy, Piemonte) and DuPont and Solvay Specialty Polymers in USA. MIT-ENI - a joint venture between the Japanese Mitsubishi Company and the Italian Enichem Company - have collaborated with the American DuPont (one of the main chemical corporations worldwide) since the beginning of the production of PFOS and PFOA, in the early 70's.

On a global scale, the health problem represented by the Pfas compounds shows some similarities with the ozone layer depletion. The Montreal Protocol (MP) was dealing with a handful of chemicals made by a handful of companies, chemicals for which there were already replacements available. The MP was ratified due to strong evidence that a depleted ozone layer would lead to an increase in UV light on the surface of the Earth, increase which would boost the risk of cancer in humans, along with many other negative outcomes for the health of the general public, for ecosystems and the climate (the total avoided temperature increase is 2.5°C, with 1.7°C coming from the higher CFCs and 0.8°C coming from the additional CO<sub>2</sub> linked to plants).

If the PFHxA (and all the substances based on the C-F bond, which doesn't exist in nature) is recognized to be persistent, mobile, bioaccumulating, toxic and difficult - if not impossible - to remove from the contaminated water, then the priority for the society is the restriction of the production and the use of the PFAS compounds, in a similar way as the the MP did for CFCs.

We criticize the concept of "socio-economic impacts" intended as the cost for the substitution at industrial level of PFHxA (and PFAS in general). In our opinion, the cost which derives from the health consequences and the suffering of large populations, such as those impacted by the Miteni case, is so great that it defies quantification. The cost for the public health sector is simply the externalization of the production costs: if the social and health impact were included in the Pfas production costs, the companies would already have invested in research to find alternative products!

Moreover, the simple fact that many consumer goods contain SVHC substances will automatically turn these products, once they reach the end of their life cycle, into SVHC-contaminated waste, thus generating huge cost for their treatment, to avoid dispersion of dangerous substances in the environment.

Epidemiologic studies have shown negative effects of the Pfas on human health, including disruption of steroid hormones; thyroid, liver and kidney disorders and metabolic dysfunctions. The PFAS generate cellular toxicity and this could compromise the delicate "brain" of the cell membrane (which is rich in lipids) and cause other fundamental alterations of the immune system, such as the reduction of the response to vaccines, as well as alteration of the neurological system (e.g. C8 Health Project, referred to the Ohio Valley, USA; Fletcher et al. 2012, <https://doi.org/10.1289/ehp.1104370>).

PFAS are bio accumulative pollutants and prenatal exposure to PFAS is considered to have an impact on human foetal development and may have adverse long-term health effects later in life (e.g. Sagiv et al., *Am.J.Epidem.* 171 (5), 593-601). In the meantime, new molecules have been produced (Wang et al., 2013. *Environ. Int.*, 60, 242–248.), among which F-53B component (6:2 Cl-PFESA; HFPO-DA; Gen-X; (ADONA) (Wang et al. 2013, *Environ. Sci. Technol.*, 47, 10163–10170.)

It is no longer acceptable to ignore this amount of data and especially the possibility that these substances could be involved in the increase of neurodegenerative diseases, disorders of neurological development and growth in childhood.

We believe it is also necessary to assess both the psychological damage to the young people raised in a social environment characterized by heavy uncertainty and the psychological damage to parents who know that they have fed their children contaminated water and food, not to mention the tragedy of mothers who have transferred their blood concentrations of pfas to their babies through breastfeeding.

In conclusion, if we want to estimate the total cost of the impact of PFAS in a more accurate way, we must consider many different factors. The huge damage to primary resources - such as water, land and air - and to water treatment plants and the specific costs of research into new compounds and the substitution of the PFAS compounds with the new alternatives are just two of them. To these factors we have to add the costs for scientific research into emerging pathologies and of hospitalization of thousands of people, as well as the costs deriving from the psychological and social damage on the resident populations (see the study of environmental violence carried out by the University of Padua). In fact, the “total socio-economic impact” we refer to, also considers the psychological effect on the population, as people become aware of the fact that the water they are drinking and the food they are eating is not safe when SVHC substances that belong to the same family of the PFAS compounds are used. Thinking about having children becomes a problem when you live in a “Critical Zone”. Besides, there is the risk of loss in real estate value, as residents tend to change housing areas.

The costs of PFASs to European society (in terms of damage to human health and of remediation of the contamination) have been estimated in the tens of billions of euros per year (EEA 2019). That is the reason why PFAS must be banned without further delay. Workers currently employed in the PFAS production and in downstream users' sectors can be shifted to the production of alternative, PFAS-free compounds. What we support is an economic development based on solid research and on social and personal priorities (in terms of health and general wellbeing of populations and individuals), not the Business as Usual (BaU) model.

## **SPECIFIC INFORMATION**

### **1. Reporting requirements**

We acknowledge the RAC and SEAC transparency applied by the public consultation.

We suggest that Undecafluorohexanoic acid (PFHxA), its salts and related substances (including polymers) and in general other Pfas compounds be derogated from the commercial ban and use only if they are used as laboratory compounds with the aim to detect the specific substance in environmental analyses and in commercial products. In the meantime, they should be marketed in a traceable way and distributed to public and private laboratories without patent restrictions.

The same derogation to restrictions should be applied also to present and future diagnostic applications, e.g. to rapid, cheap and portable tools. (<https://vuir.vu.edu.au/40594/>).

### **2. Concentration limits for PFHxA, its salts and related substances in fluoropolymers**

The PFHxA has a behaviour similar to that of PFBA, having rarely been found in the serum. A study carried out in contaminated areas in the western Veneto has shown that only 18% of the 257 exposed subjects had PFHxA in the serum (Ingelido et al. 2018, Env. Int. 110). However, a study conducted on 25 Spanish corpses has shown that PFHxA accumulates in the brain (100% of the sample, 141ng/gr), in the lungs (89%, 207ng/gr) and in the liver (70%, 68ng/gr) (Perez et al. 2013, Env. Int. 59). The fact that the PFHxA is bioaccumulating means that even low doses may have dangerous effects. Therefore, concentration limits are misleading.

### **3. Coating of electronic devices**

Due to the difficulty of their removal, the use of PFASs substances in electronic devices makes any electrical or electronic device no longer recyclable. This fact produces social costs in terms of appropriate waste disposal.

The conformal coatings are mainly composed of silicone, and only secondarily of perfluoroalkyl substances, but alternative products already exist:

[https://www.google.com/url?q=https://www.fujifilm.com/us/en/business/semiconductor-materials/photoresists/krf&sa=D&source=editors&ust=1630832673918000&usg=AOvVaw1xho8hYt9sbAdW\\_L-QjNuy](https://www.google.com/url?q=https://www.fujifilm.com/us/en/business/semiconductor-materials/photoresists/krf&sa=D&source=editors&ust=1630832673918000&usg=AOvVaw1xho8hYt9sbAdW_L-QjNuy)

### **4. Cladding for optical fibres**

In contrast to the derogation we asked for at point 1, we believe that the use of these substances should not be permitted in optic fibers, since similar performances can be achieved through easily recyclable materials.

### **5. Medical devices**

Low quantities of medical devices could be produced using PFAS compounds only if the manufacturers set up to their cost an effective, monitorable, and safe system to identify, gather and recycle all the used products.

### **6. Antifog face shields**

Low quantities of protective devices could be produced by using PFAS only if the manufacturers set up to their cost an effective, monitorable, and safe system to identify, gather and recycle all the used products.

### **7. Firefighting foam mixtures for class B fires, large tanks**

### **8. Technical textiles: textiles used in engine bays**

We think that permanent derogation for textiles used in engine bays in the automotive industry is questionable, given the general consensus on banning the endothermic engines within a few years. Most car producers have planned to cut off the production of such cars, which will be substituted by electric cars. Moreover, large cities and countries have planned to stop endothermic car circulation by 2025.

## **9. Filtration and separation media**

## **10. Photographic coatings applied to papers and inkjet photo media coatings**

In in the past, the use of paper mill sludges as amendments in agriculture was the cause of two severe cases of PFAS pollution in Germany (<https://www.umweltbundesamt.de/en/publikationen/schwerpunkt-1-2020-pfas-gekommen-u-m-zu-bleiben>, page 22), so the derogation from restriction of an use that has been proven totally disastrous appears anachronistic. Even if not used as an amendment in agriculture, any PFAS-contaminated paper sludge waste needs to be incinerated at high temperature (>1400 °C).

Sent by

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in [https://comments.echa.europa.eu/comments\\_cms](https://comments.echa.europa.eu/comments_cms)

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