

Ensuring sustainable substitution

-the case of substituting PFAS in Nordic outdoor clothing

To achieve sustainability, it is necessary that the substitution of undesirable processes, products and materials not turns out to be regrettable substitution, that is, that the new alternatives bring their own unexpected and unintended hazards to human health and to the environment. One area in which these challenges are present and well known is the phase-out and substitution of hazardous chemicals in consumer goods. Regrettable substitution may for example shift the hazard burden from one hazard to another, for example substituting a carcinogen with an endocrine disruptor, or a human toxicant with a chemical toxic to aquatic animals.

Nordic outdoor clothing companies market themselves as sustainable and/or eco-friendly and have started or finalized substitution of harmful per- and polyfluoroalkyl substances (PFAS). This case offers an opportunity to investigate corporate substitution efforts of a certain group of chemicals in an industry. While many of these companies claim to be successful in phasing out PFAS, less information is available on what substitution chemicals and processes they have used, and the trade-offs and tools used to arrive at these substitutes.

The proposed project investigates corporate substitution processes, specifically how Nordic outdoor clothing companies replace PFAS in products with alternatives. The aim is to this way provide evidence of how and why regrettable (or sustainable!) substitution occurs.

Proposed research questions include, for example:

- When and how did Nordic outdoor clothing companies start to phase out PFAS?
- How do Nordic outdoor clothing companies ensure that their products are PFAS-free?
- How has PFAS been replaced in Nordic outdoor clothing?
- How has the PFAS substitutes affected Nordic outdoor clothing companies?

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