An Update on PFAS – the "Forever Chemicals"
(by Allan Fong, HOPE researcher NSW)

Introduction

Per- and Polyfluoroalkyl substances (PFAS), often called "forever chemicals" are a group of widely used manufactured chemicals which have gained a lot of attention in recent decades because, like plastics, they do not readily breakdown in nature. Their unique chemical structure makes them effective at repelling water, oil and heat, and are therefore used in a wide variety of products including non-stick cookware, outdoor clothing like rain jackets, stain resistant furniture, food packaging and firefighting foams.

While PFAS chemicals have been associated with a wide range of adverse effects in humans such as cancer and immune problems, based on substantial research already undertaken the health effects of PFAS appear to be small (Per- and polyfluoroalkyl substances (PFAS).

Australian Government Ban

As part of a national effort to reduce the environmental and health risks of these persistent chemicals, the Australian government implemented a ban from 1st July 2025 (Australia to Ban Key PFAS Chemicals from 1 July 2025 | Maersk) prohibiting the manufacture and import or export of three main PFAS groups including their salts, isomers and any substances that degrade into them:

Banned substances:

- Perfluorooctanoic Acid (PFOA)
- Perfluorohexanesulfonic Acid (PFHxS)
- Perfluorooctanesulfonic Acid (PFOS)

Certain exemptions exist including trace contamination below defined thresholds, scientific research and use in goods already in service before the ban.

How to tell if a product contains PFAS

Identifying PFAS in products is often difficult because they are rarely listed as an ingredient, but the new government ban should provide concerned consumers with some reassurance that recently manufactured products should be free of PFAS. Despite this, some imported goods and older stock may still contain PFAS chemicals, so it's useful to understand how to spot them.

1. Check the ingredient list – In personal care products, check the ingredient list for any of the following: (Per and Polyfluoroalkyl Substances (PFAS) in Cosmetics | FDA):
    - PTFE (polytetrafluoroethylene), sometimes found in dental floss and hair products.
    - Any "perfluoro- "or "polyfluoro- "prefix.
    - DecaBDE, used as flame retardant in textiles.

2. Look for certain keywords – Products which are not for consumption such as clothing or cookware may not have an ingredient list, so look for certain marketing keywords to get an indication if it may contains PFAS chemicals (PFAS in Everyday Products: Your Complete Guide to Forever Chemicals - Go For Zero)
    - Be wary of terms such as "non-stick", "water-resistant", "grease-resistant" or "stain-resistant".
    - Avoid all Teflon products.
    - If in doubt, reach out to the manufacturer and ask if their product is PFAS free.
3. Look for certified PFAS free products – Third party certification helps to verify if a product is truly PFAS free.
    - PFAS Free Australia (PFAS Free Australia) delivers a certification standard to provide safety and confidence to consumers and supply chains through audited testing, reporting, and publication. Look for their certification logo on products.

- PFAS Central (PFAS-Free Products - PFAS Central) is a consumer-friendly website where companies can list their products on the “PFAS-Free list” provided they meet the eligibility standards (either a statement their product is PFAS free or has been tested to be PFAS free).

4. Droplet test – The Ecology Centre (Test Your Products for PFAS with a Water Droplet | Ecology Center) has developed a simple test to determine if a product contains PFAS: “If you drop a water droplet onto a PFAS-treated fabric, it will bead up, roll around, and typically leaves no residue. In contrast, a droplet dropped onto an untreated fabric will soak in”. They admit the test is not foolproof, as some fabrics (e.g. wool or wool blends) are naturally repellent, to varying degrees.

Tips on further reducing your exposure to PFAS

Go For zero (PFAS in Everyday Products: Your Complete Guide to Forever Chemicals - Go For Zero) suggest the following useful tips to further reduce your exposure to PFAS chemicals:

- Avoid non-stick cookware: Instead opt for stainless steel, cast iron or ceramic cookware.
- Filter your water: a high-quality water filter can remove PFAS.
- Avoid stain-resistant products: choose natural fabrics for clothing, furniture and carpets.
- Avoid greasy food packaging: choose reusable containers, silicone food pouches, stainless steel containers.
- Avoid waterproof jackets and boots: choose alternatives made with natural waxes.

Environmental Monitoring

The PFAS National Environmental Management Plan (PFAS NEMP) (Per- and poly-fluoroalkyl substances (PFASs) - DCCEEW) is a national framework to detect, monitor and manage PFAS in the environment. It provides guidance and defines standards on priority areas including:

- Risk assessment.
- Remediating contaminated land.
- Re-use of resource recovery products.
- Re-use of biosolids contaminated with PFAS.

The PFAS NEMP along with The Australian Drinking Water Guidelines (Water Quality Drinking water guidelines) also provides guidance on managing PFAS in drinking water. Through these national level standards, the NSW government regularly test drinking water in all 83 local water utilities to ensure they

comply with guidelines for PFAS content (PFAS and drinking water - information and updates | NSW Government).

The NSW Environment Protection Authority (EPA) is currently seeking feedback on proposed new mandatory PFAS monitoring requirements for sewerage treatment plants and landfill sites across NSW (EPA calls for input on PFAS monitoring changes | LGNSW). The proposal would see the existing voluntary and ad hoc monitoring of PFAS replaced by regular periodic monitoring in landfill leachate samples and groundwater samples as well as sewage treatment plants, with all monitored data submitted to the EPA on a yearly basis.