



An Roinn Aeráide,
Fuinnimh agus Comhshaoil
Department of Climate,
Energy and the Environment



Persistent Organic Pollutants (POPs)

David Dodd

Environment Climate Research Advisory Unit (ECRAU)

15th October 2025

ESTG
ANNUAL
CONFERENCE
2025
15TH OF OCTOBER
PEACE CAMPUS MONAGHAN

Contents



- What are POPs ?
- History of Action on POPs
- POPs Legislation and governance – Global to National
- Roles of Public Authorities and National Implementation Plan (NIP)
- Examples of POPs Monitoring and case studies
- Further sources of information

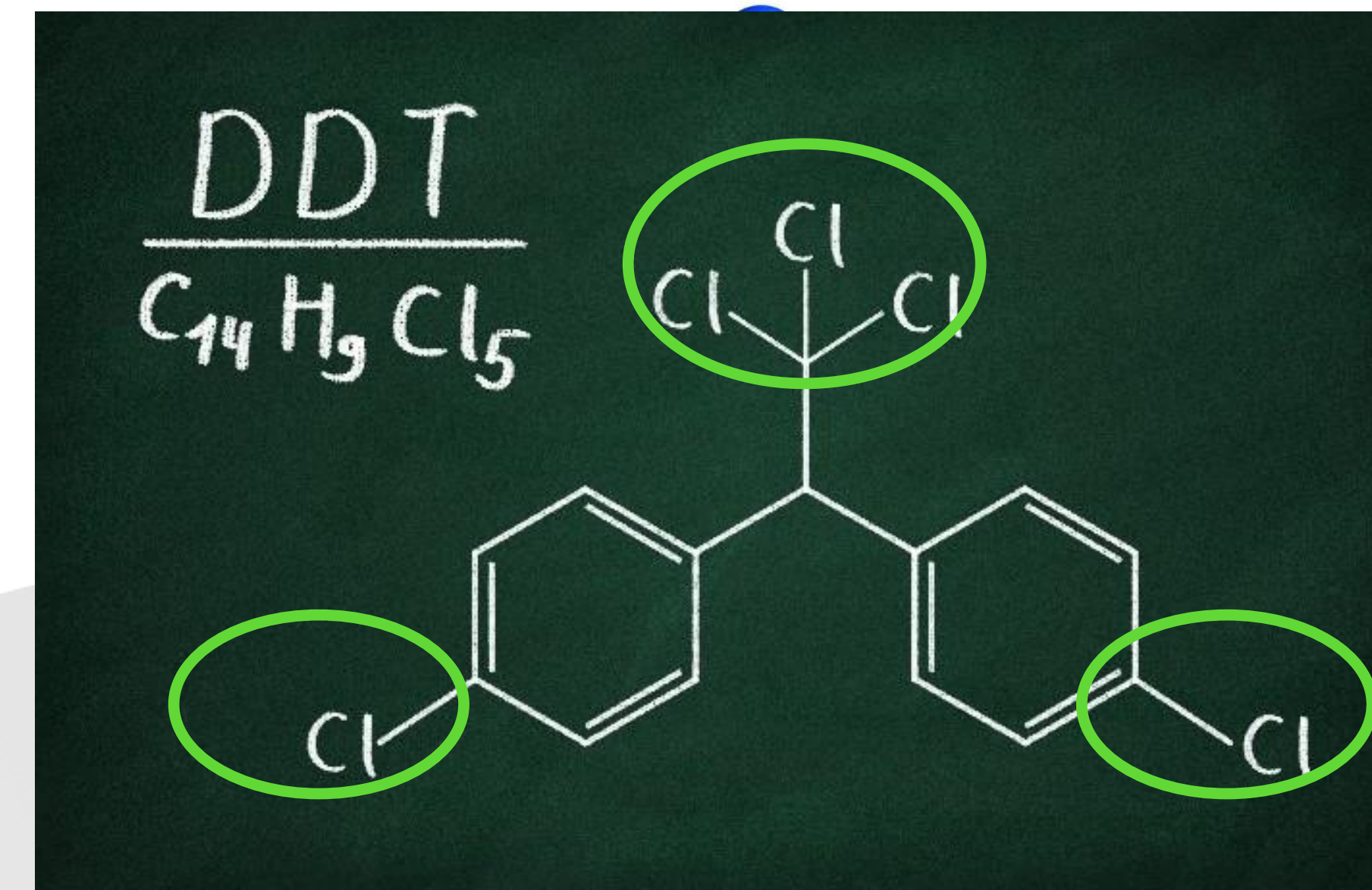


Chemistry Recap !

Organic compounds are chemical compounds primarily made of **carbon** atoms, often bonded to **hydrogen**, oxygen, nitrogen, and other elements, and are essential for life.

With **POPs** many compounds have a variety of Carbon – **Chlorine**, Carbon - **Fluorine** and or Carbon- **Bromine** Bonds

These chemical bonds in particular **C-F**, are extremely strong chemical bonds and resistant to biodegradation in the environment.

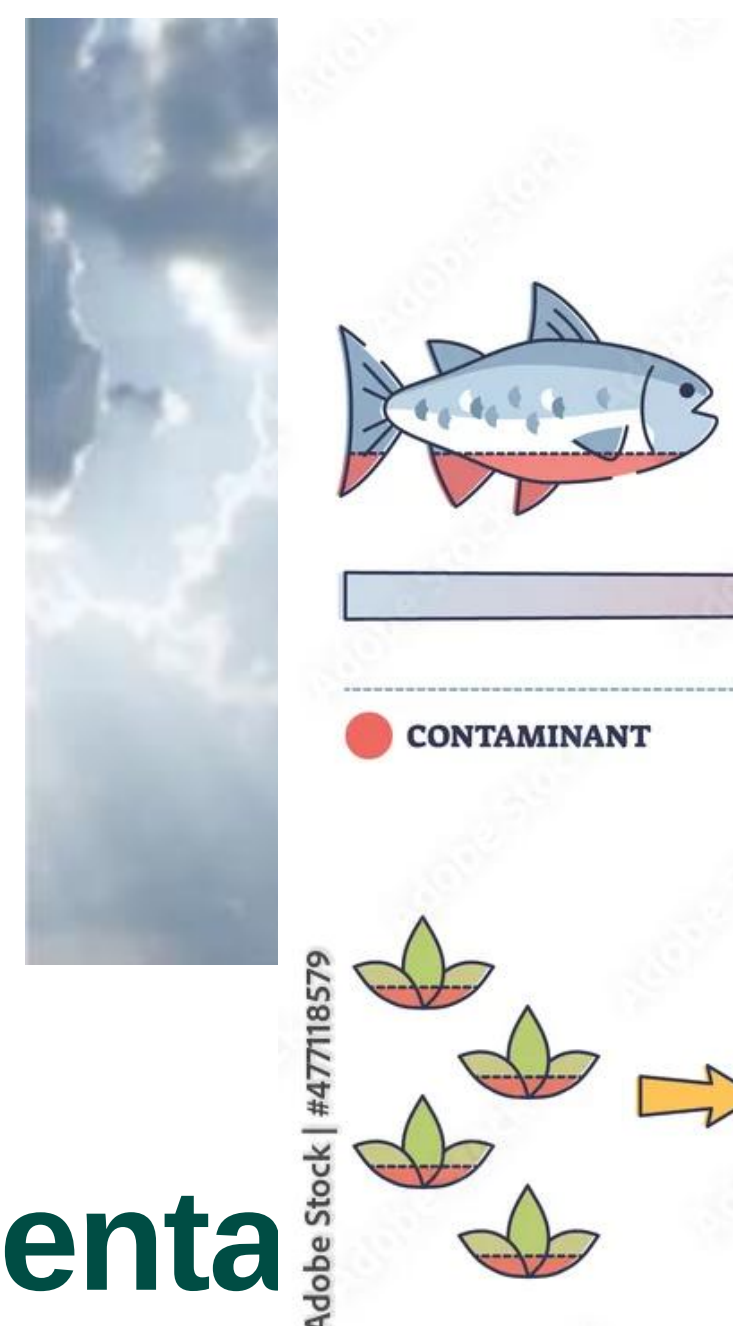


What makes a POP a POP? Criteria for POPs

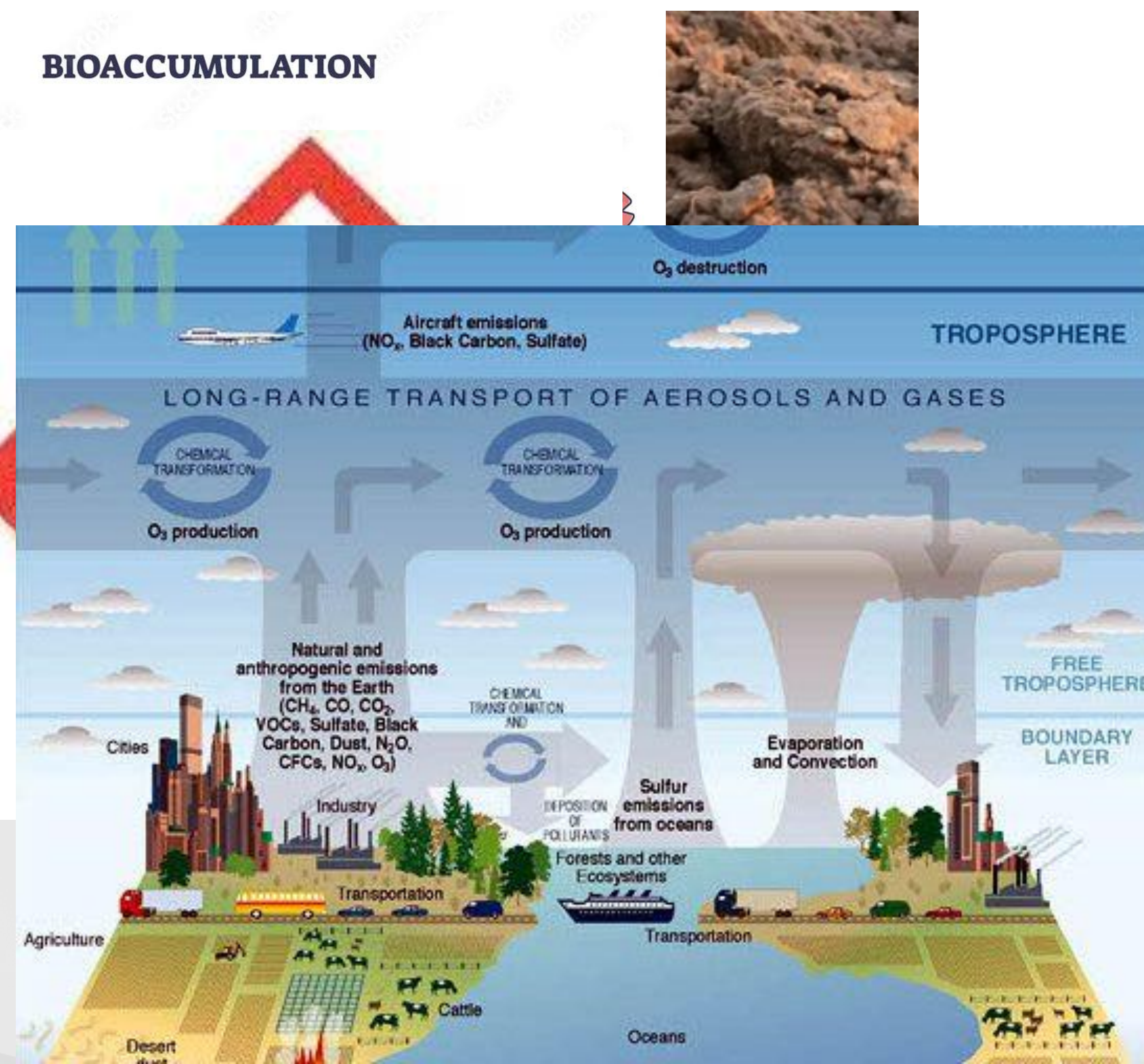


For a substance to be classified (under the Stockholm Convention) as a POP, it must undergo a scientific assessment to determine that its;

- Persistence
- Bioaccumulation
- Toxicity
- Long-range environmental transport



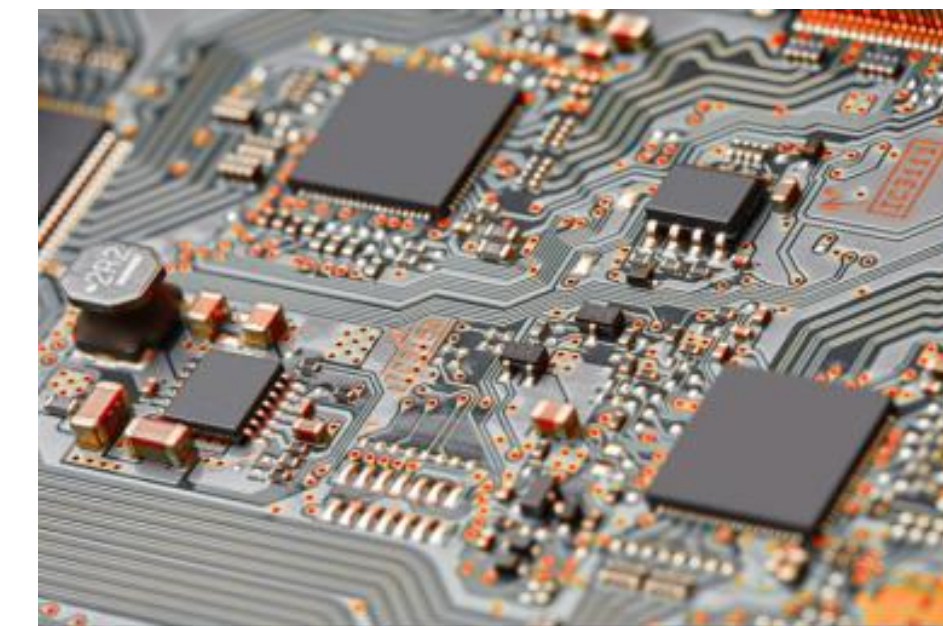
BIOACCUMULATION



What are main categories of POPs?

Chemical substances that have been identified as POPs include:

- **Pesticides** (such as DDT);
- **Industrial chemicals** (such as polychlorinated biphenyls PCBs, which were widely used in electrical equipment); or
- **Unintentional by-products** formed during industrial processes, degradation or combustion (such as dioxins and furans)



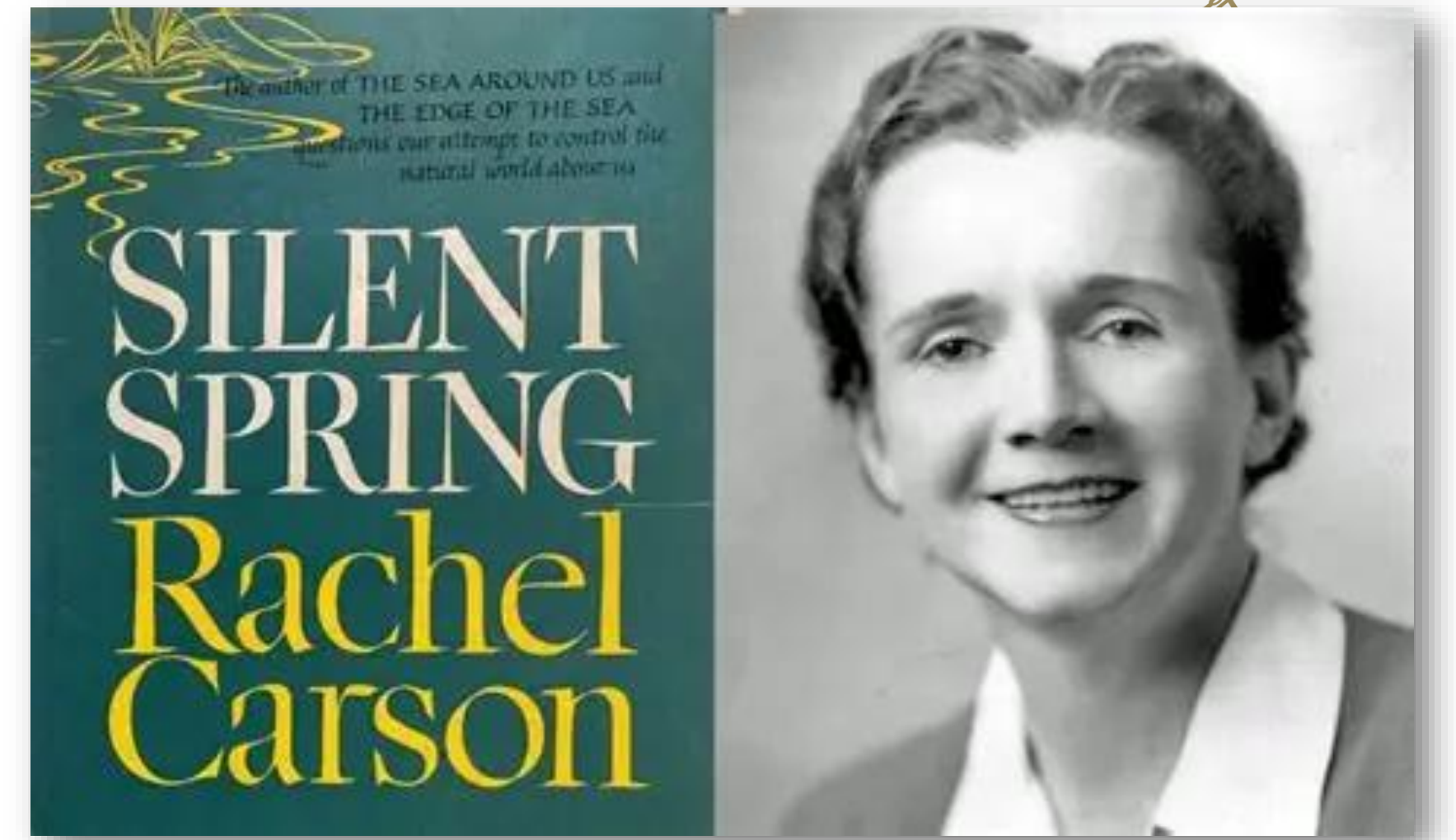
Contents



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Brief History of Action on POPs

- **1962** – Silent Spring by Rachel Carson
- **1970s and 80s** – some countries start to take action
- **1990s** – work begins on international POPs fora
- **1997** - UNEP decision to establish International Negotiating Committee (INC) to develop a global POPs treaty
- **2001** – Conference on Stockholm Convention



Overview of the Stockholm Convention



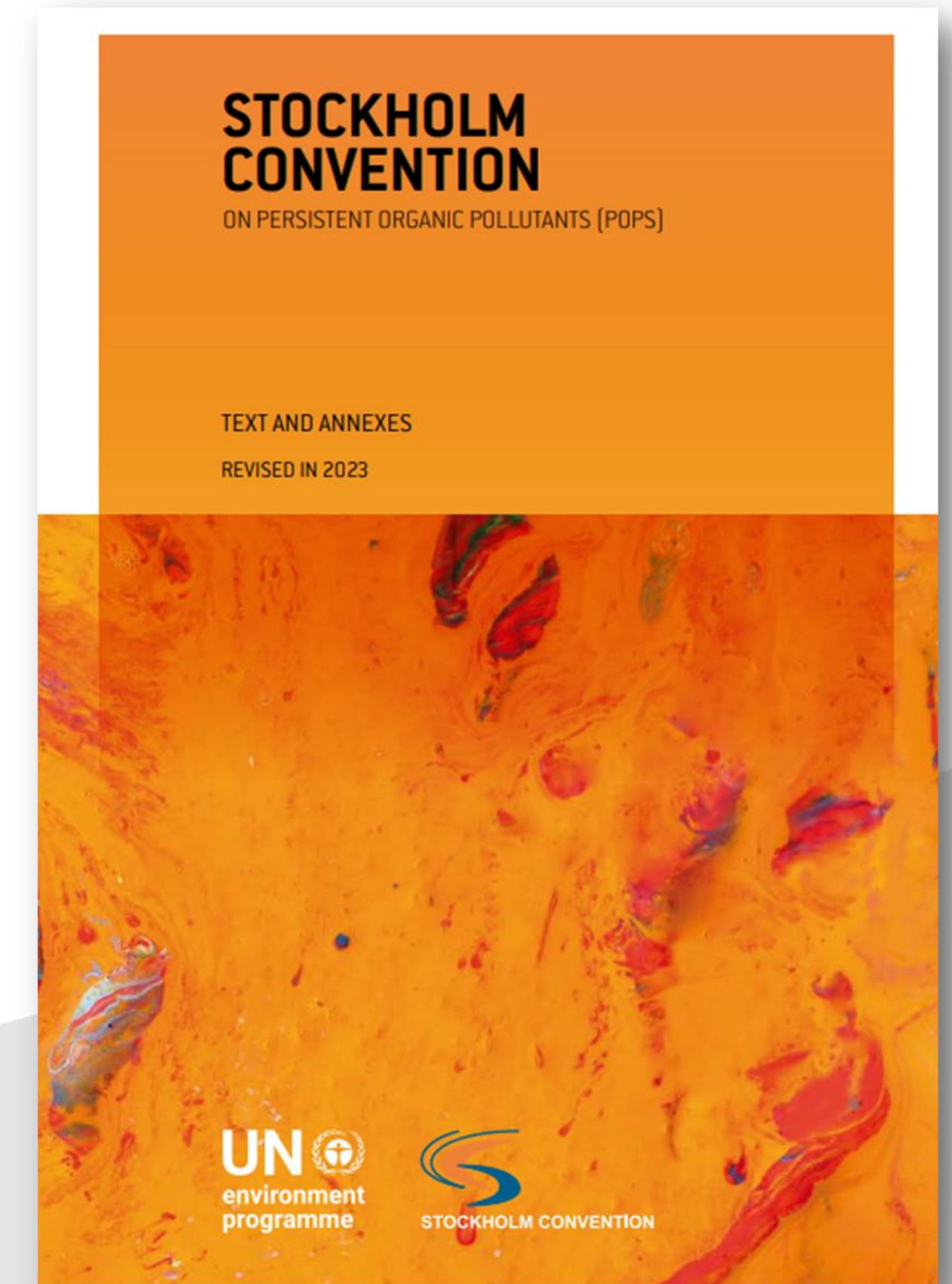
- Adopted in May 2001
- Entered into force **May 2004**
- Currently **186 Parties** and **152 signatories** (including Ireland and EU)

Objective Article 1 – “To protect Human health and environment from persistent organic pollutants”

Annex A – Elimination

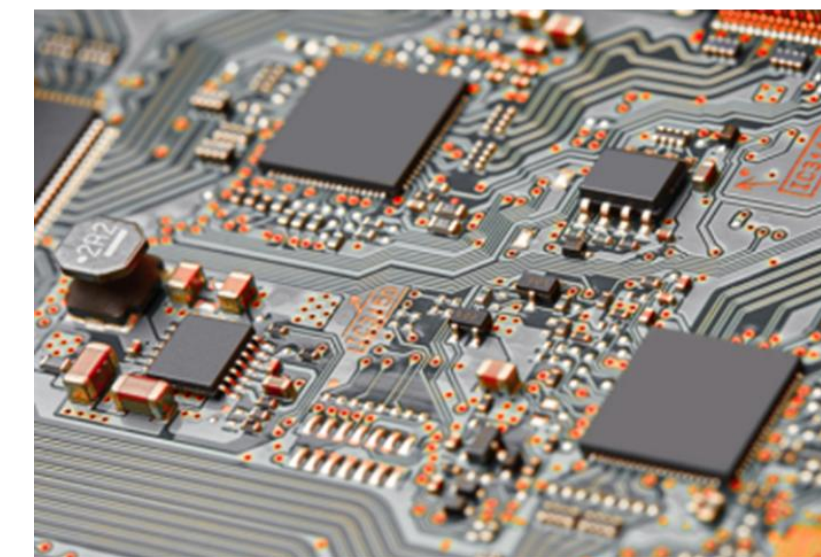
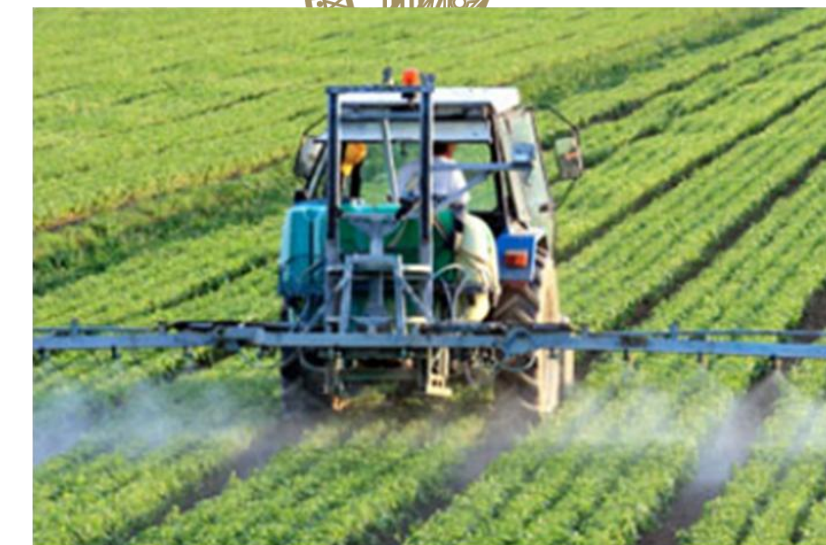
Annex B – Restriction

Annex C – Unintentional Production



Overview of the Stockholm Convention

- First POPs included “**the Dirty Dozen**”
- **Pesticides**: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, toxaphene;
- **Industrial chemicals**: hexachlorobenzene, polychlorinated biphenyls (PCBs); and
- **By-products**: hexachlorobenzene; polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans (PCDD/PCDF), and PCBs
- Currently **34 Substances** (or groups) across Three Annexes including some **PFAS** compounds
- **3 further** adopted at COP25 and entry into force in 2026



Contents



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- Roles of Public Authorities and National Implementation Plan (NIP)
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International

Stockholm Convention



IE and EU parties to SC



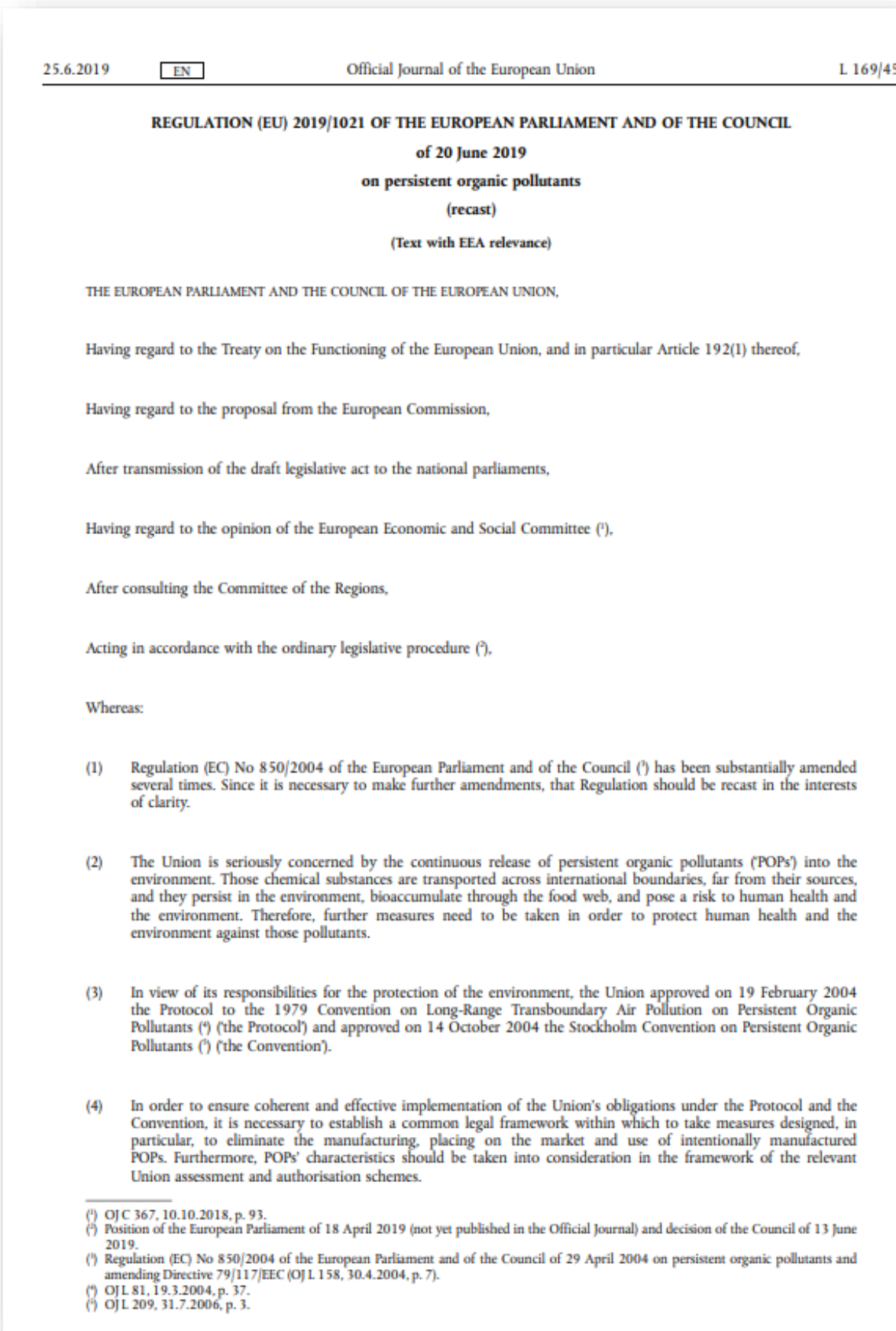
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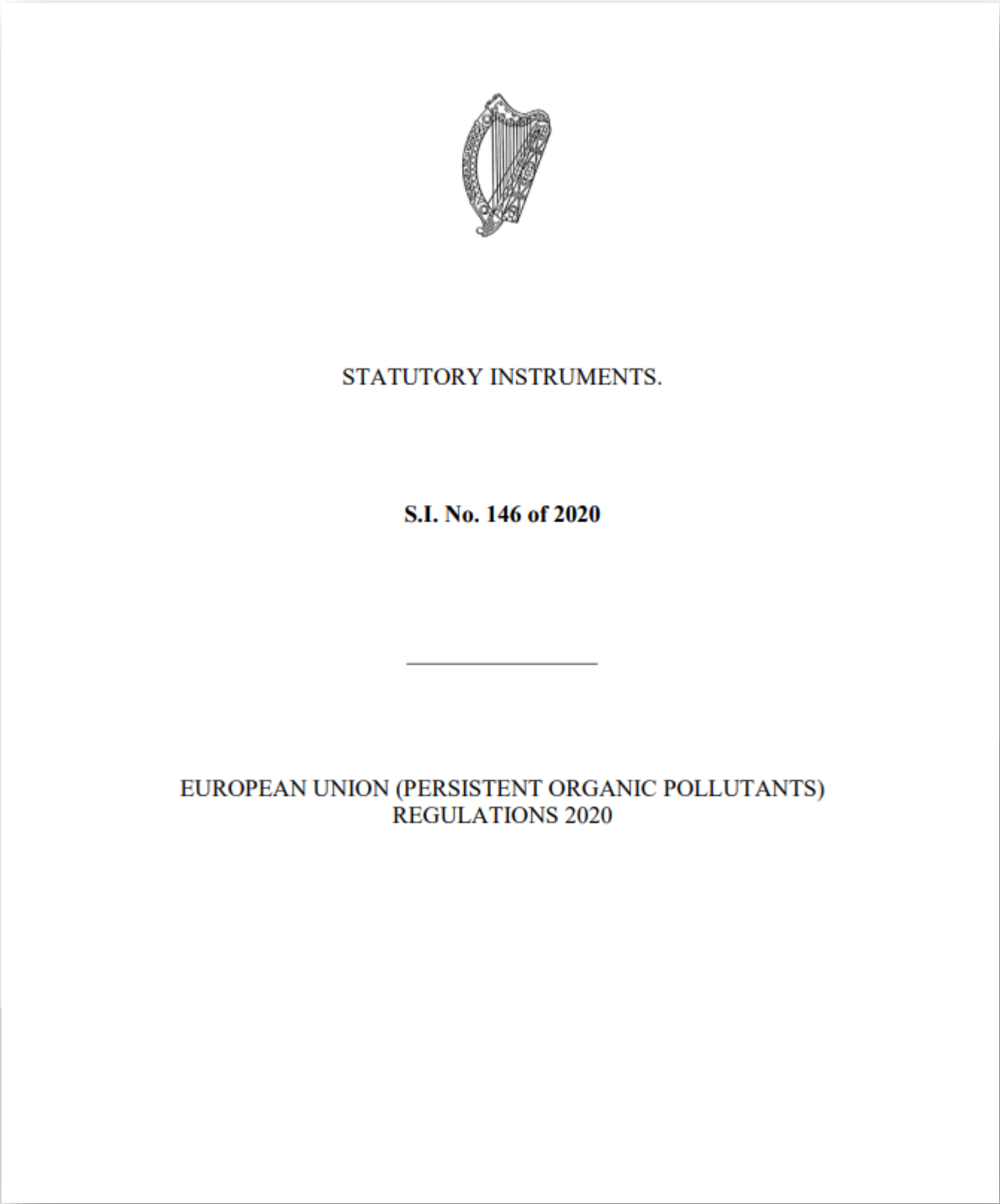
European

POPs Regulation (EU) 2019/1021



National

S.I. No. 146 of 2020





- Party to the Stockholm Convention (including the EU)
- POP Review Committee (POPRC)
- POPRC working group for the substance

- Conference of the Parties (COP)
- European Commission

* The risk profile and risk management evaluation are prepared during the intersessional period between POPRC meetings, which take place once a year (September/October). The POPRC can adopt a decision on the draft risk profile and draft risk management evaluation during a first meeting, but in some cases, the POPRC can decide to defer the decision to the following year's meeting, which lengthens the adoption process.

** The meetings of the Conference of the Parties (COP) take place once every two years in April/May.

*** Amendments to the Annexes to the Convention enter into force one year after the date of communication of their adoption by the depositary. The depositary notifications (CNs) are usually issued about 6 months after the amendments have been adopted by the COP.

International

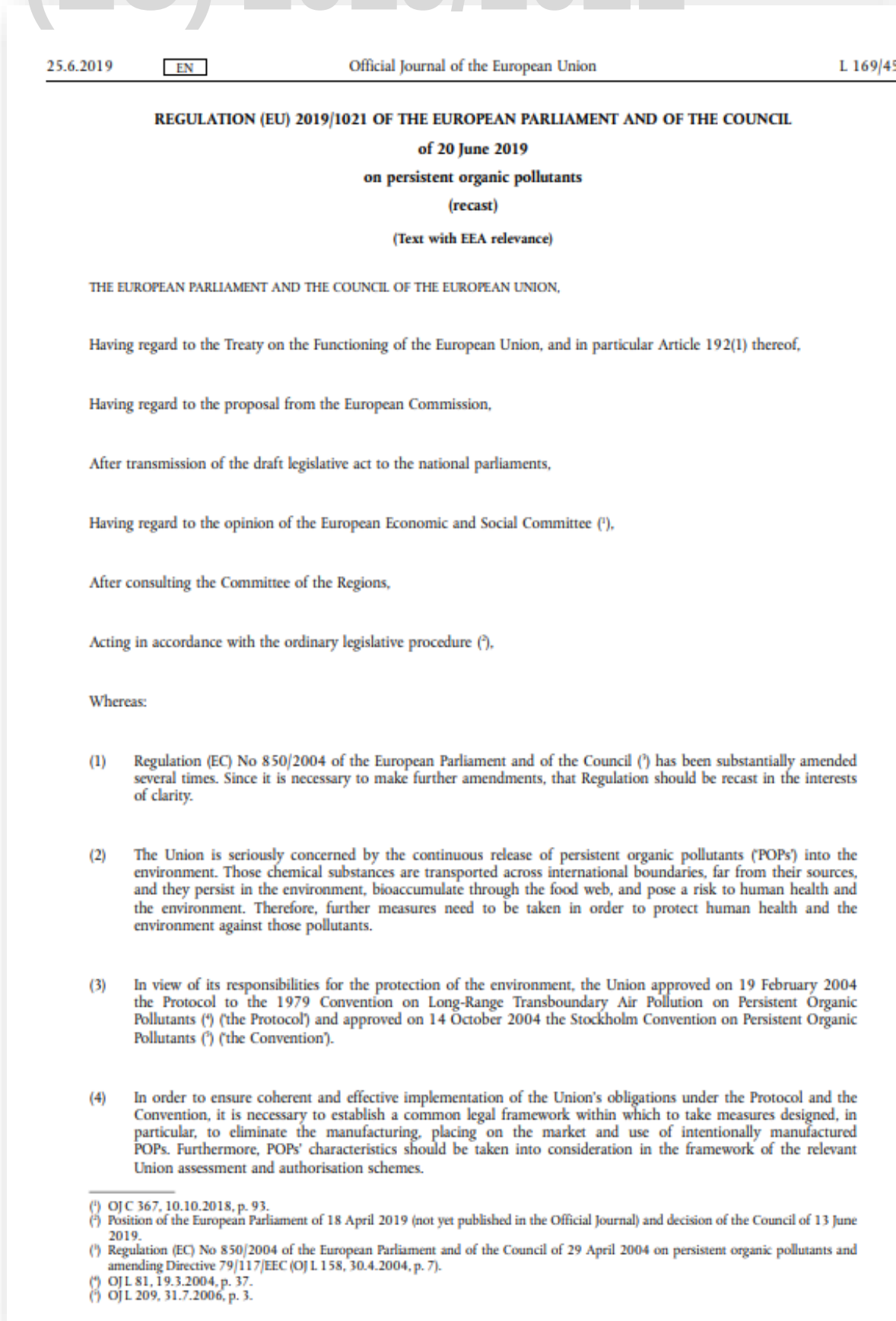
Stockholm Convention



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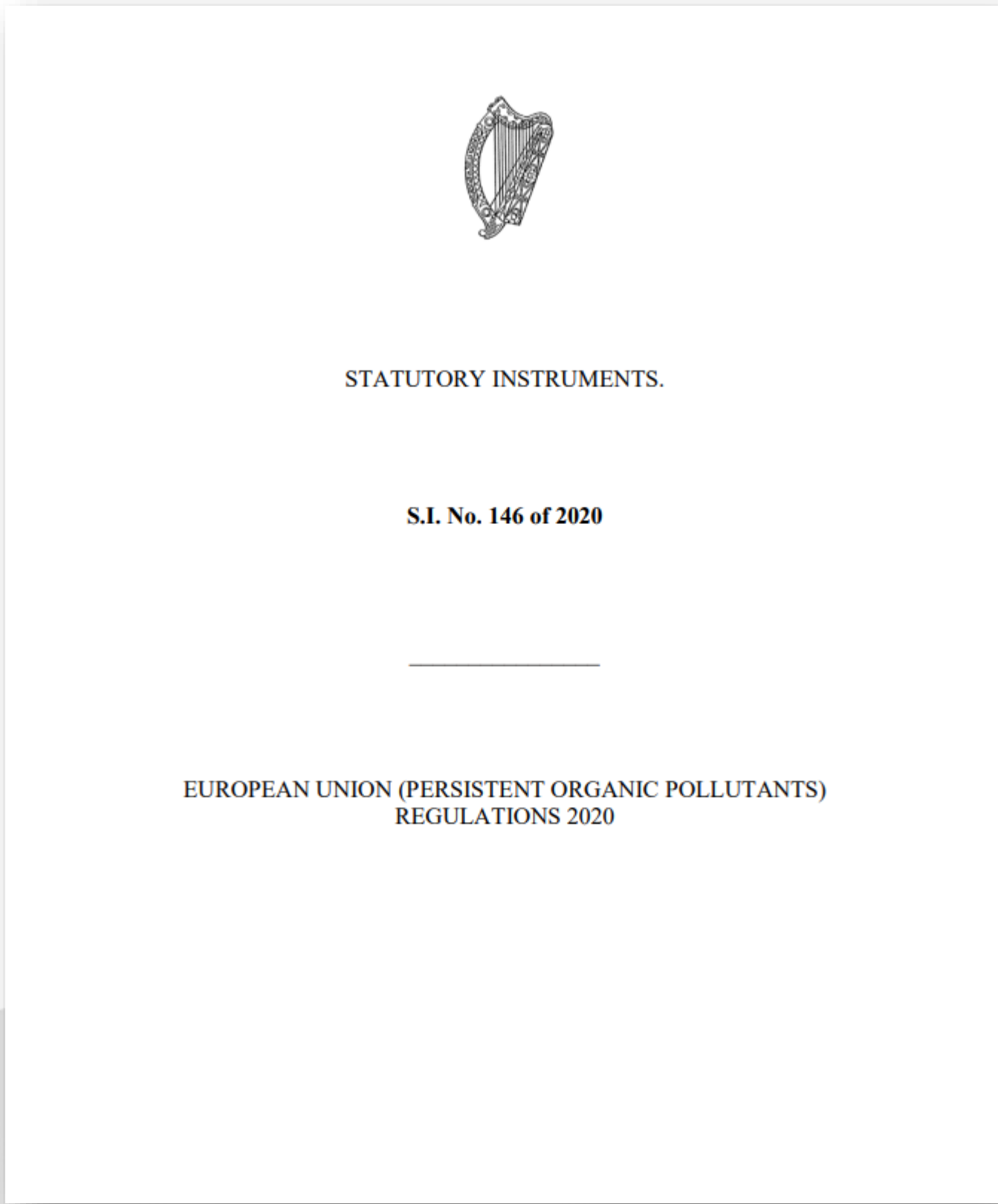
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Contents



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Organisation	Main responsibilities related to POPs
Department of Communication, Climate Action and Environment (DCCAE)	National policy and regulations concerning POPs
Environmental Protection Agency (EPA)	- Competent Authority for the purposes of the EU POPs Regulation. - Monitoring, permitting, licensing or enforcement systems concerning licensable activities under the EPA Acts and activities under the Dumping at Sea Acts. - Surveillance of products regarding content of POPs.
Health and Safety Authority (HSA)	- Administrative functions required under the EU Prior Informed Consent Regulation for POPs that are listed within this Regulation - Provision of relevant information to the EPA, as appropriate. - Lead competent authority for the REACH Regulation in Ireland.
Department of Agriculture, Food and the Marine (DAFM)	- Ensure that POPs intended for use as pesticides are not marketed or used. - Monitoring of primary food and feed for the presence of POP pesticides. - Cooperate with the EPA in the identification of any person who produces, places on the market or uses relevant substances containing POPs. - Provision of data to the EPA resulting from monitoring, inspections, checks, examinations and investigations concerning POPs. - Carry out the administrative functions required under the EU Prior Informed Consent Regulation for POPs that are listed within that Regulation and the provision of relevant information to the EPA, as appropriate. - Participate in the ECHA PBT (Persistent, Bioaccumulative and Toxic) Expert Group.
Health Products Regulatory Authority (HPRA) Formerly Irish Medicines Board	- Ensure that medicinal products for human or veterinary use that are authorised for the Irish market do not contain POPs. - Cooperate in the identification of any person who produces, places on the market or uses relevant substances containing POPs. The provision of data to the EPA resulting from monitoring, inspections, checks, examinations and investigations concerning POPs.





Revenue



Organisation	Main responsibilities related to POPs
Food Safety Authority of Ireland (FSAI)	- Monitoring and investigations relating to food and foodstuff containing POPs. - Provision of data to the EPA resulting from monitoring, inspections, checks, examinations and investigations concerning POPs.
Marine Institute (MI)	- Monitor levels of chemical substances in finfish and shellfish to underpin the quality and safety of seafood produced and landed in Ireland in conjunction with the Sea Fisheries Protection Authority (SFPA) and the FSAI. - Completion of one-off surveys and research projects (where relevant with other national and international agencies), for instance investigations into occurrence of contaminants not included in regular monitoring.
Health Service Executive (HSE)	Food sampling, analysis and investigation of POPs in foodstuffs and public awareness of public health issues in consultation with the EPA.
Revenue's Customs Service	- Control at point of importation of specified POPs to be based on criteria agreed with the EPA regarding the identification of consignments of interest to the EPA. - Cooperate, by means of post clearance data exchange in the identification of relevant importations. - Assigned specific responsibilities for the purposes of the EU Prior Informed Consent Regulation in respect of certain hazardous chemicals.
Local Authorities	- Monitoring, permitting or enforcement systems within their functional areas regarding POPs and relevant requirements under the Waste Management, Water Pollution and Air Pollution Acts. - Cooperate in the identification of any person who holds a stockpile or waste containing POPs or who produces, disposes or recovers POPs containing wastes. - The provision of data to the EPA resulting from monitoring, inspections, checks, examinations and investigations concerning POPs.



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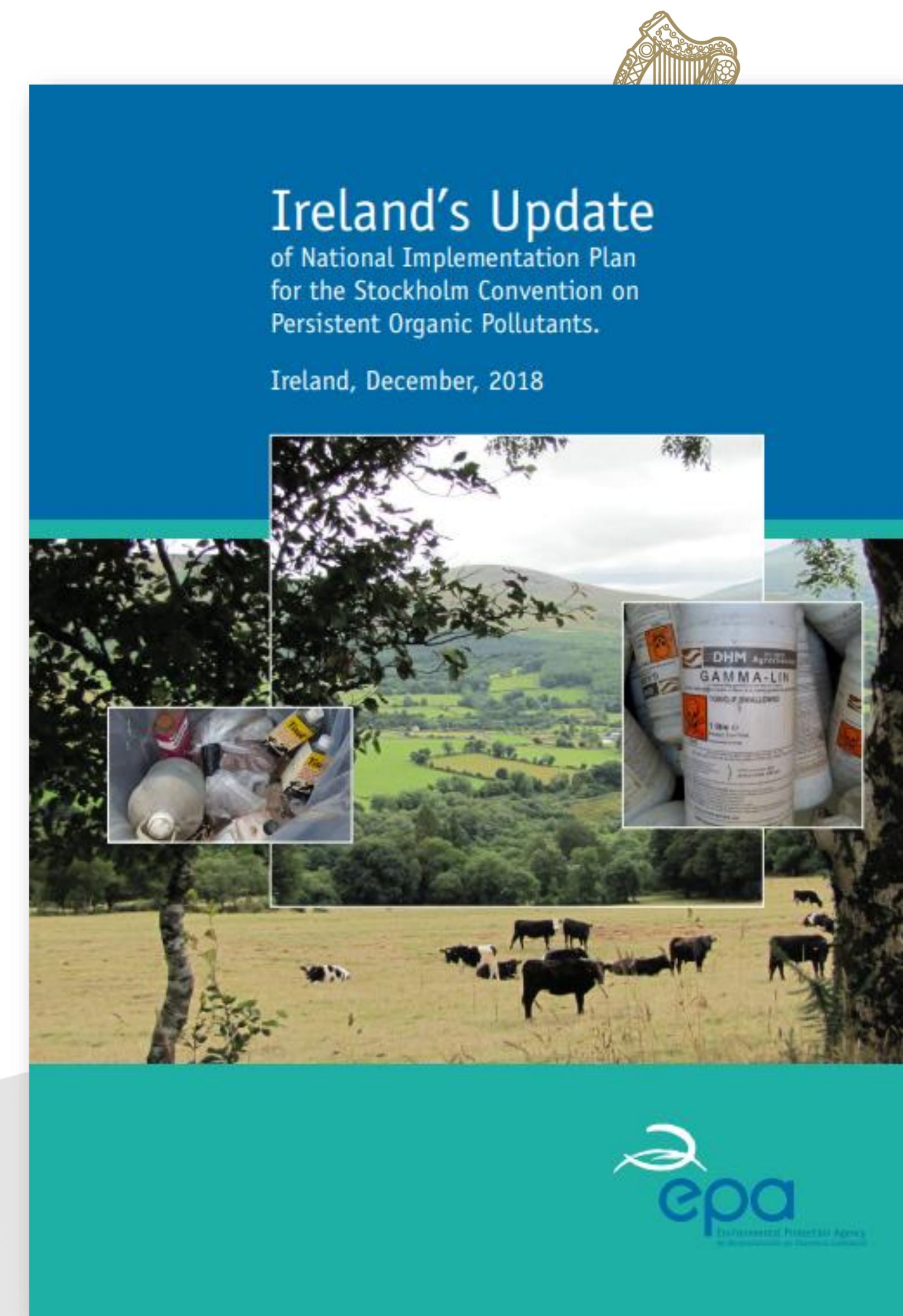


Local Authorities Ireland

- under the Waste Management, Water Pollution and Air Pollution Acts.
- Cooperate in the identification of any person who holds a stockpile or waste containing POPs or who produces, disposes or recovers POPs containing wastes.
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National Implementation Plan (NIP) on POPs

- Required under Article 7 of Stockholm Convention and Art 4 of S.I. 146 of 2020 OR when new POPs are added
- BIP shows how the party will ;
 - **Eliminate** or Restrict POPs (Annex A and B)
 - **Reduce** unintentional release (Annex C)
 - **Manage** Stockpiles and waste
 - **Strengthen** monitoring legislation and awareness
 - **Coordinate** reporting and capacity building
- **NIP Implementation Group** Chaired by EPA
- Updated NIP for Ireland for public consultation **November 2025**



Contents



- What are POPs ?
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- **Examples of POPs Monitoring and case studies**
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Monitoring of POPs in Ireland – Examples*



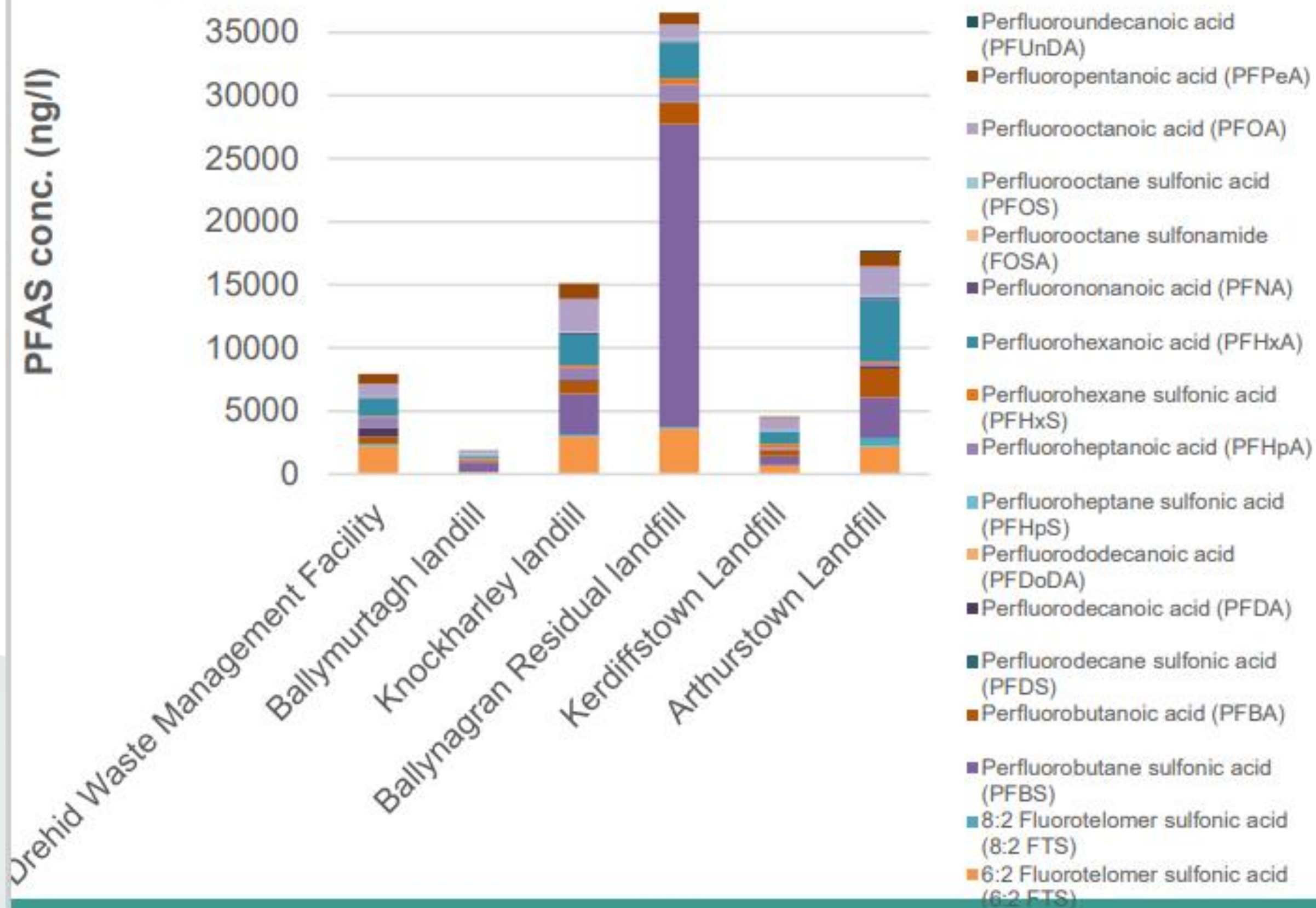
- Environmental monitoring e.g. WFD
- Fish monitoring – Marine Institute
- Food Monitoring – FSAI/DAFM
- Milk Monitoring – EPA Dioxins
- Licence conditions e.g. WtE plant Dioxins
- Research projects – e.g. landfill leachate
- Private Monitoring – contamination incidents

***See EPA POPs website and NIP for further details**

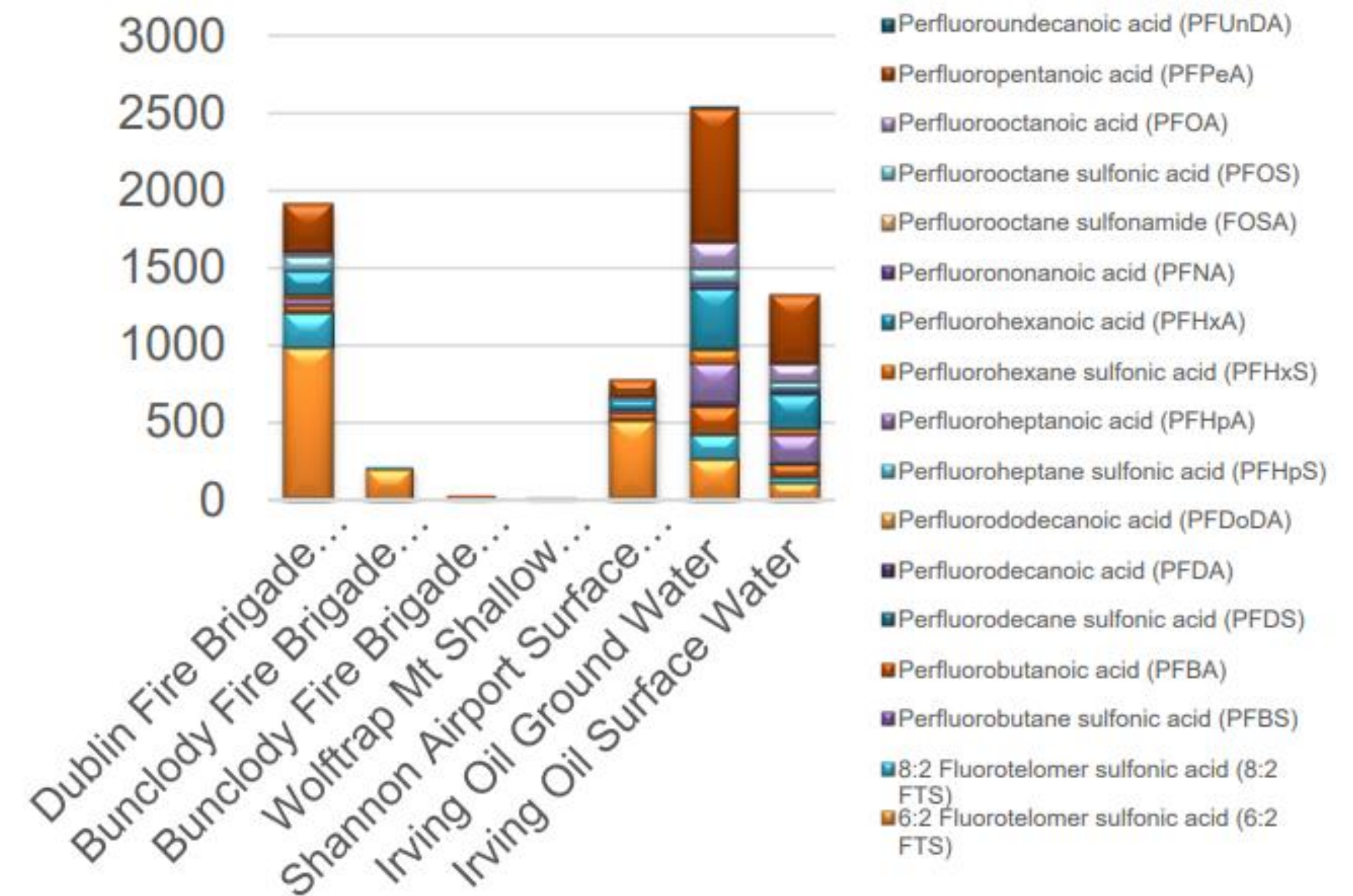
PFAS Studies – Landfill and Fire Stations



PFAS conc. (ng/l) detected in leachate samples (Fuel Research Project 2020)

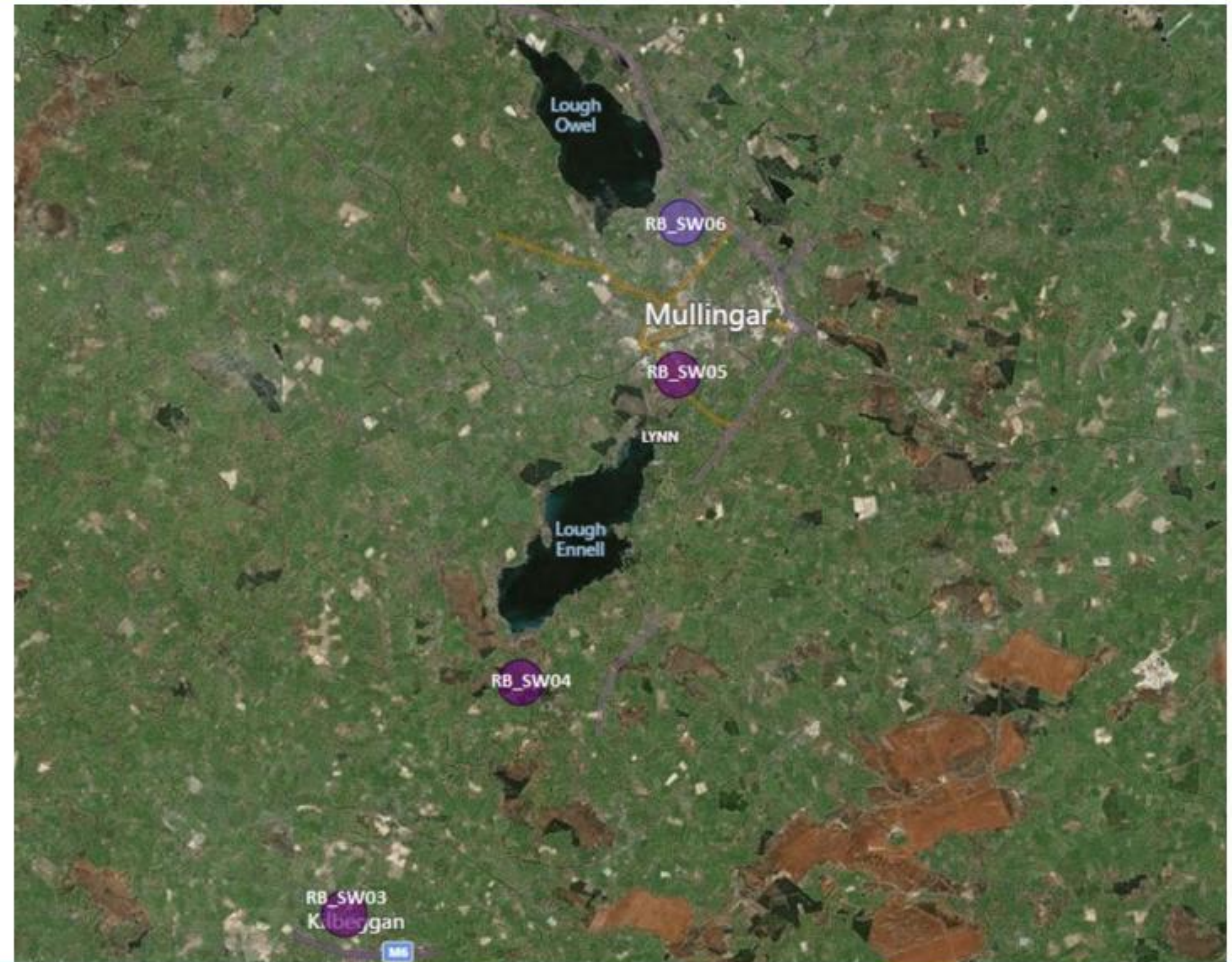


PFAS conc. (ng/l) detected in water samples (POPs Hotspot Study 2020)



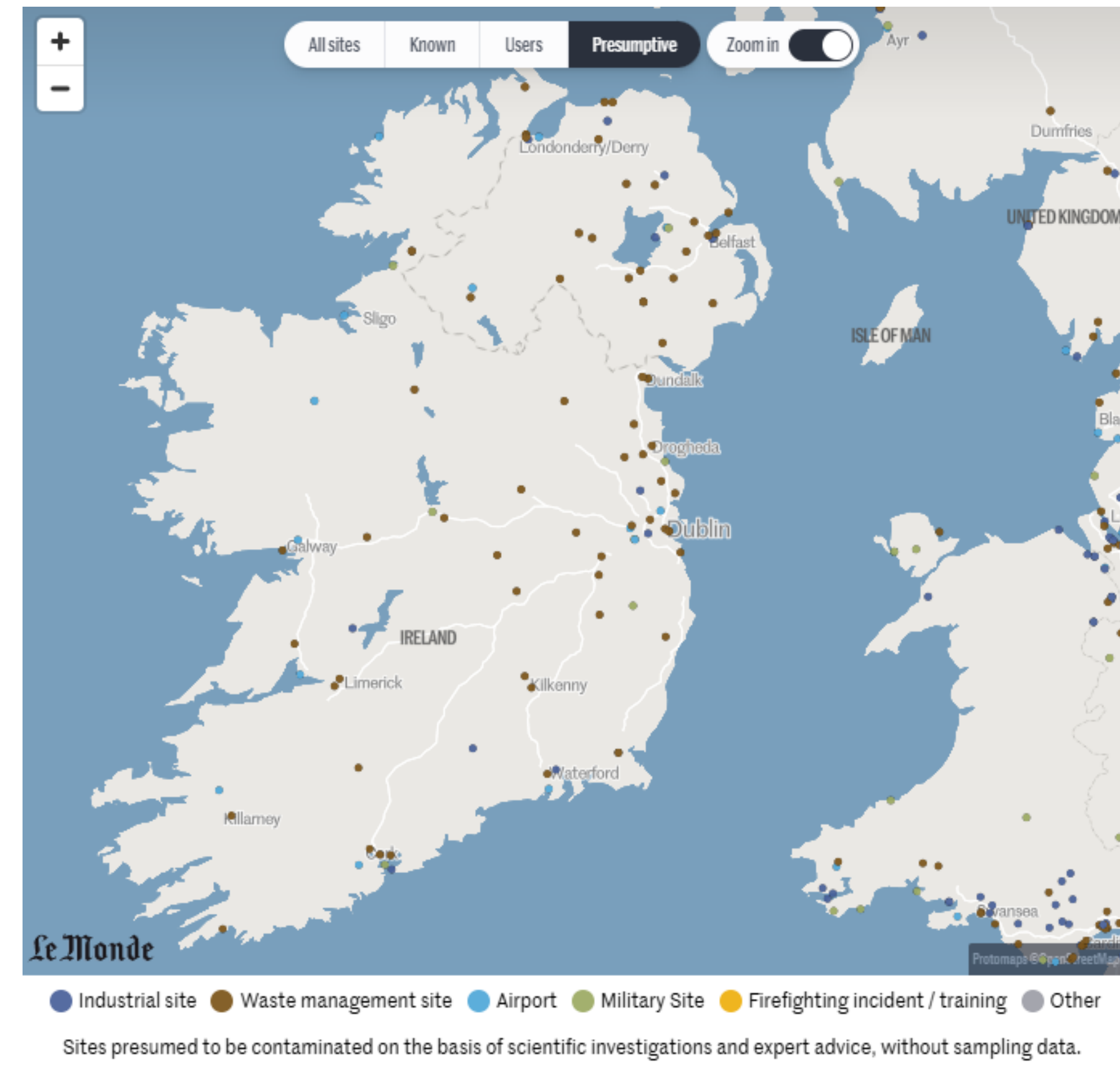
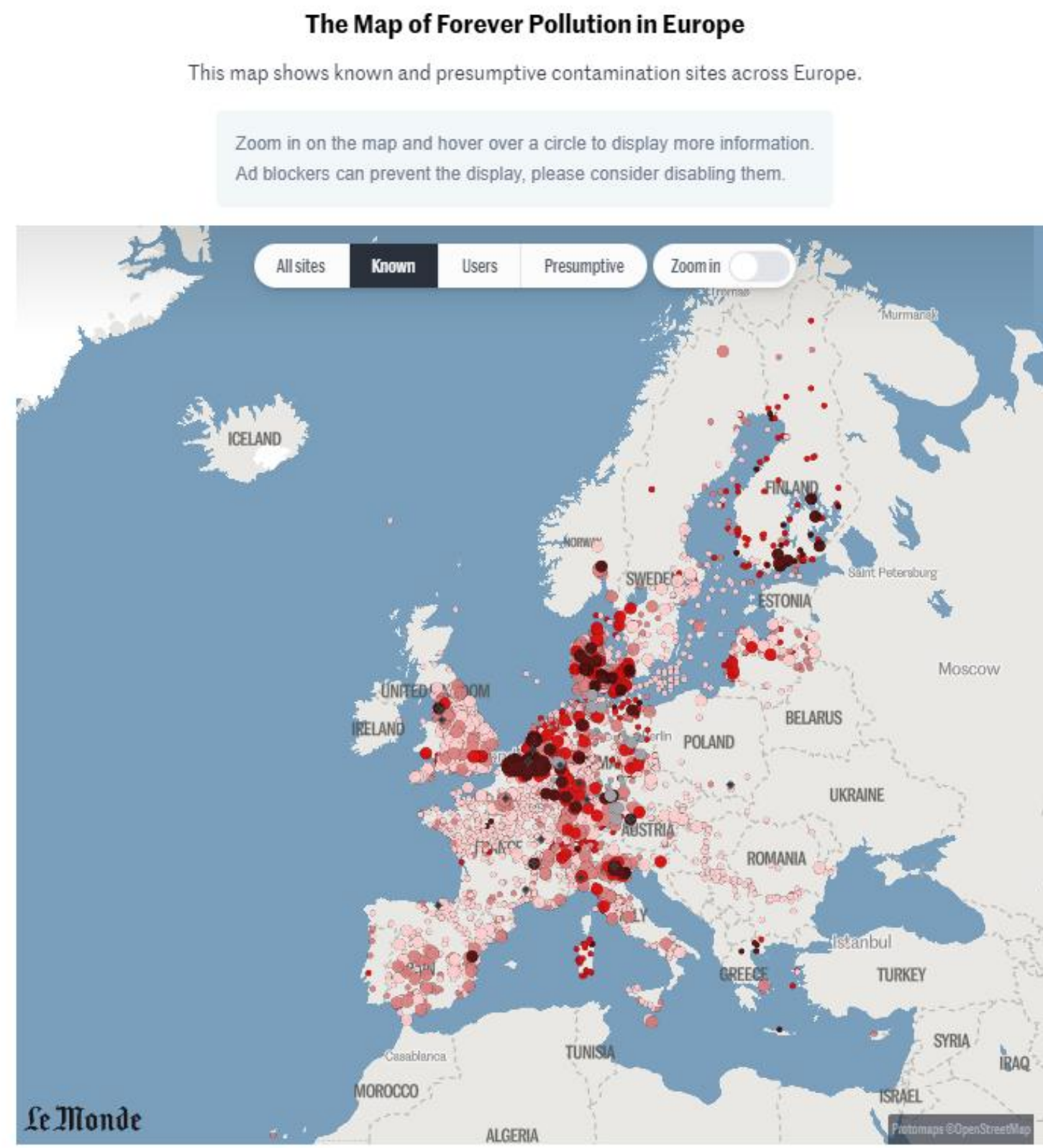
PFAS Monitoring

- 2021/2022 POPs 'hotspot' campaign monitored River Shannon and River Brosna
- PFOA ranging from 0.010 – 0.045 µg/l detected in River Brosna
- Investigation on going by Westmeath County Council in coordination with EPA.
- Uisce Eireann also made aware of these detects



The Map of Forever Pollution

Le Monde



<https://foreverpollution.eu/map/>

Case Study 1 – PCBs/Dioxins in Pork



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Archive

December 2008

Recall notice for Irish pork products

Saturday, 6 December 2008 22:36

The Food Safety Authority of Ireland has ordered the withdrawal and recall of all Irish pork products dating back to 1 September.

It follows the discovery of a contaminant in pig feed by a dioxin known as PCB at levels between 80 and 200 times the safe limits.

PCBs are highly dangerous man-made chemicals that were banned in 1979. They effect the immune and reproductive systems and can, in certain cases, cause cancers.

Advertisement

They can still be found in certain products made before the ban came into force.

The contamination first came to light last Monday, but the positive tests in the pork was only confirmed this afternoon.

Food Safety Authority

Recall notice on Irish pork products

12

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25 An R

Case Study 1 – PCBs/Dioxins in Pork (2008)

- **November 2008:** Routine **DAFM** analysis discovered the presence of “marker-PCBs. Subsequent testing showed levels of **dioxins** in pork **200** times above legal limits
- **December 6th 2008:** Irish government ordered a complete recall of all Irish pork products from pigs slaughtered from September 1st 2008.
- **December 7th 2008:** European markets ordered to remove tainted pork products from their shelves €100s of millions economic impact and food reputational impact.
- Source found to be the use of **PCB contaminated oil** used to dry feed. Exhaust gases then got deposited in feed and fed pigs etc.



Údarás Sábháilteachta Bia na hÉireann
Food Safety Authority of Ireland



Department of
**Agriculture,
Food and the Marine**
An Roinn
**Talmhaíochta,
Bia agus Mara**



Rialtas Áitiúil Éireann
Local Government Ireland



Case Study

- **PFAS** is an
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- Some PFAS
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- PFAS exan

Figure 1: Typical PFAS exposure pathways

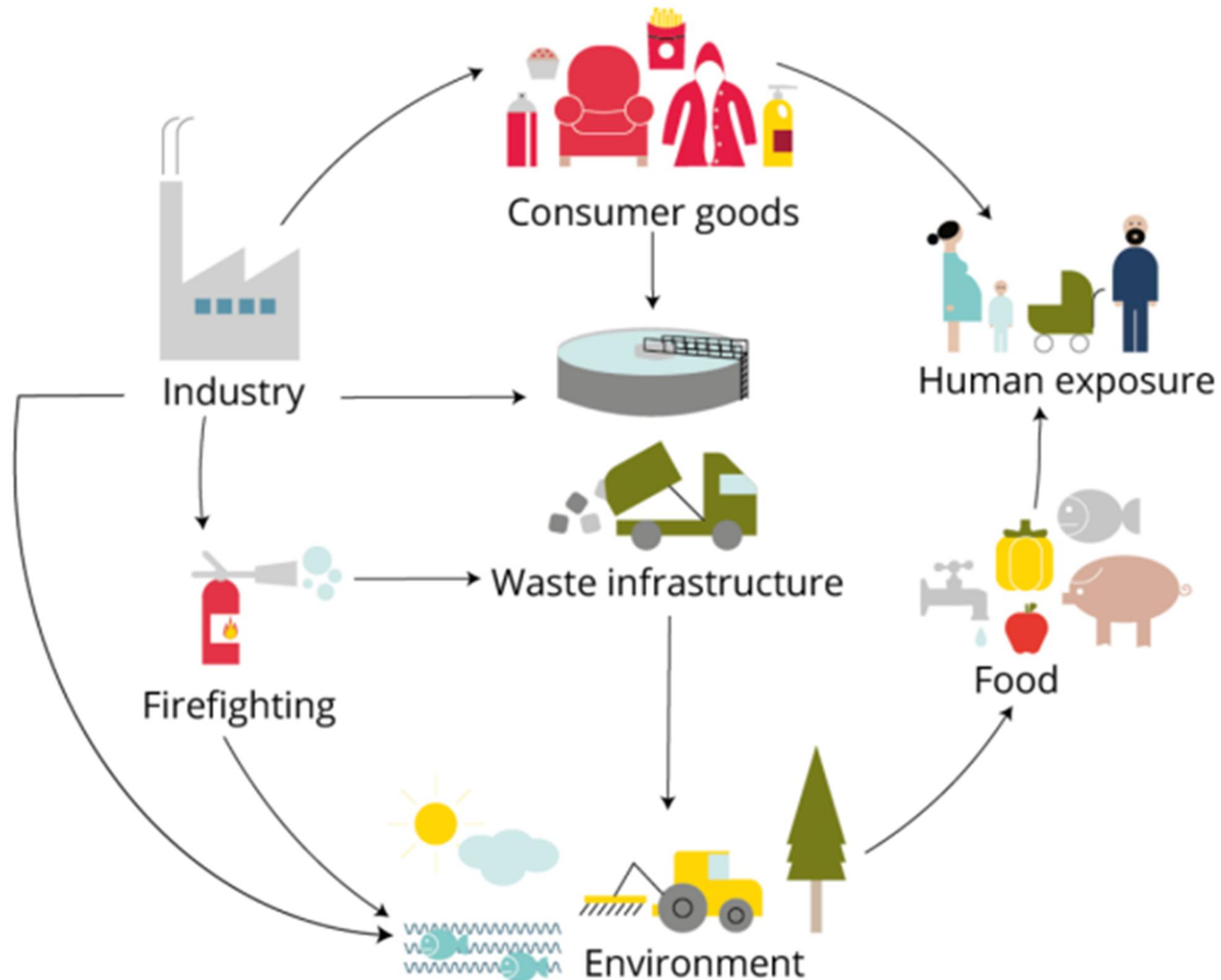


Figure Source: European Environment Agency. Briefing - Emerging chemical risks in Europe — 'PFAS'
<https://www.eea.europa.eu/publications/emerging-chemical-risks-in-europe/emerging-chemical-risks-in-europe>

Case Study 2 – PFAS in Fire Fighting Foams



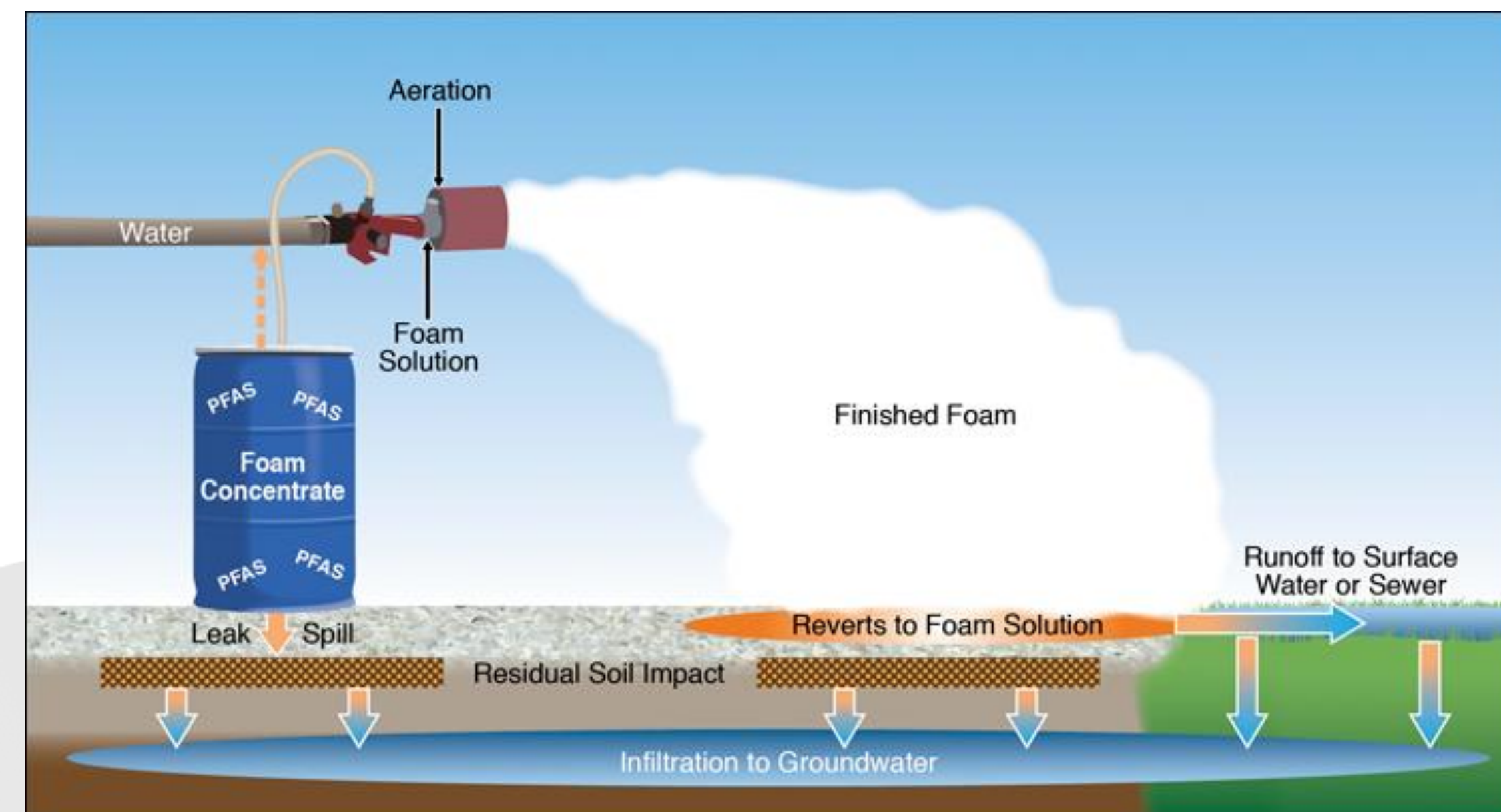
daa publishes results of two-year PFAS risk assessment

Dublin Airport one of 90 sites in Ireland known or suspected to have PFAS issue

daa has published the results of a comprehensive two-year risk assessment of PFAS on the grounds of Dublin Airport.



- Legacy use of AFFFs in airports globally
- Soil and water contamination issues
- LA involvement e.g. Fingal and Cork CC
- Ongoing monitoring and remediation



Case Study

- Complaint to W
- Fire briquette / I
- Unannounced S
- Conveyor – tron
- magnets – feeds
- “contaminated” v
- Site directed to c
- Waste authorisa
- Fully permitted a
- Acknowledgeme



(*Please note image above is not of the actual product investigated)

Contents



- What are POPs ?
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- Roles of Public Authorities and National Implementation Plan (NIP)
- Examples of POPs Monitoring and case studies
- **Further sources of information**

Further information on POPs





Environmental Protection Agency
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PCBs

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POPs, REACH and RoHS differences

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Fire Fighting Foam Restrictions

Persistent Organic Pollutants (POPs)



Persistent Organic Pollutants (POPs) are a group of organic chemicals that remain stable over long periods of time and are toxic to humans, animals and the environment. The term POPs is attributed to those specific organic chemicals that have been designated and listed as POPs under the [Listing of POPs in the Stockholm Convention](#).

- POPs bioaccumulate, meaning they become more concentrated inside the bodies of living things and accumulate in food and human tissue. For some POPs, even low levels have been linked to health issues e.g., increased cancer risk, reproductive disorders, endocrine (hormonal) disruption and increased birth defects.
- POPs stay in the environment for a long time and can travel long distances in air and water causing pollution far away from where they were originally used.

Some POPs were made for particular uses - these are known as intentional POPs, for example:

- Certain specific pesticides that have been used in the past in agriculture including lindane, dieldrin, DDT and endosulfan.
- PFOS, PFOA and PFHxS which are PFAS (per- and polyfluoroalkyl substances) that are designated as POPs, and have been used in a range of products including non-stick cookware, waterproof outdoor clothing, food packaging, medical devices, and fire-fighting foams.
- Certain specific BFRs (brominated flame retardants) were used to treat electrical equipment (e.g. plastics used equipment), textiles and furniture, to reduce the risk of fire spreading.

- PCBs (polychlorinated biphenyls) were added in the past to electrical transformers and capacitors, due to their ability to conduct heat. They were used mainly in industry settings prior to the mid-1980s with heavy electrical usage. Some PCB-containing electrical equipment may still be in use but will be completely phased out by 2025 under the Stockholm Convention.

Other POPs are released into the environment from burning fossil fuels or waste -these are known as unintentional POPs, for example:

- Dioxins and furans are very harmful substances that are created and released into the air when materials such as fossil fuels and waste are burned – even when we burn solid

Guidance documents....





Environmental Protection Agency

**GUIDANCE FOR LOCAL AUTHORITIES
REGARDING LANDS POTENTIALLY IMPACTED
BY POLYCHLORINATED BIPHENYLS (PCBs).**



Guidance Leaflet

PFOA in Fire-Fighting Foams



Environmental Protection Agency

Why are some PFAS a problem?

Per- and polyfluoroalkylated substances (PFAS) are a group of manmade chemicals that may be found in aqueous film-forming foam (AFFF) used in some fire suppression systems, including portable handheld fire extinguishers. While PFAS encompass a very large number of substances and the effects of most of these are unknown, PFAS (such as perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS)) are widely recognised as harmful to humans and the environment. PFAS are often described as the “forever chemicals” due to their persistent nature - meaning they break down very slowly, if at all, in the environment and so can pose long term risks. Furthermore, many PFAS present in fire-fighting foams are both bioavailable and bioaccumulative, meaning they are easily absorbed by living organisms and can increase in concentration within the body. PFAS discharged on land, can contaminate the soil, or be washed off into streams, rivers, potentially contaminating groundwater and drinking water supplies.

Controls on PFOS and PFOA

Fire-fighting foams commonly contain PFAS, including PFOS historically and, more recently, PFOA. PFOS and its related substances were severely restricted under the Stockholm Convention in May 2009, followed by restrictions on PFOA its salts and its related compounds in May 2019. While the use of PFOS is already banned, there are some time-limited exemptions for the use of PFOA its salts and related compounds, under the Persistent Organic Pollutants (POPs) Regulation (EU) 2019/1021. The Environmental Protection Agency (EPA) is responsible for overseeing implementation of the POPs Regulation's requirements in Ireland.

While the current focus is the time-limited restrictions on the use of PFOA, its salts and PFOA-related compounds, further restrictions are likely to extend to other PFAS including proposals under the EU Chemical Strategy for Sustainability to eliminate all non-essential uses of PFAS which may include usage in AFFF. With further restrictions likely, it is recommended that you consider switching to PFAS free alternatives, known as “fluorine free” foams, in the coming years.

The restrictions on AFFF containing PFOA and its salts at concentrations above 0.025mg/kg, and PFOA-related compounds at total concentrations above 1mg/kg (hereafter referred to as “AFFF containing PFOA”) are as follows:

Applicable Date	Restriction(s)
From July 4, 2020	- All existing stocks of AFFF containing PFOA installed in a premises <u>may only be used for Class B fires</u>¹. - Use of AFFF containing PFOA is prohibited for training purposes. - Testing of equipment/systems of AFFF containing PFOA is only allowed if releases are contained and can be properly disposed of.
From January 1, 2023	Uses of AFFF containing PFOA are permitted only where foam release can be contained.
From July 4, 2025	All uses of AFFF containing PFOA are prohibited.

If your fire systems (including handheld fire extinguishers) have AFFF containing PFOA, then the following obligations apply to you:

Applicable Date	Obligation(s)
From July 04, 2020	- Notification to the EPA is required if you intend to continue to use AFFF containing PFOA for the permitted purposes. - Any AFFF containing PFOA that are to be discarded, must be managed as a waste using a suitably authorised waste contractor. This applies to suppliers and end users. - If the total weight of AFFF containing PFOA contained within fire suppression systems, including hand-held extinguishers exceeds, 50 kg, at a given location, you must notify such stocks to the EPA and report to the EPA of the continued retention of these foams annually. - Please note: The deadline for receipt of report of stocks of greater than 50kg of AFFF containing PFOA is the 4th July annually.
From July 4, 2025	- All existing stocks of AFFF containing PFOA must be managed appropriately by a suitably authorised waste management contractor (please check EPA website at www.pops.ie for lists of contractors). - Notification made to the EPA of proper disposal/management of stocks of AFFF containing PFOA including proof of appropriate management.

¹ Class B Fires – Flammable Liquids (petrol, diesel, spirits, paint, etc.)



HSE National Drinking Water Group Dec 2022

**Frequently Asked Questions (FAQs)
PFAS in Drinking Water**

NOTE: Research in the area of PFAS is ongoing. New scientific evidence is likely to emerge in the short and medium term. These FAQs are therefore interim and will be kept under review.

What are PFAS?

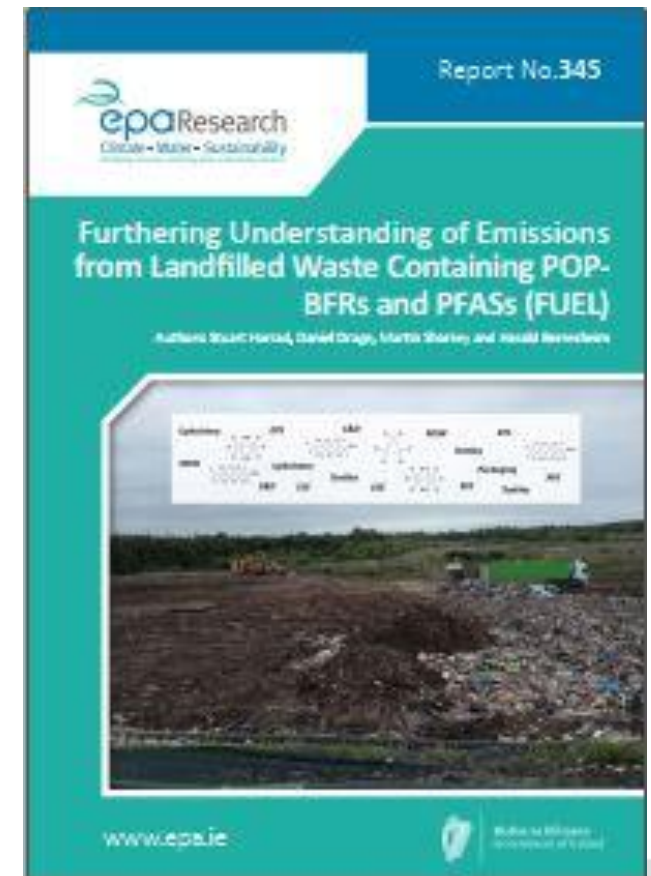
Per- and poly-fluoroalkyl substances (PFAS) are man-made chemicals. Approximately 4,700 PFAS have been identified to date (1).

PFAS have been used in many industrial and consumer products since the 1950s (1).

- They are used to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water (2).
- PFAS have the ability to reduce friction and are used in a variety of industries including aerospace, construction, automotive and electronics and can be found in a range of different products (3).
- Some specific products that may contain PFAS include (4,5):
 - Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes, and sweet wrappers
 - Non-stick cookware
 - Stain resistant coatings used on carpets, upholstery, and other fabrics
 - Water-resistant clothing
 - Cleaning products
 - Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
 - Paints, varnishes, and sealants
 - Firefighting foams

EPA research projects that might be of interest

- Ongoing Project. Assessment of the Environmental Contamination of Irish Soils and Sediments with Hazardous Chemicals (Terrachem Project) - [terrachem - University of Galway](#)
- [EPA Research Report 345: Furthering Understanding of Emissions from Landfilled Waste Containing POPBFRs and PFASs \(FUEL\)](#)
- [EPA Published Report - Determining Historic and Current PFAS Levels in AFFF in the Republic of Ireland](#)
- [EPA Published Report - Persistent Organic Pollutants, Landfill Leachate Sampling Study](#)



Further info



POPs Chemicals

Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds

CAS No. 335-67-1
EC Code: 29150900
Full Name: Perfluorooctanoic acid (PFOA), its salts and PFOA-related compounds

Synonyms: Perfluorooctanoic acid (PFOA), including any of its branched isomers; its salts; PFOA-related compounds which, for the purposes of the Convention, are any substances that degrade to PFOA, including any substances (including salts and polymers) having a linear or branched perfluoroheptyl group with the moiety (C₆F₁₃)C as one of the structural elements;

Uses: PFOA, its salts and PFOA-related compounds are used widely in the production of fluoropolymers and fluoropolymers, for the production of non-stick kitchen ware, food processing equipment. PFOA-related compounds, including side-chain fluorinated polymers, are used as surfactants and surface treatment agents in textiles, paper and paints, firefighting foams. PFOA has been detected in industrial waste, stain resistant carpets, carpet cleaning liquids, house dust, microwave popcorn bags, water, food, and Teflon. Unintentional formation of PFOA is created from inadequate incineration of fluoropolymers from municipal solid waste incineration with inappropriate incineration or open burning facilities at moderate temperatures.

Hazards and Risks to environment: PFOA is identified as a substance with a persistent, bioaccumulative and toxic nature. PFOA compounds are released into waste, and degrade to PFOA organisms. Major health risks include cancer, thyroid dysfunction, hypertension, high cholesterol.

CF₃(CF₂)₇COOH

Reference

1. Risk management evaluation on perfluorooctanoic acid, its salts and PFOA-related compounds. Persistent Organic Pollutants Review Committee, Addendum to the risk management evaluation on perfluorooctanoic acid, its salts and PFOA-related compounds. UNEP POPs POPRC, 2008.
2. Toxicological profile of PFOA. EPA, 2008.
3. Green Facts 2007: Hazardous and Risk to Human Health and the Environment. UNEP POPs POPRC, 2007.
4. Stockholm Convention, POPs POPRC, 2008.
5. Stockholm Convention, POPs POPRC, 2008.

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STOCKHOLM CONVENTION

POPs Chemicals

Endosulfan

CAS No. 559-98-8; 33213-65-9
Full Name: 6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepin-3-oxide
Trade Name: Thiodan*, Thionex; Endosan; Farmoz; Callisulfan

Uses: Endosulfan is an insecticide which has been used for over 50 years to effectively control several pests, e.g. chewing, sucking and boring insects, including aphids, thrips, beetles, foliar feeding caterpillars, mites, borers, cutworms, bollworms, bugs, white flies, leafhoppers, snails in rice paddies, and tsetse flies.

Hazards and risks to human health and the environment: Endosulfan is persistent in water. Endosulfan bioaccumulates in aquatic organisms. Exposure to Endosulfan is toxic to humans, causing effects on a wide range of organs. Exposure to a congenital physical disorder in farm workers in Africa, Asia and the Pacific shows toxicity similar to Endosulfan.

Endosulfan is used on a very wide range of crops. Major crops to which it is applied include soy, cotton, rice, and tea. Other crops include vegetables, fruits, nuts, berries, grapes, cereals, pulses, corn, oilseeds, potatoes, coffee, mushrooms, olives, hops, sorghum, tobacco, and cacao. It is used on ornamentals and forest trees, and has been used in the past as an industrial and domestic wood preservative, and for controlling earthworms in turf.

Stockholm Convention: Endosulfan is listed in Annex A to the Stockholm Convention with specific exemptions for production and use on crop-pest complexes listed in part VI of that annex (decision SC-5/3).

Reference

1. Risk profile on endosulfan. Persistent Organic Pollutants Review Committee 2008, UNEP POPs POPRC 12/20/Annex 2
2. Risk management evaluation on endosulfan. Persistent Organic Pollutants Review Committee 2008, UNEP POPs POPRC 12/20/Annex 1

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STOCKHOLM CONVENTION

POPs Chemicals

Lindane, Alpha-HCH, Beta-HCH

CAS No. 58-89-9; 319-84-6; 319-85-7
Full Name: Gamma hexachlorocyclohexane; alpha hexachlorocyclohexane; beta hexachlorocyclohexane
Trade Name: Lindane

Uses: Lindane has been used as a broad-spectrum insecticide for seed and soil treatment, foliar applications, tree and wood treatment and against ectoparasites in both veterinary and human applications. The production of lindane has decreased rapidly in the last few years and only few countries are still known to produce lindane. Alpha- and beta-HCH are produced as unintentional by-product of lindane. For each ton of lindane produced, around 6-10 tons of the other isomers including alpha- and beta-HCH are created. Large stockpiles of alpha- and beta-HCH are therefore present in the environment.

Hazards and risks to human health and the environment: Lindane is persistent, bioaccumulates easily in the food chain and bioconcentrates rapidly. There is evidence for long-range transport and toxic effects (immunotoxic, reproductive and developmental effects) in laboratory animals and aquatic organisms.

Alpha- and Beta-HCH are highly persistent in water in colder regions and may bioaccumulate and biomagnify in biota and arctic food webs. These chemicals are subject to long-range transport, are classified as potentially carcinogenic to humans and adversely affects wildlife and human health in contaminated regions.

Stockholm Convention: Lindane is listed in Annex A to the Stockholm Convention with specific exemptions for the use of lindane as a human health pharmaceutical for the control of head lice and scabies as second line treatment (decision SC-4/15). Alpha- and beta-HCH are listed in Annex A to the Stockholm Convention without specific exemptions (decisions SC-4/10, SC-4/11).

Reference

1. Risk profile on lindane. Persistent Organic Pollutants Review Committee 2005, UNEP POPs POPRC 2/12/Annex 4
2. Risk management evaluation on lindane. Persistent Organic Pollutants Review Committee 2007, UNEP POPs POPRC 3/20/Annex 4
3. Risk management evaluation for alpha hexachlorocyclohexane. Persistent Organic Pollutants Review Committee 2008, UNEP POPs POPRC 4/25/Annex 3
4. Risk management evaluation for beta hexachlorocyclohexane. Persistent Organic Pollutants Review Committee 2008, UNEP POPs POPRC 4/25/Annex 4

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STOCKHOLM CONVENTION

UN environment programme

- [Stockholm Convention - Home page](#)
- [Source: UN The New POPs](#)
- [List of substances subject to POPs Regulation - ECHA](#)

Coming soon.....



- **NEW POPs awareness course** for LAs and other public authorities
- Course will cover;
 - Sources of POPs, legislation, monitoring, case studies, POPs research....
- Planned introductory **Webinar** – possibly by year end with **in-person** courses in early 2026
- Further information from LASNTG
- Thanks to Roisín Smith, Áine Mc Carthy and EPA



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