GOUVERNEMENT

Liberté
Égalité
Fraternité

Interministerial action plan on PFAS

APRIL 2024

FRANCE NATION VERTE

Agir · Mobiliser · Accélérer

Introduction

Per- and polyfluoroalkyl substances (PFAS) are a large group of several thousand chemical compounds. According to the OECD definition, these are molecules formed by a chain of carbon atoms of varying lengths, whether linear, branched or cyclic, and containing at least one fluorinated group, which is either saturated and fully fluorinated methyl or methylene. Various functional groups can be added to this fluorocarbon structure, giving these molecules distinct physical, chemical and toxicological properties. They have many properties (non-stick, waterproof, resistant to high temperatures) which have led to their manufacture and use in many industrial sectors since the 1950s. PFAS are very persistent molecules and are widely distributed in the environment. They are also bioaccumulative.

Within PFAS, the properties (physico-chemistry, toxicity, ecotoxicity, impacts on human health and biodiversity, etc.) of certain molecules (PFOA, PFOS, etc.) are well known and the methods for their detection and measurement are routinely accessible, making it possible to monitor them in different environments. For these few molecules, the knowledge which is available has already led to the introduction of regulations to prevent certain risks associated with their use. Knowledge about the vast majority of other PFAS is incomplete (or even non-existent), but there is now an increased level of vigilance and response regarding all the substances which meet the OECD definition. The scope of this interministerial action plan therefore includes all substances which come under this definition.

Strong interministerial action is needed to address the health and environmental issues in order to respond to growing concerns about the impact of PFAS on human health and biodiversity.

Cyrille Isaac-Sibille, a deputy of the French National Assembly, was instructed by the Prime Minister on 5 July 2023 to carry out an assessment of the situation regarding PFAS in France, and to make recommendations. The deputy submitted his report at the beginning of February and his recommendations were taken into account during the drafting of the action plan.

The management of the implementation of each of the actions contained within the interministerial action plan on PFAS is assigned as indicated in the details of the actions to one or more ministries (Health, Ecology, Industry, Consumption, Research, Agriculture, Internal Affairs, Armed Forces, etc.), institutions (Ineris, BRGM, Ifremer etc.) and organisations (ANSES, SPF, Ademe, OFB, Water Agencies, etc.). Each action leader is specified on the plan.

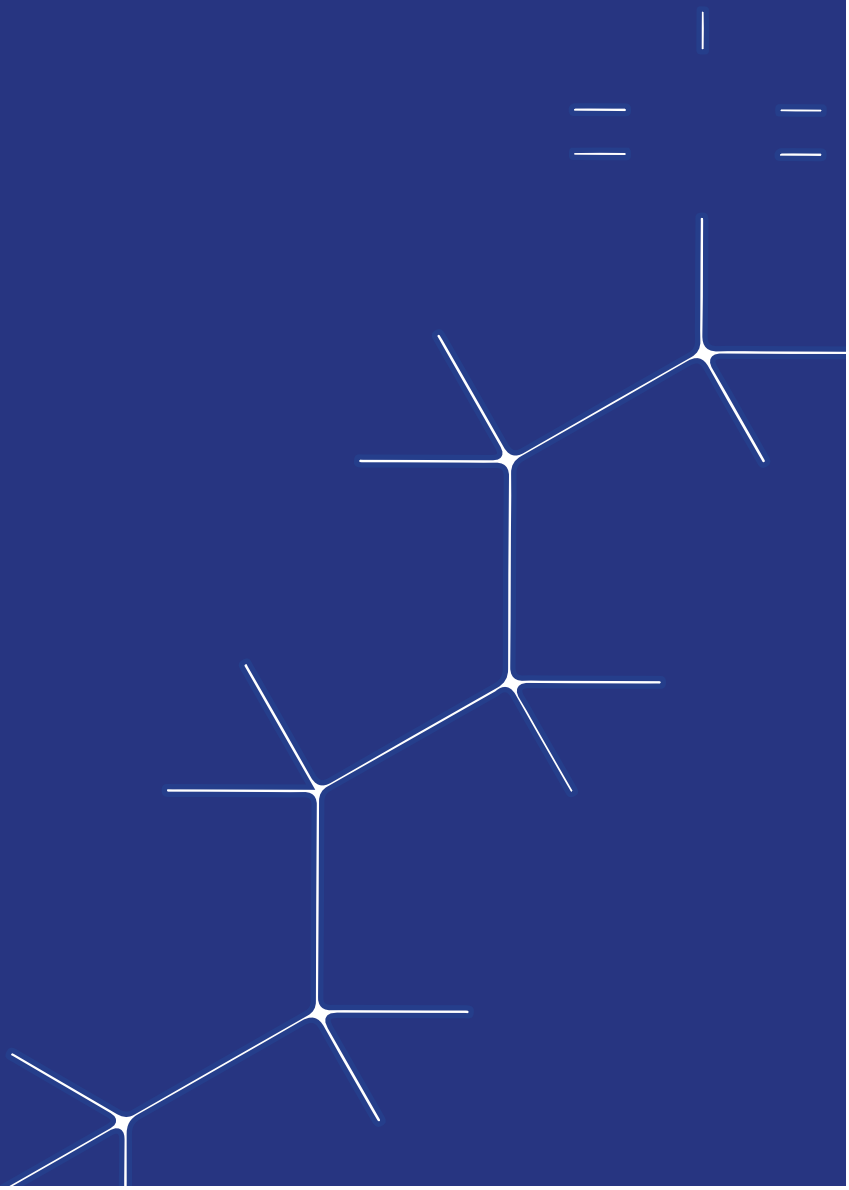
This interministerial action plan on PFAS incorporates and replaces the actions planned in the Ministry of Ecological Transition's plan on the same subject, which was published in January 2023.

An interministerial steering committee comprising all the ministries, institutions and organisations involved in implementing the plan will coordinate the actions and monitor the implementation of the plan. This committee will be co-chaired by the Chief Executive Officer for Health (from the Ministry of Labour, Health and Solidarity) and the Director General for Risk Prevention (from the Ministry of Ecological Transition). The Ministries of Ecological Transition, Labour, Health and Solidarity will report regularly to the Prime Minister on the progress of the actions.

AXE 1

GAIN KNOWLEDGE

about methods for measuring emissions, dissemination and exposure



Key area 1:

Gain knowledge about methods for measuring emissions, dissemination and exposure

Action 1: develop methods to measure emissions, environmental contamination and the degree to which humans and other living organisms are affected

The presence of PFAS in the environment is anthropogenic. In addition to their presence in many everyday objects, these substances are widely used in industrial processes and can be dispersed into the environment when they are released into the atmosphere or into water. Action 1 of this plan focuses on the development of methods for measuring PFAS, both in terms of emissions (in the atmosphere and in water) and in different environments (drinking water, surface water and groundwater, food, soil, dust and indoor air, etc.), as well as in food and consumer goods. The various reference laboratories working on these different matrices, which are collaborating so that they can share and pool the work they are doing to improve the analysis of PFAS, will provide useful support this action

Methods for measuring emissions into the atmosphere

There is currently no European or French standard for measuring PFAS in atmospheric emissions from chimneys. At the moment, it is an experimental American method described in a reference document published on the US EPA website, OTM-45, which is the most tried and tested and most widely used by laboratories taking samples and carrying out analyses to measure PFAS at chimney outlets. Some laboratories use sampling methods derived from the American method, but the reliability of these has not been established. The Directorate-General for Energy and Climate attached to MTECT and Ineris are currently working together to promote the use of PFAS measurement methods (sampling and analysis) for atmospheric emissions in France, to improve them where necessary and to standardise practices.

The role of Ineris in incorporating the American OTM-45 method into French standards, as well as in implementing and validating the analysis method resulting from this standard, is key for measuring atmospheric emissions by mid-2024.

Action leaders: MTECT/ DGEC, MTSS/ DGS

Methods for measuring emissions in aqueous discharges

Within the framework of the decree of 20 June 2023, work was carried out to identify methods for measuring PFAS in aqueous discharges alongside Ineris and AQUAREF. This work will be continued on a wider range of PFAS substances.

There are various standardised methods for the individual analysis of several PFAS in wastewater (draft European standard prNF EN 17892, ISO 21675:2019, DIN 38407-42 2011 in Germany or WAC/IV/A/025 in Belgium). Given that measures for monitoring PFAS in aqueous environments (drinking water, wastewater, surface water and groundwater) will be stepped up

and will need to provide reliable and comparable results, proven and easily reproducible methods must be defined and recognised internationally. The use of standardised analysis methods to provide an index parameter for estimating the total concentration of PFAS is also a major challenge as it can be difficult to measure all the PFAS compounds present individually. For example, in France, this total concentration is estimated using the adsorbable organic fluorine (AOF)1 parameter, for which there is currently no standardised method of analysis. In addition, this method does not enable all the PFAS present to be quantified: the use of other indicative methods is therefore being studied (EOF, TOP). AQUAREF – the national reference laboratory for the monitoring of aquatic environments – is conducting technical research to develop various individual and index methods in the wastewater matrix and to compare the results.

Action leaders: MTECT/ DEB, MTECT/ DGPR, MTSS/ DGS

Measurement methods in environments (water, soil, sediment, air) and living organisms

The developments carried out at national level in the different areas (drinking water, surface and ground water, food, soil, ambient air, dust and indoor air, marine, etc.) will be complemented by the work planned as part of the PARC2 European partnership.

Developments at a national level in the area of water intended for human consumption (EDCH) will have to be consistent with the guidelines expected in June 2024 for the analysis of PFAS, pursuant to European Directive 2020/2184 on the quality of EDCH.

Ineris will work in 2024 on the development of methods for characterising PFAS in atmospheric emissions, on the development of an analysis method for volatile PFAS (in connection with action on atmospheric emissions from incinerators), on feasibility tests concerning the analysis of PFAS in the air by PTR-MS and on the development of a multi-matrix analytical method. In 2025, more targeted work on the development of a method of analysis for PFAS in ambient air will be launched.

As regards water in particular, non-targeted analyses will be carried out using the TOP method in 2024 and the HRMS method in 2025.

Ineris will also explore the use of a bioassay (TTR-FITC on the thyroid axis) for the biosensing of PFAS and will work on its comparison with chemical analyses.

BRGM will assist with measurement methods in water, soil and sediment environments based on the developments initiated.

Action leaders: MTECT/ DGEC, MTECT/ DGPR, MTECT/ DEB, MTSS/ DGS

Measurement methods for foodstuffs

When it comes to measuring PFAS molecules in food produced and marketed by farmers and operators in the agri-food industry, the European Union has adopted a comprehensive body of regulations based on the following aspects and documents:

- maximum levels for 4 PFAS molecules (PFOS, PFOA, PFNA and PFHxS) in animal matrices (EU regulation no. 2022/388, which amended the 'base' regulation No. 1881/2006, since repealed by Regulation 2023/915, and which brings together all

1 A draft standard (pr ISO 18127) is under development for the measurement of the AOF parameter.

2 https://www.eu-parc.eu/

existing maximum levels for contaminants in foodstuffs), with additional target values for several PFAS molecules in plant matrices (Recommendation No. 2022/1431).

- guidelines on measurement methods, including sampling procedures tailored to the size of the batch in question, precautions to be taken by sample collectors, and quality standards and performance criteria for laboratories (Regulation (EU) No. 2022/1428).
- the management of EU-wide monitoring and data collection with a view to expanding the setting of maximum levels and the development of new methods of analysis to new PFAS molecules and food matrices, in order of priority (Recommendation No. 2022/1431).

In order to implement these regulations, MASA has set up a network of 5 laboratories approved since 1 January 2024, capable of analysing 22 PFAS compounds in all types of foodstuffs with the precision required by European regulations (generally speaking, the level of sensitivity and performance required to reliably quantify PFAS compounds in food matrices is a challenge for laboratories).

LABERCA/ONIRIS – the National Reference Laboratory and lead organisation of the aforementioned network – will be working in 2024 and 2025 on the development of new methods for the analysis of PFAS compounds by targeting molecule/matrix pairs identified as being of particular interest. LABERCA will focus primarily on:

- the supplementary list put forward by Recommendation No. 2022/1431 of 24 August 2022. This list targets, where appropriate, clearly identified compounds or larger families of compounds which may have different chemical structures, complicating the development process.
- the deliverables produced by ANSES within the framework of the referral of 8 November 2022, which is currently being processed and aims to prioritise certain PFAS for priority consideration.
- the lists of PFAS molecules identified and targeted by Ineris as part of the other actions in the plan with which the Institute is involved.

In addition, to continue the development of new methods for PFAS which already have them in order to improve the effectiveness of PFAS detection and reduce the cost of analysis.

Action leaders: MASA/DGAL, MTSS/ DGS

Measurement methods for materials in contact with food and consumer goods

Liquid chromatography coupled with mass spectrometry (LC-MS) is the preferred technique for identifying and measuring contaminants and is widely used in all official and private testing laboratories. However, only the latest and most advanced equipment is sensitive enough to analyse PFAS. Laboratories are already working on the measurement of PFAS in food and/or environmental matrices. In contrast, very few laboratories carry out PFAS analyses in non-food products and none offer routine analysis services. This is why, in this sector, developing routine analysis methods is essential. These methods can then be supported by the creation of methodological guidelines, as is the case for the analysis methods already available for foodstuffs.

Action leaders: MEFSIN/DGCCRF

Action 2: develop multi-route and multi-environment exposure scenarios

The aim of this action is to have sound exposure assessment scenarios for organisms (humans and other living organisms) which take into account the multiple routes (ingestion, inhalation, skin contact) and sources of exposure to PFAS, which are such ubiquitous pollutants. The phenomena of multiple exposure (exposure to several substances in the PFAS family, or exposure to PFAS and other chemical substances which may have the same biological targets) should also be considered. Ineris will work on the evaluation and applicability of scenarios on the scale of an industrial site.

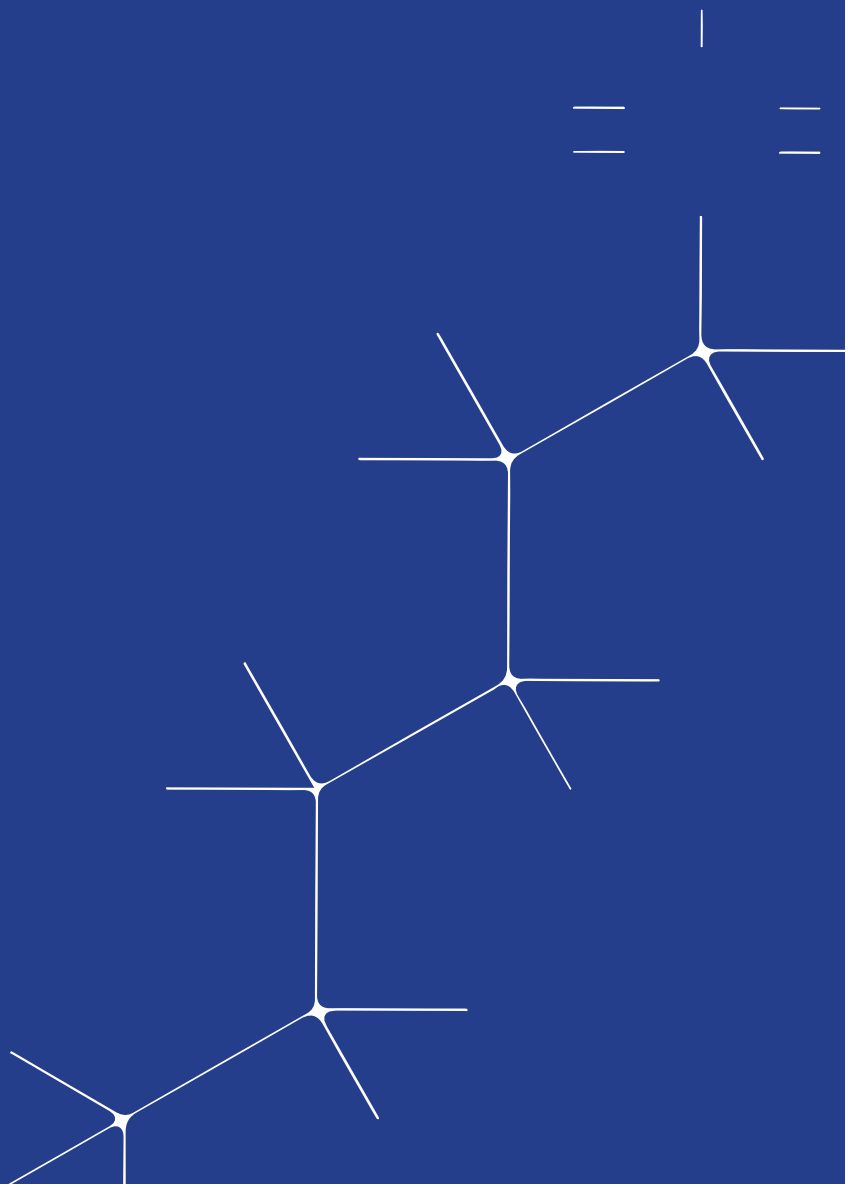
The work carried out at the national level will need to be coordinated with the work being carried out as part of PARC WP4 on human exposure and the infiltration of PFAS into the environment from non-food sources and PARC WP6 on the integrated risk and exposure assessment (in particular PBPK modelling).

Action leaders: Ineris, INRS

AXE 2

IMPROVE AND STRENGTHEN

monitoring and use the resulting data to take action



Key area 2:

Improve and strengthen monitoring and use the resulting data to take action

Action 3: improve emission monitoring systems

PFAS can potentially be released into the environment in many different forms (aqueous and gaseous emissions) from a wide range of sources, including: local authority wastewater treatment plants (due to the use of PFAS-containing products by the general public), waste incineration and treatment/recycling facilities, airports (due to the use of fire-fighting foams for exercises or in the event of an accident), fire and rescue service training areas3 (for the same reasons), military sites (largely for the same reasons), brownfield sites, industrial sites, emissions from everyday consumer products and objects when they are in use, etc.

In order to improve knowledge and the characterisation of PFAS emission sources in the environment, the following sub-actions shall be carried out:

1) Increase monitoring of PFAS in wastewater treatment plants (WWTPs)

A programme to monitor PFAS emissions in treated wastewater from urban wastewater treatment plants will be introduced in 2024 for WWTPs with a population equivalent of over 10,000 (around 1,300 facilities).

Action leaders: MTECT/ DEB

2) Improve and encourage the accreditation of laboratories specialising in the measurement of PFAS in aqueous waste

In order to support laboratories in carrying out analyses in accordance with the requirements of the Decree of 20 June 2023, AQUAREF has organised an inter-laboratory comparison (ILC) for the analysis of around thirty PFAS in the aqueous discharge matrix. Support for laboratories through the organisation of ILCs and technical days, and the provision of recommendation guidelines or method specifications appropriate for the discharges concerned, must continue to ensure the reliability of the analyses provided.

Action leaders: MTECT/ DGPR, MTECT/DEB

3) Impose through regulation a programme to measure PFAS in atmospheric emissions from incineration and co-incineration facilities

Incineration is one of the methods recommended internationally and by European legislation for the elimination of persistent organic pollutants (which include certain regulated PFAS), and is the method used in France for the elimination of waste containing PFAS. Studies usually consider that the temperature required to destroy PFAS is between 1,000°C and 1,400°C, which is around the temperature reached by incineration and co-incineration facilities.

3 Fire and rescue services (SIS), departmental fire and rescue services (SDIS) and local fire and rescue services (STIC).

However, as not all PFAS are recognised at European level, and in order to increase knowledge about the thermal degradation of PFAS, it would be advisable to directly analyse the atmospheric emissions from these facilities at the chimney outlet. It is therefore proposed to require hazardous and non-hazardous waste incineration and co-incineration plants to conduct a programme to measure PFAS in their atmospheric emissions. However, as the methods for measuring PFAS in atmospheric emissions are still in their infancy, the implementation of such an action requires that the standards for sampling and analysing PFAS in atmospheric emissions be validated in France and controlled by laboratories (see Action 1, Sub-action 1 and Action 4, Sub-action 4).

In view of the increased use of treatments to eliminate PFAS from aqueous and atmospheric industrial discharges, and of treatments for water intended for human consumption, particular attention should be paid to the monitoring of the disposal or regeneration processes for activated carbons, filtration membranes, etc. used to treat PFAS.

As part of this action, hazardous and non-hazardous waste incineration and co-incineration facilities will be required to conduct a PFAS measurement programme of their atmospheric emissions. In addition to its involvement in work on the thermal degradation of PFAS, Ineris will be able to study the effectiveness of air treatment systems in incinerators.

A draft ministerial decree on listed facilities prescribing the measurement of certain PFAS substances in atmospheric emissions from incineration and co-incineration facilities will be prepared by mid-2024.

An initial study will be carried out in 2024 on two incinerators.

Action leaders: MTECT/ DGPR, Ineris, DGEC

4) Continue monitoring PFAS in aqueous discharges from ICPEs

As part of the implementation of the MTECT PFAS action plan drawn up in January 2023, the ministerial decree of 20 June 2023 made it compulsory to carry out a programme of PFAS measurements in the aqueous discharges of numerous industrial sites potentially most affected by these substances, in particular chemical production facilities, textile manufacturing facilities, waste storage and treatment facilities and industrial wastewater treatment plants, etc. As a result, from September 2023 to June 2024, around 4,000 sites must analyse their aqueous discharges three times to assess their levels of PFAS.

The regulatory procedures for the long-term monitoring of PFAS in aqueous discharges from industrial sites will be defined based on the results of the analyses obtained.

Action leaders: MTECT/ DGPR

Action 4: improve the measures for monitoring environments

1) Speed up the standardisation processes for measurement methods (water, air, soil)

The development of measurement methods and standards must be coordinated for the different environments.

Action leaders: MTECT/ DGPR, MEFSIN/DGE, AFNOR

2) Improve and encourage the accreditation of laboratories specialising in the measurement of PFAS in the water matrix (drinking water and surface and groundwater)

The methods for managing the health risks associated with the presence of PFAS in EDCH are based mainly on the interpretation of the results of the analyses carried out as part of the health checks on EDCH. The analyses carried out as part of the health checks on drinking water must be carried out by an approved laboratory, meaning that it is accredited, in order to guarantee the reliability and accuracy of the results.

Monitoring of surface and groundwater is governed by the Decree of 26 April 2022, which sets out the water status monitoring programme implemented in accordance with Article R. 212-22 of the Environment Code. The analyses carried out as part of this monitoring programme must be carried out by an approved laboratory, in accordance with the Decree of 26 June 2023.

Action leaders: MTSS/ DGS, ANSES, MTECT/ DEB

3) Regularly conduct a national investigative programme on PFAS in EDCH

MTSS regularly mandates ANSES to conduct national investigative programmes on EDCH (raw and treated water) to determine the data acquisition parameters for water contamination. The programme, which will start in spring 2024, will focus on around thirty PFAS (20 PFAS from the drinking water directive, PFAS of interest, including some very short PFAS, known as 'ultrashort PFAS'). These prospective programmes on parameters which are still not very well known (this is the case with short-chain PFAS) enable the development and testing of analytical capabilities and then the integration of these parameters, if deemed appropriate, into the routine health monitoring of EDCH carried out by the regional health agencies and into the health checks conducted by ANSES.

Action leaders: MTSS/ DGS, ANSES

4) Improve and encourage the accreditation of laboratories specialising in the analysis and sampling of PFAS in atmospheric emissions

In the second half of 2024, Ineris will prepare (feasibility study) an inter-laboratory comparison (ILC) for PFAS in air emissions, which could be organised in the first half of 2025.

Action leaders: MTECT/ DGEC (BQA)

5) Improve and encourage the accreditation of laboratories specialising in the measurement of PFAS in the soil matrix

In line with Part 3 of Action 1, a programme will be launched to encourage analysis laboratories to obtain accreditation for measuring PFAS in the soil matrix. BRGM will contribute to this action by acting as manager for the laboratories working group set up on behalf of DGPR. It will support the laboratories in obtaining accreditation for the soil matrix.

Action leaders: MTECT/DGPR ; BRGM

6) If necessary, depending on the local context, take steps to ensure compliance with the regulatory requirement to monitor PFAS as part of the health checks carried out by the regional health agencies (ARS)

As part of the implementation of Directive (EU) 2020/2184 by the European Parliament and Council of 16 December 2020 on the quality of water intended for human consumption (EDCH), testing for PFAS is mandatory as part of the health checks carried out by the Regional Health Agencies (ARS) on EDCH and the water resources used to produce EDCH as from January 2026, in accordance with existing testing capabilities.

Some ARS are already gradually integrating PFAS into health monitoring parameters. The new quality thresholds, which are the quality threshold of 0.1 µg/L in EDCH and 2 µg/L in raw water, and which apply to a total of 20 PFAS (list set out in Directive 2020/2184), have been brought forward by France and will come into force on 1 January 2023. This enables local authorities to manage situations where these new parameters are present if they have chosen to monitor these parameters in advance as part of health checks on EDCH in light of the local context.

Action leaders: MTSS/ DGS

7) Improve PFAS monitoring in surface water, groundwater and sediments

The monitoring of surface water is governed by the Decree of 26 April 2022. This document is a response to the European regulations arising from the implementation of the framework directive on surface water. With this in mind, it oversees the comprehensive monitoring throughout the country of 45 priority substances, identified at European level, including PFOS. This monitoring is also extended to 59 other substances of concern, including 31 specific pollutants linked to the ecological status and 28 substances which also need to be monitored.

Partial monitoring is also carried out for 147 other relevant substances, including PFOA, PFHxA, PFDA and PFHxS.

The measurement programmes will be increased if necessary in certain basins and bodies of water according to what is needed following the diagnosis (mapping) of sites polluted by PFAS, in collaboration with water agencies and the Biodiversity Agency (OFB). For sediments, the analysis methods for this matrix and a list of substances to be monitored for each basin are to be defined based on studies carried out by the water agencies.

The national programmes mentioned above are complemented by one-off operations organised by numerous water policy stakeholders, foremost among which are the water agencies and authorities in mainland France. The results are available in the Naïades database.

Option of including new PFAS (in addition to the 4 PFAS monitored in surface water and the 20 monitored in groundwater) in the programmes concerning substances of emerging concern in surface water and wastewater (EMNAT) carried out by the Water Agencies and the OFB, once per cycle of the Water Framework Directive or as part of ad hoc programmes.

Action leaders: MTECT/ DEB, MTECT/ DGITM

8) Improve the monitoring of PFAS in soil

Since the year 2000, the Soil Quality Monitoring Network (RMQS) has been responsible for the long-term assessment and monitoring of soil quality in France. It is based on the monitoring of 2,240 sites distributed uniformly across France (mainland and overseas), according to a square grid with a side

length of 16 km. Soil samples, measurements and observations are taken every fifteen years at the centre of each grid.

Inclusion of PFAS analysis in the 2024 sampling programme to determine background values.

Action leaders: ADEME, GIS Sol

9) Improve the monitoring of PFAS in coastal environments

Ifremer has been using the National Marine Chemical Observation and Monitoring Network. (ROCCH) for over 40 years and the Biological Integrators Network (RINBIO) in the Mediterranean for over 20 years to monitor chemical pollution on the coastline. These networks are the main national tools for determining the levels of chemical contamination along the coastline and how this changes over time. Given the difficulty of measuring trace elements directly in the water, monitoring relies on natural concentrators of chemical molecules, such as molluscs which, by filtering the water, concentrate the pollutants in their flesh, and fine sediment in which certain molecules are trapped.

ROCCH has around 150 collection points including:

- around a hundred located in shellfish farming areas and with a combined environmental and health monitoring role in the coastal areas concerned.
- around fifty located outside shellfish farming areas and with an exclusive environmental focus.

The environmental focus of ROCCH is carried out as part of the programme of international marine environment quality assessments set out in international conventions (OSPAR, Barcelona Convention) and European directives (WFD, MSFD). Most notably, the Good Environmental Status assessment, which has just been carried out in readiness for the third cycle of the MSFD, focused on the measurement of PFOS, a single molecule from the PFAS group.

The health aspect falls under the duties of DGAL as the authority responsible for monitoring the health safety of products from the shellfish industry.

RINBIO's scope is purely environmental and it is not geared towards carrying out health assessments. The primary aim of this network is to actively monitor the chemical contamination of coastal and transitional water bodies. Monitoring programmes are carried out every three years. This enables the investigation of around 60 sites along the coastline, including 25 which typify coastal water bodies and around 30 lagoon sites, 11 of which typify transitional water bodies.

Joint action by DEB and DGAL aims to extend the monitoring of PFAS contamination of the coastline:

- throughout the ROCCH network (sampling points for health purposes and sampling points for environmental purposes) and the RINBIO network.
- for all regulated PFAS molecules in shellfish (EU Regulation No. 2023/915 on maximum levels for certain contaminants in foodstuffs and Recommendation (EU) No. 2022/1431 on the monitoring of PFAS in foodstuffs).

The costs relating to monitoring are divided between the relevant project owners (DGAL and the water agencies) according to the purpose of the sampling points concerned.

Action leaders: MTECT/DEB and MASA/DGAL

Action 5: improve the systems for monitoring foodstuffs and consumer products

Improve the monitoring of foodstuffs

From the beginning of 2022, and in response to the objectives of a European recommendation, the Directorate-General for Food (a directorate of the Ministry of Agriculture and Food Sovereignty) has initiated nationwide monitoring of PFAS in foodstuffs (90 fish samples). In 2023, this plan was expanded significantly to include other animal products, including butchered meat (regulated by a European regulation published in December 2022).

In 2024, there will be a significant increase in the monitoring carried out by the Directorate-General for Food with regard to contamination throughout the food chain. This will involve taking around 850 samples of all types of food, an increase of almost a factor of 10 in two years.

Alongside this, a network of five MASA-approved laboratories has been in place since 1 January 2024. These laboratories meet the analytical performance criteria imposed by the European Commission and will make it possible, on the one hand, to meet the data acquisition needs identified on multiple matrices and, on the other, to verify the conformity of foodstuffs already regulated.

Monitoring of food consumed by the consumer (vegetables from the garden, barnyard animals, foraging, fishing, etc.) is particularly relevant for finding out about contamination in people's immediate environment. Depending on the local context, in the event of a notification indicating suspected contamination in private gardens, a monitoring plan for self-produced food may be implemented at a regional level under the aegis of the Prefects in order to optimise coordination between State services. Prefects may be required to order environmental monitoring (including sampling and analysis of self-consumed foodstuffs) at industrial sites producing, using or releasing PFAS. Regional Health Authorities may be required to take samples of foodstuffs for personal consumption in specific cases such as in the aftermath of an accident, any other health situation deemed relevant or when conducting public health studies of their own. The data obtained on self-consumed foodstuffs will be shared at a national level and will enable recommendations to be made locally to limit exposure to PFAS.

In addition, over the course of 2024, ANSES will have access to a large amount of data acquired as part of its EAT3 study (210 foods targeted, with a total of 560 samples analysed). 19 PFAS have been analysed in all samples4.

This and other data will make it possible to characterise the most commonly consumed foodstuffs with the highest concentration of PFAS, which may help to guide (i) strategies for sampling foodstuffs (self-produced at regional/departmental level) and (ii) recommendations for methods of cultivation and livestock farming, particularly for self-production.

Action leaders: MASA/ DGAL, MTSS/DGS

1) Strengthen the monitoring of PFAS in everyday consumer products

This action will be implemented with due regard for the work carried out as part of the PARC WP6 on methods for the quick identification of chemical substances in everyday consumer

4 PFOS, PFOA, PFBS, PFHxS, PFHpS, PFDS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnA, PFDoA, PFTriA, PFTDA, PFOSi, N-Et-FOSA, N-Et-FOSA alcohol.

products. The ability to test consumer goods is directly linked to the analytical capabilities available to SCL (DGCCRF's and DGDDI's Joint Laboratory Service) in terms of the substances being searched for and analysable matrices.

1) For 2025, the DGCCRF is planning to broaden the scope of analyses to include Food contact materials (FCMs):

- the detection of PFOAs, which has been part of the DGCCRF's annual monitoring programme since 2019, will continue (even in the absence of non-compliance being found during the monitoring programme).
- in addition, exploratory analyses will be carried out on new fluorinated compounds in moulded cellulose containers, paper/cardboard, non-stick pans, etc.

This will require an initial investment to acquire the equipment needed to carry out these analyses.

2) The range of PFAS being searched for should then be gradually extended, initially targeting those most likely to be present in these products (use, environmental contamination, etc.), then extending the range of products monitored.

Action leaders: MEFSIN/DGCCRF

Action 6: introduce PFAS monitoring for fertilisers

Fertilisers are intended to improve plant nutrition. They cover a wide range of products from different sources: natural materials of plant, animal (including livestock effluents) or mineral origin, materials produced by chemical synthesis or by the treatment of waste products, etc. To ensure that there is no transfer of PFAS to plants intended for human or animal consumption as a result of fertilisation practices, the PFAS content of these fertilising materials must be known.

Action leaders: MASA, MTECT/ DGPR, MTECT/ DEB

Action 7: make an inventory of, identify, prioritise and analyse sites potentially polluted with PFAS due to the use of fire-fighting foams in order to target the monitoring of groundwater, in particular water intended for human consumption

With regard to sites potentially polluted due to the use of fire-fighting foam, the Ministry of Ecological Transition and Territorial Cohesion has asked the Ministry of Transport, the Ministry of the Armed Forces and the Ministry of the Interior to identify and analyse sites in sectors of activity under their responsibility which may be polluted5.

This action, to be carried out with the support of BRGM, has three objectives:

- To continue making an inventory of sites potentially polluted by PFAS due to the use of fire-fighting foam.
- To identify the key sites where assessments should be carried out.

5 It should be noted that the industrial sector has already begun the transition to fluorine-free foam concentrates, initially for training purposes.

- To carry out an assessment of the sites concerned, including investigations into the soil and groundwater

The data which can be communicated and is of interest for the management of health risks can be entered in existing databases (such as BDSolU for soils) or in a tool for visualising PFAS monitoring data (see Action no. 25).

This data could be useful to the Regional Health Authorities as well as to those responsible for water production and distribution (PRDPE), enabling them to intensify research into the monitoring and surveillance of water in the areas likely to be affected.

Action leaders: MTECT/DGPR, MTEC/DGAC, MIOM/DGSCGC, Min Arm, with support from BRGM and Ineris

Action 8: improve knowledge of PFAS permeation.

This action is part of the National Biomonitoring Strategy, an interministerial strategy, and the National Biomonitoring Programme run by Santé Publique France (SPF).

At the end of 2023, SPF, together with ANSES, launched a new national biomonitoring survey called ALBANE (Alimentation, Biosurveillance, sAnté, Nutrition et Environnement [Food, Biomonitoring, Health, Nutrition and Environment]). The pilot survey will get under way in 2024, with the first cycle of the survey taking place in 2025 and 2026. The first results are expected in 2028 for the biomonitoring aspect. PFAS are on the list of substances which will be monitored. This will enable the reference values for permeation into the French population to be updated and the number of substances being researched to be increased compared with the ESTEBAN survey, which was conducted between 2014 and 2016.

Alongside this national biomonitoring survey and based on the feedback from local permeation studies, SPF will update its methodological guide for conducting permeation studies and the use of biomarkers in instances of local pollution in order to ensure the relevance of survey results obtained by local study organisers and to enable comparison of the values obtained with those obtained in ALBANE, particularly the exposure reference values.

In addition to its methodological guide, the SPF will publish a FAQ on its website to reiterate the relevance and feasibility criteria as well as the objectives and interpretation limits of local permeation studies with the aim of providing guidance to those conducting local permeation studies. If necessary, regional branches of SPF will be able to provide methodological support for local permeation studies in order to ensure the relevance of results and the feasibility of comparing them with the exposure reference values measured in the general population.

The interpretation of biomonitoring data and its integration into methods for assessing exposure and risk involves the use of modelling tools, such as physiologically based toxicokinetic (PBPK) models, which enable the fate of substances in the human body to be described. These modelling tools can be used to reconstruct the exposure of human populations to environmental contaminants based on concentrations measured in these populations during biomonitoring studies. Ineris has been conducting research on PFAS for several years, which has led to the development of a PBPK model for PFOS and PFOA in humans and the application of this model to various biomonitoring studies. Ineris proposes to apply this model to the biomarker data which will be obtained at the end of the new ALBANE survey or its pilot in order to better understand the population's exposure. In addition, Ineris is developing PBPK models for PFOS and PFOA to assess the contamination levels in edible parts of fish. New models for PFNA and PFHxS are currently under development and will enable the process to be completed.

SPF, EHESP, ONIRIS and other European partners will also continue their work within the framework of PARC WP4 on human biomonitoring and biomonitoring other living organisms.

Action leaders: MTSS/ DGS, SPF, EHESP, ONIRIS, Ineris (within the framework of France Exposome)

Action 9: study the feasibility of monitoring the health effects likely to be associated with exposure to PFAS in humans and living organisms.

1) Involve the OFB in studying the relevance and feasibility of monitoring the effects of PFAS on biodiversity

A prerequisite for the possible implementation of a relevant monitoring system to support management is identifying the documented effects of PFAS on living organisms. A systematic review of the documented effects of PFAS on living organisms will also be carried out as an initial step. Once this has been done, the feasibility and usefulness in terms of management of a possible monitoring system can be considered.

Action leaders: MTECT/DEB, OFB

2) Involve Santé Publique France in the relevance and feasibility of monitoring the health of populations potentially exposed or overexposed to PFAS

Action leaders: MTSS/DGS

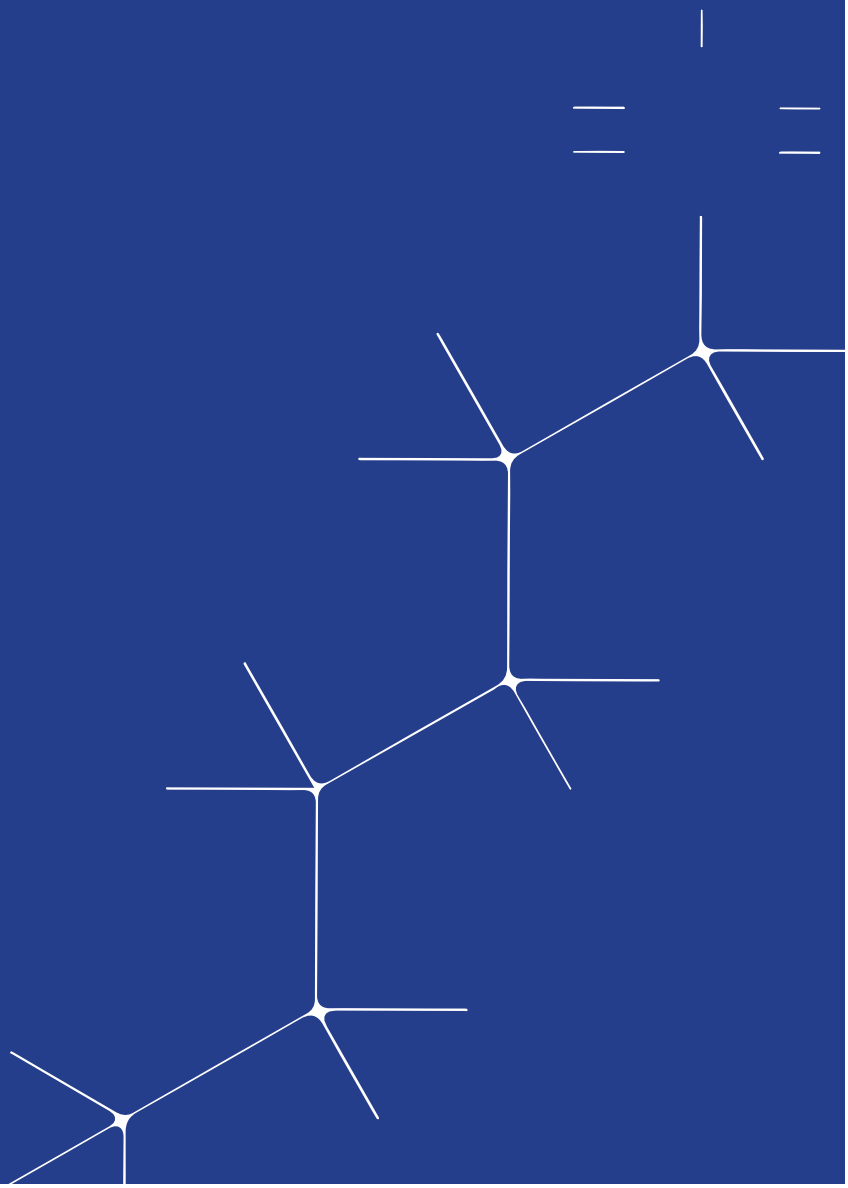
3) Initiate a programme to examine the feasibility and relevance of monitoring the health of military personnel exposed to PFAS by including it in the remit of a centre responsible for monitoring the health of military personnel and veterans

Action leaders: MINARM

AXE 3

REDUCE THE RISKS

associated with exposure to PFAS



Action 10: at a European level, support the process introduced within the framework of REACH proposing extensive restrictions to control the risks associated with the manufacture, use and marketing of PFAS

At a European level, a number of substances from the PFAS group have already been banned (PFOS, PFOA, PFHxS, PFCA C9-C14) or will be banned in the near future (PFHxA).

On 23 February 2022, the European Chemicals Agency (ECHA) presented an initial proposal for extensive restrictions on all PFAS substances in fire-fighting foams under the REACH regulation.

On 13 January 2023, a consortium of five countries (Germany, Denmark, the Netherlands, Sweden and Norway) submitted a restriction proposal to ECHA concerning the manufacture, placing on the market and use of PFAS under the REACH regulation. This project was made public on 7 February 2023 and was submitted for public consultation from 22 March to 25 September 2023. During this public consultation phase, ECHA received more than 5,600 comments, mostly complete risk analysis or restriction impact assessment documents.

The proposal covers a wide range of PFAS uses. The consortium is proposing extensive restrictions after an 18-month implementation period, targeted exemptions with additional transition periods of 5 or 12 years, or exemptions of unlimited duration for specific uses.

The restrictions adopted under the REACH regulation on the registration and authorisation of chemical substances make it possible to prohibit the manufacture, placing on the market (including import) or use of a substance for all or certain uses; they can also impose conditions for appropriate use, such as technical requirements or specific labelling.

Restrictions on the manufacture, placing on the market or use of substances require the submission of a restriction proposal, based on a file containing information providing scientific justification for the measure.

This proposed restriction is subject to review by the Risk Assessment Committee (RAC), which assesses the relevance of the proposal in terms of risk reduction, and the Socio-Economic Analysis Committee (SEAC), which examines the alternatives in the various sectors, their degree of readiness, and the transition periods envisaged.

In this case, the restriction proposal concerning the manufacture, placing on the market and use of PFAS is currently being examined by ECHA's expert committees (RAC and SEAC). ECHA has decided that the committees will conduct their assessments and analyses by sector of activity (materials in contact with foodstuffs, textiles, leathers, fabrics, compounds intended for the general public, cosmetics, etc.). Their recommendations will be forwarded to the European Commission, which will propose a draft regulation to amend Appendix XVII of REACH (restrictions). This will be put to a vote by the Member States meeting within the REACH Committee. This will then have to be examined by the European Parliament and the Council before being adopted.

France supports the proposal for extensive restrictions on PFAS made through REACH, whose proven approach takes into account risk analysis and socio-economic impacts and ensures that decisions are made according to a scientifically rigorous method.

1) Stance of the French authorities in favour of prioritising ECHA's work on industrial sectors which are key to the decarbonisation of the European economy and sovereignty and defence

France has asked the Commission to prioritise ECHA's work on key sectors for the decarbonisation of the economy and European sovereignty and defence in order to speed up the assessment process. PFAS, including fluoropolymer substances, are used in batteries for electric vehicles and in electrolysis cells for the production of hydrogen. In addition, some PFAS are also used in equipment used specifically in the defence sector. This stance prioritising the uses to be assessed will be brought to the attention of European authorities, particularly with regard to the specific uses of fluoropolymers.

Action leaders: SGAE, MTECT, MEFSIN/ DGE

2) Include in European sectoral regulations restrictions on intentionally added PFAS (toys, textiles, cosmetics)

The restriction on PFAS in food packaging is included in the document produced as part of the revision of the European Packaging Regulation (known as the 'PPWR'), for which political agreement was reached in early March 2024. It includes a ban, within 18 months of its adoption, on the presence of PFAS (as defined by the OECD) in food packaging above a certain level (from 25 ppb to 50 ppm depending on the method of analysis and the inclusion – or not – of fluoropolymers). The document includes a review of these provisions four years after their adoption to ensure their consistency with the provisions concerning PFAS that may have been adopted in the meantime, particularly under the European Chemicals Regulation REACH (see Action 10).

Other sectoral restrictions based on European documents anticipating the forthcoming restriction under the European Chemicals Regulation (REACH) could be supported on the same basis as the ban on PFAS in food packaging, particularly with regard to the review of provisions to ensure consistency with the decision due to be taken within the framework of the REACH Regulation.

The Commission has proposed a revision of the regulation on toy safety. One of the objectives is to ensure that greater attention is paid to the risks associated with the chemical products contained in toys. To this end, and although not included in the Commission's initial proposal, the inclusion of PFAS within the scope of the generic ban has been proposed by certain Member States and the European Parliament. France will support the potential restriction of PFAS substances, particularly when they are likely to pose risks to children.

The European Commission is also planning to revise the regulation on cosmetic products. France will support a restriction on PFAS substances in this context. Representatives of the European cosmetics industry have already announced their intention to exclude PFAS from the composition of their products.

As far as textiles are concerned, alternatives to PFAS exist for technical sports fabrics and household linen. The same is true for the clothing sector, where PFAS have been used for their hydrophobic properties, but alternatives have been developed by the industry, enabling them to stop using PFAS. There are no specific regulations for the textiles sector. However, it still remains necessary to restrict the use of PFAS, with priority given to textiles (excluding personal protective equipment) which come into contact with the public (e.g. clothing and

household linen). .. The implementation of the Ecodesign for Sustainable Products Regulation (ESPR), through the drawing up of its delegated regulation on textiles, is an appropriate channel at a European level, subject to an impact assessment.

Action leaders: SGAE, MEFSIN/ DGE, MEFSIN/ DGCCRF, MTSS/DGS

3) In the context of the European PFAS restriction, introduce the obligation to inform all stakeholders in the value chain regarding the use of PFAS and demand transparency, both upstream for suppliers and downstream for consumers (in connection with information for the public)

France will request a European-level discussion on the subject at a REACH committee meeting in 2024.

Action leader: SGAE

4) Support the initiative launched by several countries for the Commission to formulate a mandate to EFSA to assess the possibilities for regulatory changes (and related testing methods) concerning the persistence in the environment of active phytopharmaceutical substances and their metabolites falling under the definition of PFAS

This action concerns active phytopharmaceutical substances and their metabolites which belong to the PFAS group. At present, they are exempt from the extensive restrictions currently being considered under the REACH regulation, mainly because they are subject to sector-specific regulations which take into account the risks associated with their persistence, and because the volumes involved in this sector are much lower than the rest of PFAS uses. However, around forty active substances meet the definition of PFAS and are likely to contribute to environmental contamination.

Several countries agree there is a need to improve the way persistence is taken into account in the risk assessment of active phytopharmaceutical substances.

The French authorities will join in the efforts currently under way regarding this subject.

Action leaders: MASA/DGAL, MTECT/DGPR

Action 11: distinguish between essential and non-essential uses of PFAS, particularly in relation to the carrying out of public service

The MTECT and the MTSS will refer the matter to the CESE to draw up a report on the subject so that the social aspect of essential and non-essential uses of PFAS can be taken into account, and to contribute to the development of France's position on this subject.

In particular, the various areas of public service (hospitals, fire service, defence, etc.) will need to be considered.

Ineris will contribute to this action by conducting a review of the scientific and methodological data concerning the concept of essential use, using PFAS as a case study.

Action leaders: MTECT, MTSS for the referral, CESE for the advice

Action 12: introduce PFAS monitoring for imported products

This action concerns PFAS which are banned under the European Regulation on Persistent Organic Pollutants (PFOA, PFOS, PFHxA) and PFAS which are banned under the REACH regulation for certain PFAS. Monitoring may be expanded following the adoption of regulations currently under discussion concerning PFAS in consumer products.

Action leaders: MEFSIN/ DGCCRF, DGDDI

THE MANAGEMENT OF RISKS RELATED TO PFAS IN THE ENVIRONMENT

Action 13: accelerate the production of toxicological reference values (TRV) and reference values for interpreting the data produced by monitoring

1) Draw up an acceleration strategy and implement it

Producing health reference values involves integrating the scientific knowledge available for a given substance and providing benchmarks to help prevent risks. A referral to ANSES has already been made to produce values for different PFAS. The methods for accelerating the process are:

- Analysis of the reliability and relevance of values produced by other health agencies (national or European) to avoid duplication of work (see below).
- An approach to establishing health values by family or group of substances with similar or comparable toxicological properties.

2) Have TRVs available

There are ongoing discussions between ANSES and the ministries which commissioned the referral regarding how the expertise on priority substances for the TRV proposal will be formalised in a contract, and the timetable for making the TRVs produced, or endorsed based on international work, available.

Action leaders: MTSS/DGS, MTECT/ DGPR, ANSES

3) Develop internal toxicological reference values (iTRVs) in order to be able to interpret permeation levels in relation to health risks at a population level.

An internal TRV (iTRV) is a level of body burden below which the probability of health effects occurring in humans is considered negligible. iTRVs can be used to interpret the level of exposure to a health risk at the population level.

Depending on the results of the work on biomonitoring priorities carried out with Santé Publique France for the general population and occupational exposures (see Actions 8 and 22), those substances requiring the development of an iTRV will be identified and integrated into the scope of ANSES' contracted expertise.

ANSES will be able to use the iTRVs or similar existing values produced at international level. If these values are not relevant, ANSES will define new values in accordance with the work carried out as part of PARC WP4 on determining iTRVs.

Action leaders: MTECT/DGPR, MTSS/DGS

4) Have reference values available to interpret the data produced by monitoring

Based on the toxicological reference values established by ANSES, contact the relevant operators to determine, based on reliable exposure scenarios (see Action 2), reference values in the various environments (air, food, etc.).

Action leaders: MTECT/DGEC, DGPR, MASA/DGAl, MTSS/ DGS/ DGT, EHESP, HCSP, Ineris, BRGM,

5) Standardise and pool work between European risk assessment agencies, particularly with regard to the definition of reference values, including internal TRVs.

Given the existence of similar concerns in other countries (in Europe, in the United States), a number of agencies and stakeholders are working on similar projects in parallel, often leading to duplication. ANSES has set up an initiative in conjunction with EFSA to share the work undertaken to improve subsidiarity. The aim is to make it easier for information and data to circulate, and above all to share the results of expert assessments, thereby leading to a more efficient distribution of effort.

A request from the European Commission within the framework of PARC to set up European coordination on internal TRVs.

Action leaders: MESR, SPF, ANSES (directly and via the PARC project)

Action 14: produce, within timeframes appropriate for the implementation of prevention and management measures, provisional levels which can be used to carry out quantitative health risk assessments (QHRA) and provisional reference values in particular environments indicating a level of health concern

This approach, for a given substance, is based on two stages:

1. A survey of the toxicological reference values available at an international level.
2. Production on this basis of a range of values or a provisional benchmark value for concentrations in certain environments indicating a level of health concern in order to manage local situations where quality limits are exceeded, as well as establishing provisional levels which can be used for a QHRA.

For the first stage, this approach was carried out by ANSES for the 20 PFAS included within the scope of the health monitoring of EDCH in homes. Stage 2 has been initiated by the High Council for Public Health (HCSP) at the request of the Ministry of Social Affairs and Health (MTSS) for these substances (7 priority substances) in order to determine the provisional management procedures if the quality limits are exceeded.

In accordance with the method set out by the HCSP for the implementation of stage 2, from mid-2024, Ineris will produce the following for PFAS falling within the scope of the health monitoring of EDCH:

- Provisional levels (or ranges of levels) per ingestion which can be used for the quantitative assessment of health risks (based on the TRVs per ingestion adopted by the HCSP for determining the concentration ranges which indicate health concerns in EDCH).
- Provisional reference values (or ranges of provisional reference values) in other relevant environmental areas, indicating a level of health concern related to the ingestion of PFAS substances (alone or in combination).

This is mainly in order to interpret the contamination results of these environments, also based on the benchmarking of American and European EQAs carried out by Ineris. The ALARA approach and comparison with background noise may also be used as required.

Action leaders: MTSS/DGS, MASA/DGAL, MTECT/DGPR

As necessary, as and when a better picture emerges of the contamination situation in the environments (in particular the environments and substances concerned) and the transfer and exposure routes (see Actions in Focus Areas 1 and 2), and provided that the toxicity of PFAS by inhalation is clearly established beforehand, this approach may be applied to other routes of exposure (particularly by inhalation) and other substances if the need for the reference values involved could not be met by Action 14 within timeframes which are compatible with the need to prevent health risks.

Action leaders: MTSS/DGS and MTSS/DGPR

Action 15: establish the regulatory definition of sensitive catchment areas used for drinking water production and include the issue of PFAS

Article L. 211-3 of the Environment Code introduced, in connection with the implementation of Directive 2020/2184 on the quality of drinking water, the concept of 'sensitive catchment areas.' An interministerial decree (MTECT, MTSS) must specify what catchments are sensitive to diffuse pollution of agricultural and industrial origin (including PFAS pollution).

One or more decrees issued by MTECT and MASA will subsequently specify the requirements for these sensitive catchment areas.

Action leaders: MTECT/DEB, MTSS

Action 16: regulate and reduce PFAS discharges into the environment

1) Emission regulations: setting emission limit values (ELVs) compliance with which can be demonstrated by taking measurements

Emission limit values will be established based on the measurement programmes carried out in 2023 and 2024 and the reference values in the environments.

These emission limit values will be based primarily on a comparison of existing ELVs in Europe and the United States.

Action leaders: MTECT/ DGPR, DGEC, DEB

2) Decide on the need to define a safety threshold and a maximum flow for the PFAS content of fertilisers

The need to define safety thresholds and maximum flows for PFAS in fertilisers will be explored based on the results of Action 6.

Action leaders: MTECT/DEB and MTECT/DGPR, MASA/ DGAl

3) Require the implementation of PFAS treatment systems in facilities which process liquid waste contaminated with PFAS (fire-fighting foams, etc.)

Since the 1950s, PFAS substances have been widely used in the manufacture of fire-fighting foam. PFAS are persistent molecules, and these are found in fire-fighting foam at the end of its service life and then, potentially, in waste treatment channels. Given the high PFAS content of specific waste such as fire-fighting foam, the occasional acceptance of such waste at some waste treatment facilities may result in the removal of PFAS by these facilities being insufficient prior to release into the aquatic environment. This situation may lead certain facilities to refuse this waste as a precautionary measure. To ensure that fire-fighting foams can be consistently and correctly treated, it is proposed that the waste treatment facilities concerned be required to install suitable PFAS treatment systems.

This sub-action will include:

- improving the regulatory framework for waste treatment facilities in order to reduce PFAS discharges into the natural environment
- reviewing, in the second half of 2024, the ministerial decrees concerning the facilities in question, based on a study peer reviewed by Ineris and the results of the programme to analyse PFAS in the aqueous discharges of certain classified installations for environmental protection (ICPE) under the terms of the Decree of 20 June 2023.

Action leaders: MTECT/ DGPR, Ineris

Action 17: manage PFAS pollution situations in accordance with the polluted sites and soils doctrine of MTECT

When industrial facilities cease operations, PFAS soil contamination will now be routinely investigated during the diagnostic phase in appropriate industrial sectors, thanks to the updated ActiviPoll matrix, which identifies the likelihood of pollutants occurring according to industrial activity.

This update will be based primarily on data from PFAS measurement programmes in aqueous discharges carried out under the ministerial Decree of 20 June 2023.

Action leaders: MTECT/ DGPR, MASA/ DGAL

Action 18: support local services (ARS, DREAL, DRAAF, etc.) in the management of local PFAS pollution situations

The initial aim will be to collate the resources available (guidelines, other existing references) and produced as part of the plan's actions in order to facilitate their use by local stakeholders.

Sharing local expertise will also be facilitated, in particular by mobilising the existing corresponding networks of local departments of the various different ministries (ARS network, DREAL network, DRAAF network, etc.) in order to capitalise on the tools and approaches developed.

In a second phase, if necessary, further guidelines could be developed on this basis.

Action leaders: MTECT/ DGPR, MTSS/ DGS, MASA/ DGAL

Action 19: assess the advisability and feasibility of setting up medical monitoring and care for potentially overexposed populations

This action aims to assess, based on the available scientific data, the advisability and feasibility of setting up monitoring and medical care for potentially overexposed populations. Depending on the conclusions of this assessment, it could involve:

- defining the criteria for overexposure and the methods for measuring and monitoring PFAS permeation in populations living on polluted sites or populations which may have been exposed in general.

- drawing up best practice recommendations for healthcare professionals for the monitoring and care of overexposed individuals.
- defining the procedures for the medical care of overexposed populations, including breastfeeding women.
- informing the population and providing them with recommendations aimed at reducing their exposure (see Action 26).

To carry out this action, the expertise of the relevant health agencies and institutions will be necessary, as well as rigorous preparation in advance of the methods for collecting data and supporting the people being monitored, based on the results of the permeation measurements. Generally speaking, particular care should be taken when interpreting the health impact of permeation measurements for substances such as PFAS, because a permeation value reflects a history of exposure but is not necessarily a predictor of future health.

Action leaders: MTSS/ DGS

Action 20: consider the work-related health issues for professions likely to be particularly exposed

The results of the call for opinions by ANSES of 8 November 2022 on the assessment of the contamination of different environments, the development of reference values and the prioritisation of per- and polyfluoroalkyl substances (PFAS) to enable management measures and regulatory developments, which include the implementation of restrictions on PFAS under the REACH regulation, will serve as guidance for actions aimed at better defining occupational health and safety issues related to exposure to these substances.

As part of this referral, the results of which are expected in April 2025, ANSES must define the priorities for monitoring occupational exposure to PFAS, including:

- Ranking substances to be considered for biomonitoring, in conjunction with Santé Publique France, based on this input.
- Identifying the groups of workers potentially most at risk, including workers who do not automatically fall under the usual scope (including firefighters and the military).

In this way, it will be possible to identify the substances for which ANSES will be asked to develop occupational exposure limit values (OELVs) or biological limit values (BLVs).

These results will also enable the inclusion of a feasibility study in the national biomonitoring strategy to examine the exposure levels of the most exposed workers by Santé Publique France and identify the main determinants of exposure.

The actions to be taken specifically with regard to the occupational health of firefighters and military personnel exposed to PFAS are:

1. To monitor and support the completion of the restriction process on the use of PFAS in fire-fighting foams under the REACH regulation and to apply its terms as soon as possible following its adoption at a European level.
2. To recommend that fire and rescue services prioritise the use of fluorine-free foam concentrates pending their possible ban (C6).

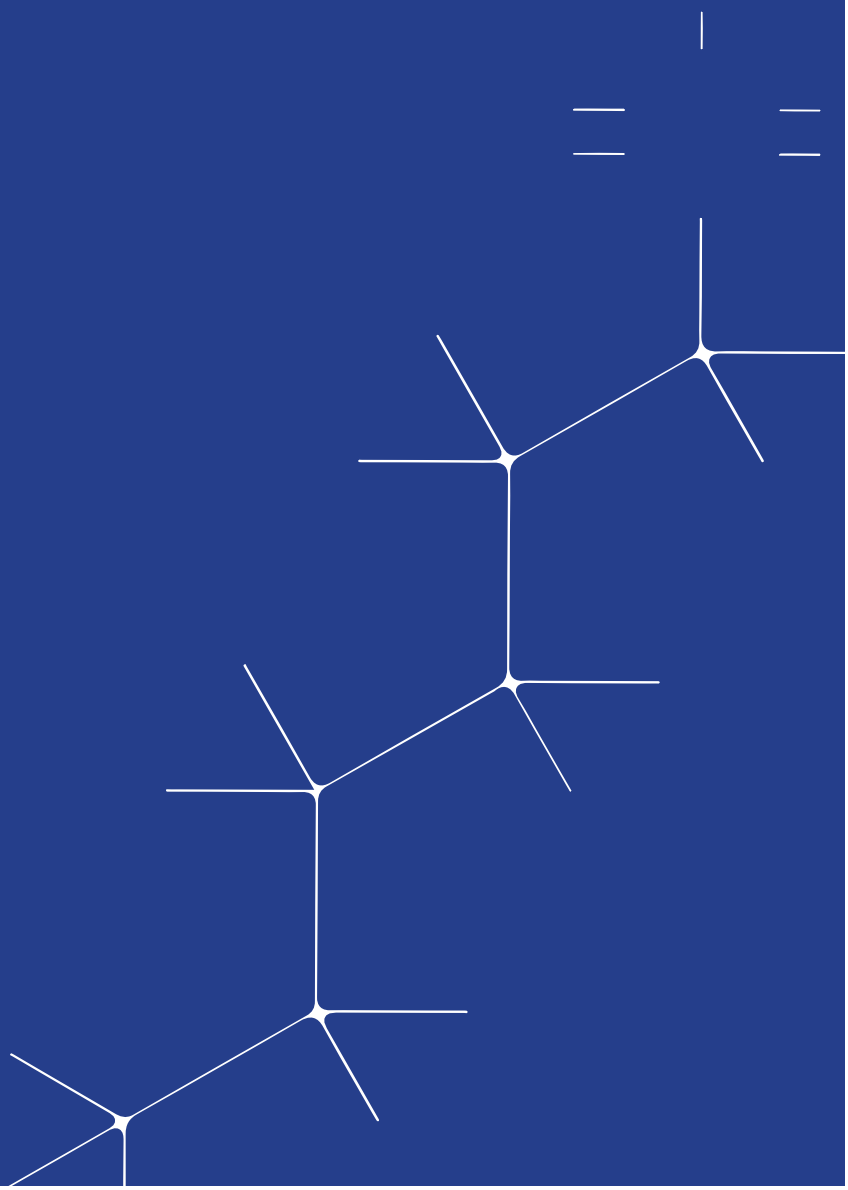
With regard to exposure to PFAS (PPE, foam concentrates, fumes), the aim is to include the PFAS question in the field of study of a future prospective study group monitoring military personnel and their exposome.

Departments of the Ministry of the Armed Forces and the Ministry of the Interior will be able to incorporate the results of the aforementioned ANSES referral and the work on the OELVs and VLBs for the general population so exposure and health monitoring programmes can be adapted for serving firefighters and military personnel.

Action leaders: DGT, Min int/ DGSCGC, MinArm,

AXE 4

INNOVATE by joining forces with economic stakeholders and supporting research



Key area 4

Innovate by joining forces with economic stakeholders and supporting research

Action 21: improve upstream research into PFAS and incorporate the issues related to these substances into the France 2030 calls for proposals

1) Improve the funding for upstream research

MESR will carry out an inventory of French research strengths and research projects conducted over the past 10 years on PFAS with funding from the ANR and Europe.

Investment in upstream research on PFAS will be significantly increased by MESR, and will include various aspects such as:

- Improving knowledge of the physicochemical properties of PFAS substances (with a focus on polymers), the mechanisms controlling the mobility and transfer of these substances and their degradation in the environment.
- The development of PFAS soil-groundwater transfer models to improve understanding of transfer mechanisms and how they evolve in time and space.
- Research to improve the assessment of the dangers and risks of PFAS and similar polymers for human health and biodiversity, with a focus on the production of toxicological and epidemiological data, the development of toxicokinetic models and other data which will ultimately enable the refinement of the production of TRVs. Particular emphasis will be placed on PFAS, for which little data is available.

This research work will have to be coordinated and balanced with the work carried out within the framework of PARC, in particular for PARC work packages W5 and W6. European coordination may be supported with PARC for actions focused on PFAS.

Support for research projects on PFAS toxicological and epidemiological data will be coordinated with the ANSES calls to tender for the National Environment and Occupational Health and Safety Research Programme (PNR EST).

This call to tender for the ANR project will be carried out in two waves, separated by one to two years.

Action leaders: MESR/ DGRI

2) Support applied research and innovation on PFAS as part of France 2030

The integration of PFAS within the framework of France 2030 will be stepped up as part of an approach which takes into account the actions already undertaken within France 2030 in relation to PFAS or materials more generally identified as posing a risk to health and the environment, like, for example, in the Batteries and Hydrogen strategies.

This increased emphasis is particularly evident in the i-Nov Innovation Competition call for projects[6] (themes: 'Health and Energy, Resources, Natural Environments') and in the Innov Eau call for projects[7]. The issue of the health and environmental risks posed by PFAS will also need to be discussed in the context of the research calls for tender for the future prevention strategy. The aim of these calls for projects could be to support innovation in relation to PFAS in the following areas:

- Innovation in emission control/treatment.
- Innovation in waste treatments, including the eradication of PFAS.
- Innovation in the field of pollution control/decontamination of environments (in particular identification of effective treatment systems ready for operation and deployment in the field in the short term).
- Study of the impact of PFAS on health and the environment based on contamination scenarios at local level.

The FR2030 IDémo calls, and possibly Première usine, could lead to funding for research or innovation projects in areas of interest for the plan, although they cannot be integrated a priori since they have no sectoral focus.

Action leaders: MESFIN/ DGE, MTSS/DGS, MTECT/DGPR

Action 22: promote innovation in the area of substitution

In the context of this action, MEFSIN's Directorate-General for Enterprise will encourage economic stakeholders to focus on the substitution of PFAS, especially as part of the strategic committees for industrial sectors' roadmaps, so that the drivers and obstacles can be identified.

It will promote the dissemination of knowledge and experiences on substitution in conjunction with Ineris. This will enable the DGE to rely on the PFAS section of the 'Substitution of chemical substances' portal, which Ineris will update regularly (see action no. 24).

Action leaders: MEFSIN/ DGE

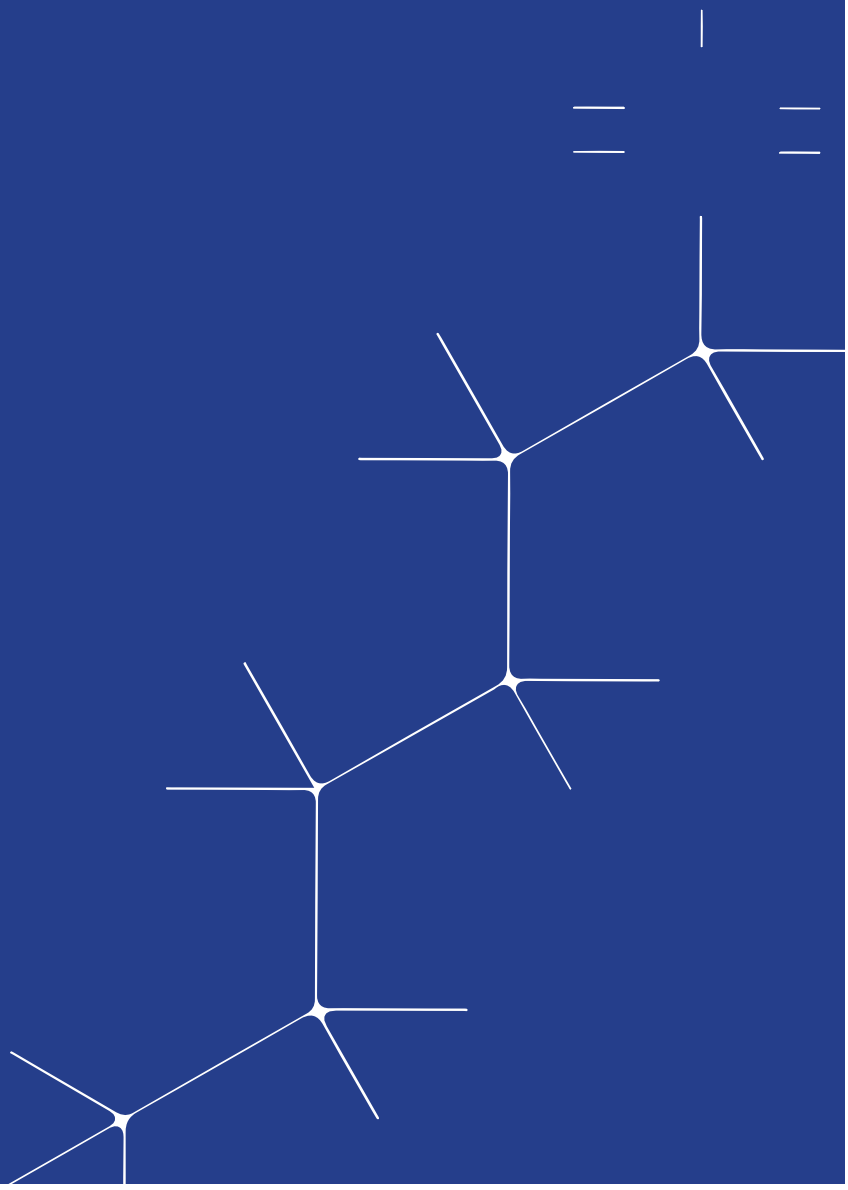
[6] The call for projects 'i-Nov Innovation Competition' is a support programme funded by the France 2030 plan, which aims to select innovation projects with high potential for the French economy.

[7] The Innov Eau call for projects aims 'To improve the treatment of water and the environment in a sustainable way, in particular by innovating in the treatment of domestic and industrial wastewater, using phytopurification and remediation technologies'.

AXE 5

STAY INFORMED

for better action



Key area 5

Stay informed for better action

Action 23: the gradual development of a tool for visualising data and sites, and investigation of the possibilities and obstacles to interoperability between PFAS measurement data sources in different environments

Firstly, it is important to provide transparent information on the identification of sites which produce, use or release PFAS or which are contaminated by PFAS, as and when these are identified.

Secondly, the various monitoring programmes (see Focus Area 2) generate and will generate a very large amount of data, covering numerous substances and several matrices, across the whole of the country. Currently, each monitoring programme is run by a ministerial department and the data is collected in specific databases administered by these departments or operators using dedicated information systems.

An investigation phase will be carried out with the CGDD's Ecolab as part of the Green Data for Health (GD4H) project, to clarify, with the involvement of the various data managers concerned, the opportunities and constraints for increased interoperability of PFAS measurement data in different environments.

The conclusions of this first stage will enable, during a second stage, an action plan to be produced for each data source with a longer deadline in order to make the different data involved interoperable and, as a result, set up a visualisation tool which is automatically updated with the new data generated.

Pending the results of this investigation and in order to respond to society's demand for transparency:

- BRGM will develop an initial version of the tool to make measurement data from various environments available to the public (for example, in the form of maps showing the levels measured in the environment) so that it can be actively updated by the various data producers.
- The investigation phase conducted with Ecolab will subsequently make it possible to consolidate this first version of the tool.

Action leaders: SGPE, CGDD (Ecolab), MTSS/DGS, BRGM, MTECT/ DGPR

Action 24: introduction of a PFAS 'section' in the chemical substances portal

The chemical substances portal (CSP) run by Ineris as part of its work in support of public policy is a tool for disseminating the knowledge acquired on the hazardous nature of substances to all stakeholders. The portal is currently being redesigned, and a 'section' dedicated to PFAS will be created and then filled in as knowledge is acquired.

Action leaders: *MTECT/DGPR, Ineris*

Action 25: under the leadership of the prefect, use existing forums for dialogue to enable debates to be held, share diagnoses and propose methods of providing information to the public concerned

By making the most of existing bodies, such as the permanent secretariats for the prevention of pollution and industrial risks (SPPPI) or the site monitoring commissions (CSS), the proposal is to encourage the sharing and dissemination of information on local and national issues related to PFAS substances with all local stakeholders.

These organisations comprise representatives of the government, economic stakeholders, employees, local authorities, associations and local residents.

Action leaders: Prefects

Action 26: information for healthcare professionals and the general public on PFAS exposure, potential health impacts and means of prevention

This action aims to inform healthcare professionals and the general public about the health impacts of PFAS and how to prevent exposure. It will enable the work of Action 19 to be translated into concrete action, particularly with the production of relevant information tools.

1) For healthcare professionals

The best practice recommendations established by HAS (see Action 19) will be disseminated to healthcare professionals. They can be adapted for the different healthcare professionals.

The Regional Health Agencies will be able to effectively disseminate these recommendations within the local healthcare professional communities that may be affected by PFAS contamination.

Action leaders: MTSS/DGS

2) For the general public

With a view to prevention, a synthetic and educational information tool will be developed for the general public, based in large part on the work carried out by the Walloon Government[8] and HAS (see Action 19), in order to reliably inform citizens about the risks associated with PFAS and the simple actions they can take to limit their exposure to these substances. This tool will be made available on the websites of the MTSS, SPF and HAS. Its dissemination could also be organised by the Regional Health Agencies (e.g. during public meetings or sampling programmes in private homes).

Action leaders: MTSS/DGS

[8] http://environnement.sante.wallonie.be/pfas

Interministerial action plan on PFAS

APRIL 2024

GOUVERNEMENT

Liberté
Égalité
Fraternité

DICOM-CAB-BRO/24050 – Avril 2024