SOILveR

Soil and land research funding platform for Europe

Project PREMISS

Priorisation of emerging chemical compounds in soils

Mid-term Report, June 2021

Acknowledgments

To Soilver funders

How to refer to this report

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SOILveR in brief

The SOILveR platform strongly believes in the need for integrated soil and land research and knowledge exchange in Europe. We acknowledge the added value of coordinating, co-funding and disseminating cross-border soil and land management research. SOILveR is a self-financed platform. The platform members have a common interest in sharing and implementing integrated multidisciplinary research. SOILveR builds on the experiences from other funding networks such as SNOWMAN and address knowledge needs identified by e.g. the Horizon 2020 project INSPIRATION and other initiatives as well as those proposed by the members of SOILveR.

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1. Context and objectives of the project

1.1 Context

Contaminants of Emerging Concerns (CECs) are raising increasing attention for the last few decades in the water media. Indeed the Water Framework Directive 2000/60/EC (and its groundwater daughter directive 2006/118/EC) and its application have been an important driver for water quality since 2000. However, CECs were officially considered in the monitoring of surface water in 2015 (regard to Directive 2008/105/EC of the European Parliament). For the groundwater media, CECs watch list is currently in elaboration under voluntary action of Member States. There are some other European initiatives on CECs for the water media, such as NORMAN (first from research teams such as NORMAN project funded the 6th Framework Programme in 2005 and existing now as a non-profit organization since 2009).

The PREMISS project will build on several experiences from prioritisation of CECs in water compartments. Over the past decade, an increasing number of initiatives have developed to help assess and integrate CECs in environmental risk assessment. Among all actions, two of the most highlighted conclusions are a) the need to share results and b) the inability to prioritise CECs due to a lack of data. Given the complexity of CECs characterization and assessment, it is indeed necessary to:

- 1) Put together all available data, from all sources of information;
- 2) Find some methods to plug the gaps: the lack of data must not be a hindrance to inclusion of CECs in environmental risk assessment.

There are some European initiative on soil quality monitoring such as the LUCAS survey, which focussed mainly on biodiversity and productivity monitoring aspects. However, in absence of a Soil framework Directive, attention paid in Europe to soil quality monitoring remains insufficient (especially regarding CECs). In addition, there are no soil quality guidelines defined at EU level neither for known substances nor for CECs.

In November 2018, the first International workshop on Emerging policy challenges on New SOil contaminants (ENSOr) was held in Brussels. It gathered regulatory bodies, R&D communities and economic actors such as service providers (consultancies) and problem owners (industries) and resulted in the EmConsoil network. EmConsoil network organised a second workshop in May 2021, which provided up-to-date expertise and knowledge on CECs in soil and sub-soil.

A family of CECs, naming the PerFluorinated Alkylated Substances (PFAS), has been of increasing concerns for the last few years. For example, CONCAWE (the association for petroleum industries) and NICOLE (Network for Industrially CO-ordinated sustainable Land Management in Europe) have been working on a PFAS review in 2014 and 2015. There are many on-going R&D and management actions (,), and regulations initiatives on the subject, such as:

- First Flemish (OVAM) soil guidelines PFAS June 2020, Flemish PFAS updated guideline in March 2021
- In July 2020 the RIVM published background values of PFOA and PFOS in Dutch natural soil, and RIVM and Deltares published a report on the difference in leaching of PFAS from soil and dredging spoil. In July 2021 the RIVM published updated risk limits for PFAS in soil and groundwater based on the EFSA advice.
- SOILveR webinar on PFAS in 2020

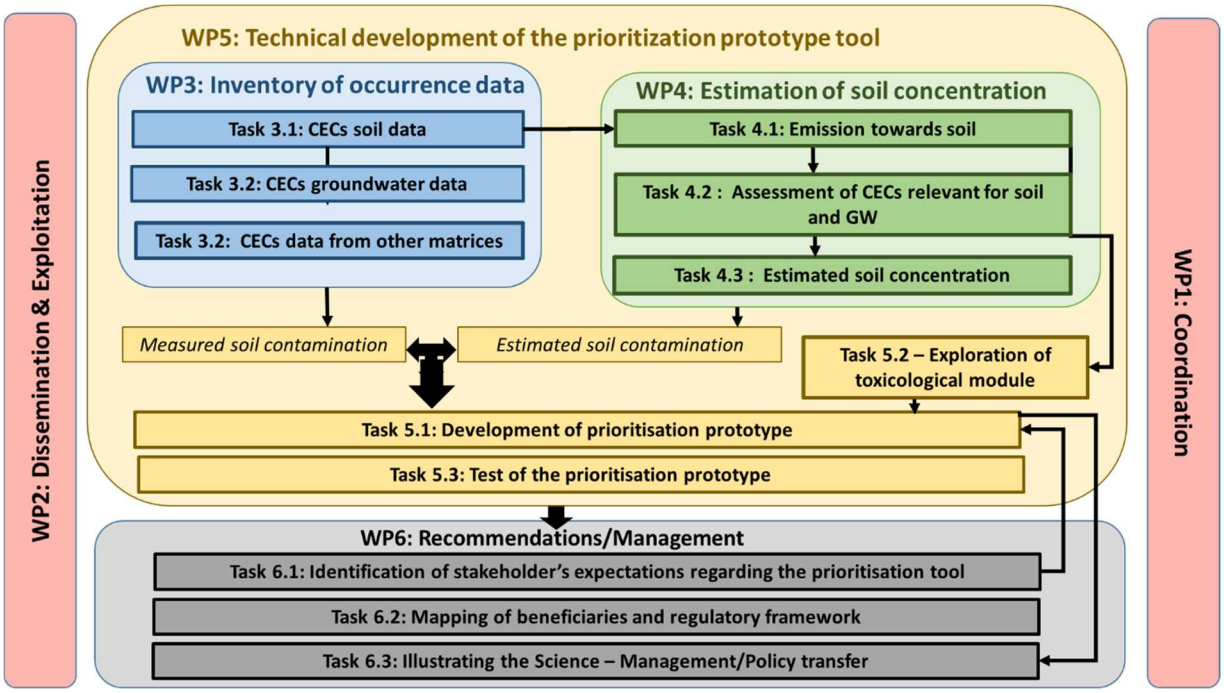
- PFAS International Berlin conference strongly supported by the German Ministry of Environment in 2020
- PFAS Memorandum by the Common Forum in 2020
- PFAS in products and waste streams (Arcadis, 2021).

1.2 Objectives

In this context, **the PREMISS project proposes to tackle the issue of CECs in soils and sub-soil media**. PREMISS is an experimental development project, based on experienced research teams, who have faced difficulties of CECs prioritisation. The PREMISS project has the objectives to **integrate** and **connect** scientific results already obtained (compilation of databases), **improve** the occurrence modelling tool on the "source characterisation" side, **propose** a generic scheme for risk assessment of CECs, including existing and modelled data and considering associated uncertainties.

2. Methodology

The work plan consists of six work packages. WP connections are highlighted in Figure 1. WP3 will provide knowledge on the occurrence of CECs in soil and sub-soil across Europe, which may be used for comparison with soil concentration estimated in WP4 and which shall be used as input data in the prioritisation tool (WP5). WP4 will enable one to estimate the potential for poorly monitored CECs to contaminate soils. WP5 will use both these pieces of information (known/measured and estimated/modelled data) to assess potential storage of CECs in soils. In combination with toxicological information, WP5 will provide a prioritisation for CECs in soils based on a Source-Pathway-Receptor conceptual model. WP6 will define, based on researchers' and stakeholders' inputs, main expectations on CECs prioritisation and recommendations concerning CECs management in soils. WP1 will ensure a smooth running of the project and WP2 organize the dissemination of project outputs.



The inventory of occurrence data, estimation of soil concentration, toxicological risk assessment and the whole prototype tool will be tested for various spectra of compounds, which are specified in each WP description. In any case, PREMISS aims at illustrating as much variety of situations as possible in testing chemicals having contrasted set of data (in terms of data availability or chemical properties).

3. Main results obtained & work in progress

PREMISS advancement is described below for each work package, encompassing contractual Description of Work (DoW), synthesis of work performed (including rational and decisions taken), difficulties encountered, remaining tasks and potential upcoming issues / deviations to the DoW.

3.1 WP1: Project management and coordination (lead: BRGM)

a) DoW

M1.1 to M1.3: Meeting minutes from each meeting (3 meetings with Soilver board and any other internal project meeting) – *PPT presentations are made available for all meetings*
DL1.1: Mid-term progress report (M6) – *draft report delivered M8*
DL1.2: Final PREMISS report including all WP contributions, and conclusions of the project (M12)

b) Synthesis of work performed to date / Meetings

The consortium agreement was produced and sent to the Soilver board the 4th February 2021.
Due to the sanitary conditions, no physical meeting was held since the beginning of the project. Instead, regular technical video meeting were held, focusing on one or two technical WP, with an overview of all other points if needed (administrative, communication etc..).
As the project duration is very short and as all WPs are strongly interconnected, there has been many meetings for the last 6 months, as described in the following table.

	main WP targeted
09/11/2020	WP1
13/11/2020	WP6
17/11/2020	kick-off meeting
07/12/2020	WP3
05/01/2021	WP3 / WP6
19/01/2021	WP6
08/02/2021	WP4/WP5/WP3
11/02/2021	WP3
10/05/2021	WP4/WP5
18/05/2021	WP3
14/06/2021	WP1

All partners have been involved in all meetings. Presentation supports are available for all meetings.

c) Difficulties

"Emerging contaminants" encompass a large range of substances, which are not "regulated" and for which there is significant lack of data. It was therefore necessary in the first steps of the project to clarify the items (substances, groups of substances) PREMISS team will be working on. This co-

elaboration of consensual understanding and common framework required more time than anticipated.
The schedule and the subject of the project require the project team to continuously be cautious regarding the project framing and the associated workload. Over the first 6 months of the project, we made choices considering whether or not objectives were achievable within the timeline and resources available of the project.

d) Remaining tasks and upcoming issues
The remaining task of WP1 consists mainly in ensuring a good running of the second half of the project and compilation of the final report from the draft chapters to be provided by the WPs. Besides the strong involvement of the PREMISS team from the start of the project, we estimate that we have around 2 month delays from initial schedule. We shall not be able to make up the delay over the next four months but the project team will do as best as possible to avoid additional delay.
A deadline extension request will be submitted to the Soilver secretariat.

3.2 WP2: Dissemination and exploitation (Lead: BRGM)

a) DoW
M2.1: Participation to 1 conference during the project - *Completed*
DL2.3: Publications and communication papers (M12)

b) Synthesis of work performed to date
The PREMISS project (objectives, scope and preliminary results) have been presented at two events

- Oral presentation at the Ensor3 symposium Friday 7 May 2021
- Oral presentation at the NICOLE Spring Workshop 17th of June 2021: in the special session of AquaConSoil "PFAS and other emerging contaminants: status and advances made on monitoring, detection and remediation"

There are ongoing discussions concerning the publication of a review on available CECs' occurrence data (WP3).

c) Current difficulties
None.

d) Remaining tasks and foreseen difficulties
Potential publication topics need to be discussed among partner (beyond on-going discussion on WP3 outcomes) and one scientific paper shall be drafted.
PREMISS results will be presented at a final meeting, which will be organized by the SOILVER secretariat
Respect of timeline is a challenging point for the PREMISS team (see deadline extension request below).

3.3 WP3: Inventory of data on CECs occurrence data in soils, groundwater and sources to soils in participating countries (Lead: ISSeP)

a) DoW

M3.1 List of CECs with data available for all relevant environmental compartments (M3) - *completed*

DL 3.1: report (chapter) on the inventory of existing data on CECs in soils, groundwater and sources to soils (air, dust, sludge, manure) – M6 – *in progress*

The primary aim and focus of the WP3 is to collect existing data on CECs (concentration, analytical thresholds) in soils (including agricultural, contaminated industrial soils), sources to soils (e.g. manure or sludge applied on agricultural soils) and in groundwater in partners' countries.

The main challenge of this WP is to identify a number of CECs for which data are available in soils, groundwater and sources to soils, so that the prioritisation tool can be tested. Measured concentrations in soils will serve for comparison with estimated soil concentration from the WP4 or as direct input for the prioritisation tool (WP5). Another challenge is the very large number of chemical substances to consider together with the lack of existing data related to it.

b) Meetings

- 5/01/2021: i) Non-CECs substances, ii) CECs categorization, iii) Data collection: first overview of available data and next steps.
- 11/02/2021: i) Substances selection: Selection of S-P-R and associated substance categories. ii) Data collection: occurrence data, detection limits/ quantification limits
- 10/05/2021: Collected quantification frequencies on the 10/05/2021 and next steps (→ What data are needed for input in WP4 and WP5 ?)
- 18/05/2021: Pre-selection of 18 pilot substances, based on availability of data, but also on suspected toxicity, contrasted physico-chemical properties and contrasted sources.

c) Synthesis of work performed to date

- Definition of the scope: Regulated substances in participating countries, through European or national legislations, were considered non CECs and out of the scope of the project. Inorganic substances were also excluded for two reasons: most of them are regulated and regularly monitored, and oxidation-reduction reactions make transfer estimation in environmental matrices difficult. The inventory was limited to occurrence data measured from 2010 until the end of 2020 in France, The Netherlands, Flanders and Wallonia. However, some exceptions were made when occurrence data were already aggregated for a larger geographic zone (eg. JRC, 2012, Occurrence and levels of selected compounds in European Sewage Sludge Samples) or a different time scale (eg. Achtergrondwaarden 2000 in The Netherlands). The inventory focused primarily on national databases (DB) and reports in relevant matrices (see below).

- Categorization in 11 substances categories: As proposed by Bunting et al (2021) [1], to classify emerging compounds CECs were divided in 11 categories: chemical intermediates, flame retardants, lifestyle products, personal care products, pesticides, PFAS, pharmaceuticals, phenols & alkylphenols, plasticisers, solvents & THMs, and other CECs.
- Inventory of chemical substances regulated in soils in participating countries and/or Europe and exclusion of those substances from the scope of the project.
- Selection of of the Source-Pathway-Receptor schemes for the risk assessment (WP5):
    i. WWTP sludge/manure/compost/digestate/pesticides application on agricultural soils
    ii. Sediment application on soils (marine sediments are excluded)
    iii. Industrial emissions (aerial deposition, accidental and chronic leaks are excluded)

  Other SPR were identified in the PREMISS project but could not be studied in the scope of project due to limited resource. Each SPR scheme is associated with specific substances (families).
- Selection of 4 priority substances categories for the inventory: Relevant chemical substances categories related to the identified SPR were identified: PFAS, Phenols & Alkylphenols, Pesticides and Pharmaceuticals (including veterinary drugs). These 4 categories include a very large number of chemical substances. Consequently, it has been necessary to limit the inventory to a list of chemicals within these categories.
- Inventory of occurrence data in national DB and reports. The list of DB and reports included in the inventory and the substances included are listed in annex 1a. As a first step, quantification frequencies were inventoried, i.e. the percentage of samples where the substance was quantified divided by the total number of analyzed samples - data were collected from various monitoring schemes varying in geographical scale (site or global) and in temporal scale (monitoring duration and frequency). These are presented in annexes 1b to 1e.
- Selection of 18 pilot substances for prototype testing (WP4): A selection of ten compounds was made for a complete inventory of occurrence data and metadata (Limit of quantification, quantification frequency, minimum, maximum, median, average, 90th percentile concentrations, etc.) as well as physical-chemical properties and eventual guidance values in environmental matrices as input in the prototype for transfer estimation (WP4) and risk assessment (WP5). The selection was based on occurrence data availability and quantification frequency on the one hand, and on contrasted chemical properties or contrasted characteristics (eg. banned vs in use), without any tox- or ecotoxicity criteria, on the other hand. The list of pilot substances is presented in annex 2.

[1] S.Y. Bunting, D.J. Lapworth, E.J. Crane, J. Grima-Olmedo, A. Koroša, A. Kuczyńska, N. Mali, L. Rosenqvist, M.E. van Vliet, A. Togola, B. Lopez, Emerging organic compounds in European groundwater, Environmental Pollution, Volume 269, 2021, 115945, ISSN 0269-7491, https://doi.org/10.1016/j.envpol.2020.115945

d) Difficulties

- The chosen substances categories include a very large number of chemical substances. Consequently, it has been necessary to limit the inventory to a list of chemicals within these categories. Substances were selected in order to get a panel of substances with varied physicochemical properties.
- Data in soils are scarce, except for PFAS in Flanders and the Netherlands. Therefore, some scientific literature articles were consulted for some substances.
- Naming of and reference to chemical substances across the reports/DB are not always consistent. This resulted in an additional work to check the correspondence between names and CAS number across different sources.
- Some occurrence data were measured at contaminated sites. In the inventory, a distinction was made between "Global monitoring" reflecting background concentrations and "Point sources" concentrations measured near risk activities or potentially contaminated sites.
- Comparability of data: Some of the DB/reports consider detection limit (DL) while others take into account quantification limit (QL). Furthermore, DL/QL values are not always stated. The choice for QL or DL is generally not supported with arguments in the DB/reports. Concentrations lower than DL/QL are not evenly considered across DB and reports and the choice for these values is generally not explained either. Some reports exclude concentrations lower than DL/QL in the statistical treatment, other consider the value of the QL itself, other considers half the value of the QL, while other sets it equal to 0. Finally, some studies involved poorly sampled matrices (one or two sample(s)). Representativeness of those can therefore be questioned.
- Statistical treatment and aggregation of the whole dataset is not possible due to the differences stated above. Therefore, quantification frequencies were used to represent available data in national DB and reports.

  These difficulties will be taken up as lessons learnt for recommendations at national levels and EU level in WP6 (improvement for data aggregation and comparison of data, common reference substances signaling, need for homogeneous database (LQ, etc..) , etc.).

e) Remaining tasks and foreseen difficulties

- Finalization of the DL3.1 Chapter on the inventory of occurrence data for the final report.
- No specific difficulty is foreseen for this task.

3.4 WP4: Estimation of soil concentrations (Lead: DELTARES)

a) DoW

M4.1: List of soil specific sources and the contaminants in these sources - *completed*
M4.2: List of (improved) loads for relevant components – *in progress*
M4.3: Decide on the criteria to define mobility, volatility, etc. – *in progress*
D4.1 report (chapter) on soil specific sources (e.g. manure, aerial deposition) and (potential) CEC's in these sources (M7). – *in progress*

D4.2 report (chapter) on the relevance of CECs for soil and groundwater and estimated soil concentration contributing to the prioritisation tool regarding sources, fate and transport (M8) – *in progress*

b) Meetings

08/02/2021: Kick of WP4 & WP5 presentation and discussion on the estimation of fate and toxicity.
10/05/2021: Discussion on fate and toxicological modules in WP4 and WP5 and input requirements for WP4 and WP5.
18/05/2021: Pre-selection of 18 pilot substances, based on availability of data, but also on suspected toxicity, contrasted physico-chemical properties and contrasted sources.

c) Synthesis of work performed to date

WP4 focusses on the estimation of soil concentrations for a total of 18 pilot substances, covering several SPR schemes and having some occurrence data (see part on WP3), including PFAS substances, industrial chemicals, pesticides and pharmaceuticals. Soil concentrations are estimated using the steady state model SimpleBox by using predicted chemical parameters from the EPA dashboard, estimated emissions based on REACH registration and/or national data (if available) and specific landscape settings based on characteristics representing either The Netherlands, Belgium or France. Exemplary calculations have been performed to calculate soil emissions of various pharmaceuticals and a guideline for the use of SimpleBox in the PREMISS project has been written. Based on the exemplary calculations and guidelines all partners will now perform calculations themselves to test the application. Each country will be doing calculations on a specific group of substances. Deltares will check these calculations.
Selected specific sources of contaminants in (rural) soil studied in the project, include:

- Dredged materials
- Fertilizers (animal manure, mineral fertilizers and organic fertilizers)
- Sewage sludge
- Pesticides application

Application of these sources has been quantified for The Netherlands, Belgium and France and this information will be used as an addition to the SimpleBox model.

Other specific sources, for example sources related to urban areas or point sources (e.g. spills and landfills) could not studied in PREMISS due to limited resources.

d) Difficulties

- Experimental chemical properties are not available for all substances, for prioritisation therefore the predicted chemical properties are used (based on QSAR data = quantitative structure-activity relationship) ;
- If no national emission data is available emission data is based on REACH registered chemicals expressed in a tonnage range as exact numbers are confidential. Assumptions to express the EU REACH registered numbers as national numbers as the fate modelling will be based on national numbers.
- Degradation rates are not easily available and often require a thorough literature research (they are hard to find in the literature for CECs, degradation rates in soils are being studied

in academic projects). Degradation rates are therefore not included in the WP 4 calculations.. Apart from leaching, degradation is an important process in reaching a steady state. However, it appears to be complicated to quantify this in the model. Within this project we will describe how degradation can be included, but it will not be possible to have it implemented in the model. The degradation rate for soils can be set to zero, in order to determine a worst case scenario for soil concentrations of CECs, assuming only leaching occurs and no degradation. By calculating the toxicity based on this worst case soil concentration a distinction can be made between substances which may potentially be hazardous based on their emission and substances for which the emissions are not high enough to be considered hazardous.
Limitations and difficulties raised for the fate module will be taken up as lesson learnt and recommendations in the WP6.

e) Remaining tasks and foreseen issues

- Calculations by all partners to test the use of fate and toxicological modules of WP4 and WP5
- Verification of calculations by Deltares (WP4) and RIVM (WP5)
- Finalization of the fate and toxicological modules

3.5 WP5 : Technical development of the prioritisation prototype tool (Lead: RIVM)

a) DoW

M5.1: Methodological results and agreement leading to decisions on dealing with emissions, fate and toxicology (M 8) – *in progress*
These results are described in a concept chapter of which the main content was sent to the project team June 16th. On July 1st a meeting is planned to discuss the method and answer questions about the approach. To test the method, calculations are done with pilot compounds.
M5.2: Methodological agreement on risk, related to a tiered workflow and priority setting (M 8) – *in progress.*
The method of the tier 1 prioritisation is reported in an excel version of the instrument. . In tier 2 specific sources can be estimated and measured toxicity data can be used. In tier 3 includes the use of measurements in soil and groundwater and a full evaluation of toxicity data. This instrument will be described in chapter of which the main content will be sent to the project team in July. Project partners can react on this chapter. Depending on the project team feedback a meeting can be planned.
M5.3: Overall harmonized structure (M9)
The overall structure will be finalized after the agreement on the methodology in July.
M5.4: : Testing of priority tool blueprint/prototype with five to ten substances (M 11)
The testing of the prototype will start the second half of June by the different partners (France: PFAS; Flanders: Industrial compounds; Wallonie: Pesticides; Netherlands: Pharmaceuticals).

DL 5.1: report (chapter) on possibilities for toxicological module (M 11)
A concept of this chapter is ready in June.
DL 5.2: report (chapter) on prioritisation prototype tool and Notice for Use (M12)
The general scheme for prioritisation is ready and the excel-calculation sheet of the instrument is ready to apply to the example compounds.

b) Meetings

08/02/2021 Kick of WP4 & WP5 presentation and discussion on the estimation of fate and toxicity.
10/05/2021 Discussion on fate and toxicological modules in WP4 and WP5 and input requirements for WP4 and WP5. Agreement on performing example calculations by all participants.
18/05/2021: Pre-selection of 18 pilot substances, based on availability of data, but also on suspected toxicity, contrasted physicochemical properties and contrasted sources (SPR).
01/07/2021: Discussion on the first results of the example calculations with all project partners. The method in general and the specific experiences with compounds will be discussed.

c) Synthesis of work performed to date

WP5 focusses on the estimation of the toxicity for human health, ecotoxicity and secondary poisoning, because these are the main endpoints. This is done in three modules. These modules are described more extensively for the report and shortly to perform the calculations with example compounds. The 18 pilot substances, include PFAS substances, industrial chemicals, pesticides and pharmaceuticals.
For the first tier of the estimation of the toxicity for human health, direct toxicity and secondary poisoning is described. In combination with the fate described in WP4 the three toxicity modules lead to three prioritisation lists. For human toxicity and secondary poisoning only tier 1 is described. Because of the available time, elaboration on tier 2 and 3 was not possible and not planned. Tier 1 estimations are all based on QSARS and the Threshold of Toxicological Concern so that for a large range of compounds the toxicity can be estimated (ECOSAR, OECD QSAR Toolbox, EpiSuite). For direct ecotoxicity in tier 2 the database of the Solutions project can be used. The SOLUTIONS project focusses on the identification and prioritisation of emerging compounds in surface water.
Substances that end high on the prioritisation list in tier 1 can be selected to make a more precise estimation of the expected concentrations in soils and in a more precise estimation of the toxicity in tier 2.
The example calculations can be used to learn more about the possibilities for, and the differences between tier 1 estimations and available data for a tier 2 estimation.

d) Difficulties

- QSARS are available to estimate the ecotoxicity and substance specific data. Automatic selection of the most appropriate QSAR for a certain type of compound might be difficult.
- For secondary poisoning also data on bioaccumulation as well as other compounds specific data are required. These data should be the same as for the fate modelling.
- Because of three different end-points also three prioritisation lists will be generated. The question will probably come up if it is possible to combine them. With three lists, the prioritisation depends on the importance the user gives to these endpoints.

- Tier 2 toxicity data (based on toxicity tests) should not be combined with tier 1 estimations. It has to be made clear that different uncertainty levels should not be combined.

e) Remaining tasks and foreseen issues

An important task is to report the example calculations (about 18 substances) and discuss the goals of the test:

- prioritisation tool: does the system work and lead to prioritisation
- is it possible to perform the prototype prioritisation by experts
- is it possible to find the data?

Secondly it can be described what influence experimental toxicity data or specific data on fate have on the results; what conclusions can be drawn on uncertainty?
With results of WP3 measured concentrations in data base can be compared with the estimated concentrations and on the prioritisation. It is valuable to evaluate what can be the main reasons for differences.

After this task a chapter will be delivered on the toxicity modules and the prioritisation method. Running the prototype for a large batch of compounds is not part of the project.

3.6 WP6: Opportunities for CECs Management and recommendations of R&D Research (Lead: BRGM)

a) DoW

M6.1: Set SKH working group (M1) - *completed*
M6.2: First meeting of the SKH working group (M3) - *completed*
M6.3: Second meeting of the SKH working group (M10)
DL6.1: Report (chapter) on Recommendations from PREMISS tool outcomes (M12)

b) Meetings

The full project team organised the stakeholders' meeting through several project webmeetings:

- 13/11/2020: 1st internal PREMISS team meeting. The type of stakeholders to be invited, proposals for meeting type and questionnaire content were discussed.
- 05/01/2021: 2nd internal PREMISS meeting. The agenda of this meeting included participants status, web workshop agenda (content and roles), questionnaire and remaining actions.
- 19/01/2021: 3rd internal PREMISS meeting: This last meeting gave us the opportunity to go through the representations of plenary session, last adjustments on organisation of national rooms to ensure homogeneity of the national sessions.

c) Synthesis of work performed to date

The main work performed in WP6 in the first half of the project dealt with the **1st stakeholders' meeting on identification of SKHs' demands on CECs prioritisation in soil and sub-soil**. This action included three phases:

- Organisation
- Running of the worshop
- Minutes

Organisation of the stakeholders' meeting

The first step of the organisation consisted in defining the type of stakeholders that we chose to convene at the event. The overall aim was to identify the demands for a wide range of Dutch, Belgium and French stakeholders including:

- Regulators including actors at national level dealing with contaminated land, substances and ecology, and actors at regional and local level.
- Public or private problem owners, including industrial substances producers, site owners, soil owners (e.g. for soil re-use, excavated soil management), water treaters or managers
- R&D actors in occurrence, risk assessment, management and remediation
- Service providers including environmental consultants, remediation works and laboratories
- Funding bodies of R&D or CECs management actions (operator).

We exclude the substances users (industrial use, agricultural use, community or citizen use), as the focus of the discussion was to identify CECs prioritisation demands.

A questionnaire was designed by the project team to frame the 1st stakeholders' meeting. The questionnaire included three parts:

- Part 1: Current state of knowledge on CECs in soil and sub-surface;
- Part 2: Demands & expectations on prioritisation of CECs in soil;
- Part 3: Exploitation of prioritisation output.

The questionnaire was sent to the participants, prior to the workshop (10 days before), in order for them to be informed about the questions that would be raised for the national session.

Running of the workshop

The workshop was held in video on the 26th of January 2021 from 9.30 to 14.30. The workshop agenda included:

- A "Setting the Scene" plenary session gathering all the participants enabling to introduce PREMISS project, its preliminary outcomes and the objectives of the WS.
- National sessions: Three parallel sessions (French, Belgium and Dutch sessions) aiming at gathering national stakeholders' demands on CECs prioritisation in soil and sub-soil. These

sessions were run homogeneously by each country based on the structure of the questionnaire
- A "discussion" plenary session aiming at sharing national session feedback and debating on specific questions.

It gathered 31 stakeholders, covering all the targeted stakeholders' types and representing equally The Netherlands (9 participants), Belgium (12 participants) and France (10 participants). The full project team was involved in facilitating and chairing the event.

Workshop minutes

The meeting minutes intended to transcribe as accurately as possible stakeholders' discussions and feedback. They were as exhaustive as possible and were sent to workshop participants on the 7th of June 2021.

Beyond the workshop, the great input provided on CECs' prioritisation demands are very useful for PREMISS project as they enable to:

- Define the framework of the prioritisation prototype which is currently developed in PREMISS. Indeed demands on Source-Pathway-Receptor scenario, emissions/substances and toxicity have been swiftly used by the project team. The project team assessed whether or not the demands could be included in the prototype development (and how?) in accordance to PREMISS resource and timeline. That was direct input to refine the scenario and assumptions to be tested.
- To come – Make recommendations for future actions and perspectives. Demands which could not be taken into account in prototype development (either because they were not selected by project team or because they were not associated with prototype development) will be used to draft recommendations.

d) Difficulties

No specific difficulties had risen in the organisation and running of the 1st stakeholders' meeting, besides the challenge to stick to the very short deadline initially scheduled.

e) Remaining tasks / foreseen issues

The remaining work of the WP6 consist in making recommendations from the PREMISS tool approaches and results. The potential translation of PREMISS results into recommendations will be ***drafted by the project team*** and discuss with the stakeholders at ***a second SKH meeting*** to be organised at the end of September / beginning of October 2021. Further to this 2nd meeting, ***the chapter*** on Recommendations from PREMISS tool outcomes ***will be written*** and included in the overall PREMISS report.

Up-coming issues: The 2nd SKH meeting will to be held when PREMISS tool results are made available, which may mean that it is postponed a couple of months from the initial schedule.

4. Annexes

Annex 1: Inventory of occurrence data in national DB and reports
- 1a: Inventory of data sources - national DB and reports
- 1b to 1e: Quantification frequencies

Annex 2: List of pilot substances

Annex 1-a Inventory of CECs occurrence data in environmental media
List of DB, reports, publications and CEs included in the inventory (PREMISS WP3)

				TOTAL PFAS	TOTAL Phenols	TOTAL Pesticides	TOTAL Pharma/ Vet	TOTAL	perfluoro-n-butanoic acid
									PFBA
Pays	**Nom BD/rapport/publication**	**Type Monitoring**	**Matrice**	**TOTAL PFAS**	**TOTAL Phenols**	**TOTAL Pesticides**	**TOTAL Pharma/Vet**	**TOTAL**	**375-22-4**
BE-Wal	SPW Sediment Database	Global	Sediment	**1**	**4**	**4**	**0**	**9**	
BE-Wal	SPW ESO Database	Global	GW	**0**	**0**	**5**	**0**	**5**	
BE-Vl	VMM Sludge	Global	Sediment	**0**	**0**	**2**	**0**	**2**	
FR	RMQS	Global	Soil	**0**	**0**	**4**	**0**	**4**	
FR	NAÏADES	Global	Sediment	**5**	**12**	**7**	**2**	**26**	
FR	ADES	Global	GW	**17**	**14**	**11**	**12**	**55**	**T**
NL	Dutch Water Authorities	Global	Sediment	**27**	**5**	**0**	**0**	**33**	**T**
NL	KWR monitoring network	Global	GW	**1**	**2**	**2**	**3**	**8**	
NL	Achtergrondwaarden 2000	Global	Soil	**0**	**4**	**3**	**0**	**8**	
NL	PFAS achtergrondwaarden database	Global	Soil	**28**	**0**	**0**	**0**	**28**	**T**
NL	FARO Advies 2020	Global	Sludge	**0**	**4**	**6**	**7**	**17**	
NL	Waterbodem landelijke DB (CSO Advi	Global	Sediment	**0**	**4**	**3**	**0**	**8**	
BE-Wal	BIODIEN report 2018	Global	GW	**5**	**7**	**8**	**1**	**22**	
BE-Wal	IMHOTEP report 2017	Global	GW	**0**	**0**	**0**	**4**	**4**	
BE-Wal	CARIBOUH project	Global	Sludge	**5**	**8**	**1**	**5**	**19**	
BE-Vl	OVAM, 2021 - Deel 1 & Deel 2	Global	Soil	**29**	**4**	**3**	**0**	**36**	**T**
NL	RIVM 2020 achtergrondwaarden	Global	Soil	**29**	**0**	**0**	**0**	**29**	**T**
EUR	JRC, 2012	Global	Sludge	**17**	**0**	**2**	**7**	**26**	
FR	Net et al., 2015*	Global	Sediment	**0**	**0**	**1**	**2**	**3**	
FR	Mailler et al., 2018*	Global	Sludge	**2**	**1**	**0**	**4**	**7**	
FR	Mailler et al., 2014*	Global	Sludge	**2**	**1**	**0**	**4**	**7**	
FR	INERIS, 2014	Global	Sludge	**2**	**4**	**0**	**5**	**11**	

Annex 1-a Inventory of CECs occurrence data in environmental media
List of DB, reports, publications and CEs included in the inventory (PREMISS WP3)

				TOTAL PFAS	TOTAL Phenols	TOTAL Pesticides	TOTAL Pharma/ Vet	TOTAL	perfluoro-n-butanoic acid
									PFBA
Country	**DB/Report/Publication**	**Monitoring Type**	**Matrix**	**TOTAL PFAS**	**TOTAL Phenols**	**TOTAL Pesticides**	**TOTAL Pharma/Vet**	**TOTAL**	**375-22-4**
BE-Vl	OVAM Mistral-databank	Point source	Soil	**5**	**4**	**4**	**0**	**14**	
BE-Vl	OVAM Mistral-databank	Point source	Sediment	**0**	**0**	**2**	**0**	**2**	
BE-Vl	OVAM Mistral-databank	Point source	GW	**4**	**5**	**4**	**0**	**14**	
FR	GIDAF	Point source	GW	**25**	**6**	**9**	**1**	**42**	T
FR	SUPREMA	Point source	Sediment	**0**	**2**	**0**	**1**	**3**	
FR	SUPREMA	Point source	Sludge	**0**	**2**	**0**	**1**	**3**	
BE-Vl	Sullied Sediment Database	Point source	Sediment	**15**	**0**	**3**	**1**	**19**	T
BE-Vl	OVAM, 2018	Point source	Soil	**21**	**0**	**0**	**0**	**21**	T
BE-Vl	OVAM, 2018	Point source	GW	**21**	**0**	**0**	**0**	**21**	T
BE-Vl	OVAM, 2018	Point source	Sediment	**21**	**0**	**0**	**0**	**21**	T
BE-Vl	OVAM hostpot verkenner	Point source	Soil	**0**	**3**	**0**	**0**	**4**	
NL	RIVM 2018 GenX en PFOA	Point source	Soil	**2**	**0**	**0**	**0**	**2**	
BE-Vl	Groffen et al., 2019*	Point source	Soil	**15**	**0**	**0**	**0**	**15**	T
NL	Van Bentum et al., 2017	Point source	Soil	**21**	**0**	**0**	**0**	**21**	T
NL	Expertisecentrum PFAS 2018	Point source	Soil	**21**	**0**	**0**	**0**	**21**	T
NL	Expertisecentrum PFAS 2018	Point source	GW	**21**	**0**	**0**	**0**	**21**	T
NL	Van Bentum et al., 2018	Point source	Soil	**2**	**0**	**0**	**0**	**2**	
NL	Van Bentum et al., 2018	Point source	GW	**2**	**0**	**0**	**0**	**2**	
FR	Mourier et al. 2019*	Point source	Sediment	**8**	**0**	**0**	**0**	**8**	T

perfluoro-n-pentanoic acid	perfluorohexanoic acid	perfluoro-n-heptanoic acid	perfluoro-n-octanoic acid	perfluoro-n-octanoic acid branched	perluoro-n-nonanoic acid	perfluoro-n-decanoic acid	perfluoro-n-undecanoic acid	perfluoro-n-dodecanoic acid	perfluoro-n-tridecanoic acid	perfluoro-n-tetradecanoic acid	perfluoro-n-hexadecanoic acid
PFPeA	PFHxA	PFHpA	PFOA	PFOA branched	PFNA	PFDA	PFUnDA	PFDoA	PFTrDA	PFTeDA	PFHxDA
2706-90-3	307-24-4	375-85-9	335-67-1	-	375-95-1	335-76-2	2058-94-8	307-55-1	72629-94-8	376-06-7	67905-19-5
	T		T		T	T					
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			T								
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		T	T		T	T	T	T	T	T	
			T								
			T								
			T								

perfluoro-n-pentanoic acid	perfluorohexanoic acid	perfluoro-n-heptanoic acid	perfluoro-n-octanoic acid	perfluoro-n-octanoic acid branched	perluoro-n-nonanoic acid	perfluoro-n-decanoic acid	perfluoro-n-undecanoic acid	perfluoro-n-dodecanoic acid	perfluoro-n-tridecanoic acid	perfluoro-n-tetradecanoic acid	perfluoro-n-hexadecanoic acid
PFPeA	PFHxA	PFHpA	PFOA	PFOA branched	PFNA	PFDA	PFUnDA	PFDoA	PFTrDA	PFTeDA	PFHxDA
2706-90-3	307-24-4	375-85-9	335-67-1	-	375-95-1	335-76-2	2058-94-8	307-55-1	72629-94-8	376-06-7	67905-19-5
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perfluoro-n-octadecanoic acid	perfluoro-1-butane sulfonic acid	perfluoro-1-pentane sulfonic acid	perfluoro-1-hexane sulfonic acid	perfluoro-1-heptane sulfonic acid	perfluoro-1-octane sulfonic acid	perfluoro-1-octane sulfonic acid branched	perfluoro-1-decane sulfonic acid	4:2 fluorotelomer sulfonic acid	6:2 fluorotelomer sulfonic acid	8:2 fluorotelomer sulfonic acid	10:2 fluorotelomer sulfonic acid
PFODA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFOS branched	PFDS	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS
16517-11-6	375-73-5	2706-91-4	355-46-4	375-92-8	1763-23-1	-	335-77-3	757124-72-4	27619-97-2	39108-34-4	120226-60-0
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perfluoro-n-octadecanoic acid	perfluoro-1-butane sulfonic acid	perfluoro-1-pentane sulfonic acid	perfluoro-1-hexane sulfonic acid	perfluoro-1-heptane sulfonic acid	perfluoro-1-octane sulfonic acid	perfluoro-1-octane sulfonic acid branched	perfluoro-1-decane sulfonic acid	4:2 fluorotelomer sulfonic acid	6:2 fluorotelomer sulfonic acid	8:2 fluorotelomer sulfonic acid	10:2 fluorotelomer sulfonic acid
PFODA	PFBS	PFPeS	PFHxS	PFHpS	PFOS	PFOS branched	PFDS	4:2 FTS	6:2 FTS	8:2 FTS	10:2 FTS
16517-11-6	375-73-5	2706-91-4	355-46-4	375-92-8	1763-23-1	-	335-77-3	757124-72-4	27619-97-2	39108-34-4	120226-60-0
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N-methylperfluorooctane sulfonamidoacetic acid	N-ethylperfluorooctane sulfonamidoacetic acid	perfluoro-1-octanesulfonamide	N-methylperfluorooctanesulfonamide	8:2 polyfluoroalkyl phosphate diester	Hexafluoropropyleneoxide dimer acid	2-chlorophenol	2,4-dichlorophenol	2,4,5-trichorophenol	2,4,6-trichorophenol	2,3,4,6-tetrachorophenol	pentachlorophenol
N-MeFOSAA	N-EtFOSAA	PFOSA	N-MeFOSA	8:2 diPAP	GenX/HFPO-DA						PCP
2355-31-9	2991-50-6	754-91-6	31506-32-8	678-41-1	13252-13-6	95-57-8	120-83-2	95-95-4	88-06-2	58-90-2	87-86-5
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						T		T	T	T	T
						T	T (2,4-2,5)	T	T	T	T
							T (2,4-2,5)	T	T		T
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	T ?	T	T	T	T						
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N-methylperfluorooctane sulfonamidoacetic acid	N-ethylperfluorooctane sulfonamidoacetic acid	perfluoro-1-octanesulfonamide	N-methylperfluorooctanesulfonamide	8:2 polyfluoroalkyl phosphate diester	Hexafluoropropyleneoxide dimer acid	2-chlorophenol	2,4-dichlorophenol	2,4,5-trichorophenol	2,4,6-trichorophenol	2,3,4,6-tetrachorophenol	pentachlorophenol
N-MeFOSAA	N-EtFOSAA	PFOSA	N-MeFOSA	8:2 diPAP	GenX/HFPO-DA						PCP
2355-31-9	2991-50-6	754-91-6	31506-32-8	678-41-1	13252-13-6	95-57-8	120-83-2	95-95-4	88-06-2	58-90-2	87-86-5
		T				T	T (2,4-2,5)	T	T	T (+2,3,5,6)	
		T				T	T (2,4-2,5)	T	T	T (+2,3,5,6)	
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						T	T (2,4-2,5)	T	T	T (+2,3,5,6)	T
					T						
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bisphénol A	bisphénol S	bisphénol F	4-tert-butylphenol	4-tert-octylphenol	nonylphénols	4-nonyl-phénol (branched) mixture	4-n-nonyl-phenol (linear)	isononyl-phenol	isononyl-phenol ethoxylated	2-isopropyl-phenol	2,3,6-triméthylphenol
BPA						branched	linear				
80-05-7	80-09-1	620-92-8	98-54-4	140-66-9	25154-52-3	84852-15-3	104-40-5	11066-49-2	127087-87-0	88-69-7	2416-94-6
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				T	T?						
T					T	T	T				

bisphénol A	bisphénol S	bisphénol F	4-tert-butylphenol	4-tert-octylphenol	nonylphénols	4-nonyl-phénol (branched) mixture	4-n-nonyl-phenol (linear)	isononyl-phenol	isononyl-phenol ethoxylated	2-isopropyl-phenol	2,3,6-triméthylphenol
BPA						branched	linear				
80-05-7	80-09-1	620-92-8	98-54-4	140-66-9	25154-52-3	84852-15-3	104-40-5	11066-49-2	127087-87-0	88-69-7	2416-94-6
T										T	
T			T							T	
						T					

2,4,6-trimethylphenol	bis-2,6(dimethylethyl-1,1)methyl-4-phenol	phenyl-2-phenol	chloro-4-benzyl-2-phenol	aldrin	glyphosate	DDT	dieldrine	diuron	hydrazin	imidacloprid (neonicotinoid)	métola-chlore
			chlorofene	aldrin	glyphosate	DDT	dieldrine	diuron	hydrazin	imidacloprid	métolachlore
527-06-6	128-37-0	90-43-7	120-32-1	309-00-2	1071-83-6	50-29-3	60-57-1	330-54-1	302-01-2	138261-41-3	51218-45-2
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						T	T				
				T		T	T	T			
		T		T	T	T	T	T		T	T
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											T

2,4,6-trimethylphenol	bis-2,6(dimethylethyl-1,1)methyl-4-phenol	phenyl-2-phenol	chloro-4-benzyl-2-phenol	aldrin	glyphosate	DDT	dieldrine	diuron	hydrazin	imidacloprid (neonicotinoid)	métola-chlore
			chlorofene	aldrin	glyphosate	DDT	dieldrine	diuron	hydrazin	imidacloprid	métolachlore
527-06-6	128-37-0	90-43-7	120-32-1	309-00-2	1071-83-6	50-29-3	60-57-1	330-54-1	302-01-2	138261-41-3	51218-45-2
				T	T	T (som DDT)	T	T			
				T			T				
				T	T	T (som DDT)	T	T			
		T		T	T	T	T	T	T	T	T
		T	T								
		T	T								
				T		T					

métola-chlore ESA	métola-chlore OXA	triclosan	enrofloxacin (fluoroquinolones)	ciprofloxacin (fluoroquinolones)	ofloxacin (fluoroquinolones)	doxycyclin (tetracyclines)	tetracyclin (tetracyclines)	carbamazepine	acide 2-éthanoïque	ibuprofen	erythromycin (macrolides)
métolachlore ESA	métolachlore OXA	triclosan	enrofloxacin	ciprofloxacin	ofloxacin	doxycyclin	tetracyclin	carbamazepin	diclofenac	ibuprofen	erythromycin
171118-09-5	152019-73-3	3380-34-5	93106-60-6	85721-33-1	82419-36-1	564-25-0	60-54-8	298-46-4	15307-86-5	15687-27-1	114-07-8
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métola-chlore ESA	métola-chlore OXA	triclosan	enrofloxacin (fluoroquinolones)	ciprofloxacin (fluoroquinolones)	ofloxacin (fluoroquinolones)	doxycyclin (tetracyclines)	tetracyclin (tetracyclines)	carbamazepine	acide 2-éthanoïque	ibuprofen	erythromycin (macrolides)
métolachlore ESA	métolachlore OXA	triclosan	enrofloxacin	ciprofloxacin	ofloxacin	doxycyclin	tetracyclin	carbamazepin	diclofenac	ibuprofen	erythromycin
171118-09-5	152019-73-3	3380-34-5	93106-60-6	85721-33-1	82419-36-1	564-25-0	60-54-8	298-46-4	15307-86-5	15687-27-1	114-07-8
		T									
		T							T		

azithromycin (macrolides)	clarithromycin (macrolides)	fipronil (phenylpyrazoles)
azithromycin	clarithromycin	fipronil
83905-01-5	81103-11-9	120068-37-3
		T
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T		

azithromycin (macrolides)	clarithromycin (macrolides)	fipronil (phenylpyrazoles)
azithromycin	clarithromycin	fipronil
83905-01-5	81103-11-9	120068-37-3
		T
		T
		T

Annexe 1-b Inventory of CECs occurrence data in environmental media
Quantification frequencies for PFAS (PREMISS WP3)

Nom de la substance	# CAS	Pays/région	Type de monitoring	Matrice	Nbre d'analyses	Fréquence de quantification	Source
PFOA	335-67-1	NL	Global	Soil	100	**89%**	RIVM 2020 Achtergrondwaarden
PFOA	335-67-1	NL	Global	Soil	6279	**62,14%**	PFAS achtergrondwaarden DB
PFOA	335-67-1	BE-Vl	Global	Soil	50	**72%**	OVAM 2021
PFOA	335-67-1	NL	Global	Sediment	6500	**47,69%**	Dutch Water Authorities DB 2020
PFOA	335-67-1	FR	Global	Sediment	4034	**0,74%**	Naïades
PFOA	335-67-1	BE-Wal	Global	Sludge	147	**68%**	Caribouh project
PFOA	335-67-1	FR	Global	Sludge	48	0%	INERIS 2014
PFOA	335-67-1	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
PFOA	335-67-1	EUR	Global	Sludge	61	**100%**	JRC, 2012
PFOA	335-67-1	EUR	Global	Sludge	58	**97%**	JRC, 2012
PFOA	335-67-1	NL	Global	GW	488	11%	KWR Monitoring Network 2015-2016
PFOA	335-67-1	BE-Wal	Global	GW	122	**27%**	BIODIEN project
PFOA	335-67-1	FR	Global	GW	15499	**9%**	ADES
PFOA	335-67-1	BE-Vl	Point source	Soil	57	**98%**	Groffen et al., 2019
PFOA	335-67-1	BE-Vl	Point source	Soil	40	**38%**	OVAM 2018 Onderzoek
PFOA	335-67-1	NL	Point source	Soil	100	**91%**	RIVM 2020 Achtergrondwaarden
PFOA	335-67-1	NL	Point source	Soil	12	**100%**	RIVM, 2018
PFOA	335-67-1	NL	Point source	Soil	86	**91%**	Expertise Centrum PFAS (2018a)
PFOA	335-67-1	NL	Point source	Soil	24	**100%**	Expertisecentrum PFAS (2017)
PFOA	335-67-1	NL	Point source	Soil	28	**100%**	Expertisecentrum PFAS (2018b)
PFOA	335-67-1	BE-Vl	Point source	Sediment	18	**72%**	Sullied Sediment
PFOA	335-67-1	FR	Point source	Sediment	25	**44%**	Mourier et al., 2019
PFOA	335-67-1	BE-Vl	Point source	GW	48	**75-85%**	OVAM 2018 Onderzoek
PFOA	335-67-1	FR	Point source	GW	47	**94%**	GIDAF
PFOA	335-67-1	NL	Point source	GW	12	**100%**	Expertisecentrum PFAS (2017)
PFOA	335-67-1	NL	Point source	GW	8	**88%**	Expertisecentrum PFAS (2018b)
PFOA branched	-	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFOA branched	-	NL	Global	Soil	3464	7,45%	PFAS achtergrondwaarden DB
PFOA branched	-	NL	Global	Soil	100	2%	RIVM 2020 Achtergrondwaarden
PFOA branched	-	NL	Point source	Soil	100	6%	Industrial
PFOS	1763-23-1	BE-Vl	Global	Soil	50	**94%**	OVAM 2021
PFOS	1763-23-1	NL	Global	Soil	6361	**64%**	PFAS achtergrondwaarden DB
PFOS	1763-23-1	NL	Global	Soil	100	**94%**	RIVM 2020 Achtergrondwaarden
PFOS	1763-23-1	NL	Global	Sediment	6300	**100%**	Dutch Water Authorities DB 2020
PFOS	1763-23-1	FR	Global	Sediment	5681	2%	Naïades
PFOS	1763-23-1	BE-Wal	Global	Sediment	176	19,3%	SPW Sediment database
PFOS	1763-23-1	BE-Wal	Global	Sludge	147	**88%**	Caribouh project
PFOS	1763-23-1	FR	Global	Sludge	48	**49%**	INERIS, 2014
PFOS	1763-23-1	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
PFOS	1763-23-1	EUR	Global	Sludge	61	**97%**	JRC, 2012
PFOS	1763-23-1	EUR	Global	Sludge	58	**90%**	JRC, 2012
PFOS	1763-23-1	BE-Wal	Global	GW	122	**26%**	BIODIEN project
PFOS	1763-23-1	FR	Global	GW	9757	**11%**	ADES
PFOS	1763-23-1	BE-Vl	Point source	Soil	57	**97%**	Groffen et al., 2019
PFOS	1763-23-1	BE-Vl	Point source	Soil	61	**82%**	OVAM 2018 Onderzoek
PFOS	1763-23-1	NL	Point source	Soil	100	**94%**	RIVM 2020 Achtergrondwaarden
PFOS	1763-23-1	NL	Point source	Soil	6	**100%**	Expertisecentrum PFAS (2017)
PFOS	1763-23-1	NL	Point source	Soil	86	**44%**	Expertisecentrum PFAS (2018a)
PFOS	1763-23-1	NL	Point source	Soil	28	**89%**	Expertisecentrum PFAS (2018b)
PFOS	1763-23-1	FR	Point source	Sediment	25	**96%**	Mourier et al., 2019
PFOS	1763-23-1	BE-Vl	Point source	Sediment	1	**100%**	OVAM 2018 Onderzoek
PFOS	1763-23-1	BE-Vl	Point source	Sediment	18	**89%**	Sullied Sediment
PFOS	1763-23-1	BE-Vl	Point source	GW	48	**71-81%**	OVAM 2018 Onderzoek
PFOS	1763-23-1	FR	Point source	GW	2	**100%**	GIDAF
PFOS	1763-23-1	NL	Point source	GW	12	**58%**	Expertisecentrum PFAS (2017)
PFOS	1763-23-1	NL	Point source	GW	8	**75%**	Expertisecentrum PFAS (2018b)
PFOS branched	-	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFOS branched	-	NL	Global	Soil	4542	**40,25%**	PFAS achtergrondwaarden DB
PFOS branched	-	NL	Point source	Soil	100	**58%**	RIVM 2020 Achtergrondwaarden
PFOS branched	-	NL	Global	Soil	100	**51%**	RIVM 2020 Achtergrondwaarden
PFBA	375-22-4	NL	Global	Soil	2792	17,16%	PFAS achtergrondwaarden DB
PFBA	375-22-4	NL	Point source	Soil	100	**25%**	RIVM 2020 Achtergrondwaarden
PFBA	375-22-4	NL	Global	Soil	100	18%	RIVM 2020 Achtergrondwaarden
PFBA	375-22-4	BE-Vl	Global	Soil	50	**100%**	OVAM 2021
PFBA	375-22-4	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFBA	375-22-4	NL	Global	Sediment	4800	<2%	Dutch Water Authorities DB 2020
PFBA	375-22-4	NL	Point source	Soil	86	16%	Expertisecentrum PFAS (2018)
PFBA	375-22-4	BE-Vl	Point source	Soil	57	**65%**	Groffen
PFBA	375-22-4	BE-Vl	Point source	Soil	40	**33%**	OVAM 2018 Onderzoek
PFBA	375-22-4	BE-Vl	Point source	GW	48	**67-75%**	OVAM 2018 Onderzoek
PFBA	375-22-4	FR	Global	GW	3296	0,90%	ADES
PFBA	375-22-4	FR	Point source	GW	43	**88,4%**	GIDAF

PFDA	335-76-2	NL	Global	Sediment	4800	18,0%	Dutch Water Authorities DB 2020
PFDA	335-76-2	FR	Global	Sediment	3416	0,18%	Naïades
PFDA	335-76-2	NL	Global	Soil	2789	8,07%	PFAS achtergrondwaarden DB
PFDA	335-76-2	BE-Vl	Global	Soil	50	2%	OVAM 2021 Afleiden
PFDA	335-76-2	NL	Point source	Soil	86	9%	Expertisecentrum PFAS (2018a)
PFDA	335-76-2	BE-Vl	Point source	Soil	57	16%	Groffen
PFDA	335-76-2	BE-Vl	Point source	Soil	40	23%	OVAM 2018 Onderzoek
PFDA	335-76-2	BE-Vl	Point source	GW	48	**23-46%**	OVAM 2018 Onderzoek
PFDA	335-76-2	BE-Vl	Point source	Sediment	18	11%	Sullied Sediment
PFDA	335-76-2	EUR	Global	Sludge	58	**57%**	JRC 2012
PFDA	335-76-2	FR	Global	GW	8647	1%	ADES
PFDA	335-76-2	FR	Point source	GW	3	**100%**	GIDAF
PFDoA	307-55-1	NL	Global	Sediment	4800	20,23%	Dutch Water Authorities DB 2020
PFDoA	307-55-1	NL	Global	Soil	2787	2,26%	PFAS achtergrondwaarden DB
PFDoA	307-55-1	BE-Vl	Global	Soil	50	0%	OVAM 2021 Afleiden
PFDoA	307-55-1	BE-Vl	Point source	Soil	57	**67%**	Groffen
PFDoA	307-55-1	BE-Vl	Point source	Soil	40	13%	OVAM 2018 Onderzoek
PFDoA	307-55-1	BE-Vl	Point source	GW	48	2%	OVAM 2018 Onderzoek
PFDoA	307-55-1	BE-Vl	Point source	Sediment	18	28%	Sullied Sediment
PFDoA	307-55-1	FR	Point source	Sediment	25	**60%**	Mourier et al., 2019
PFDoA	307-55-1	FR	Global	GW	8565	0,2%	ADES
PFDoA	307-55-1	FR	Point source	GW	3	**100%**	GIDAF
PFHpA	375-85-9	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFHpA	375-85-9	NL	Global	Soil	2785	13,25%	PFAS achtergrondwaarden DB
PFHpA	375-85-9	NL	Point source	Soil	100	**28%**	RIVM 2020 Achtergrondwaarden
PFHpA	375-85-9	NL	Global	Soil	100	11%	RIVM 2020 Achtergrondwaarden
PFHpA	375-85-9	BE-Wal	Global	GW	122	15%	BIODIEN project
PFHpA	375-85-9	BE-Wal	Global	Sludge	147	20%	Caribouh project
PFHpA	375-85-9	EUR	Global	Sludge	58	**79%**	JRC, 2012
PFHpA	375-85-9	BE-Vl	Global	Soil	50	10%	OVAM 2021 Afleiden
PFHpA	375-85-9	NL	Point source	Soil	86	15%	Expertisecentrum PFAS (2018a)
PFHpA	375-85-9	BE-Vl	Point source	Soil	57	5%	Groffen et al., 2019
PFHpA	375-85-9	BE-Vl	Point source	Soil	40	**25%**	OVAM 2018 Onderzoek
PFHpA	375-85-9	BE-Vl	Point source	GW	48	**69-75%**	OVAM 2018 Onderzoek
PFHpA	375-85-9	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFHpA	375-85-9	FR	Global	GW	14947	5%	ADES
PFHpA	375-85-9	FR	Point source	GW	45	**88,9%**	GIDAF
PFHxDA	67905-19-5	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFHxDA	67905-19-5	NL	Global	Soil	1863	0,43%	PFAS achtergrondwaarden DB
PFHxDA	67905-19-5	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFHxDA	67905-19-5	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFHxDA	67905-19-5	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFHxDA	67905-19-5	BE-Vl	Global	Soil	40	0%	OVAM 2018 Onderzoek
PFHxDA	67905-19-5	BE-Vl	Global	GW	48	0%	OVAM 2018 Onderzoek
PFODA	16517-11-6	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFODA	16517-11-6	NL	Global	Soil	1863	0,32%	PFAS achtergrondwaarden DB
PFODA	16517-11-6	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFODA	16517-11-6	BE-Vl	Point source	Soil	40	3%	OVAM 2018 Onderzoek
PFODA	16517-11-6	BE-Vl	Point source	GW	48	0%	OVAM 2018 Onderzoek
PFODA	16517-11-6	FR	Point source	GW	3	**100%**	GIDAF
PFPeA	2706-90-3	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFPeA	2706-90-3	NL	Global	Soil	2733	8,67%	PFAS achtergrondwaarden DB
PFPeA	2706-90-3	NL	Point source	Soil	100	**27%**	RIVM 2020 Achtergrondwaarden
PFPeA	2706-90-3	NL	Global	Soil	100	5%	RIVM 2020 Achtergrondwaarden
PFPeA	2706-90-3	BE-Vl	Global	Soil	50	22%	OVAM 2021
PFPeA	2706-90-3	BE-Vl	Point source	Soil	57	17%	Groffen
PFPeA	2706-90-3	NL	Point source	Soil	86	5%	Expertisecentrum PFAS (2018a)
PFPeA	2706-90-3	BE-Vl	Point source	Soil	40	**38%**	OVAM 2018 Onderzoek
PFPeA	2706-90-3	BE-Vl	Point source	GW	48	**75%**	OVAM 2018 Onderzoek
PFPeA	2706-90-3	BE-Vl	Point source	Sediment	18	11%	Sullied Sediment
PFPeA	2706-90-3	FR	Global	GW	4893	2,9%	ADES
PFPeA	2706-90-3	FR	Point source	GW	45	**93,3%**	GIDAF
PFTeDA	376-06-7	NL	Global	Sediment	4800	4,50%	Dutch Water Authorities DB 2020
PFTeDA	376-06-7	NL	Global	Soil	2318	0,73%	PFAS achtergrondwaarden DB
PFTeDA	376-06-7	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFTeDA	376-06-7	BE-Vl	Point source	Soil	57	12%	Groffen et al., 2019
PFTeDA	376-06-7	BE-Vl	Point source	Soil	40	3%	OVAM 2018 Onderzoek
PFTeDA	376-06-7	BE-Vl	Point source	GW	48	0%	OVAM 2018 Onderzoek
PFTeDA	376-06-7	FR	Point source	Sediment	25	**36%**	Mourier et al., 2019
PFTeDA	376-06-7	FR	Global	GW	6593	0%	ADES
PFTeDA	376-06-7	FR	Point source	GW	3	**100%**	GIDAF
PFTrDA	72629-94-8	NL	Global	Sediment	4800	7,29%	Dutch Water Authorities DB 2020
PFTrDA	72629-94-8	NL	Global	Soil	2318	1,21%	PFAS achtergrondwaarden DB
PFTrDA	72629-94-8	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFTrDA	72629-94-8	BE-Vl	Point source	Soil	57	**32%**	Groffen et al., 2019
PFTrDA	72629-94-8	BE-Vl	Point source	Soil	40	0%	OVAM 2018 Onderzoek
PFTrDA	72629-94-8	BE-Vl	Point source	GW	48	0%	OVAM 2018 Onderzoek
PFTrDA	72629-94-8	FR	Point source	Sediment	25	**36%**	Mourier et al., 2019
PFTrDA	72629-94-8	FR	Global	GW	3425	0%	ADES
PFTrDA	72629-94-8	FR	Point source	GW	3	**100%**	GIDAF

PFUnDA	2058-94-8	NL	Global	Sediment	4800	12,33%	Dutch Water Authorities DB 2020
PFUnDA	2058-94-8	NL	Global	Soil	2786	3,34%	PFAS achtergrondwaarden DB
PFUnDA	2058-94-8	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFUnDA	2058-94-8	NL	Point source	Soil	86	5%	Expertisecentrum PFAS (2018a)
PFUnDA	2058-94-8	BE-Vl	Point source	Soil	57	**30%**	Groffen et al., 2019
PFUnDA	2058-94-8	BE-Vl	Point source	Soil	40	15%	OVAM 2018 Onderzoek
PFUnDA	2058-94-8	BE-Vl	Point source	GW	48	6%	OVAM 2018 Onderzoek
PFUnDA	2058-94-8	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFUnDA	2058-94-8	FR	Point source	Sediment	25	**60%**	Mourier et al., 2019
PFUnDA	2058-94-8	FR	Global	GW	8595	0,1%	ADES
PFUnDA	2058-94-8	FR	Point source	GW	3	**100%**	GIDAF
PFNA	375-95-1	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFNA	375-95-1	FR	Global	Sediment	3413	1,49%	Naïades
PFNA	375-95-1	NL	Global	Soil	2793	10,35%	PFAS achtergrondwaarden DB
PFNA	375-95-1	NL	Point source	Soil	100	21%	RIVM 2020 Achtergrondwaarden
PFNA	375-95-1	NL	Global	Soil	100	14%	RIVM 2020 Achtergrondwaarden
PFNA	375-95-1	EUR	Global	Sludge	61	**97%**	JRC, 2012
PFNA	375-95-1	EUR	Global	Sludge	58	**68%**	JRC, 2012
PFNA	375-95-1	BE-Vl	Global	Soil	50	2%	OVAM, 2021
PFNA	375-95-1	BE-Vl	Point source	Soil	57	**30%**	Groffen et al., 2019
PFNA	375-95-1	NL	Point source	Soil	86	16%	Expertisecentrum PFAS (2018a)
PFNA	375-95-1	BE-Vl	Point source	Soil	40	**30%**	OVAM 2018 Onderzoek
PFNA	375-95-1	BE-Vl	Point source	GW	48	**29-56%**	OVAM 2018 Onderzoek
PFNA	375-95-1	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFNA	375-95-1	FR	Point source	Sediment	25	**64%**	Mourier et al., 2019
PFNA	375-95-1	FR	Global	GW	10801	0,9%	ADES
PFNA	375-95-1	FR	Point source	GW	3	**100%**	GIDAF
PFOSA	754-91-6	NL	Global	Sediment	4800	8,02%	Dutch Water Authorities DB 2020
PFOSA	754-91-6	NL	Point source	Soil	100	1%	RIVM 2020 Achtergrondwaarden
PFOSA	754-91-6	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFOSA	754-91-6	BE-Vl	Point source	Soil	40	**33%**	OVAM 2018 Onderzoek
PFOSA	754-91-6	BE-Vl	Point source	GW	48	**10-42%**	OVAM 2018 Onderzoek
PFOSA	754-91-6	FR	Global	GW	6603	0,20%	ADES
PFOSA	754-91-6	FR	Point source	GW	3	**100%**	GIDAF
PFHxA	307-24-4	NL	Global	Soil	2625	14,93%	Database PFAS achtergrondwaarden c
PFHxA	307-24-4	NL	Global	Soil	100	14%	RIVM 2020 Achtergrondwaarden
PFHxA	307-24-4	BE-Vl	Global	Soil	50	4%	OVAM 2021
PFHxA	307-24-4	BE-Wal	Global	GW	122	24%	BIODIEN project
PFHxA	307-24-4	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFHxA	307-24-4	FR	Global	Sediment	3413	1%	Naïades
PFHxA	307-24-4	BE-Wal	Global	Sludge	147	**48%**	Caribouh project
PFHxA	307-24-4	BE-Vl	Point source	Soil	57	16%	Groffen et al., 2019
PFHxA	307-24-4	NL	Point source	Soil	86	10%	Expertisecentrum PFAS (2018a)
PFHxA	307-24-4	BE-Vl	Point source	Soil	40	**40%**	OVAM 2018 Onderzoek
PFHxA	307-24-4	NL	Point source	Soil	100	**32%**	RIVM 2020 Achtergrondwaarden
PFHxA	307-24-4	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFHxA	307-24-4	BE-Vl	Point source	GW	48	**73-81%**	OVAM 2018 Onderzoek
PFHxA	307-24-4	FR	Global	GW	14947	4,8%	ADES
PFHxA	307-24-4	FR	Point source	GW	45	**100%**	GIDAF
PFBS	375-73-5	NL	Global	Sediment	4800	2,23%	Dutch Water Authorities DB 2020
PFBS	375-73-5	NL	Global	Soil	2443	1,88%	Database PFAS achtergrondwaarden c
PFBS	375-73-5	NL	Point source	Soil	100	3%	RIVM 2020 Achtergrondwaarden
PFBS	375-73-5	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFBS	375-73-5	BE-Vl	Global	Soil	50	4%	OVAM 2021
PFBS	375-73-5	BE-Vl	Point source	Soil	57	**37%**	Groffen et al., 2019
PFBS	375-73-5	NL	Point source	Soil	86	**3%**	Expertisecentrum PFAS (2018a)
PFBS	375-73-5	BE-Vl	Point source	Soil	40	15%	OVAM 2018 Onderzoek
PFBS	375-73-5	BE-Vl	Point source	GW	48	**46-75%**	OVAM 2018 Onderzoek
PFBS	375-73-5	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFBS	375-73-5	FR	Point source	GW	45	98%	GIDAF
PFDS	335-77-3	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFDS	335-77-3	NL	Global	Soil	2075	0,58%	PFAS achtergrondwaarden DB
PFDS	335-77-3	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFDS	335-77-3	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFDS	335-77-3	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFDS	335-77-3	BE-Vl	Point source	Soil	57	12%	Groffen et al., 2019
PFDS	335-77-3	BE-Vl	Point source	Soil	40	20%	OVAM 2018 Onderzoek
PFDS	335-77-3	BE-Vl	Point source	GW	48	2%	OVAM 2018 Onderzoek
PFDS	335-77-3	BE-Vl	Point source	Sediment	18	11%	Sullied Sediment
PFDS	335-77-3	FR	Global	GW	14618	0,3%	ADES
PFDS	335-77-3	FR	Point source	GW	3	100,0%	GIDAF
PFPeS	2706-91-4	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFPeS	2706-91-4	BE-Vl	Global	Soil	50	0%	OVAM 2021

PFHpS	375-92-8	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
PFHpS	375-92-8	NL	Global	Soil	2026	0,54%	PFAS achtergrondwaarden DB
PFHpS	375-92-8	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFHpS	375-92-8	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
PFHpS	375-92-8	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFHpS	375-92-8	BE-Vl	Point source	Soil	57	7%	Groffen et al., 2019
PFHpS	375-92-8	FR	Global	GW	3425	1,9%	ADES
PFHpS	375-92-8	FR	Point source	GW	38	**63,2%**	GIDAF
PFHxS	355-46-4	NL	Global	Sediment	4800	5,13%	Dutch Water Authorities DB 2020
PFHxS	355-46-4	NL	Global	Soil	2287	4,63%	PFAS achtergrondwaarden DB
PFHxS	355-46-4	NL	Point source	Soil	100	5%	RIVM 2020 Achtergrondwaarden
PFHxS	355-46-4	NL	Global	Soil	100	2%	RIVM 2020 Achtergrondwaarden
PFHxS	355-46-4	BE-Wal	Global	GW	122	13%	BIODIEN project
PFHxS	355-46-4	BE-Wal	Global	Sludge	147	1%	Caribouh project
PFHxS	355-46-4	BE-Vl	Global	Soil	50	0%	OVAM 2021
PFHxS	355-46-4	BE-Vl	Point source	Soil	40	**45%**	OVAM 2018 Onderzoek
PFHxS	355-46-4	BE-Vl	Point source	GW	48	**69-81%**	OVAM 2018 Onderzoek
PFHxS	355-46-4	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
PFHxS	355-46-4	FR	Global	GW	14992	8,4%	ADES
PFHxS	355-46-4	FR	Point source	GW	22	**100%**	GIDAF
4:2 FTS	757124-72-4	NL	Global	Sediment	4800	<2%	Dutch Water Authorities DB 2020
4:2 FTS	757124-72-4	NL	Global	Soil	2126	1,03%	PFAS achtergrondwaarden DB
4:2 FTS	757124-72-4	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
4:2 FTS	757124-72-4	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
4:2 FTS	757124-72-4	BE-Vl	Global	Soil	50	0%	OVAM 2021
4:2 FTS	757124-72-4	FR	Point source	GW	32	3%	GIDAF
6:2 FTS	27619-97-2	NL	Global	Sediment	4800	6,63%	Dutch Water Authorities DB 2020
6:2 FTS	27619-97-2	NL	Global	Soil	2032	1,48%	PFAS achtergrondwaarden DB
6:2 FTS	27619-97-2	NL	Point source	Soil	100	4%	RIVM 2020 Achtergrondwaarden
6:2 FTS	27619-97-2	NL	Global	Soil	100	3%	RIVM 2020 Achtergrondwaarden
6:2 FTS	27619-97-2	BE-Vl	Global	Soil	50	**54%**	OVAM 2021
6:2 FTS	27619-97-2	BE-Vl	Point source	Soil	40	**40%**	OVAM 2018 Onderzoek
6:2 FTS	27619-97-2	BE-Vl	Point source	GW	48	**65-75%**	OVAM 2018 Onderzoek
8:2 FTS	39108-34-4	NL	Global	Sediment	4800	2,58%	Dutch Water Authorities DB 2020
8:2 FTS	39108-34-4	NL	Global	Soil	1970	0,66%	PFAS achtergrondwaarden DB
8:2 FTS	39108-34-4	NL	Point source	Soil	100	1%	RIVM 2020 Achtergrondwaarden
8:2 FTS	39108-34-4	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
8:2 FTS	39108-34-4	BE-Vl	Global	Soil	50	0%	OVAM 2021
8:2 FTS	39108-34-4	BE-Vl	Point source	Soil	40	**35%**	OVAM 2018 Onderzoek
8:2 FTS	39108-34-4	BE-Vl	Point source	GW	48	**29-46%**	OVAM 2018 Onderzoek
8:2 FTS	39108-34-4	FR	Point source	GW	26	15%	GIDAF
8:2 diPAP	678-41-1	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
8:2 diPAP	678-41-1	NL	Global	Soil	100	1%	RIVM 2020 Achtergrondwaarden
8:2 diPAP	678-41-1	BE-Vl	Global	Soil	50	2%	OVAM 2021
10:2 FTS	120226-60-0	NL	Global	Sediment	4800	7,75%	Dutch Water Authorities DB 2020
10:2 FTS	120226-60-0	NL	Point source	Soil	100	1%	RIVM 2020 Achtergrondwaarden
10:2 FTS	120226-60-0	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
10:2 FTS	120226-60-0	BE-Vl	Global	Soil	50	0%	OVAM 2021
10:2 FTS	120226-60-0	BE-Vl	Point source	Soil	40	15%	OVAM 2018 Onderzoek
10:2 FTS	120226-60-0	BE-Vl	Point source	GW	48	2%	OVAM 2018 Onderzoek
GenX / HFPO-DA	13252-13-6	NL	Global	Soil	139	2,16%	PFAS achtergrondwaarden DB
GenX / HFPO-DA	13252-13-6	NL	Point source	Soil	38	7,89%	RIVM 2020 Achtergrondwaarden
GenX / HFPO-DA	13252-13-6	NL	Point source	Soil	12	**100%**	RIVM 2018 GenX-PFOA
GenX / HFPO-DA	13252-13-6	NL	Point source	Soil	6	**100%**	Expertisecentrum PFAS 2017
GenX / HFPO-DA	13252-13-6	NL	Global	Soil	37	0%	RIVM 2020 Achtergrondwaarden
GenX / HFPO-DA	13252-13-6	BE-Vl	Global	Soil	50	0%	OVAM 2021
GenX / HFPO-DA	13252-13-6	NL	Point source	GW	6	**100%**	Expertisecentrum PFAS 2017
N-EtFOSAA	2991-50-6	NL	Global	Sediment	4800	**35%**	Dutch Water Authorities DB 2020
N-EtFOSAA	2991-50-6	NL	Global	Soil	1724	2,26%	PFAS achtergrondwaarden DB
N-EtFOSAA	2991-50-6	NL	Point source	Soil	100		RIVM 2020 Achtergrondwaarden
N-EtFOSAA	2991-50-6	NL	Global	Soil	100	3%	RIVM 2020 Achtergrondwaarden
N-EtFOSAA	2991-50-6	BE-Vl	Global	Soil	50	0%	OVAM 2021
N-EtFOSAA	2991-50-6	FR	Point source	Sediment	25	**56%**	Mourier et al., 2019
N-EtFOSAA	2991-50-6	FR	Point source	GW	3	**100%**	GIDAF
N-MeFOSAA	2355-31-9	NL	Global	Sediment	4800	23%	Dutch Water Authorities DB 2020
N-MeFOSAA	2355-31-9	NL	Global	Soil	1687	0,41%	PFAS achtergrondwaarden DB
N-MeFOSAA	2355-31-9	BE-Vl	Global	Soil	50	0%	OVAM 2021
N-MeFOSAA	2355-31-9	FR	Point source	Sediment	25	**84%**	Mourier et al., 2019
N-MeFOSAA	2355-31-9	FR	Point source	GW	3	**100%**	GIDAF
N-MeFOSA	31506-32-8	NL	Global	Sediment	4800	<2,08%	Dutch Water Authorities DB 2020
N-MeFOSA	31506-32-8	NL	Global	Soil	1712	0,18%	PFAS achtergrondwaarden DB
N-MeFOSA	31506-32-8	NL	Point source	Soil	100	0%	RIVM 2020 Achtergrondwaarden
N-MeFOSA	31506-32-8	NL	Global	Soil	100	0%	RIVM 2020 Achtergrondwaarden
N-MeFOSA	31506-32-8	BE-Vl	Global	Soil	50	0%	OVAM 2021
N-MeFOSA	31506-32-8	FR	Point source	GW	3	**100%**	GIDAF

Annexe 1-c Inventory of CECs occurrence data in environmental media
Quantification frequencies for phenols and alkylphenols (PREMISS WP3)

Nom de la substance	# CAS	Pays/ région	Type de monitoring	Matrice	Nbre d'analyses	Fréquence de quantification	Source
2-chlorophénol	95-57-8	NL	Global	Soil	100	**86%**	Achtergrondwaarden 2000
2-chlorophénol	95-57-8	FR	Global	Sediment	6453	0,02%	Naïades
2-chlorophénol	95-57-8	BE-Wal	Global	GW	118	0%	BIODIEN project
2-chlorophénol	95-57-8	FR	Global	GW	27754	0,1%	ADES
2-chlorophénol	95-57-8	NL	Global	Sediment	11	0%	Waterbodem landelijke DB
2-chlorophénol	95-57-8	BE-Vl	Point source	Soil	4	**100%**	OVAM hotspot verkenner
2-chlorophénol	95-57-8	BE-Vl	Point source	Soil	699	6-8%	Mistral DB
2-chlorophénol	95-57-8	BE-Vl	Point source	GW	1174	<32%	Mistral DB
2-chlorophénol	95-57-8	FR	Point source	GW	33	**36,4%**	GIDAF
3-chlorophénol		BE-Vl	Point source	Soil	26	15%	OVAM hotspot verkenner
4-chlorophénol		BE-Vl	Point source	Soil	26	15%	OVAM hotspot verkenner
2,4-dichlorophenol	102-83-2	NL	Global	Soil	100	**100%**	Achtergrondwaarden 2000
2,4-dichlorophenol	102-83-2	FR	Global	Sediment	6384	0%	Naïades
2,4-dichlorophenol	102-83-2	NL	Global	Sediment	11	0%	Waterbodem landelijke DB
2,4-dichlorophenol	102-83-2	FR	Global	GW	21038	1,7%	ADES
2,4-dichlorophenol	102-83-2	FR	Point source	GW	7	**57,1%**	GIDAF
2,4,5-trichorophenol	95-95-4	BE-Wal	Global	Sludge		yet to come	CARIBOUH project
2,4,5-trichorophenol	95-95-4	FR	Global	Sediment	9884	0,01%	Naïades
2,4,5-trichorophenol	95-95-4	NL	Global	Sediment	11	0%	Waterbodem landelijke DB
2,4,5-trichorophenol	95-95-4	FR	Global	GW	28159	0%	ADES
2,4,5-trichorophenol	95-95-4	BE-Vl	Point source	Soil	26	15%	OVAM hotspot verkenner
2,4,5-trichorophenol	95-95-4	BE-Vl	Point source	Soil	666	9-57%	Mistral DB
2,4,5-trichorophenol	95-95-4	BE-Vl	Point source	GW	830	<11%	Mistral DB
2,4,5-trichorophenol	95-95-4	BE-Wal	Point source	GW	118	0%	BIODIEN project
2,4,6-trichorophenol	88-06-2	NL	Global	Soil	100	**96%**	Achtergrondwaarden 2000
2,4,6-trichorophenol	88-06-2	BE-Wal	Global	Sludge		yet to come	CARIBOUH project
2,4,6-trichorophenol	88-06-2	FR	Global	Sediment	9933	0,05%	Naïades
2,4,6-trichorophenol	88-06-2	NL	Global	Sediment	11	0%	Waterbodem landelijke DB
2,4,6-trichorophenol	88-06-2	BE-Wal	Global	GW	119	0,8%	BIODIEN project
2,4,6-trichorophenol	88-06-2	FR	Global	GW	26892	0,1%	ADES
2,4,6-trichorophenol	88-06-2	BE-Vl	Point source	Soil	26	15%	OVAM hotspot verkenner
2,4,6-trichorophenol	88-06-2	BE-Vl	Point source	Soil	393	**11-68%**	Mistral DB
2,4,6-trichorophenol	88-06-2	BE-Vl	Point source	GW	1644	**20-26%**	Mistral DB
2,3,4,6-tetrachorophenol	58-90-2	NL	Global	Soil	100	**100%**	Achtergrondwaarden 2000
2,3,4,6-tetrachorophenol	58-90-2	FR	Global	Sediment	6246	0,02%	Naïades
2,3,4,6-tetrachorophenol	58-90-2	NL	Global	Sediment	11	0%	Waterbodem landelijke DB
2,3,4,6-tetrachorophenol	58-90-2	BE-Wal	Global	GW	119	0%	BIODIEN project
2,3,4,6-tetrachorophenol	58-90-2	FR	Global	GW	16587	0,0%	ADES
2,3,4,6-tetrachorophenol	58-90-2	BE-Vl	Point source	Soil	4	**100%**	OVAM hotspot verkenner
2,3,4,6-tetrachorophenol	58-90-2	FR	Point source	GW	7	**57,1%**	GIDAF
pentachlorophenol	87-86-5	NL	Global	Soil	100	**100%**	Achtergrondwaarden 2000
pentachlorophenol	87-86-5	FR	Global	Sediment	11069	0,4%	Naïades
pentachlorophenol	87-86-5	NL	Global	Sediment	58	not communicated	Waterbodem landelijke DB
pentachlorophenol	87-86-5	BE-Wal	Global	Sludge		yet to come	CARIBOUH project
pentachlorophenol	87-86-5	BE-Wal	Global	GW	118	0%	BIODIEN project
pentachlorophenol	87-86-5	FR	Global	GW	52067	0,1%	ADES
pentachlorophenol	87-86-5	BE-Vl	Point source	Soil	26	15%	OVAM hotspot verkenner
pentachlorophenol	87-86-5	FR	Point source	GW	553	**34,9%**	GIDAF
4-tert-octylphenol	140-66-9	BE-Vl	Global	Soil	50	0%	OVAM, 2021
4-tert-octylphenol	140-66-9	FR	Global	Sediment	10367	5,0%	Naïades
4-tert-octylphenol	140-66-9	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
4-tert-octylphenol	140-66-9	BE-Wal	Global	Sludge		yet to come	CARIBOUH project
4-tert-octylphenol	140-66-9	NL	Global	Sludge	1	0%	FARO Advies 2020
4-tert-octylphenol	140-66-9	FR	Global	GW	38840	1%	ADES
4-tert-butylphenol	98-54-4	FR	Global	Sediment	8358	2,5%	Naïades
4-tert-butylphenol	98-54-4	FR	Global	GW	27660	5,3%	ADES
4-tert-butylphenol	98-54-4	BE-Vl	Point source	GW	15	**33%**	mistral
4-nonylphénol (branched) mixture	84852-15-3	FR	Global	Sediment	11882	**28%**	Naïades
4-nonylphénol (branched) mixture	84852-15-3	FR	Global	Sludge	48	57%	INERIS, 2014
4-nonylphénol (branched) mixture	84852-15-3	FR	Global	Sludge		yet to come	CARIBOUH project
4-nonylphénol (branched) mixture	84852-15-3	NL	Global	Sludge	1	0%	FARO Advies, 2020
4-nonylphénol (branched) mixture	84852-15-3	BE-Wal	Global	GW	121	5%	BIODIEN Project
4-nonylphénol (branched) mixture	84852-15-3	FR	Global	GW	41099	7,6%	ADES
4-nonylphénol (branched) mixture	84852-15-3	FR	Point source	GW	35	**100%**	GIDAF
4-n-nonylphenol (linear)	104-40-5	FR	Global	Sediment	7394	0,6%	Naïades
4-n-nonylphenol (linear)	104-40-5	BE-Wal	Global	GW	120	0%	BIODIEN Project
4-n-nonylphenol (linear)	104-40-5	BE-Wal	Global	Sediment	125	0%	SPW Sediment DB
4-n-nonylphenol (linear)	104-40-5	FR	Global	Sludge	48	0%	INERIS, 2014
4-n-nonylphenol (linear)	104-40-5	NL	Global	Sludge	1	0%	FARO Advies 2020
4-n-nonylphenol (linear)	104-40-5	FR	Global	GW	26468	0%	ADES

nonylphénol	25154-52-3	FR	Global	Sludge	48	**57%**	INERIS, 2014
isononylphenol	11066-49-2	FR	Global	GW	11907	11%	ADES
isononylphenol ethoxylated	127087-87-0	FR	Global	Sediment	358	1,1%	Naïades
isononylphenol diethoxylated		FR	Global	Sediment	631	1,9%	Naïades
2-isopropylphenol	88-69-7	BE-Vl	Point source	Soil	68	10%	Mistral DB
bisphénol A	80-05-7	BE-Vl	Global	Soil	50	**36%**	OVAM, 2021
bisphénol A	80-05-7	FR	Global	Sediment	3342	8,1%	Naïades
bisphénol A	80-05-7	FR	Global	Sludge	48	**55%**	INERIS 2014
bisphénol A	80-05-7	FR	Global	GW	27563	**12%**	ADES
bisphénol A	80-05-7	NL	Global	Sludge	1	**0%**	FARO Advies 2020
bisphénol A	80-05-7	NL	Global	GW	495	19%	KWR 2015-2016
bisphénol A	80-05-7	BE-Wal	Global	GW	121	13,2%	BIODIEN Project
bisphénol A	80-05-7	BE-Vl	Point source	Soil	1	**100%**	Mistral DB
bisphénol A	80-05-7	BE-Vl	Point source	GW	116	**33%**	Mistral DB
bisphénol S	80-09-1	BE-Vl	Global	Soil	50	0%	OVAM, 2021
bisphénol F	620-92-8	BE-Vl	Global	Soil	50	**32%**	OVAM, 2021
chloro-4-benzyl-2-phenol	120-32-1	FR	Point source	Sediment	53	0%	SUPREMA
chloro-4-benzyl-2-phenol	120-32-1	FR	Point source	Sludge	6	0%	SUPREMA
phenyl-2-phenol	90-43-7	FR	Point source	Sediment	53	1,9%	SUPREMA
phenyl-2-phenol	90-43-7	FR	Point source	Sludge	6	0%	SUPREMA
phenyl-2-phenol	90-43-7	FR	Point source	GW	5	0%	GIDAF
2,3,6-trimethylphenol	2416-94-6	NL	Global	Sediment	11	0%	Waterbodem landelijke DB

Annexe 1-d Inventory of CECs occurrence data in environmental media
Quantification frequencies for pesticides (PREMISS WP3)

Nom de la substance	# CAS	Pays/ région	Type de monitoring	Matrice	Nbre d'analyses	Fréquence de quantification	Source
aldrin	309-00-2	NL	Global	Soil	100	**90%**	Achtergrondwaarden 2000
aldrin	309-00-2	FR	Global	Soil	628	6%	RMQS DB
aldrin	309-00-2	FR	Global	Sediment	11946	0,85%	Naïades
aldrin	309-00-2	NL	Global	Sediment	11049	10%	CSO Advies 2010
aldrin	309-00-2	BE-Vl	Global	Sediment	341	0,88%	VMM Sludge
aldrin	309-00-2	NL	Global	Sludge	1	0%	FARO Advies 2020
aldrin	309-00-2	BE-Wal	Global	GW	117	0%	BIODIEN project
aldrin	309-00-2	FR	Global	GW	69605	0%	ADES
aldrin	309-00-2	BE-Vl	Point source	Sediment	18	0%	Sullied Sediment
aldrin	309-00-2	BE-Vl	Point source	Soil	2749	<36%	Mistral DB
aldrin	309-00-2	BE-Vl	Point source	GW	1603	<9%	Mistral DB
aldrin	309-00-2	FR	Point source	GW	379	19%	GIDAF
dieldrine	60-57-1	NL	Global	Soil	100	**69%**	Achtergrondwaarden 2000
dieldrine	60-57-1	FR	Global	Soil	628	**9%**	RMQS DB
dieldrine	60-57-1	BE-Wal	Global	Sediment	971	5%	SPW Sediment DB
dieldrine	60-57-1	BE-Vl	Global	Sediment	341	13%	VMM Sludge
dieldrine	60-57-1	FR	Global	Sediment	11945	0,71%	Naïades
dieldrine	60-57-1	NL	Global	Sediment	11048	15%	CSO Advies 2010
dieldrine	60-57-1	NL	Global	Sludge	1	**100%**	FARO Advies 2020
dieldrine	60-57-1	BE-Wal	Global	GW	117	0%	BIODIEN project
dieldrine	60-57-1	FR	Global	GW	64035	1%	ADES
dieldrine	60-57-1	BE-Vl	Point source	Soil	2689	11-55%	Mistral DB
dieldrine	60-57-1	BE-Vl	Point source	Sediment	1599	10-23%	Mistral DB
dieldrine	60-57-1	BE-Vl	Point source	GW	6	<17%	Mistral DB
dieldrine	60-57-1	FR	Point source	GW	365	16%	GIDAF
4,4'-DDT	50-29-3	BE-Vl	Global	Soil	50	**90%**	OVAM 2021 Afleiden
4,4'-DDT	50-29-3	NL	Global	Soil	100	**35%**	Achtergrondwaarden 2000
4,4'-DDT	50-29-3	FR	Global	Soil	628	**31%**	RMQS DB
4,4'-DDT	50-29-3	BE-Wal	Global	Sediment	971	5%	SPW Sediment DB
4,4'-DDT	50-29-3	BE-Vl	Global	Sediment	341	13%	VMM Sludge
4,4'-DDT	50-29-3	FR	Global	Sediment	10040	3,8%	Naïades
4,4'-DDT	50-29-3	NL	Global	Sediment	10865	**31%**	CSO Advies 2010
4,4'-DDT	50-29-3	NL	Global	Sludge	1	0%	FARO Advies 2020
4,4'-DDT	50-29-3	BE-Wal	Global	GW	117	0%	BIODIEN project
4,4'-DDT	50-29-3	FR	Global	GW	62938	0%	ADES
4,4'-DDT	50-29-3	BE-Vl	Point source	Sediment	18	**83%**	Sullied Sediment
4,4'-DDT	50-29-3	FR	Point source	GW	322	14%	GIDAF
diuron	330-54-1	FR	Global	Soil	158	**44%**	RMQS DB
diuron	330-54-1	BE-Wal	Global	Sediment	12	0%	SPW Sediment DB
diuron	330-54-1	FR	Global	Sediment	4490	4,9%	Naïades
diuron	330-54-1	NL	Global	Sludge	1	0%	FARO Advies 2020
diuron	330-54-1	EUR	Global	Sludge	9	**56%**	JRC 2012
diuron	330-54-1	FR	Global	GW	81114	4%	ADES
diuron	330-54-1	NL	Global	GW	876	2,5%	KWR Monitoring Network 2015-2
diuron	330-54-1	BE-Wal	Global	GW	117	12%	BIODIEN project
diuron	330-54-1	BE-Wal	Global	GW	2346	11%	SPW ESO DB
diuron	330-54-1	BE-Vl	Point source	Soil	14	0%	Mistral DB
diuron	330-54-1	BE-Vl	Point source	GW	42	~24%	Mistral DB
diuron	330-54-1	FR	Point source	GW	142	**39%**	GIDAF

glyphosate	1071-83-6	BE-Vl	Global	Soil	50	18%	OVAM 2021 Afleiden
glyphosate	1071-83-6	FR	Global	Sediment	588	9,5%	Naïades
glyphosate	1071-83-6	NL	Global	GW	876	4%	KWR Monitoring Network 2015-2
glyphosate	1071-83-6	BE-Wal	Global	GW	64	11%	SPW ESO DB
glyphosate	1071-83-6	BE-Wal	Global	GW	122	0,8%	BIODIEN project
glyphosate	1071-83-6	FR	Global	GW	77499	2%	ADES
glyphosate	1071-83-6	BE-Vl	Point source	Soil	15	**~73%**	Mistral DB
glyphosate	1071-83-6	BE-Vl	Point source	GW	27	~19%	Mistral DB
glyphosate	1071-83-6	FR	Point source	GW	31	0%	GIDAF
hydrazin	302-01-2	FR	Point source	GW	5	**100%**	GIDAF
imidacloprid	138261-41-3	BE-Vl	Global	Soil	50	4%	OVAM 2021 Afleiden
imidacloprid	138261-41-3	FR	Global	Sediment	329	0%	Naïades
imidacloprid	138261-41-3	NL	Global	Sludge	1	0,0%	FARO Advies 2020
imidacloprid	138261-41-3	EUR	Global	Sludge	58	2%	JRC 2012
imidacloprid	138261-41-3	BE-Wal	Global	GW	118	1,7%	BIODIEN project
imidacloprid	138261-41-3	FR	Global	GW	65499	2%	ADES
imidacloprid	138261-41-3	FR	Point source	GW	196	**38%**	GIDAF
métolachlore	51218-45-2	BE-Wal	Global	GW	1688	6%	SPW ESO DB
métolachlore	51218-45-2	FR	Global	Sediment	5031	3,6%	Naïades
métolachlore	51218-45-2	FR	Global	Sediment	10	0%	Net et al. 2015
métolachlore	51218-45-2	FR	Point source	GW	25	32%	GIDAF
métolachlore ESA	171118-09-5	BE-Wal	Global	GW	1236	**45%**	SPW ESO DB
métolachlore ESA	171118-09-5	BE-Wal	Global	GW	117	**50%**	BIODIEN project
métolachlore ESA	171118-09-5	FR	Global	GW	31213	**36%**	ADES
métolachlore OXA	152019-73-3	BE-Wal	Global	GW	1236	12%	SPW ESO DB
métolachlore OXA	152019-73-3	BE-Wal	Global	GW	117	1,7%	BIODIEN project
métolachlore OXA	152019-73-3	FR	Global	GW	31162	10,1%	ADES
triclosan	3380-34-5	BE-Vl	Point source	Sediment	17	**100%**	Sullied Sediment
triclosan	3380-34-5	NL	Global	Sludge	1	**100%**	FARO Advies 2020
triclosan	3380-34-5	BE-Wal	Global	Sludge		yet to come	CARIBOUH project
triclosan	3380-34-5	FR	Global	GW	16218	0,40%	ADES

Annexe 1-e Inventory of CECs occurrence data in environmental media
Quantification frequencies for pharmaceuticals (PREMISS WP3)

Nom de la substance	# CAS	Pays/ région	Type de monitoring	Matrice	Nbre d'analyses	Fréquence de quantification	Source
azithromycin	83905-01-5	NL	Global	Sludge	1	100%	FARO Advies, 2020
azithromycin	83905-01-5	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
azithromycin	83905-01-5	BE-Wal	Global	Sludge	97	28%	Caribouh project
azithromycin	83905-01-5	FR	Global	GW	3186	0,1%	ADES
carbamazepin	298-46-4	FR	Global	Sediment	10	**0%**	Net et al. 2015
carbamazepin	298-46-4	FR	Global	Sludge	47	**89%**	INERIS 2014
carbamazepin	298-46-4	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
carbamazepin	298-46-4	NL	Global	Sludge	1	100%	FARO Advies, 2020
carbamazepin	298-46-4	EUR	Global	Sludge	9	**11%**	JRC, 2012
carbamazepin	298-46-4	BE-Wal	Global	Sludge	147	**94%**	Caribouh project
carbamazepin	298-46-4	NL	Global	GW	495	5,70%	KWR Monitoring Network 2015-2
carbamazepin	298-46-4	BE-Wal	Global	GW	359	**32%**	IMHOTEP project
carbamazepin	298-46-4	FR	Global	GW	8551	8,3%	ADES
ciprofloxacin	85721-33-1	FR	Global	Sludge	47	**91%**	INERIS 2014
ciprofloxacin	85721-33-1	FR	Global	Sludge	47	not communicated	Mailler et al., 2018
ciprofloxacin	85721-33-1	EUR	Global	Sludge	9	0%	JRC, 2012
ciprofloxacin	85721-33-1	FR	Global	GW	8029	0,1%	ADES
clarithromycin	81103-11-9	BE-Wal	Global	Sludge	139	**55%**	Caribouh project
clarithromycin	81103-11-9	NL	Global	Sludge	1	0%	FARO Advies, 2020
clarithromycin	81103-11-9	EUR	Global	Sludge	9	22%	JRC, 2012
clarithromycin	81103-11-9	BE-Wal	Global	GW	359	14%	IMHOTEP project
clarithromycin	81103-11-9	FR	Global	GW	6087	0,3%	ADES
diclofenac	15307-86-5	FR	Global	Sediment	10	0%	Net et al., 2015
diclofenac	15307-86-5	FR	Global	Sediment	5	0%	Naïades
diclofenac	15307-86-5	NL	Global	Sludge	1	100%	FARO Advies, 2020
diclofenac	15307-86-5	BE-Wal	Global	Sludge	147	**70%**	Caribouh project
diclofenac	15307-86-5	EUR	Global	Sludge	58	**81%**	JRC, 2012
diclofenac	15307-86-5	NL	Global	GW	495	1,40%	KWR Monitoring Network 2015-2
diclofenac	15307-86-5	FR	Global	GW	8767	1,7%	ADES
diclofenac	15307-86-5	BE-Wal	Global	GW	359	17%	IMHOTEP project
diclofenac	15307-86-5	BE-Vl	Point source	Sediment	17	**100%**	Sullied Sediment
doxycyclin (tetracyclines)	564-25-0	FR	Global	GW	3581	0,1%	ADES
enrofloxacin (fluoroquinolones)	93106-60-6	EUR	Global	Sludge	9	0%	JRC, 2012
enrofloxacin (fluoroquinolones)	93106-60-6	FR	Global	GW	1795	0,1%	ADES
erythromycin	114-07-8	NL	Global	Sludge	1	0%	FARO Advies, 2020
erythromycin	114-07-8	EUR	Global	Sludge	9	0%	JRC, 2012
erythromycin	114-07-8	FR	Global	GW	8097	0,7%	ADES
fipronil	120068-37-3	FR	Global	Sediment	514	0%	Naïades
fipronil	120068-37-3	NL	Global	Sludge	1	0%	FARO Advies, 2020
fipronil	120068-37-3	BE-Wal	Global	GW	118	0%	BIODIEN project
fipronil	120068-37-3	FR	Global	GW	40033	0,1%	ADES
fipronil	120068-37-3	FR	Point source	Sediment	53	**64,2%**	SUPREMA
fipronil	120068-37-3	FR	Point source	Sludge	6	**100%**	SUPREMA
fipronil	120068-37-3	FR	Point source	GW	80	27,5%	GIDAF
ibuprofen	15687-27-1	BE-Wal	Global	Sludge	97	0%	Caribouh project
ibuprofen	15687-27-1	FR	Global	Sludge	47	**60%**	INERIS, 2014
ibuprofen	15687-27-1	NL	Global	Sludge	1	**0%**	FARO Advies, 2020
ibuprofen	15687-27-1	EUR	Global	Sludge	58	**72%**	JRC, 2012
ibuprofen	15687-27-1	FR	Global	GW	14198	0,3%	ADES
ibuprofen	15687-27-1	NL	Global	GW	495	1%	KWR Monitoring Network 2015-2
ibuprofen	15687-27-1	BE-Wal	Global	GW	359	4%	IMHOTEP project
ofloxacin	82419-36-1	FR	Global	Sludge	47	**100%**	INERIS, 2014
ofloxacin	82419-36-1	FR	Global	Sludge	47	not communicated	Mailler et al. 2018
ofloxacin	82419-36-1	EUR	Global	Sludge	9	0%	JRC, 2012
ofloxacin	82419-36-1	FR	Global	GW	9228	0,2%	ADES
tetracyclin	60-54-8	FR	Global	Sludge	47	**94%**	INERIS, 2014
tetracyclin	60-54-8	EUR	Global	Sludge	9	0%	JRC, 2012
tetracyclin	60-54-8	FR	Global	GW	3554	0%	ADES

Annex 2 Selected pilot substances for WP4-5 (PREMISS WP3)
(Some to be confirmed (tbc))

#	CAS	Substance category	Substance name	Substance acronym
1	335-67-1	PFAS	perfluoro-n-octanoic acid	PFOA
2	1763-23-1	PFAS	perfluoro-1-octane sulfonic acid (PFOS)	PFOS
3	307-24-4	PFAS	perfluorohexanoic acid	PFHxA
4	355-46-4	PFAS	perfluoro-1-hexane sulfonic acid (PFHxS)	PFHxS
tbc	13252-13-6	PFAS	Hexafluoropropyleneoxide dimer acid	GenX
tbc	375-22-4	PFAS	perfluoro-n-butanoic acid (PFBA)	PFBA
tbc	2991-50-6 & 1336-61-4	PFAS	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA
6	84852-15-3	Phenols & Alkylphenols	4-nonylphénol (branched) mixture	nonylphenol
7	80-05-7	Phenols & Alkylphenols	bisphenol A	BPA
8	51218-45-2	Pesticides	Metolachlore	
9	171118-09-5	Pesticides	Metolachlore ESA	
10	152019-73-3	Pesticides	Metolachlore OXA	
11	1071-83-6	Pesticides	Glyphosate	
tbc	138261-41-3	Pesticides	Imidacloprid ?	
12	15307-86-5	Pharmaceuticals	diclofenac	-
13	3380-34-5	Pharmaceuticals	triclosan	-
14	81103-11-9	Pharmaceuticals	clarithromycin	-
tbc	83905-01-5	Pharmaceuticals	azithromycin ?	-

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