



JRC

EUROPEAN COMMISSION



Institute for
Environment and
Sustainability

BIOSOIL study

ESBN plenary meeting

18 November 2008

Christine LE BAS



INVENTAIRE FORESTIER
NATIONAL



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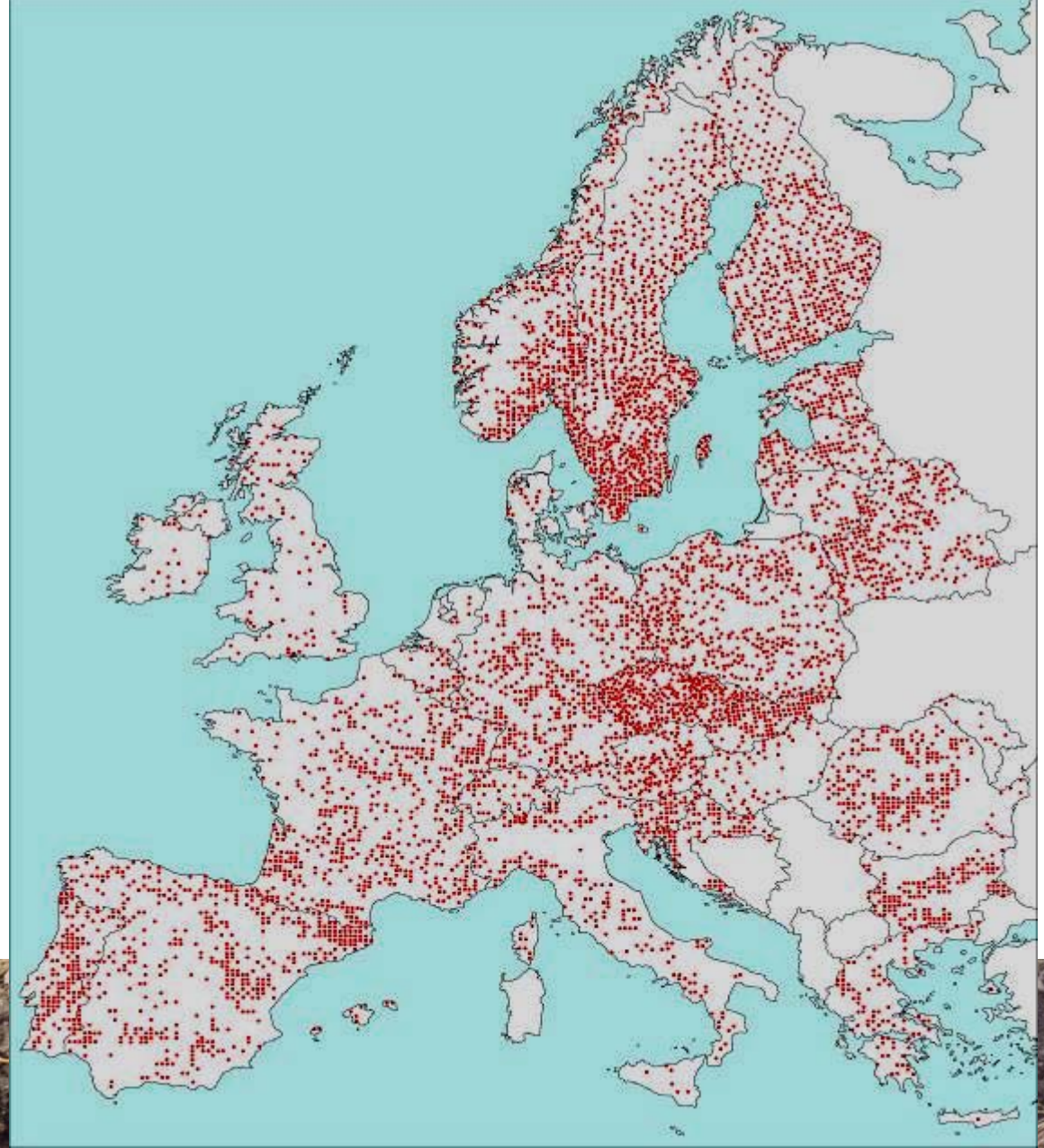
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Overview

- **Part of the Forest Focus regulation**
 - **Monitoring of forest for their protection against atmospheric pollution**
- **A demonstration study on the monitoring of chemical properties of forest soil and on forest biodiversity**
- **On the sites of the level I of Forest Focus**
 - **level I = network 16 km x 16 km**
- **Supported by the Joint Research Centre, Institute of Environment and Sustainability**



5700 plots



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Content of Biosoil

➤ By each country:

- Sampling of composites
- Analysis of the composite samples
- Description and sampling of a soil profile
- Biodiversity observations

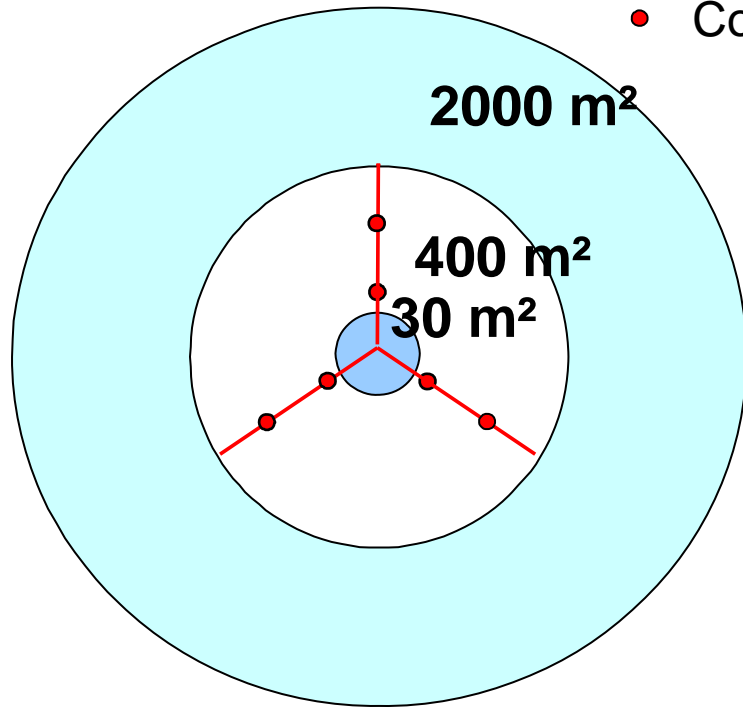
➤ By a unique laboratory:

- Re-analysis of 10% of the samples
- Re-analysis of the samples from the same sites from the 1st survey if available



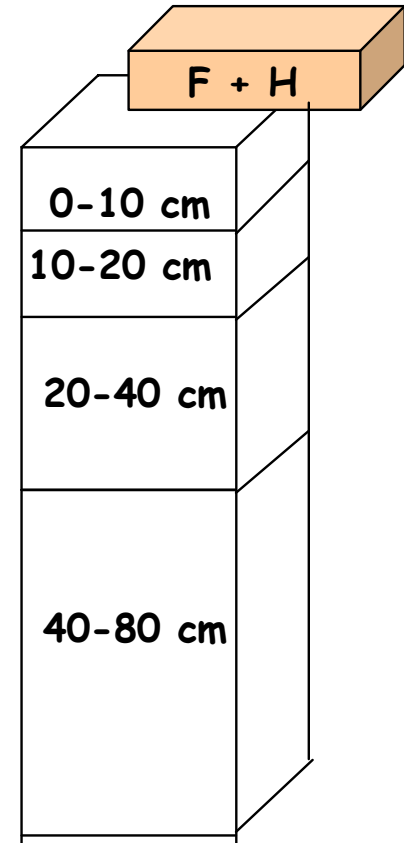
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● Composites samples

□ Profile



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Technical support

- **A consortium is in charge of:**
 - **Developing the computer system for data submission and data storage**
 - **Developing procedures of data quality control**
 - **Controlling data submitted by each country**
 - **Analysing composite samples from 10% of the plots by a unique laboratory**



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The consortium

- **InfoSol Unit – INRA Orléans**
- **Soil Analysis laboratory – INRA Arras**
- **French National Forest Inventory – IFN
Nogent-sur-Vernisson**

- **Contract of 3 years still November 2009**



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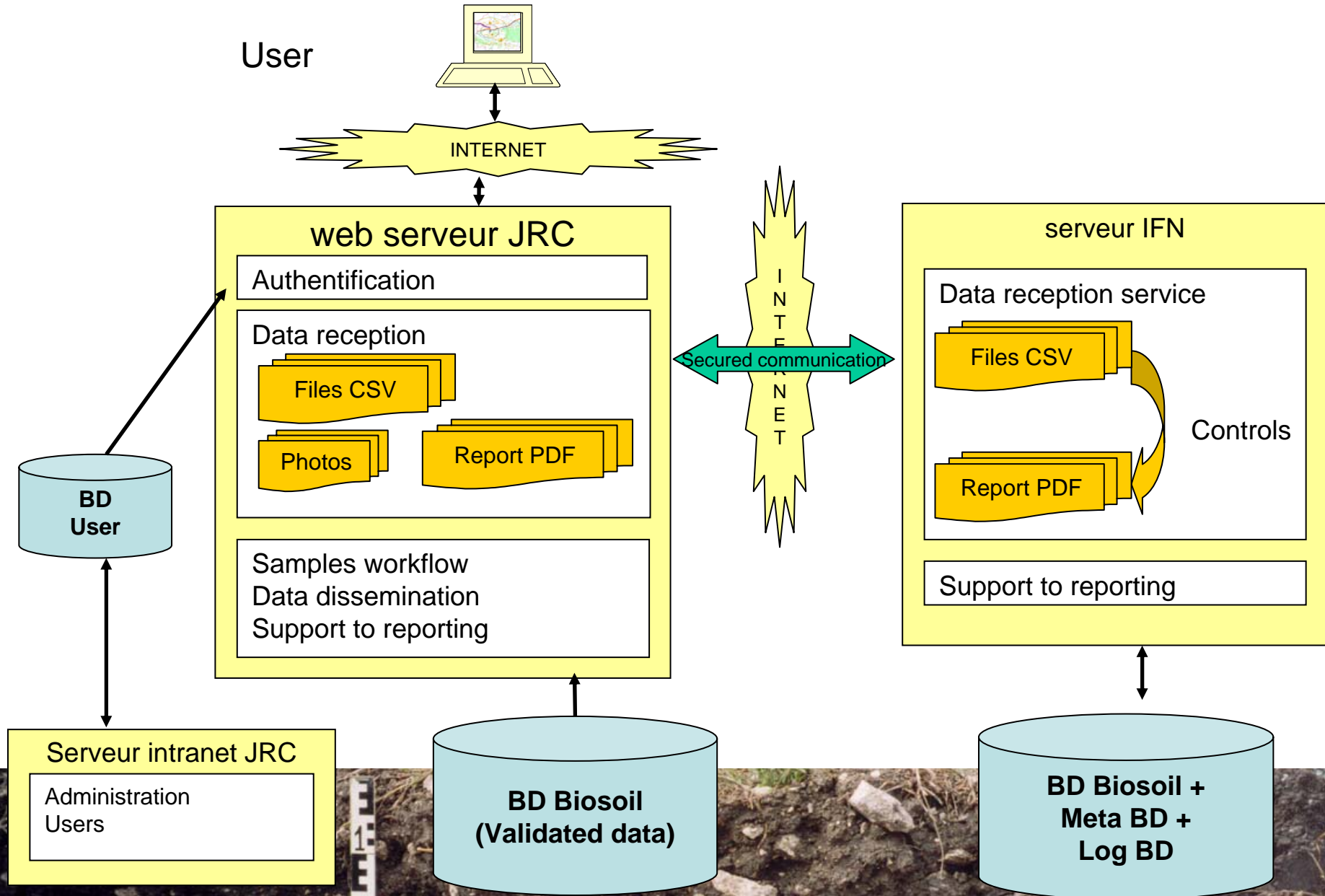
Steps of the technical support

- **First year (2007):**
 - Development of the computer application (DB + Web site)
 - Receiving samples for re-analysis
- **Second year (2008):**
 - End of receiving samples for re-analysis
 - Re-analysis of samples
 - Receiving data from each country
- **Third year (2009):**
 - End of re-analysis of samples
 - Quality control of received data



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<http://biosoil.jrc.ec.europa.eu>



General presentation

The Biosoil project is a study under the scope of the Forest Focus EC regulation n°2152/2003 that deals with the monitoring of the forest condition for the protection of forest against atmospheric pollution and against forest fires.

The Biosoil study started in November 2006 for a duration of three years. The data storage and compilation will be performed by the French National Institute for Agricultural Research (INRA) and the French National Forest Inventory (NFI), by contract with the DG JRC.

The overall goal of the BioSoil soil project is to demonstrate the feasibility of a systematic forest soil monitoring at the European scale. Under the scope of ICP Forests, a first survey on soil condition was performed in 1994/1996, in which soil chemical analysis and soil profile description were made on Level I plots (based upon a grid of 16 km x 16 km grid). The Biosoil project will carry out a second survey on all Level I plots and on some Level II plots for the participating Member States.

The measurements and analyses to be performed on the plots are described in the [Manual on methods and criteria for harmonized sampling, assessment, monitoring and analysis of the effects of air pollution on forests](#) (Part IIIa), dated from June 2006. They include all mandatory and optional parameters for the Level I plots. A full soil profile description according to the FAO guidelines for Soil Description (2006) and its classification according to the World Reference Base 2006 also have to be performed. The measured data collected on soil profiles will be integrated into the Soil Profile Analytical Data Base of Europe. National laboratories are in charge of the analysis. The data to be submitted and its format are specified in the Submission Data Format Specification documents. For details on these documents and on the reference manuals [click here](#).

A subset of Level I plots will be re-analyzed by a central laboratory, the Laboratory for Soil Analyses of INRA (France).

Web site overview

This web site is composed of several modules:

- . The data submission module that is to be used by the National Focal Centres to submit their data to the Biosoil System (available in November 2007).
- . The sample workflow module that is to be used by the National Focal Centres to follow up the sending to and the processing of the samples for re-analysis by the central laboratory (available in May 2007).
- . The data dissemination module that is to be used by authorized persons to download summaries of Data status and Data currently available in the Biosoil System (available ??).

To access to the modules (restricted access), [login here](#)



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Welcome | **Data submission** | Sample workflow | Data dissemination | Statistics | Documents

Choose Inventory | Submit data | Submit DAR | Warnings | Add pictures | Submissions history

Progression zone

Please, select the extension then the file to upload

File upload zone

pls

Action zone

Reset **CLICK**

Context information

Connection

Connected : demo2

Last activity : 10/12/07
08:26:41

Country Germany -
Thüringen

Role NFC

Data Submission

Inventory type chosen

Type : Biosoil Level I

Year : 2006

Files-to-upload extensions:
.pls .som .prf .pfl

1

2

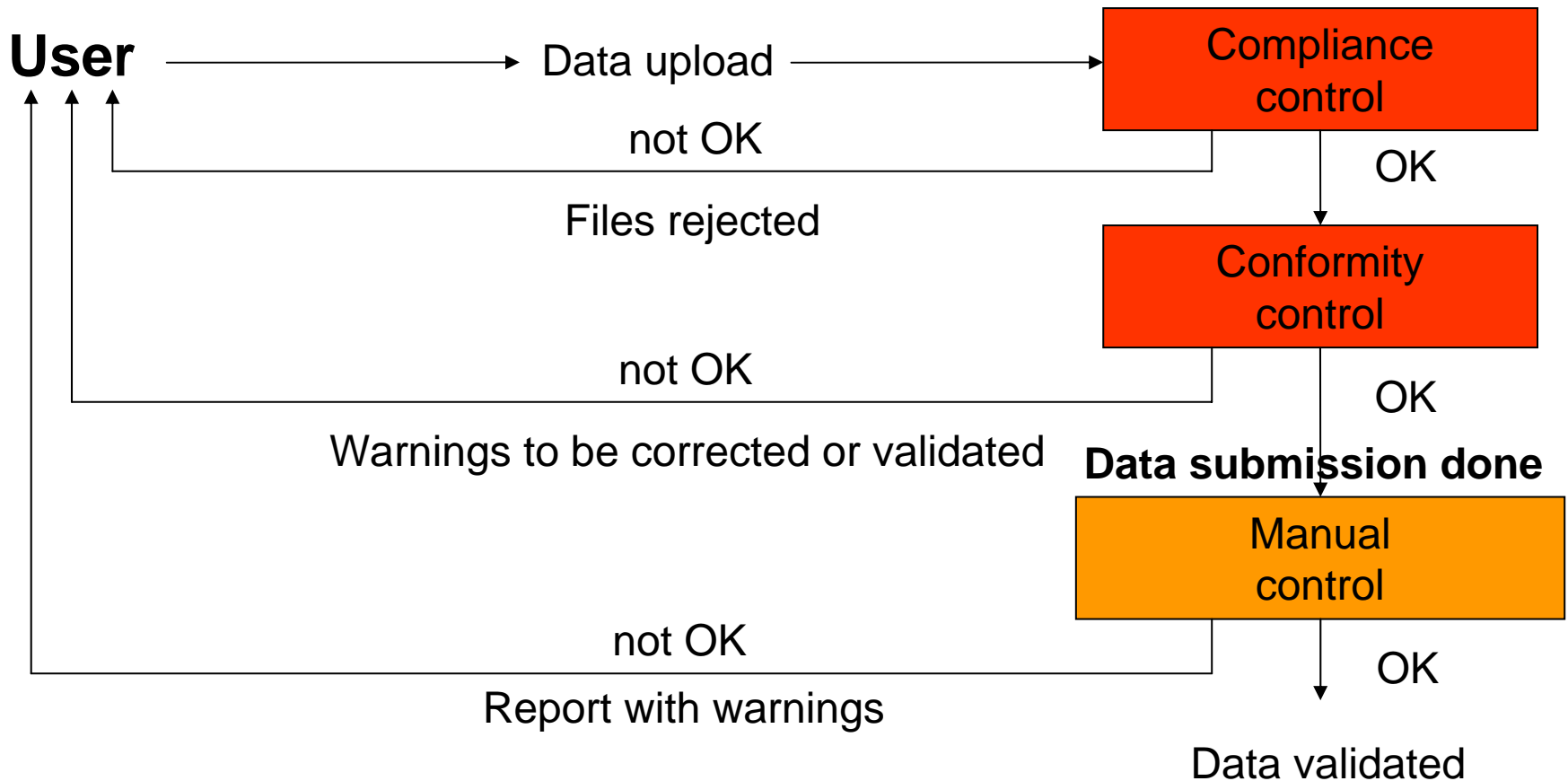
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Data quality controls



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Re-analysis of samples

Country	Nb samples 94	Nb samples Biosoil
Cyprus	11	
Austria	73	110
Czech Rep	45	101
Denmark	28	27
Estonia	41	58
France	236	237
Germany	68	250



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Re-analysis of samples

Country	Nb samples 94	Nb samples Biosoil
Ireland	26	33
Italy	14	128
Portugal	48	72
Slovenia	21	30
Spain	125	130
Sweden	191	363



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Re-analysis of samples

Country	Nb samples 94	Nb samples Biosoil
Belgium		12
Greece		10
Hungary		38
Finland		298
Latvia		47
Lithuania		40
Poland		287



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Re-analysis of samples

Country	Nb samples 94	Nb samples Biosoil
Slovak Rep		100
UK		138
TOTAL	927	2536



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