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RADIATION PROTECTION No. 191

Nuclear Science and Technology

Environmental Radioactivity in the European Community

2012-2014

DG ENER: Nuclear Energy, Safety and ITER
DG JRC: Nuclear Safety and Security

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PREFACE

Under the terms of Article 36 of the Euratom Treaty, European Union Member States shall periodically communicate to the Commission information on environmental radioactivity levels on their national territory. Since the early 1960s, the Commission has compiled and published this information as a series of reports. The current report, covering the years 2012 to 2014, is the 35th in the series.

This report endeavours to improve the clarity of information on levels of radioactivity in the European environment by making use of standardised reporting levels. These reporting levels are supported by more detailed radioactivity levels from a limited number of stations that provide high sensitivity measurements. The current report is the first in which the new EC Member State – Croatia, since July 2013 – is fully incorporated in the tables and the figures.

As part of its DG Energy support programme, the Directorate for Nuclear Safety and Security of the EC Joint Research Centre (JRC) has introduced all environmental radioactivity results received from the Member States into the Radioactivity Environmental Monitoring (REM) database. The JRC collated, checked and loaded the data, prepared the tabulations and figures as appropriate and provided the draft of the report. I would like to express my gratitude for the JRC's assistance and for the co-operation provided by the national authorities who supplied the original data.

This report is addressed to all who are concerned with radioactivity in the European environment.

M. Garribba
Deputy Director-General
Responsible for the coordination
of Euratom policies and Energy
Union financing instruments
Directorate-General Energy

CONTENTS

I INTRODUCTION

A. General

This report presents a summary of the available data on levels of radioactivity in some environmental media in the European Union (EU) Member States for the years 2012 - 2014. These data are obtained from official reports published by the responsible authorities and from data transmitted directly to the Commission by the national authorities and from individual laboratories. Member States provide environmental radioactivity data to the EU to comply with Articles 35 and 36 of the Euratom Treaty (see Appendix A). Continuous or semi-continuous monitoring of air and water is undertaken in Member States. Monitoring of food products, such as milk or mixed diet is considered an acceptable surrogate for the Article 35 requirement to monitor soil[1].

Individual monitoring laboratories tend to retain measurement techniques that have proven reliable over the years and are of sufficient sensitivity for radiological protection purposes. Measurement techniques, and thus measurement sensitivities, may, therefore, vary between laboratories and countries. This can make the interpretation and comparison of data across Europe difficult.

In order to facilitate the presentation of the results, it has been agreed[2] to use uniform reporting levels (see Appendix B) as a benchmark. If the results for a certain sample type - radionuclide combination are above their corresponding reporting level (RL), then the measured values are stated in this report. Otherwise they are reported as "< RL". Measured values are submitted either as a specific number or as known to be less than a certain value. When only known to be less than a certain value, the measured value is referred to as a constraint (<) value. Constraint (<) values above the corresponding reporting level are not considered in the calculations for this report. If the results for a certain sample type - radionuclide combination consist only of constraint (<) values above the reporting level, this is indicated with the Δ symbol in data tables. The reporting levels used in this report were derived such that they would indicate a resultant effective dose value of 1/1000th of a mSv (0.001 mSv).

It must be emphasised that the reporting levels are only meant to be a tool for presenting data and should not be confused with maximum permitted levels of radioactive contamination.

Radiation in the environment comes from space, from the earth, from air, from water, food and other natural sources. It also comes from radioactive waste, consumer products, atmospheric nuclear weapons testing and other artificial sources. Ionising radiation from natural and artificial sources do not differ in kind or effect on humans. The world average effective dose from all sources of radiation is 3.0 millisievert (mSv) per year (2.4 mSv for natural sources and 0.6 mSv for artificial)[3] [2]. Across the Member States of the European Community the annual effective dose for members of the public from natural sources ranges from about 1.5 mSv to just above 6 mSv, with a population-weighted average annual effective dose of 3.2 mSv[4] [2].

In normal circumstances, variations in time and space for the data from the many sampling locations which are distributed all over the Member States' territories (referred to as the "**dense network**"[5] [1]) are gradual. For this reason daily, weekly or even monthly variations per sample location are not of radiological significance. The data are therefore presented as regional averages (Table 1) except for surface water where on single sample locations is reported.

Although most values are below reporting levels, it is valuable to present the actual concentrations for a small number of locations. This allows any trends in radionuclide concentrations to be monitored over time. To achieve this, a number of representative locations were selected, this is referred to as the "**sparse network**"[6] [1]. High sensitivity measurements are performed at these locations and the individual results are presented graphically.

As in the previous report [3], the following combinations of sample and radionuclide categories are reported, as per the Commission Recommendations to Article 36 of the Euratom Treaty (2000/473/Euratom) [1] also mentioned in Appendix A:

Sampling media	Radionuclide categories	
	Dense network	Sparse network
airborne particulates	gross ß ^{137}Cs	^{7}Be ^{137}Cs
surface water	residual ß ^{137}Cs	^{137}Cs
drinking water	^{3}H ^{90}Sr ^{137}Cs	^{3}H ^{90}Sr ^{137}Cs
milk	^{90}Sr ^{137}Cs	^{90}Sr ^{137}Cs
mixed diet	^{90}Sr ^{137}Cs	^{90}Sr ^{137}Cs

[1] According to [1], "The monitoring of levels of radioactivity in soil does not allow a direct assessment of the exposure of the population. The exposure related to soil contamination is more directly assessed on the basis of ambient dose rate and foodstuff contamination. Experience has shown that the incorporation of soil data in the monitoring serves little useful purpose".

[2] Official Journal of the European Communities L 191, 27.07.2000, p. 9 (Annex III).

[3] European Atlas of Natural Radiation, Publication Office of the European Union, Luxembourg, 2019, p. 32.

[4] European Atlas of Natural Radiation, Publication Office of the European Union, Luxembourg, 2019, p. 173.

[5] Official Journal of the European Communities L 191, 27.07.2000, p. 2.

[6] Official Journal of the European Communities L 191, 27.07.2000, p. 2.

However, not all of the above combinations of sample and nuclide type are routinely monitored by each Member State.

Every effort has been made to collect all the available data, thus, most of the blank entries correspond to the absence of measurements. In some cases, the available results may have not been received.

All the radionuclides sampled, except strontium-90 (^{90}Sr) and caesium-137 (^{137}Cs), can be of either natural or artificial origin. The two exceptions are of artificial origin, mainly from past atmospheric weapons testing and from radioactive routine or accidental discharges from nuclear facilities.

The sampling locations incorporated in this report are intended to be as representative as possible of regional or national situations. However, while measurements local to and possibly influenced by nuclear installations have been discounted wherever practical, in certain cases national data are strongly dependent on such monitoring programmes.

B. Structure of the report

This report is composed of three main parts:

The **text part** consists of a general introduction followed by one chapter for each medium; this includes general information on the sample type, the occurrence of natural radionuclides therein, a description of sample preparation and analysis and a short discussion of the results.

The **results** are presented by sample and nuclide type, sample types are identified with appropriate symbols. All data from the dense network is presented, followed by that from the sparse network.

- The dense network results are presented graphically (with the exception of surface water as this sample type does not allow for geographical presentation) and in tabular form. The graphical representation illustrates the annual average radioactivity concentrations for each geographical region (see Section C). Four shades are used to indicate the concentrations on a scale ranging from less than the reporting level to ten times the reporting level. In addition, each sampling location is indicated. Next to the graphical representation the results are presented in tabular form. These results are averaged over geographical regions and over a particular time period (quarter, semester or whole year, depending on the availability of data). The total number of sampling locations and the number of measurements used to calculate the annual averages are given for each geographical region. In addition, the monthly maximum and the month in which this occurred are given for those values above the appropriate reporting level.
- The results for the sparse network are preceded by a map illustrating the sampling locations. The data are presented as time versus activity concentration graphs from 1984 onwards (where the data is available). Between one and three nearby locations are illustrated on each graph. Full lines represent actual sampling periods whereas dotted lines link measurement results over unsampled time periods. The appropriate reporting level is indicated by a horizontal line. The choice of 1984 as a start date enables the pulse of radioactivity which entered the environment of the EU from the 1986 Chernobyl accident in the Ukraine to be seen clearly.

The **appendices** to this report provide additional information on the Euratom Treaty, the calculation of reporting levels, the averaging procedures used, the data sources, the bibliography and information about the REM data bank. The addresses of the national authorities and laboratories that contributed to this report are given in Appendix D, while the national reports of environmental monitoring data are given in Appendix E. All data presented in this report are also stored in the REM data bank, at the JRC-Ispra, Italy (see Appendix F), and can be accessed with the REMdb online query described in the "Related Information" section at the end of this introduction.

Finally, and with the aim of enlarging the readership of this report, a glossary provides background information on frequently used terms in radiation protection.

C. Geographical divisions

For the larger Member States the data is divided according to geographical divisions. The partitioning of Croatia, Germany, Finland, France, Italy, Poland, Romania, Spain, Sweden and the United Kingdom has been based on administrative regions (Table 1) and results in a total of 47 geographical divisions of the EU (Figure 1).

II. AIRBORNE PARTICULATES

Airborne radioactive materials may occur in either gaseous or particulate form. In general, the latter is of greater potential radiological significance because it may be deposited and hence remain in the local environment. Consequently, most national routine monitoring networks measure only the particulate component. Atmospheric radioactivity is dominated by the naturally occurring, short-lived particulate decay products of gaseous radon (Rn = 1 to 20 Bq m^{-3} in outdoor air) [2]. Measurements of "total beta" radioactivity in airborne particulates must allow for this naturally occurring radioactivity. Other naturally occurring radionuclides measured in airborne particulates include beryllium-7 (^{7}Be) and potassium-40 (^{40}K).

Airborne particulate **sampling** is carried out by pumping air through filters at a flow rate of several hundred cubic meters per day. In most countries filters are changed daily and analysed for total beta activity following the decay of radon decay products. Individual radionuclide analyses are performed weekly, monthly or quarterly. Man-made alpha-emitting aerosols are rarely measured by routine monitoring networks as they are usually undetectable, even close to the nuclear installations where they are produced. Therefore, these measurements are not presented in this report. The sampling locations in the EU for gross beta and ^{137}Cs, considered in this report, are illustrated on the maps in figs. A1 – A3 and A4 – A6, respectively.

Minimal **treatment** of the air filters is required, on the whole, they are measured directly or they may be ashed or compressed to improve the counting geometry and hence counting efficiency.

Results: Most Member States have provided **gross beta (gross-ß)** data (Tables A1 – A3) and **^{137}Cs** data (Tables A4 – A6) for the dense network. For the sparse network those stations were selected that provide a good coverage of the European territory and for which measurable concentrations were reported. The results for the naturally occurring **^{7}Be** and artificial radionuclide **^{137}Cs** are given in Figures A8 to A22 and Figures A23 to A37, respectively. The ^{137}Cs activity concentration trends clearly show the 'Chernobyl peak' (26 April - 10 May 1986), followed by a return to pre-Chernobyl concentration values. The Chernobyl-peak values may differ by several orders of magnitude at different locations, due to differences in the airborne activity and also differences in the sampling time used (ranging from hours to weeks).

III. SURFACE WATER

Surface water is one of the compartments into which authorised discharges of radioactive effluents from nuclear installations are made. Radionuclides in surface waters can be found in the water phase or associated with suspended particles and can eventually become incorporated into sediments and living species. Natural radionuclides in river water include ^{3}H at levels of 0.02 - 0.1 Bq l^{-1}, ^{40}K (0.04 - 2 Bq l^{-1}), radium, radon and their short-lived decay products (< 0.4 - 2 Bq l^{-1}). The main fraction of tritium (^{3}H) in surface water however is due to man's activities.

Samples are either taken continuously and bulked for monthly or quarterly analysis, or alternatively, spot samples are taken periodically several times a year and analysed individually. Some laboratories remove suspended material from the water sample for separate analysis.

Treatment of the water may consist of filtration or evaporation (for direct measurement of the residue), ion-exchange and subsequent washing of the ion exchange column. More elaborate chemical separation techniques are used to determine radionuclides such as strontium-90 (^{90}Sr). To determine ^{3}H concentrations, generally the water is multiple distilled.

Results: Most of the sampling locations considered (Fig. S1 to S10) lie on rivers into which authorised discharges of radioactive effluents are made. Surface water samples may, therefore, contain detectable radioactive contaminants traceable to installations at appreciable distances upstream from the sampling locations and this appears to be reflected in some cases in the results obtained. Furthermore, this has the effect of clouding the usual distinction made between sampling carried out for the purposes of general environmental monitoring and that for the surveillance of nuclear power plants. Nevertheless, since the rivers in question are all water courses of major significance, the results have been considered to be nationally representative.

The results on beta activity given here (Tables S1 – S15) refer to **residual-ß** (total beta less natural ^{40}K activity). For France, the national reports indicate total beta for the water phase and for suspended matter, and the potassium content separately; the residual beta activity was calculated using a conversion factor of 27.6 Bq g^{-1} potassium. Also **^{137}Cs** is reported (Tables S16 – S30).

For the sparse network those stations were selected for which measurable concentrations of ^{137}Cs were reported and which provided a good coverage of the European territory on major rivers and in the sea (Fig. S11). The results are presented in Figs. S12 to S27.

It should be noted that while some above average values appear to be associated with discharges from nuclear installations the results are still well below levels which might be considered of any significance in terms of health.

IV. DRINKING WATER

Drinking water is monitored because of its vital importance for man, even though a severe radioactive contamination of this medium is rather improbable. The most important natural radionuclides in drinking water are ^{3}H (0.02 - 0.4 Bq l^{-1}), ^{40}K (typically 0.2 Bq l^{-1} but varies greatly), radium, radon and their short-lived decay products (0.4 - 4.0 Bq l^{-1}). Occasionally, the presence of ^{3}H and radium may also be due to man's activities.

Samples may be taken from ground or surface water supplies, from water distribution networks, mineral waters etc. Spot samples are taken a few times a year and analysed individually or samples are taken daily and bulked for monthly or quarterly analysis.

Sample **treatment** usually consists of sample evaporation for direct measurement of the concentrate or separation on ion-exchange columns. More elaborate chemical separations are required for ^{90}Sr determination, whereas ^{3}H is generally measured following multiple distillation of the sample.

Results: ^{3}H values are presented in Tables W1 – W3. For the sparse network, thirty stations reported measured concentrations (Figs. W11 to W23). For **^{90}Sr** the levels are shown in Tables W4 – W6 and, for the sparse network, in Figs. W24 to W34. For **^{137}Cs** the results are presented in Tables W7 – W9 and, for the sparse network, in Figs. W35 to W48.

V. MILK

Consumption of milk and dairy products has been shown to be one of the most important pathways for uptake of radionuclides from environment to man.

Samples are mostly taken at dairies covering large geographical areas in order to obtain representative samples. They are generally taken on a monthly basis; but sometimes only during the pasture season. The samples may be analysed separately or bulked for regional or national average evaluations.

Treatment usually consists of drying the sample for gamma spectroscopic analysis and chemical separation for ^{90}Sr.

Results: Generally the concentrations of the stable elements calcium (Ca) and potassium (K) are determined because of the similarity of their metabolic behaviour with strontium (Sr) and caesium (Cs) respectively. Typical values in milk are 1 to 2 g l^{-1} for calcium and potassium. The average radioactive concentrations reported in the tables were mainly calculated from data which were themselves averages in time (daily, weekly or monthly) and space. For **^{90}Sr** quarterly averages are shown in Tables M1 – M3. **^{137}Cs** quarterly averages are presented in Tables M4 - M6.

VI. MIXED DIET

The aim of measuring radioactivity in mixed diet is to get “integral” information on the uptake of radionuclides by man via the food chain. Rather than expressing the radioactivity content of foodstuffs per unit weight, it is more appropriate to estimate the activity consumed per day per person (Bq d^{-1} p^{-1}). An important natural radionuclide is ^{40}K (typically 100 Bq d^{-1} p^{-1}).

Foodstuffs can be measured as separate ingredients. However, due to differences in the composition of national diets, the trend is to sample complete meals to give a representative figure for the contamination of mixed diet. Nevertheless knowledge of the contamination of the individual ingredients together with the composition of the national diet can also lead to a representative figure.

Samples are taken as ingredients or as complete meals, mostly at places where many meals are consumed (i.e. factory restaurants, schools).

Treatment usually consists of mixing the sample prior to gamma spectroscopic measurement of ^{137}Cs and chemical separation to determine the ^{90}Sr activity.

Results: Generally the concentrations of the stable isotopes of calcium and potassium are determined because of the similarity of their metabolic behaviour with strontium and caesium, respectively. Typical values in mixed diet are 0.7 to 1.5 g d^{-1} person^{-1} for calcium and 3 to 4 g d^{-1} person^{-1} for potassium. For **^{90}Sr** the quarterly averages are shown in Tables D1 – D3. The sparse network results are presented in Figs. D8 – D19. **^{137}Cs** quarterly averages are given in Tables D4 – D6. The measurements reported by the sparse network stations shown in the report clearly show a decreasing trend of caesium contamination in mixed diet after the Chernobyl accident (Figs. D20 to D32).

RELATED INFORMATION

Monitoring Reports available in electronic format

The list of all the published (and downloadable) Monitoring Reports is available here:

https://remon.jrc.ec.europa.eu/About/Environmental-Monitoring/Monitoring-Reports-Download

REMdb online query

Although the Monitoring Reports describe the collected information as complete as possible, this communication medium does not allow to show the amount of data in all its details. A new interface, called REMdb Query, provides an interactive access to the collected and verified environmental monitoring data in the European Union.

The new interface can be accessed from the "Maps" section, Routine Monitoring icon of web site https://remon.jrc.ec.europa.eu/ or directly from:

https://remap.jrc.ec.europa.eu/Routine.aspx

REMdb web services

REM has published various private web services that provide the link between the Data Submission Tool and the REM database at the JRC.

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1. Commission Recommendation 2000/473/Euratom, OJ L191 of 27.7.2000
2. G. Cinelli, M. De Cort and T. Tollefsen, “European Atlas of Natural Radiation”, Publication Office of the European Union, Luxembourg, 2019
3. M. De Cort, T. Tollefsen, M. Marin Ferrer, S. Vanzo, M. A. Hernandez Ceballos, E. Nweke, L. De Felice, S. Martino, P. V. Tognoli and V. Tanner, “Environmental Radioactivity in the European Community 2007-2011”, EUR 29564, 2018

Fig . 1

Definition of the geographical regions used in the data tables and figures

Table 1
Definition of country partitions. Country codes according to ISO 3166/4217

Country	Short description	Detailed description
AT	Austria	
BE	Belgium	
BG	Bulgaria	
CY	Cyprus	
CZ	Czech Republic	
DE-N	Germany - North	Bremen, Hamburg, Mecklenburg-Vorpommern, Niedersachsen and Schleswig-Holstein
DE-C	Germany - Central	Hessen, Nordrhein-Westfalen, Rheinland-Pfalz and Saarland
DE-S	Germany - South	Baden-Württemberg and Bayern
DE-E	Germany - East	Berlin, Brandenburg, Sachsen, Sachsen-Anhalt and Thüringen
DK	Denmark	
EE	Estonia	
ES-N	Spain - North	Aragon, Asturias, Cantabria, Galicia, Navarra, Pais Vasco and Rioja
ES-C	Spain - Central	Castilla - La Mancha, Castilla - Leon, Extramadura and Madrid
ES-S	Spain - South	Andalucia, Canarias, Ceuta y Melilla and Murcia
ES-E	Spain - East	Baleares, Cataluña and C. Valenciana
FI-N	Finland - North	Lapland and Oulu
FI-S	Finland - South	Western Finland, Eastern Finland, Southern Finland
FR-NW	France - Northwest	Bretagne, Centre, Ile de France, Nord-Pas-de-Calais, Haute Normandie, Basse Normandie, Pays de la Loire and Picardie
FR-NE	France - Northeast	Alsace, Bourgogne, Champagne-Ardennes, Franche-Comté and Lorraine
FR-SW	France - Southwest	Aquitaine, Languedoc-Roussillon, Limousin, Midi-Pyrénées and Poitou-Charentes
FR-SE	France - Southeast	Auvergne, Corse, Provence-Alpes-Côte-d'Azur and Rhône-Alpes
GB-EN	United Kingdom - England	
GB-WL	United Kingdom - Wales	
GB-SC	United Kingdom - Scotland	
GB-NI	United Kingdom - Northern Ireland	
GR	Greece	
HR-A	Croatia - Adriatic	Primorsko-goranska, Licko-senjska, Zadarska, Šibensko-kninska, Splitsko-dalmatinska, Istarska, Dubrovacko-neretvanska
HR-C	Croatia - Continental	Grad Zagreb, Zagrebacka, Krapinsko-zagorska, Varaždinska, Koprivnicko-križevacka, Medimurska, Bjelovarsko-bilogorska, Viroviticko-podravska, Požeško-slavonska, Brodsko-posavska, Osjecko-baranjska, Vukovarsko-srijemska, Karlovacka, Sisacko-moslavacka
HU	Hungary	
IE	Ireland	
IT-N	Italy - North	Emilia-Romagna, Friuli-Venezia-Giulia, Liguria,Lombardia, Piemonte, Trentino Alto Adige, Val d'Aosta and Veneto
IT-C	Italy - Central	Abruzzo, Lazio, Marche, Molise, Toscana and Umbria
IT-S	Italy - South	Basilicata, Calabria, Campania, Puglia, Sardegna and Sicilia
LT	Lithuania	
LU	Luxembourg	
LV	Latvia	
MT	Malta	
NL	The Netherlands	
PL-N	Poland - North	Kujawsko-Pomorskie, Lubuskie, Mazowieckie, Podlaskie, Pomorskie, Warminsko Mazurskie, Wielkopolskie, Zachodniopomorskie
PL-S	Poland - South	Dolnoslaskie, Lubelskie, Lodzskie, Malopolskie, Opolskie, Podkarpackie, Slaskie, Swietokrzyskie
PT	Portugal	
RO-N	Romania - North	Alba, Arad, Bacau, Bihor, Bistrita-Nasaud, Botosani, Brasov, Caras-Severin, Cluj, Covasna, Harghita, Hunedoara, Iasi, Maramures, Mures, Neamt, Salaj, Satu-Mare, Sibiu, Suceava, Timis and Vaslui
RO-S	Romania - South	Arges, Braila, Bucuresti-Ilfov, Buzau, Calarasi, Constanta, Dambovita, Dolj, Galati, Giurgiu, Gorj, Ialomita, Mehedinti, Olt, Prahova,Teleorman, Tulcea, Valcea and Vrancea
SE-N	Sweden - North	Övre Norrland and Mellersta Norrland
SE-S	Sweden - South	Stockholm, Östra Mellansverige, Sydsverige, Norra Mellansverige, Småland med öarna and Västsverige
SI	Slovenia	
SK	Slovakia	

DENSE

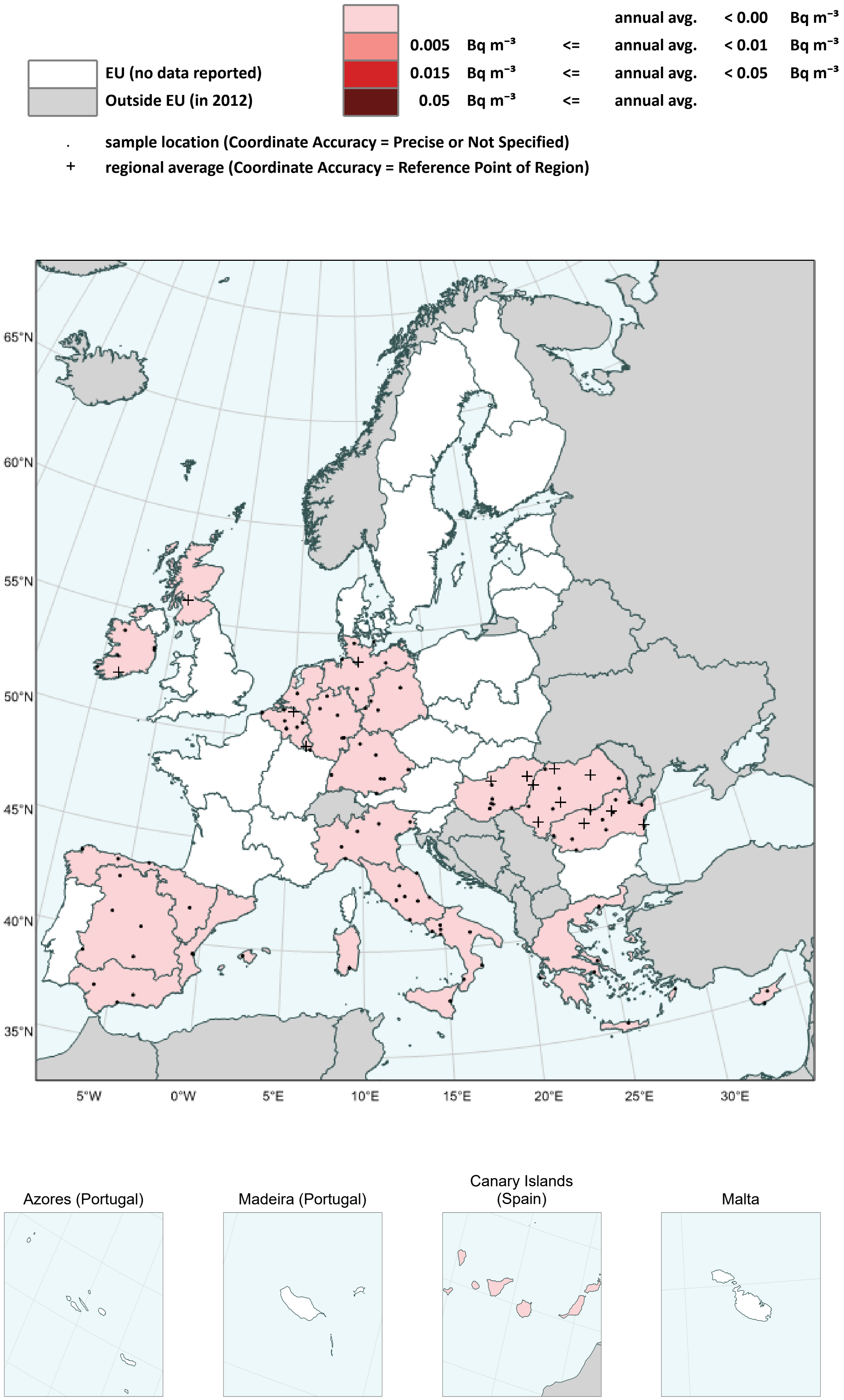


Fig.A1
Sampling locations and geographical averages by year for gross-β in airborne particulates, 2012

Table A1: Geographical and time averages

YEAR : 2012

SAMPLE TYPE : airborne particulates (Bq m^{-3})

NUCLIDE CATEGORY : gross-β

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT									
BE	2563	9	< RL	< RL	< RL	< RL	< RL	< RL	2
BG									
CY	20	2	< RL	< RL	< RL	< RL	< RL	< RL	11
CZ									
DE-N	272	6	< RL	< RL	< RL	< RL	< RL	< RL	2
DE-C	82	5	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-S	241	7	< RL	< RL	< RL	< RL	< RL	< RL	8
DE-E	120	4	< RL	< RL	< RL	< RL	< RL	< RL	3
DE	715	22	< RL	< RL	< RL	< RL	< RL	< RL	2
DK									
EE									
ES-N	211	4	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-C	260	5	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-S	159	3	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-E	159	3	< RL	< RL	< RL	< RL	< RL	< RL	8
ES	789	15	< RL	< RL	< RL	< RL	< RL	< RL	9
FI-N									
FI-S									
FI									
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN									
GB-WL									
GB-SC	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI									
GB	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GR	441	6	< RL	< RL	< RL	< RL	< RL	< RL	8
HU	677	9	< RL	< RL	< RL	< RL	< RL	< RL	2
IE	71	6	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-N	497	5	< RL	< RL	< RL	< RL	< RL	< RL	8
IT-C	805	7	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-S	367	11	< RL	< RL	< RL	< RL	< RL	< RL	8
IT	1669	23	< RL	< RL	< RL	< RL	< RL	< RL	1
LT									
LU	77	2	< RL	< RL	< RL	< RL	< RL	< RL	2
LV									
MT									
NL	53	1	< RL	< RL	< RL	< RL	< RL	< RL	5
PL-N									
PL-S									
PL									
PT									
RO-N	711	10	< RL	< RL	< RL	< RL	< RL	< RL	9
RO-S	1021	14	< RL	< RL	< RL	< RL	< RL	< RL	12
RO	1732	24	< RL	< RL	< RL	< RL	< RL	< RL	12
SE-N									
SE-S									
SE									
SI									
SK									

RL: reporting level for gross-β In air, i.e. 5.0 E-03 BQ/M3 (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

				annual avg.	< 0.00	Bq m^{-3}
	0.005	Bq m^{-3}	<=	annual avg.	< 0.01	Bq m^{-3}
EU (no data reported)	0.015	Bq m^{-3}	<=	annual avg.	< 0.05	Bq m^{-3}
Outside EU (in 2013)	0.05	Bq m^{-3}	<=	annual avg.		

. sample location (Coordinate Accuracy = Precise or Not Specified)

\+ regional average (Coordinate Accuracy = Reference Point of Region)

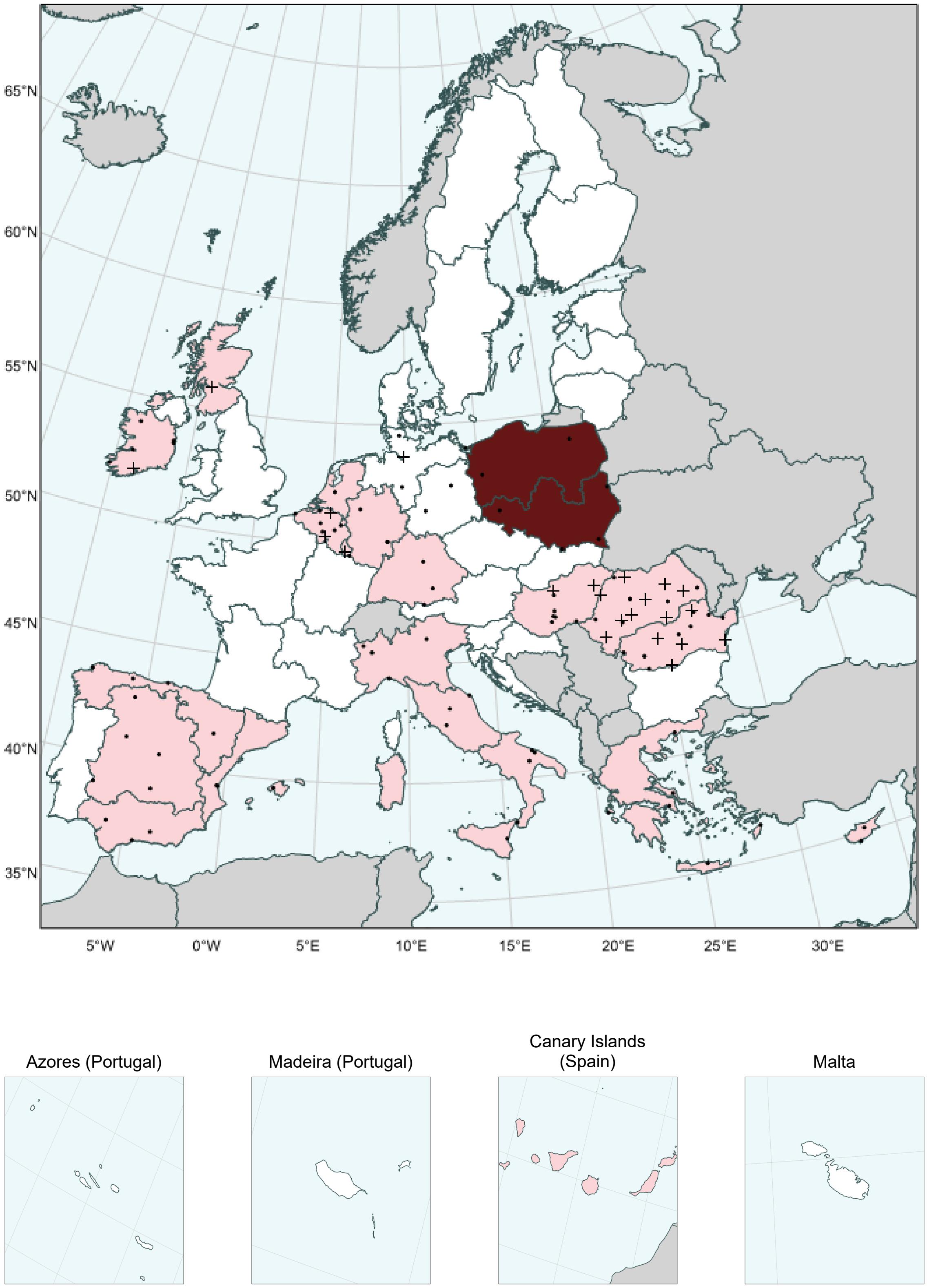


Fig.A2

Sampling locations and geographical averages by year for gross-β in airborne particulates, 2013

Table A2: Geographical and time averages

YEAR : **2013**
SAMPLE TYPE : **airborne particulates (Bq m^{-3})**
NUCLIDE CATEGORY : **gross-β**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT									
BE	2507	8	< RL	< RL	< RL	< RL	< RL	< RL	3
BG									
CY	212	2	< RL	< RL	< RL	< RL	< RL	< RL	11
CZ									
DE-N	3	3					Δ		
DE-C	5	3	< RL				< RL	< RL	3
DE-S	156	3	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-E	2	2					Δ		
DE	166	11	< RL	< RL	< RL	< RL	< RL	< RL	7
DK									
EE									
ES-N	211	4	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-C	259	5	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-S	160	3	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-E	158	3	< RL	< RL	< RL	< RL	< RL	< RL	7
ES	788	15	< RL	< RL	< RL	< RL	< RL	< RL	7
FI-N									
FI-S									
FI									
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN									
GB-WL									
GB-SC	13	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI									
GB	13	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GR	373	6	< RL	< RL	< RL	< RL	< RL	< RL	10
HR-A									
HR-C									
HR									
HU	781	8	< RL	< RL	< RL	< RL	< RL	< RL	4
IE	72	6	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-N	419	5	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C	594	3	< RL	< RL	< RL	< RL	< RL	< RL	8
IT-S	660	5	< RL	< RL	< RL	< RL	< RL	< RL	1
IT	1673	13	< RL	< RL	< RL	< RL	< RL	< RL	12
LT									
LU	76	2	< RL	< RL	< RL	< RL	< RL	< RL	7
LV									
MT									
NL	53	1	< RL	< RL	< RL	< RL	< RL	< RL	3
PL-N	6	3	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1.8E-01	1
PL-S	8	4	6.3E-02	6.3E-02	6.3E-02	6.3E-02	6.3E-02	6.3E-02	12
PL	14	7	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	1.1E-01	12
PT									
RO-N	2654	16	< RL	< RL	< RL	< RL	< RL	< RL	12
RO-S	2722	14	< RL	< RL	< RL	< RL	< RL	< RL	11
RO	5376	30	< RL	< RL	< RL	< RL	< RL	< RL	11
SE-N									
SE-S									
SE									
SI									
SK									

RL: reporting level for gross-β In air, i.e. 5.0 E-03 BQ/M3 (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

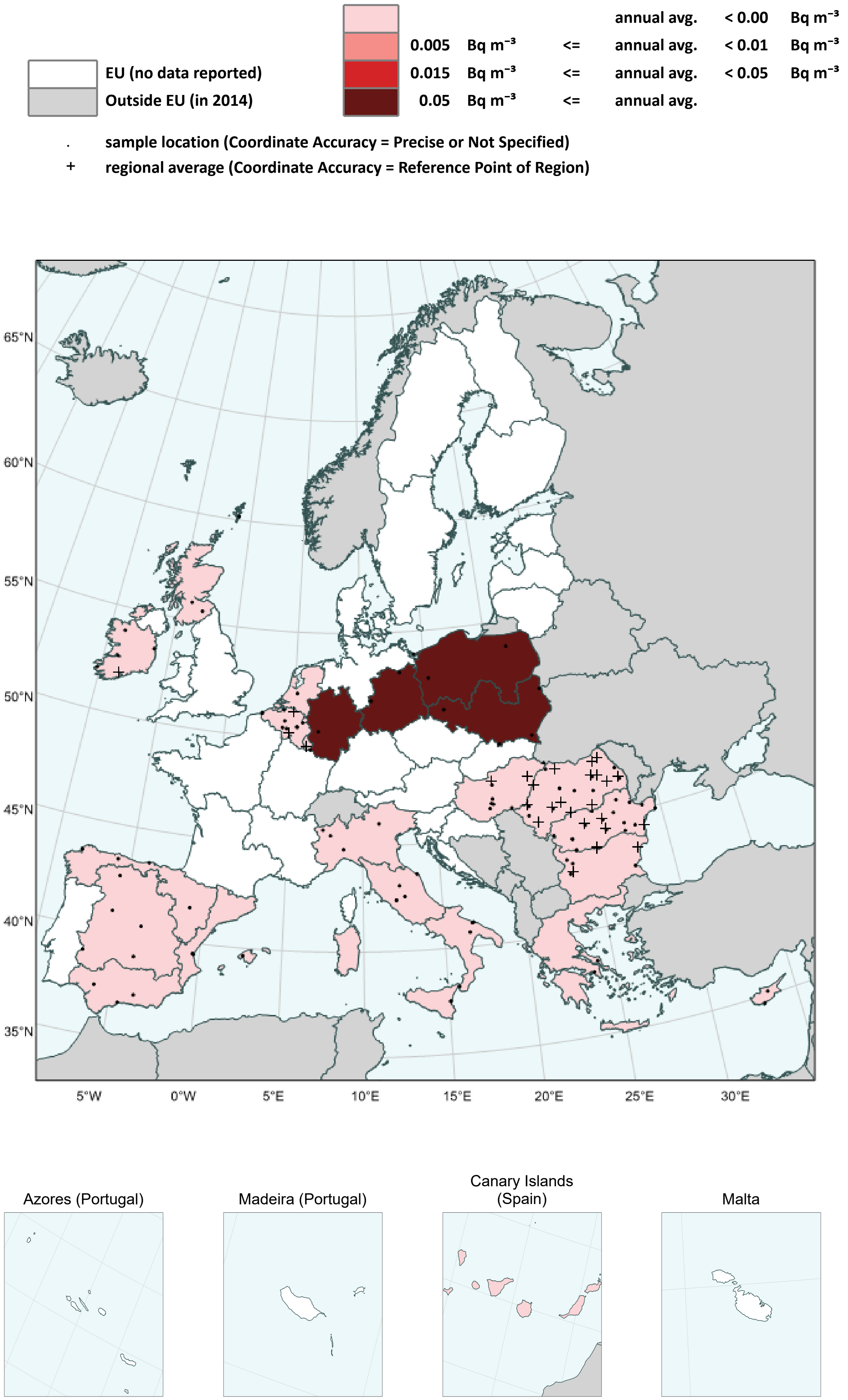


Fig.A3

Sampling locations and geographical averages by year for gross-β in airborne particulates, 2014

Table A3: Geographical and time averages

YEAR : **2014**

SAMPLE TYPE : **airborne particulates (Bq m⁻³)**

NUCLIDE CATEGORY : **gross-β**

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT									
BE	2552	12	< RL	< RL	< RL	< RL	< RL	< RL	9
BG	12	7	< RL	< RL	< RL	< RL	< RL	< RL	3
CY	200	2	< RL	< RL	< RL	< RL	< RL	< RL	8
CZ									
DE-N							Δ		
DE-C	2	1		2.8E-01	2.4E-01		2.6E-01	2.8E-01	6
DE-S							Δ		
DE-E	3	2		9.7E-01		< RL	4.9E-01	9.7E-01	6
DE	5	3		6.2E-01	2.4E-01	< RL	2.9E-01	6.2E-01	6
DK									
EE									
ES-N	210	4	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-C	265	5	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	158	3	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-E	157	3	< RL	< RL	< RL	< RL	< RL	< RL	6
ES	790	15	< RL	< RL	< RL	< RL	< RL	< RL	10
FI-N									
FI-S									
FI									
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN									
GB-WL									
GB-SC	36	3	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI									
GB	36	3	< RL	< RL	< RL	< RL	< RL	< RL	1
GR	2	2	< RL				< RL	< RL	1
HR-A									
HR-C									
HR									
HU	780	9	< RL	< RL	< RL	< RL	< RL	< RL	11
IE	55	5	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-N	389	4	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C	170	5	< RL	< RL	< RL	< RL	< RL	< RL	3
IT-S	750	6	< RL	< RL	< RL	< RL	< RL	< RL	4
IT	1309	15	< RL	< RL	< RL	< RL	< RL	< RL	1
LT									
LU	78	2	< RL	< RL	< RL	< RL	< RL	< RL	9
LV									
MT									
NL	54	1	< RL	< RL	< RL	< RL	< RL	< RL	9
PL-N	3	3	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1
PL-S	4	4	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	1.3E-01	12
PL	7	7	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1.4E-01	1
PT									
RO-N	5957	24	< RL	< RL	< RL	< RL	< RL	< RL	11
RO-S	5991	23	< RL	< RL	< RL	< RL	< RL	< RL	8
RO	11948	47	< RL	< RL	< RL	< RL	< RL	< RL	11
SE-N									
SE-S									
SE									
SI									
SK									

RL: reporting level for gross-β In air, i.e. 5.0 E-03 BQ/M3 (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

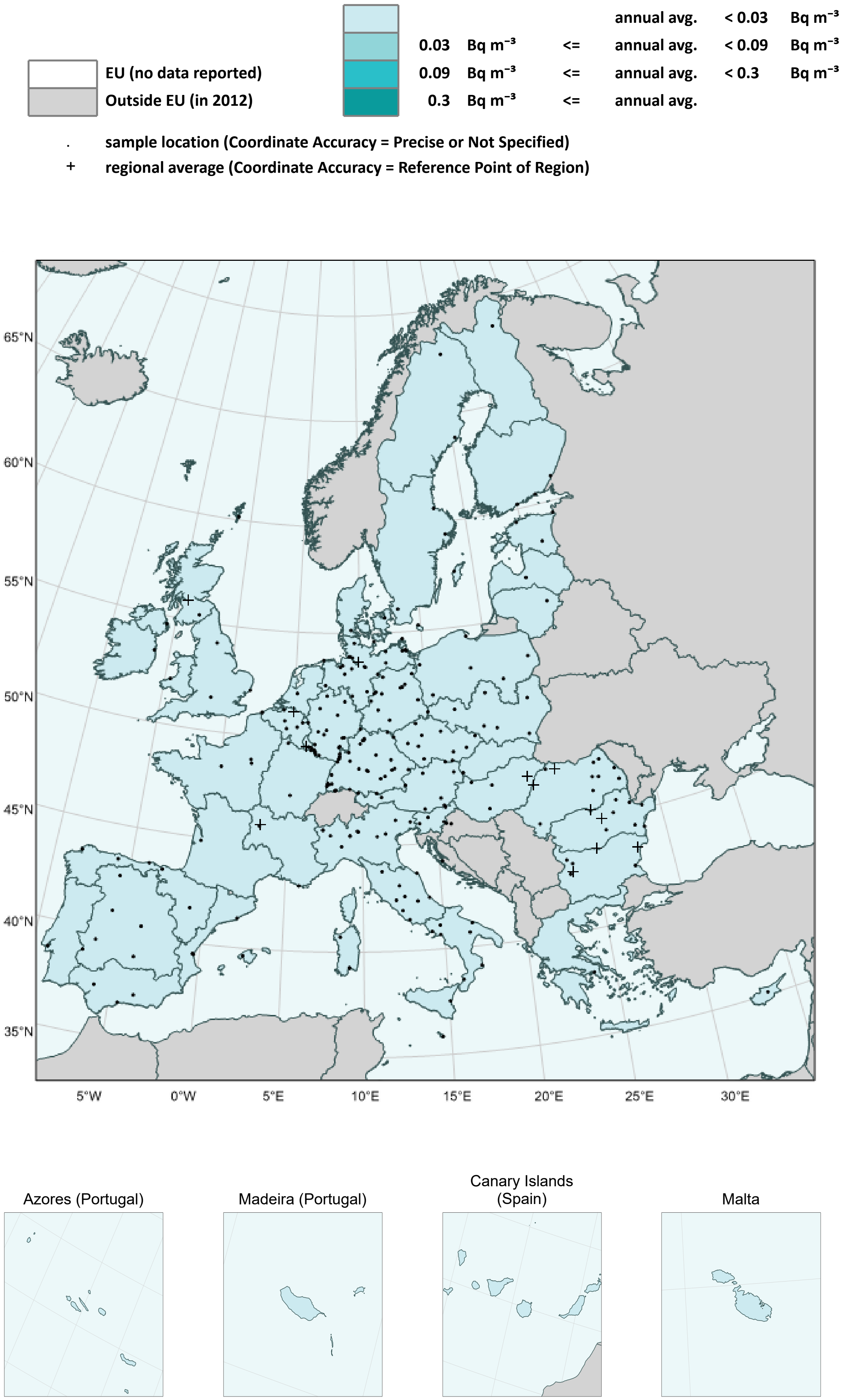


Fig.A4

Sampling locations and geographical averages by year for ^{137}Cs in airborne particulates, 2012

Table A4: Geographical and time averages

YEAR : **2012**
SAMPLE TYPE : **airborne particulates (Bq m^{-3})**
NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	587	10	< RL	< RL	< RL	< RL	< RL	< RL	2
BE	95	8	< RL	< RL	< RL	< RL	< RL	< RL	1
BG	151	8	< RL	< RL	< RL	< RL	< RL	< RL	10
CY	11	1	< RL	< RL	< RL	< RL	< RL	< RL	4
CZ	533	10	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-N	3966	25	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-C	4023	22	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-S	4844	32	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-E	3361	12	< RL	< RL	< RL	< RL	< RL	< RL	3
DE	16194	91	< RL	< RL	< RL	< RL	< RL	< RL	3
DK	73	3	< RL	< RL	< RL	< RL	< RL	< RL	12
EE	159	3	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-N	104	5	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-C	169	7	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	134	4	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-E	92	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES	499	20	< RL	< RL	< RL	< RL	< RL	< RL	9
FI-N	53	1	< RL	< RL	< RL	< RL	< RL	< RL	2
FI-S	373	3	< RL	< RL	< RL	< RL	< RL	< RL	12
FI	426	4	< RL	< RL	< RL	< RL	< RL	< RL	12
FR-NW	71	3	< RL	< RL	< RL	< RL	< RL	< RL	3
FR-NE	69	2	< RL	< RL	< RL	< RL	< RL	< RL	2
FR-SW	37	1	< RL	< RL	< RL	< RL	< RL	< RL	3
FR-SE	81	3	< RL	< RL	< RL	< RL	< RL	< RL	2
FR	258	9	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-EN	15	3	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-WL	5	1	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-SC	21	3	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	2
GB	46	8	< RL	< RL	< RL	< RL	< RL	< RL	2
GR	8	1		< RL	< RL	< RL	< RL	< RL	10
HU	170	4	< RL	< RL	< RL	< RL	< RL	< RL	6
IE	6	1	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-N	257	12	< RL	< RL	< RL	< RL	< RL	< RL	7
IT-C	1015	9	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-S	299	11	< RL	< RL	< RL	< RL	< RL	< RL	7
IT	1571	32	< RL	< RL	< RL	< RL	< RL	< RL	9
LT	13	1	< RL	< RL	< RL	< RL	< RL	< RL	2
LU	106	2	< RL	< RL	< RL	< RL	< RL	< RL	12
LV	3	1	< RL		< RL		< RL	< RL	3
MT	46	1	< RL	< RL	< RL	< RL	< RL	< RL	10
NL	53	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	6	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	6	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	12	12	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	52	1	< RL	< RL	< RL	< RL	< RL	< RL	7
RO-N	47	11	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-S	62	9	< RL	< RL	< RL	< RL	< RL	< RL	1
RO	109	20	< RL	< RL	< RL	< RL	< RL	< RL	1
SE-N	107	2	< RL	< RL	< RL	< RL	< RL	< RL	6
SE-S	215	4	< RL	< RL	< RL	< RL	< RL	< RL	5
SE	322	6	< RL	< RL	< RL	< RL	< RL	< RL	6
SI	59	5	< RL	< RL	< RL	< RL	< RL	< RL	12
SK	14	2	< RL	< RL	< RL	< RL	< RL	< RL	2

RL: reporting level for ^{137}Cs In air, i.e. 3.0 E-02 BQ/M3 (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

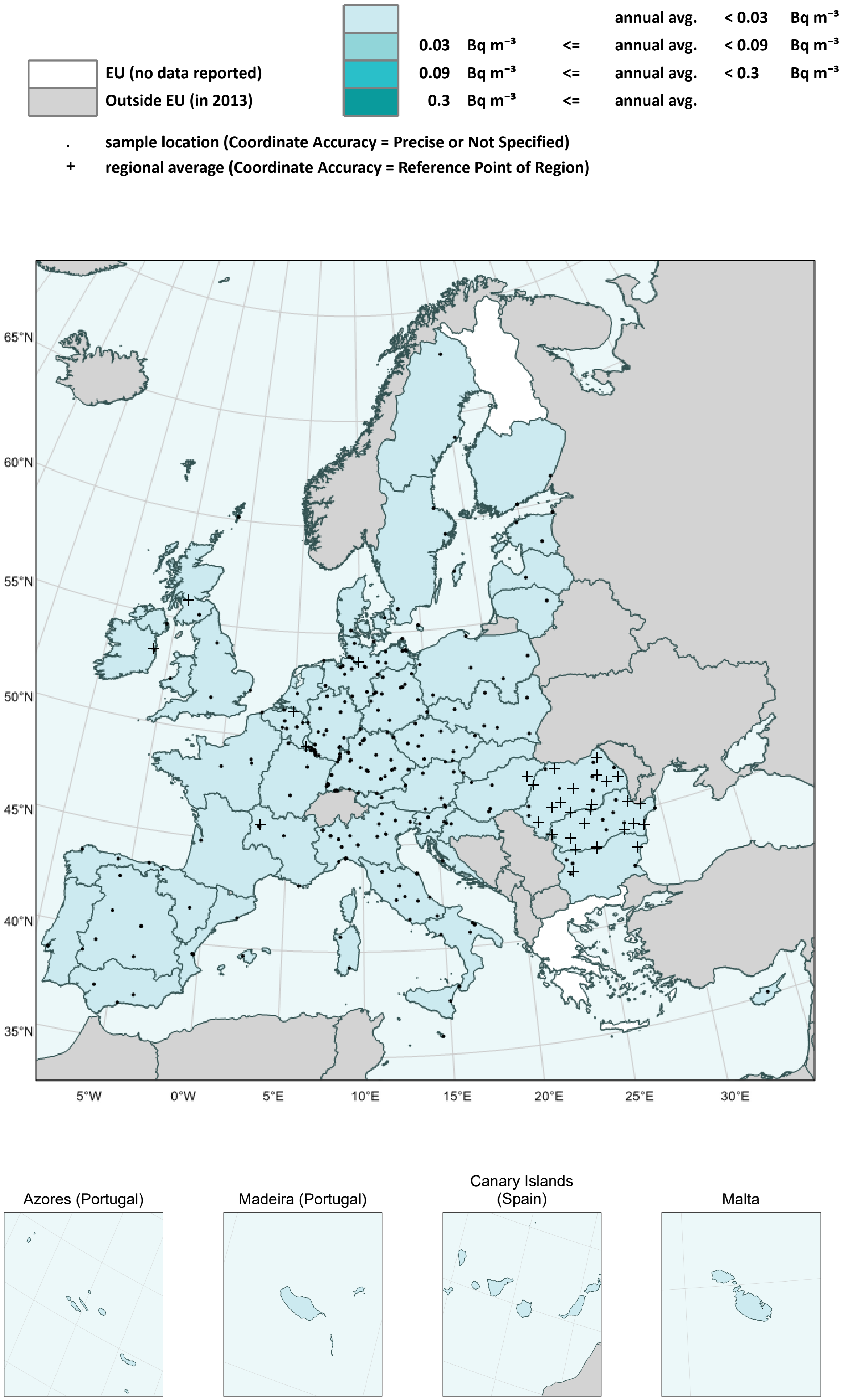


Fig.A5

Sampling locations and geographical averages by year for ^{137}Cs in airborne particulates, 2013

Table A5: Geographical and time averages

DENSE

YEAR : 2013
SAMPLE TYPE : airborne particulates (Bq m^{-3})
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	525	10	< RL	< RL	< RL	< RL	< RL	< RL	12
BE	98	9	< RL	< RL	< RL	< RL	< RL	< RL	11
BG	142	8	< RL	< RL	< RL	< RL	< RL	< RL	1
CY	32	1	< RL	< RL	< RL	< RL	< RL	< RL	7
CZ	553	11	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-N	4087	26	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	3781	22	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-S	4513	34	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-E	3240	12	< RL	< RL	< RL	< RL	< RL	< RL	1
DE	15621	94	< RL	< RL	< RL	< RL	< RL	< RL	1
DK	73	3	< RL	< RL	< RL	< RL	< RL	< RL	1
EE	152	3	< RL	< RL	< RL	< RL	< RL	< RL	4
ES-N	105	5	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-C	172	7	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-S	131	4	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-E	92	4	< RL	< RL	< RL	< RL	< RL	< RL	3
ES	500	20	< RL	< RL	< RL	< RL	< RL	< RL	2
FI-N									
FI-S	512	5	< RL	< RL	< RL	< RL	< RL	< RL	4
FI	512	5	< RL	< RL	< RL	< RL	< RL	< RL	4
FR-NW	56	3	< RL	< RL	< RL	< RL	< RL	< RL	12
FR-NE	66	3	< RL	< RL	< RL	< RL	< RL	< RL	12
FR-SW	48	1	< RL	< RL	< RL	< RL	< RL	< RL	7
FR-SE	78	5	< RL	< RL	< RL	< RL	< RL	< RL	12
FR	248	12	< RL	< RL	< RL	< RL	< RL	< RL	12
GB-EN	15	3	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-WL	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	23	3	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB	48	8	< RL	< RL	< RL	< RL	< RL	< RL	1
GR									
HR-A	5	1	< RL	< RL	< RL	< RL	< RL	< RL	11
HR-C	15	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	20	2	< RL	< RL	< RL	< RL	< RL	< RL	12
HU	237	5	< RL	< RL	< RL	< RL	< RL	< RL	1
IE	10	2	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-N	323	22	< RL	< RL	< RL	< RL	< RL	< RL	11
IT-C	923	11	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-S	182	9	< RL	< RL	< RL	< RL	< RL	< RL	9
IT	1428	42	< RL	< RL	< RL	< RL	< RL	< RL	1
LT	10	1	< RL	< RL	< RL	< RL	< RL	< RL	4
LU	106	2	< RL	< RL	< RL	< RL	< RL	< RL	2
LV	3	1	< RL	< RL	< RL		< RL	< RL	9
MT	53	1	< RL	< RL	< RL	< RL	< RL	< RL	2
NL	53	1	< RL	< RL	< RL	< RL	< RL	< RL	3
PL-N	12	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	12	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	24	12	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	49	1	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-N	234	19	< RL	< RL	< RL	< RL	< RL	< RL	10
RO-S	224	18	< RL	< RL	< RL	< RL	< RL	< RL	8
RO	458	37	< RL	< RL	< RL	< RL	< RL	< RL	7
SE-N	107	2	< RL	< RL	< RL	< RL	< RL	< RL	4
SE-S	213	4	< RL	< RL	< RL	< RL	< RL	< RL	4
SE	320	6	< RL	< RL	< RL	< RL	< RL	< RL	4
SI	63	5	< RL	< RL	< RL	< RL	< RL	< RL	9
SK	13	1	< RL	< RL	< RL	< RL	< RL	< RL	1

RL: reporting level for ^{137}Cs In air, i.e. 3.0 E-02 BQ/M3 (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

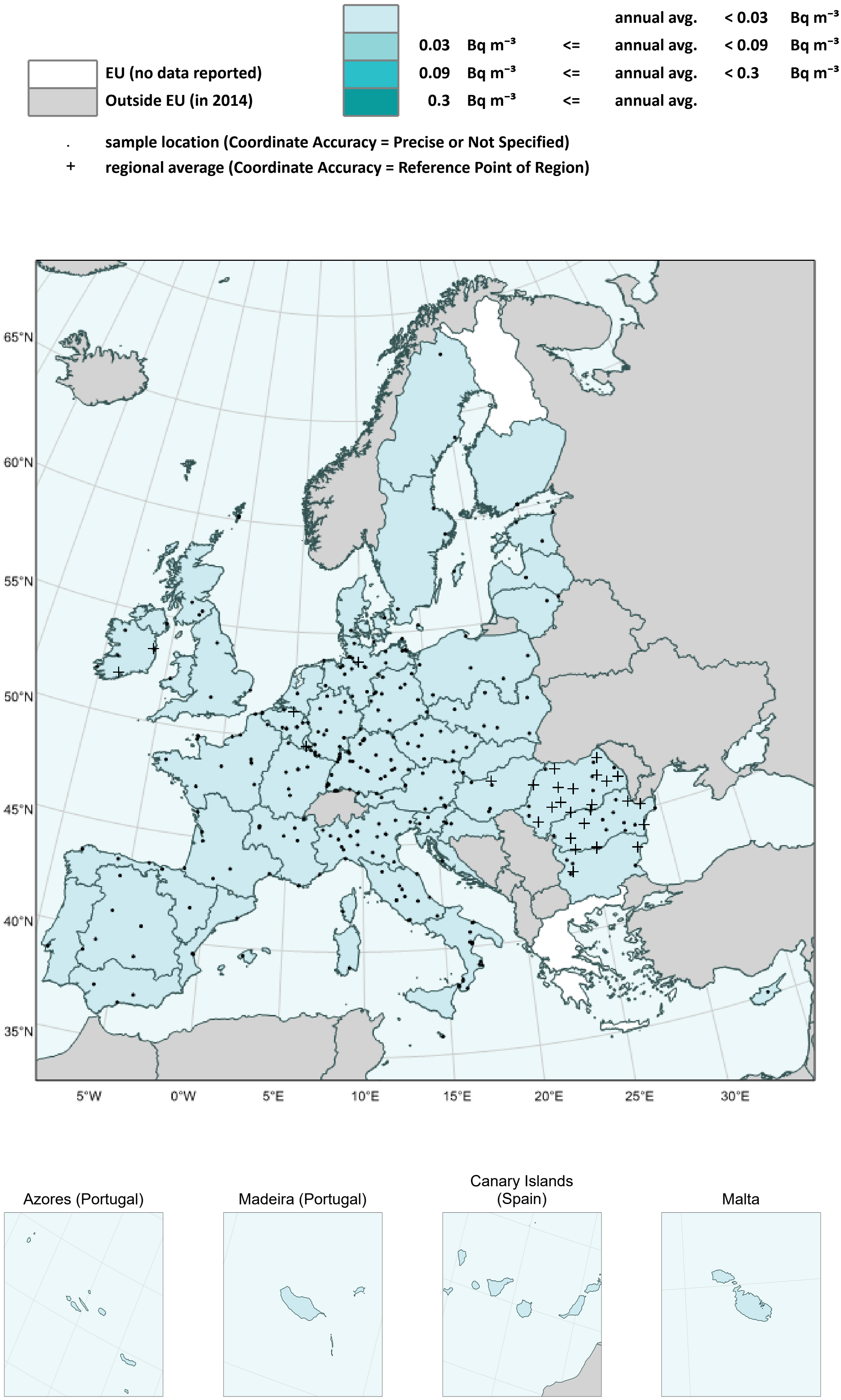


Fig.A6

Sampling locations and geographical averages by year for ^{137}Cs in airborne particulates, 2014

Table A6: Geographical and time averages

DENSE

YEAR : **2014**

SAMPLE TYPE : **airborne particulates (Bq m⁻³)**

NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	567	10	< RL	< RL	< RL	< RL	< RL	< RL	1
BE	100	11	< RL	< RL	< RL	< RL	< RL	< RL	9
BG	151	8	< RL	< RL	< RL	< RL	< RL	< RL	8
CY	29	1	< RL	< RL	< RL	< RL	< RL	< RL	3
CZ	567	10	< RL	< RL	< RL	< RL	< RL	< RL	9
DE-N	4016	25	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-C	3782	18	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-S	4576	35	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	3281	11	< RL	< RL	< RL	< RL	< RL	< RL	11
DE	15655	89	< RL	< RL	< RL	< RL	< RL	< RL	11
DK	76	4	< RL	< RL	< RL	< RL	< RL	< RL	11
EE	151	3	< RL	< RL	< RL	< RL	< RL	< RL	5
ES-N	105	5	< RL	< RL	< RL	< RL	< RL	< RL	11
ES-C	173	7	< RL	< RL	< RL	< RL	< RL	< RL	4
ES-S	133	4	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	92	4	< RL	< RL	< RL	< RL	< RL	< RL	3
ES	503	20	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N									
FI-S	518	4	< RL	< RL	< RL	< RL	< RL	< RL	5
FI	518	4	< RL	< RL	< RL	< RL	< RL	< RL	5
FR-NW	665	14	< RL	< RL	< RL	< RL	< RL	< RL	2
FR-NE	218	7	< RL	< RL	< RL	< RL	< RL	< RL	8
FR-SW	374	8	< RL	< RL	< RL	< RL	< RL	< RL	1
FR-SE	389	11	< RL	< RL	< RL	< RL	< RL	< RL	3
FR	1646	40	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-EN	15	3	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-WL	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	38	5	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB	63	10	< RL	< RL	< RL	< RL	< RL	< RL	9
GR									
HR-A	5	1	< RL	< RL	< RL	< RL	< RL	< RL	8
HR-C	12	1	< RL	< RL	< RL	< RL	< RL	< RL	4
HR	17	2	< RL	< RL	< RL	< RL	< RL	< RL	4
HU	226	5	< RL	< RL	< RL	< RL	< RL	< RL	1
IE	121	7	< RL	< RL	< RL	< RL	< RL	< RL	4
IT-N	691	20	< RL	< RL	< RL	< RL	< RL	< RL	3
IT-C	698	13	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-S	159	18	< RL	< RL	< RL	< RL	< RL	< RL	9
IT	1548	51	< RL	< RL	< RL	< RL	< RL	< RL	4
LT	9	2		< RL	< RL	< RL	< RL	< RL	10
LU	105	2	< RL	< RL	< RL	< RL	< RL	< RL	1
LV	3	1			< RL	< RL	< RL	< RL	7
MT	53	1	< RL	< RL	< RL	< RL	< RL	< RL	8
NL	54	1	< RL	< RL	< RL	< RL	< RL	< RL	4
PL-N	6	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	6	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	12	12	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	50	1	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-N	229	19	< RL	< RL	< RL	< RL	< RL	< RL	7
RO-S	216	18	< RL	< RL	< RL	< RL	< RL	< RL	1
RO	445	37	< RL	< RL	< RL	< RL	< RL	< RL	8
SE-N	106	2	< RL	< RL	< RL	< RL	< RL	< RL	6
SE-S	212	4	< RL	< RL	< RL	< RL	< RL	< RL	5
SE	318	6	< RL	< RL	< RL	< RL	< RL	< RL	5
SI	75	5	< RL	< RL	< RL	< RL	< RL	< RL	12
SK	13	2	< RL	< RL	< RL	< RL	< RL	< RL	1

RL: reporting level for ^{137}Cs In air, i.e. 3.0 E-02 BQ/M3 (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

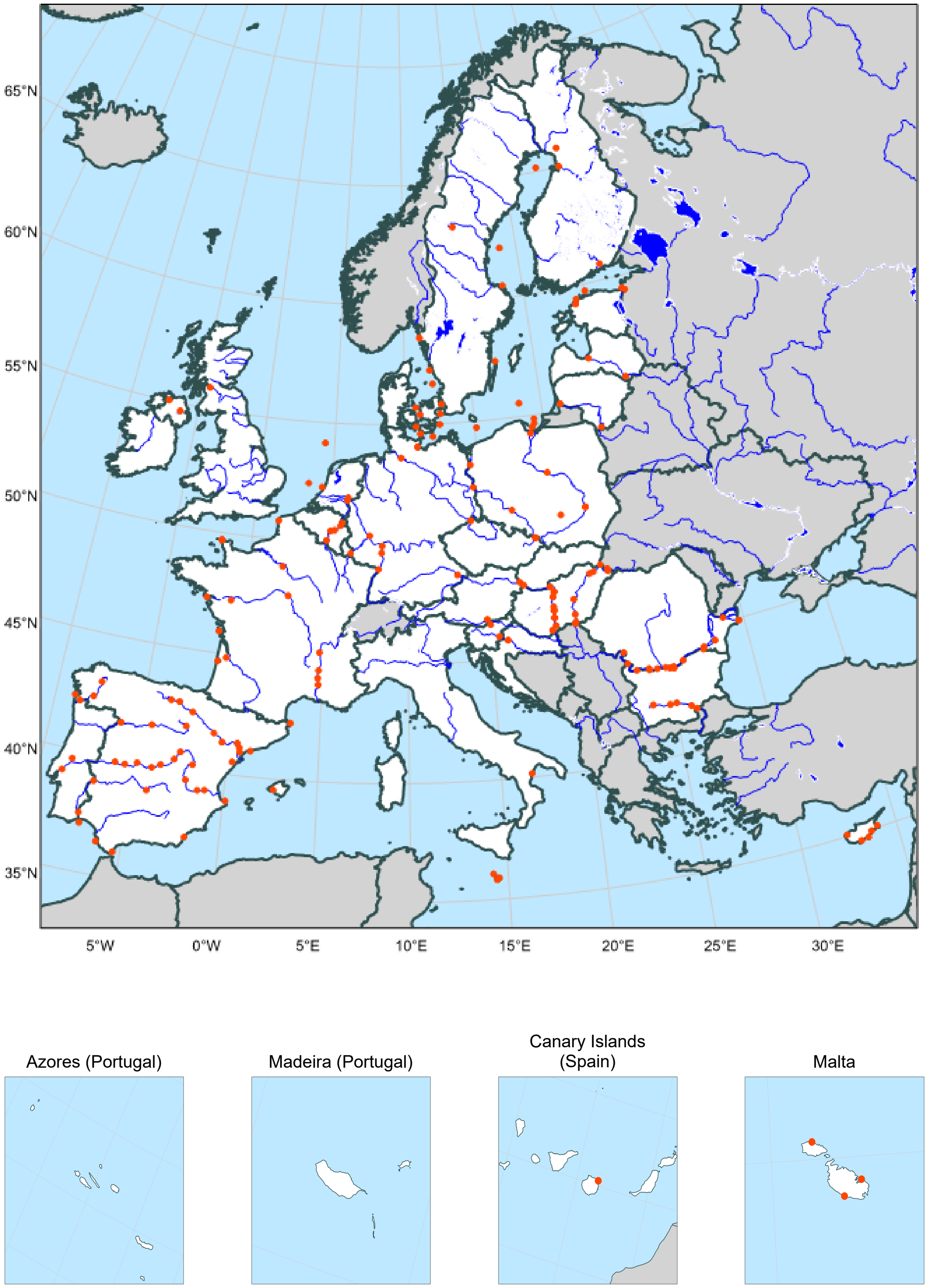


Fig. S1

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE

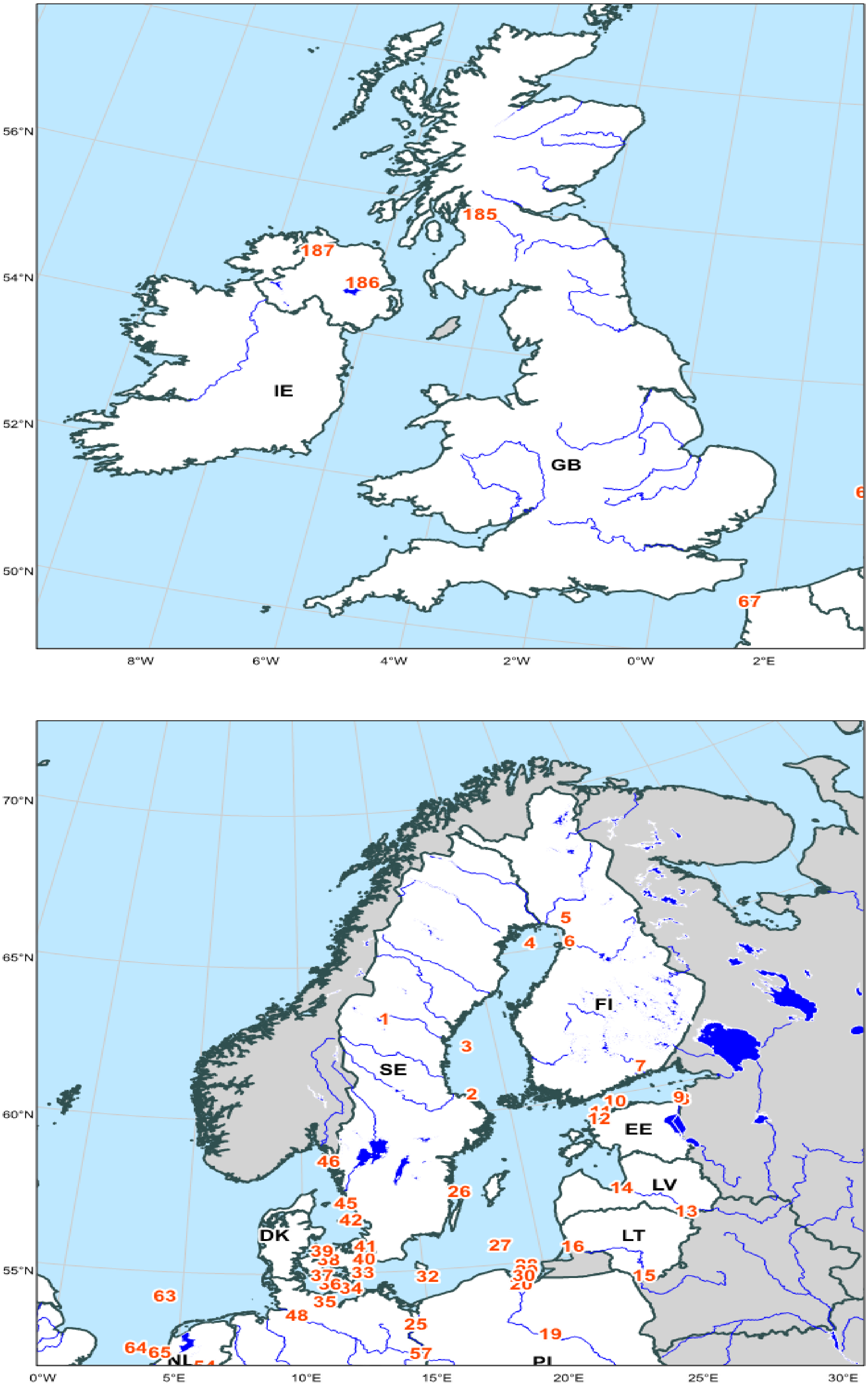


Fig. S2

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE

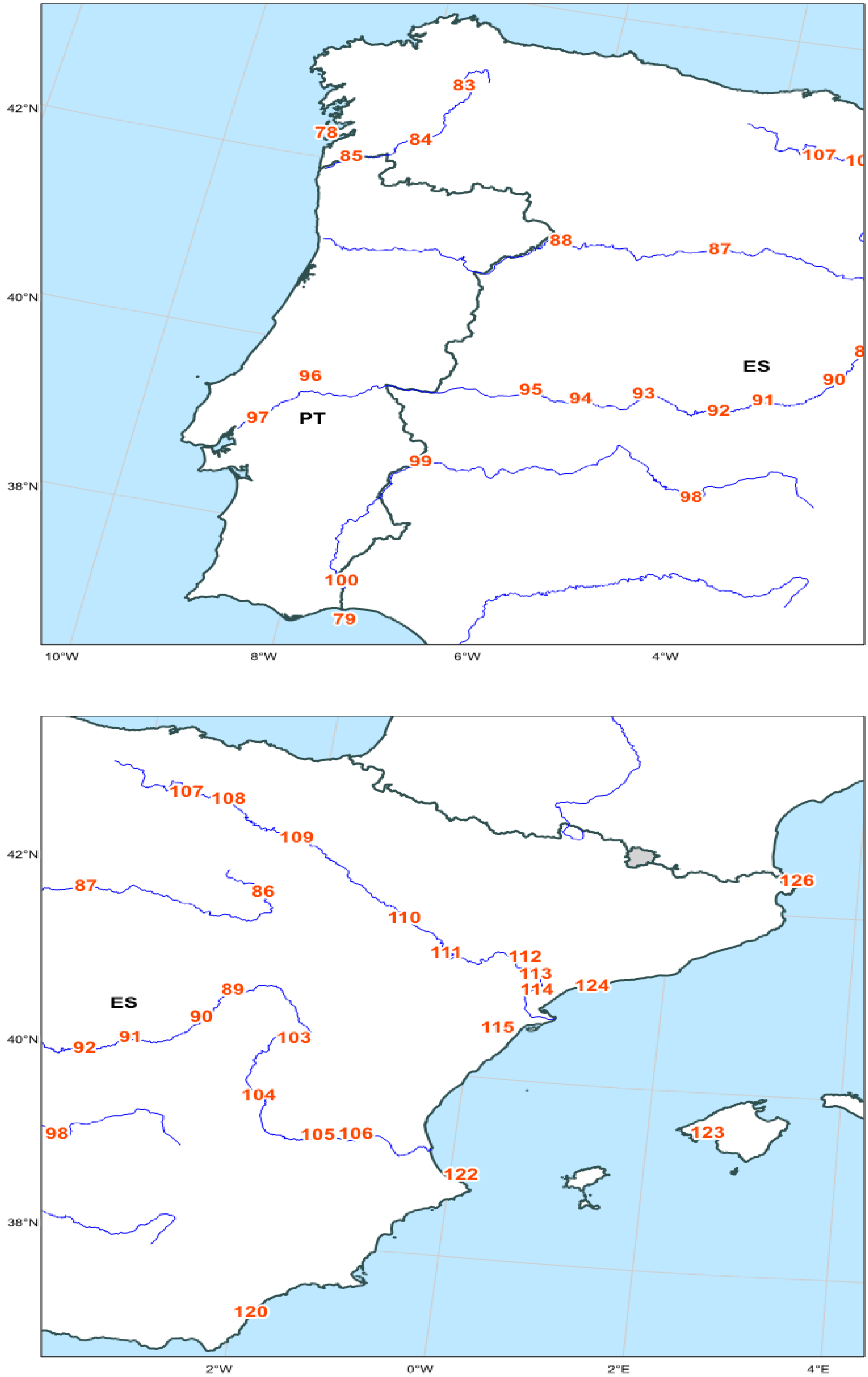


Fig. S3

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

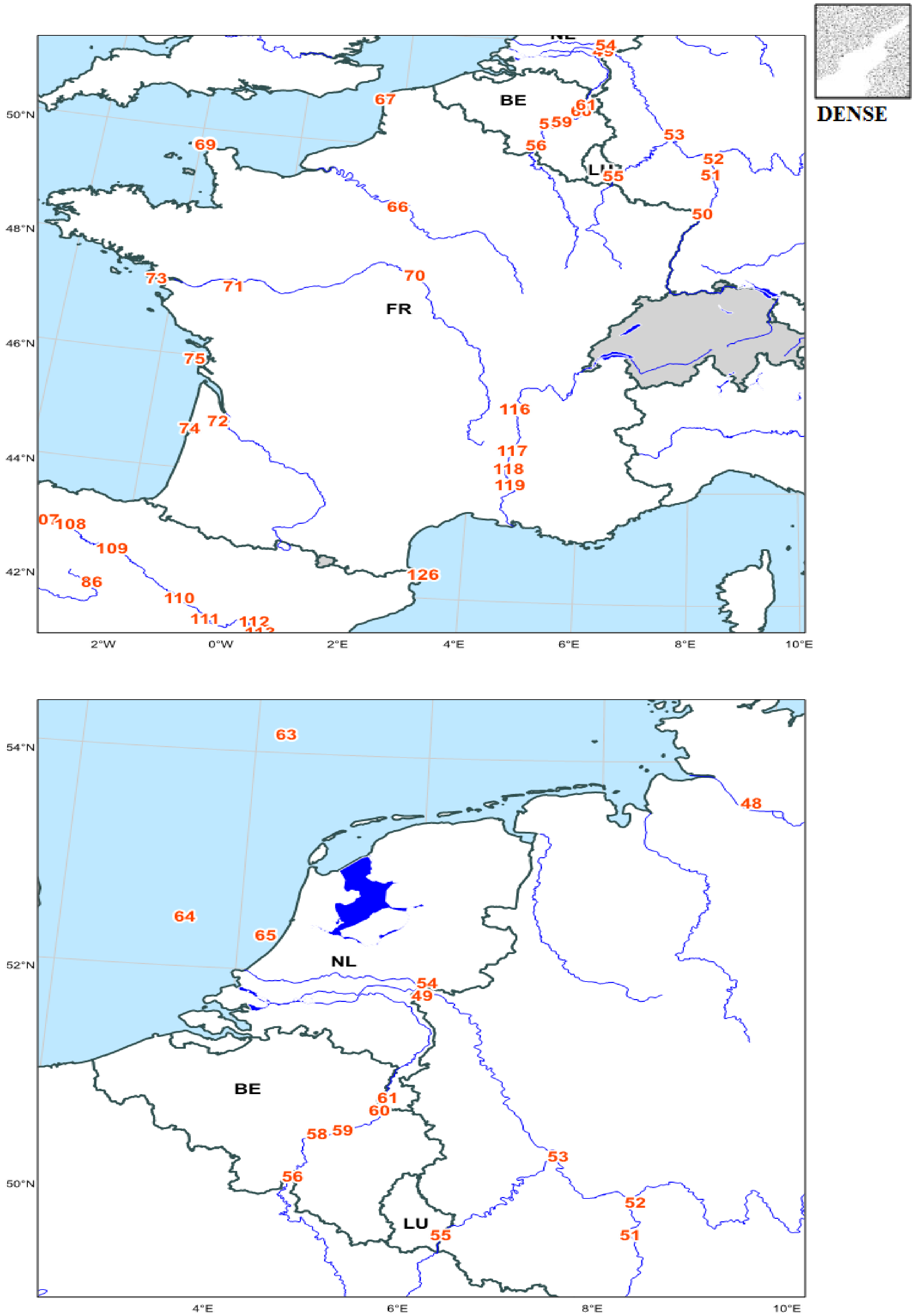


Fig. S4

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE

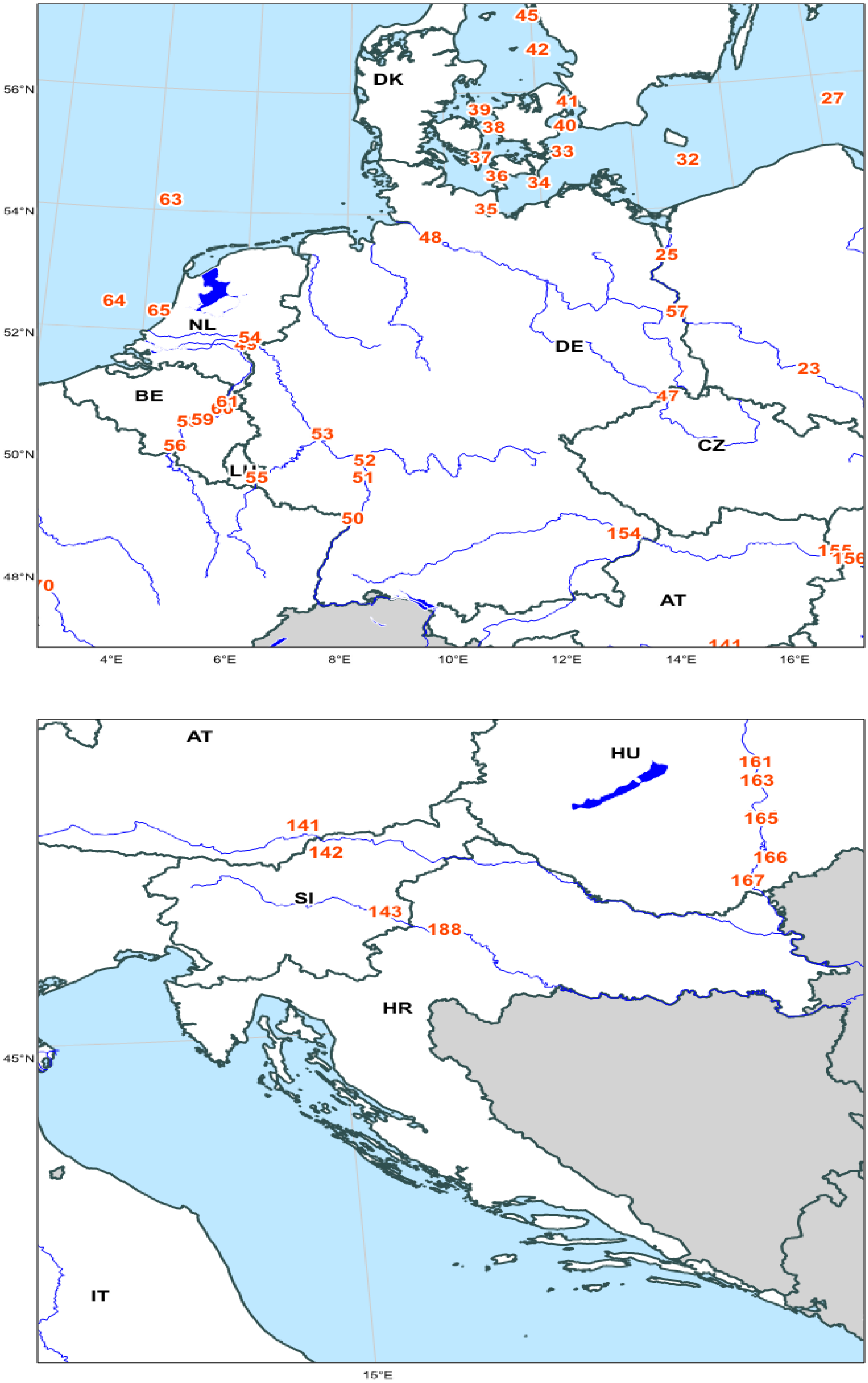


Fig. S5

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

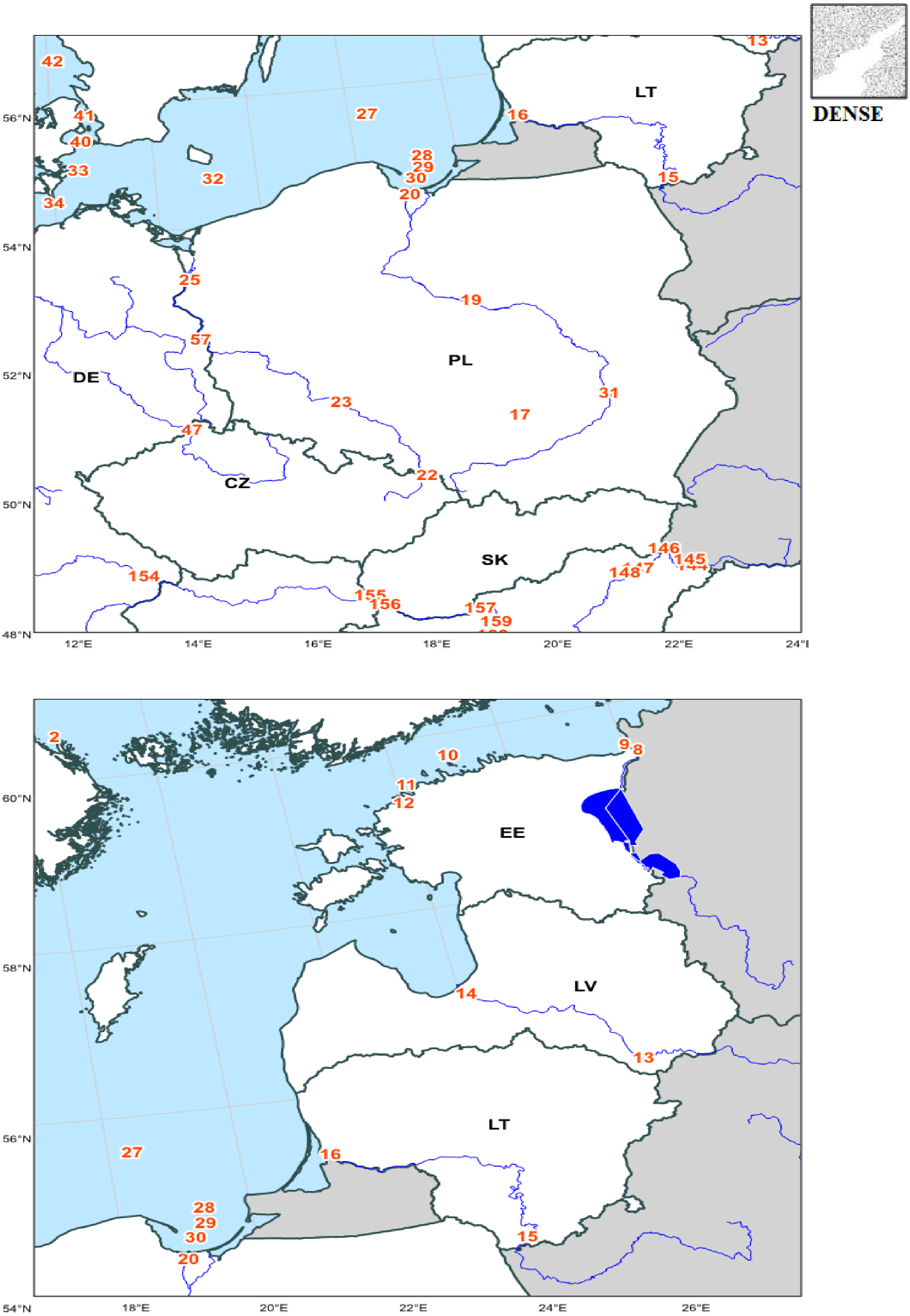


Fig. S6

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE

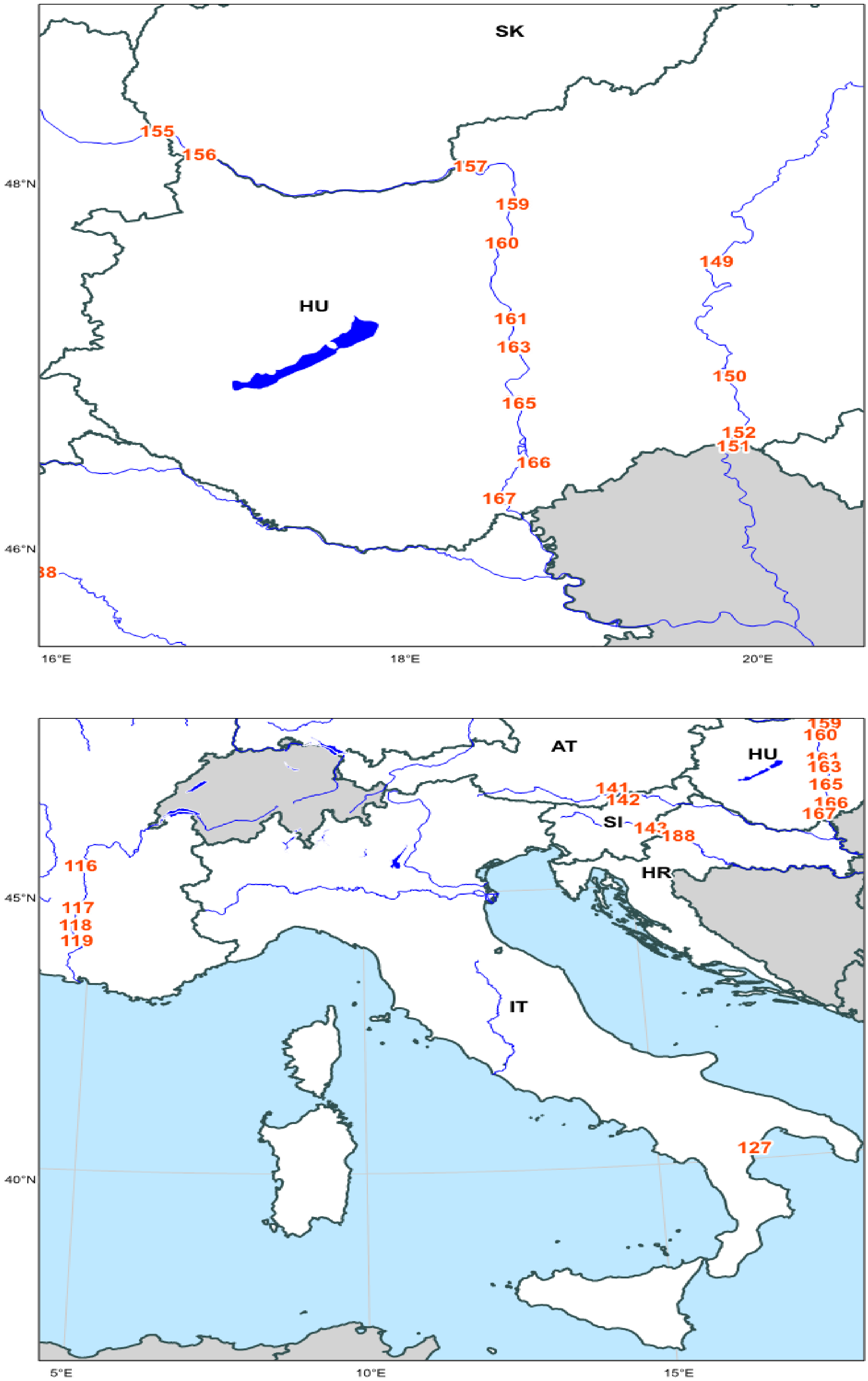
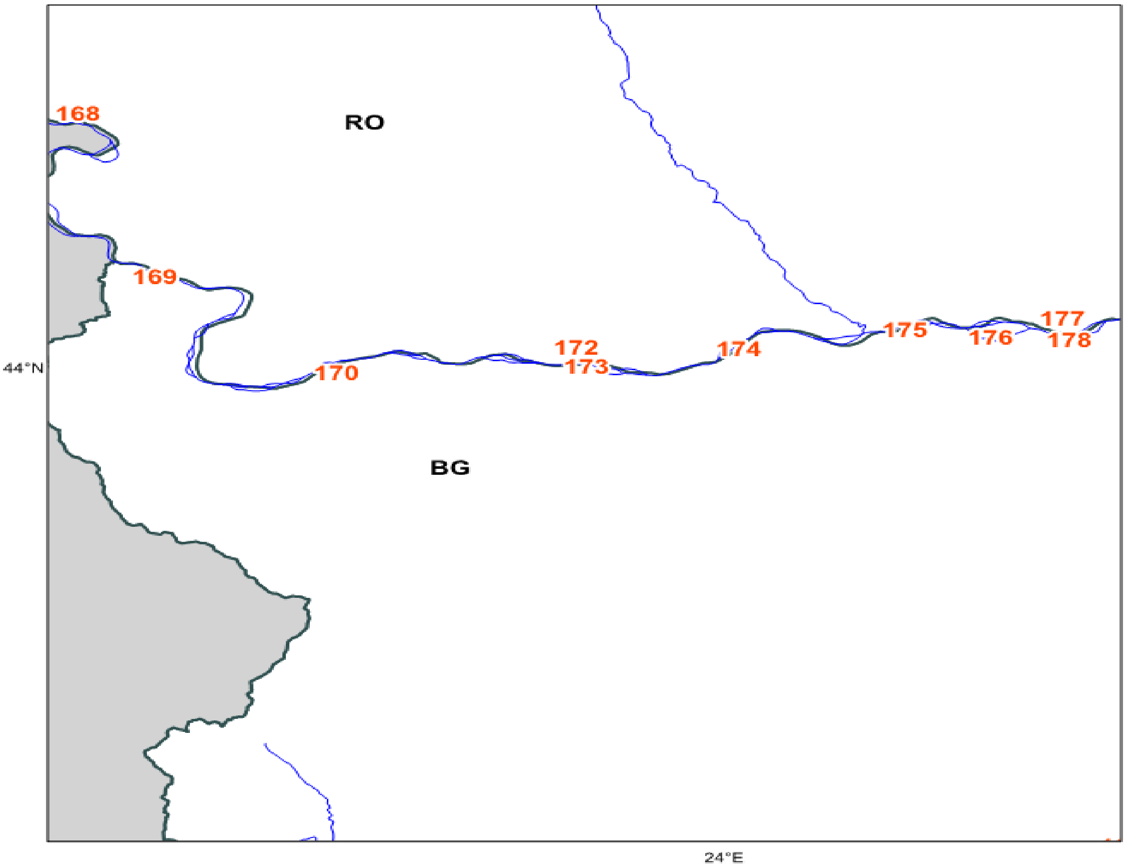


Fig. S7

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30



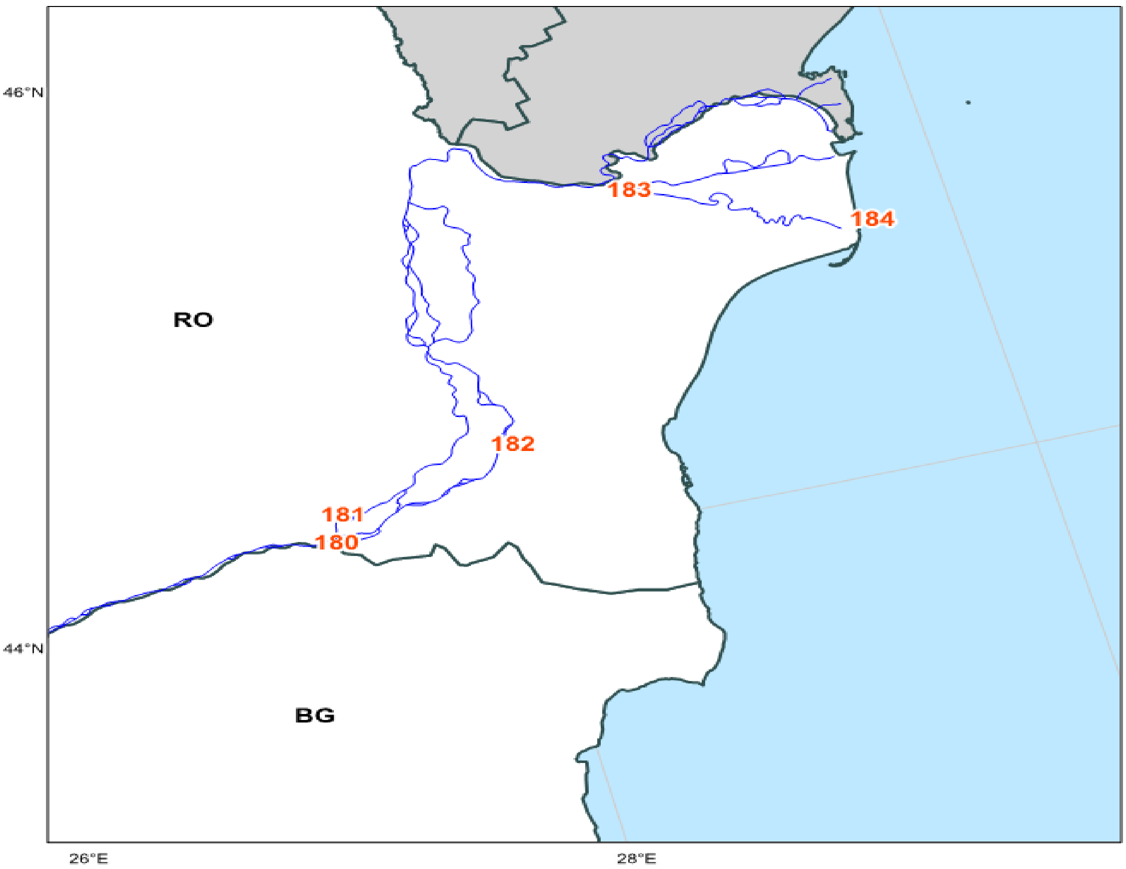


Fig. S8
Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

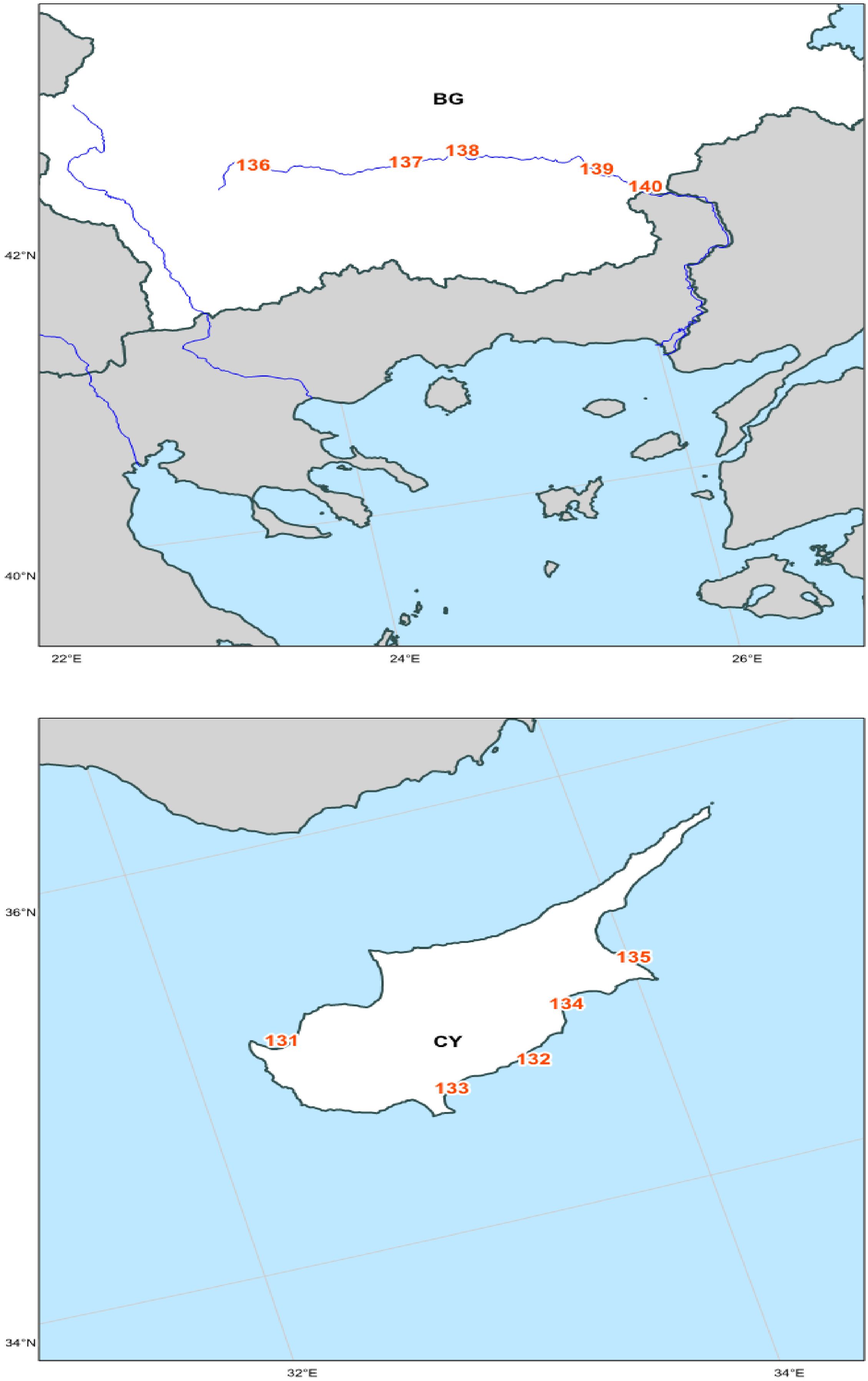
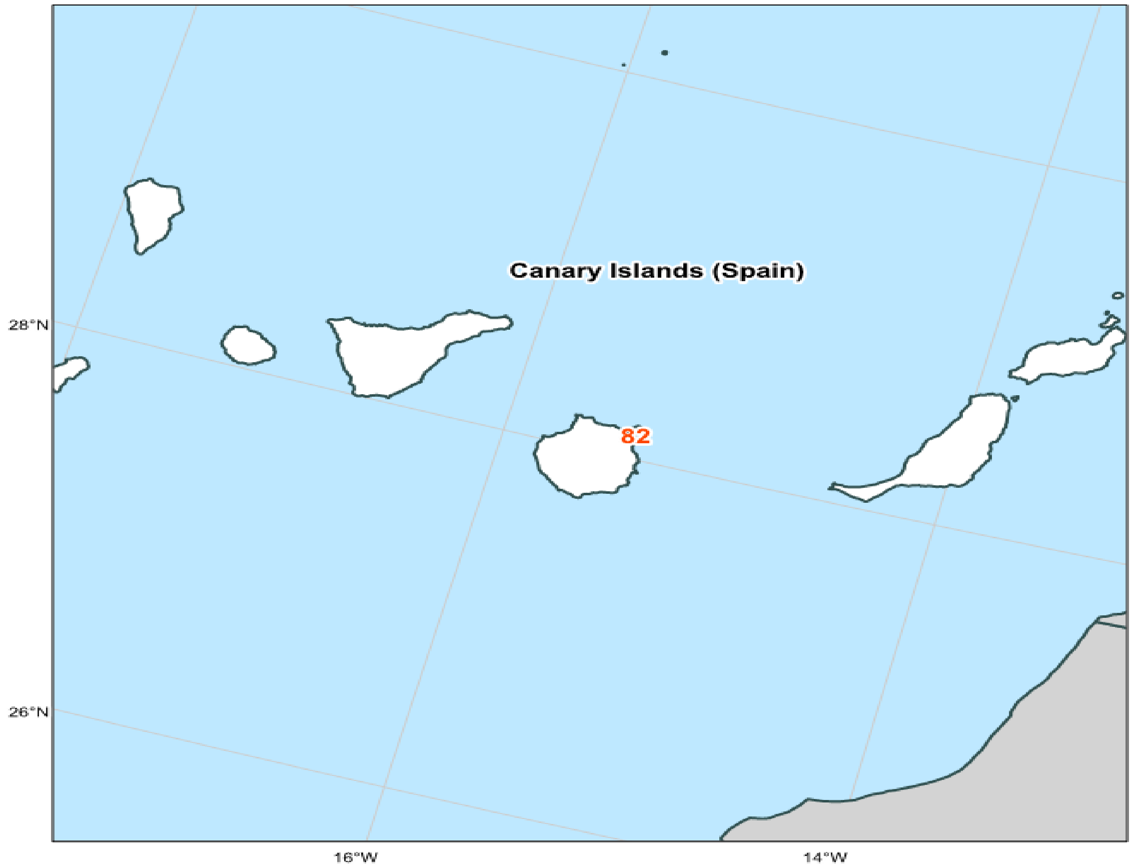


Fig. S9

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE



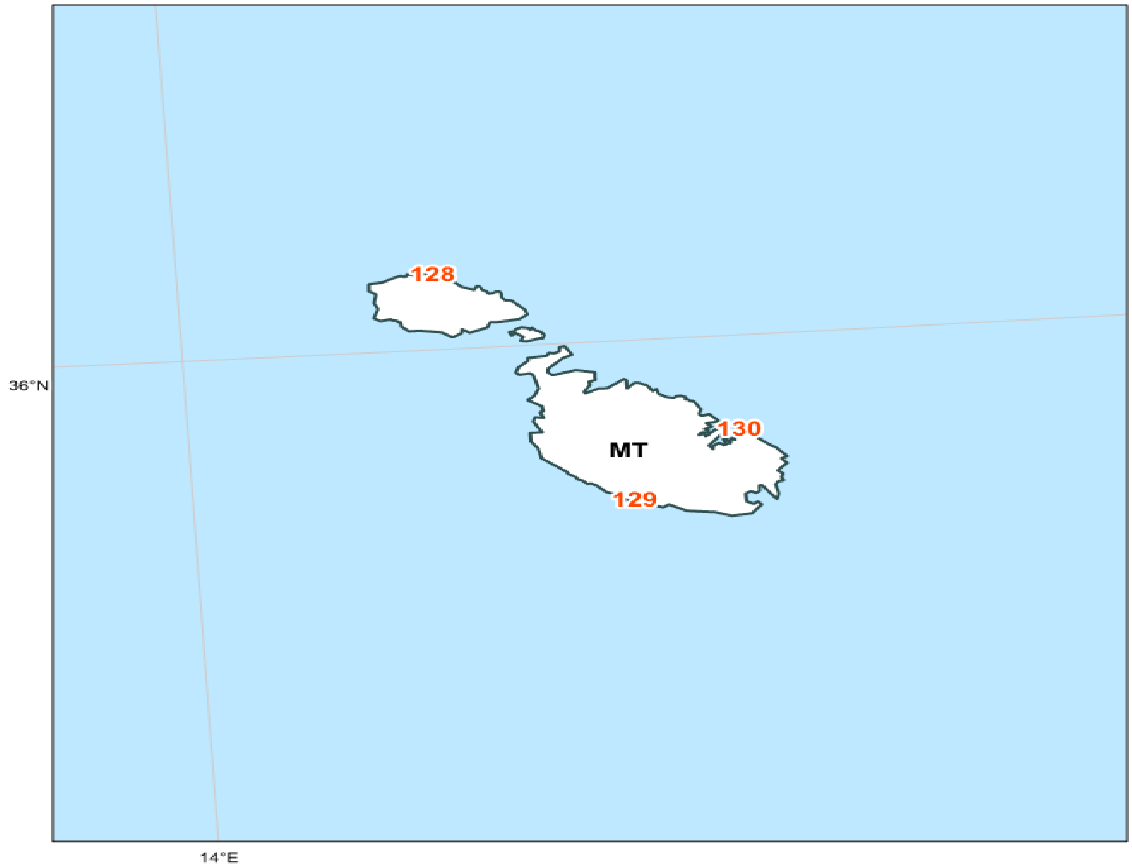


Fig. S10

Sampling locations for residual-β and ^{137}Cs in surface water considered in Tables S1 – S30

DENSE

Table S1: Time averages

YEAR : 2012

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE								
Gulf Of Bothnia	2	Forsmark (F135)	SE								
	3	Bottenhavet (C14)	SE								
	4	Bottenviken (A5)	SE								
Kemijoki	5	Kemi	FI								
Oulujoki	6	Oulu	FI								
Kymijoki	7	Kotka	FI								
Narva	8	Narva	EE								
Gulf Of Finland	9	Gulf Of Finland, N8	EE								
	10	Gulf Of Finland, EE17	EE								
	11	Gulf Of Finland, PE	EE								
	12	Gulf Of Finland, PW	EE								
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT								
	16	Skirvyte	LT								
Vistula	17	Krakow Tyniec	PL								
	18	Annopol	PL								
	19	Plock	PL								
	20	Kiezmark	PL								
Oder	21	Bohumin	CZ	*4*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*8*
	22	Chalupki	PL								
	23	Wroclaw	PL								
	25	Krajnik	PL								
Baltic Sea	26	Oskarshamn (S36)	SE								
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL								
	32	Baltic Sea P-39	PL								
	33	Moen	DK								
	34	Gedser Odde	DK								
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK								
	37	Langeland Baelt	DK								
The Great Belt	38	Halskov Rev	DK								
	39	Asnaes Rev	DK								
The Sound	40	The Sound S	DK								
	41	The Sound N(A)	DK								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S2: **Time averages**

YEAR : **2012**
SAMPLE TYPE : **surface water (Bq l^{-1})**
NUCLIDE CATEGORY : **residual-β**

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK								
	45	Ringhals (35)	SE								
Skagerrak	46	Fjaellbacka	SE								
Elbe	47	Hrensko	CZ	*4*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*7*
	48	Wedel	DE								
	49	Cuxhaven	DE								
Rhine	50	Lauterbourg	FR								
	51	Worms	DE								
	52	Trebur	DE								
	53	Koblenz	DE								
	54	Lobith	NL								
Moselle	55	Wincheringen	DE								
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE								
	58	Andenne	BE								
	59	Huy	BE								
	60	Lixhe	BE								
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES						*Δ*		
	79	Isla Christina	ES						*Δ*		
	80	Puerto de Cadiz	ES						*Δ*		
	81	Estrecho de Gibraltar	ES						*Δ*		
	82	Puerto De Las Palmas	ES						*Δ*		

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S3: Time averages

YEAR : 2012
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	9
	95	Embalse de Torrejon	ES	17	< RL	< RL	< RL	< RL	< RL	< RL	6
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	8	< RL	< RL	< RL	< RL	< RL	< RL	5
Guadiana	98	Balbuena	ES	2	< RL		< RL		< RL	< RL	3
	99	Puente Palmas	ES	3	< RL	< RL	< RL		< RL	< RL	3
	100	San Lucar	ES	3	< RL	< RL	< RL		< RL	< RL	9
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	11
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	11
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	11
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	2
Ebro	107	Garona Arriba	ES	13	< RL	< RL	< RL	< RL	< RL	< RL	1
	108	Garona Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	2
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	112	Ribarroja	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	113	Asco Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	1
	114	Garcia	ES								
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR								
	118	Tricastin	FR								
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S4: Time averages

YEAR : 2012

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : residual-β

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES						Δ		
	122	Cabo de San Antonio	ES						Δ		
	123	Puerto de Palma	ES						Δ		
	124	Puerto de Tarragona	ES						Δ		
	126	Cabo de Creus	ES						Δ		
	127	Rotondella	IT								
	128	Xwejni	MT								
	129	Lapsi	MT								
	130	Wied Ghammieq	MT								
	131	Polis	CY								
	132	Paphos	CY								
	133	Limassol	CY								
	134	Larnaca	CY								
	135	Paralimni	CY								
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	*24*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*8*
	142	Dravograd	SI								
Sava	143	Krsko	SI								
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU								
	150	Mindszent	HU								
	151	Tiszasziget II	HU								
	152	Tiszasziget I	HU								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S5: Time averages

YEAR : 2012
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE								
	155	Wolfsthal	AT	*12*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*9*
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU								
	162	Dunafoldvar II	HU								
	163	Dunafoldvar I	HU								
	164	Kalocsa	HU								
	165	Gerjen	HU								
	166	Baja	HU								
	167	Mohacs	HU								
	168	Drobeta Turnu Severin	RO								
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO								
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO								
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO								
	182	Cernavoda*	RO								
	183	Tulcea	RO								
	184	Sfantu Gheorge Tulcea	RO								
Clyde	185	Clyde Estuary	UK								
Lough Neagh	186	Lough Neagh	UK								
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S6: Time averages

YEAR : 2013
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE								
Gulf Of Bothnia	2	Forsmark (F135)	SE								
	3	Bottenhavet (C14)	SE								
	4	Bottenviken (A5)	SE								
Kemijoki	5	Kemi	FI								
Oulujoki	6	Oulu	FI								
Kymijoki	7	Kotka	FI								
Narva	8	Narva	EE								
Gulf Of Finland	9	Gulf Of Finland, N8	EE								
	10	Gulf Of Finland, EE17	EE								
	11	Gulf Of Finland, PE	EE								
	12	Gulf Of Finland, PW	EE								
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT								
	16	Skirvyte	LT								
Vistula	17	Krakow Tyniec	PL								
	18	Annopol	PL								
	19	Plock	PL								
	20	Kiezmark	PL								
Oder	21	Bohumin	CZ	*4*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*8*
	22	Chalupki	PL								
	23	Wroclaw	PL								
	25	Krajnik	PL								
Baltic Sea	26	Oskarshamn (S36)	SE								
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL								
	32	Baltic Sea P-39	PL								
	33	Moen	DK								
	34	Gedser Odde	DK								
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK								
	37	Langeland Baelt	DK								
The Great Belt	38	Halskov Rev	DK								
	39	Asnaes Rev	DK								
The Sound	40	The Sound S	DK								
	41	The Sound N(A)	DK								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S7: Time averages

YEAR : 2013
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK								
	45	Ringhals (35)	SE								
Skagerrak	46	Fjaellbacka	SE								
Elbe	47	Hrensko	CZ	5	< RL	< RL	< RL	< RL	< RL	< RL	2
	48	Wedel	DE								
	49	Cuxhaven	DE								
Rhine	50	Lauterbourg	FR								
	51	Worms	DE								
	52	Trebur	DE								
	53	Koblenz	DE								
	54	Lobith	NL								
Moselle	55	Wincheringen	DE								
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE								
	58	Andenne	BE								
	59	Huy	BE								
	60	Lixhe	BE								
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES	1			8.6E-01		8.6E-01	8.6E-01	8
	79	Isla Christina	ES						Δ		
	80	Puerto de Cadiz	ES						Δ		
	81	Estrecho de Gibraltar	ES						Δ		
	82	Puerto De Las Palmas	ES						Δ		

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S8: Time averages

YEAR : **2013**

SAMPLE TYPE : **surface water (Bq l $^{-1}$)**

NUCLIDE CATEGORY : **residual-β**

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	12
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	2
	95	Embalse de Torrejon	ES	16	< RL	< RL	< RL	< RL	< RL	< RL	9
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	1				< RL	< RL	< RL	12
Guadiana	98	Balbuena	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	99	Puente Palmas	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	100	San Lucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	11
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	12
Ebro	107	Garona Arriba	ES	13	< RL	< RL	< RL	< RL	< RL	< RL	8
	108	Garona Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	12
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	112	Ribarroja	ES	11	< RL	< RL	< RL	< RL	< RL	< RL	9
	113	Asco Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	9
	114	Garcia	ES								
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR								
	118	Tricastin	FR								
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S9: Time averages

YEAR : 2013
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES						Δ		
	122	Cabo de San Antonio	ES						Δ		
	123	Puerto de Palma	ES						Δ		
	124	Puerto de Tarragona	ES						Δ		
	126	Cabo de Creus	ES						Δ		
	127	Rotondella	IT								
	128	Xwejni	MT								
	129	Lapsi	MT								
	130	Wied Ghammieq	MT								
	131	Polis	CY								
	132	Paphos	CY								
	133	Limassol	CY								
	134	Larnaca	CY								
	135	Paralimni	CY								
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	24	< RL	< RL	< RL	< RL	< RL	< RL	10
	142	Dravograd	SI								
Sava	143	Krsko	SI								
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU								
	150	Mindszent	HU								
	151	Tiszasziget II	HU								
	152	Tiszasziget I	HU								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S10: Time averages

YEAR : 2013
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE								
	155	Wolfsthal	AT	*12*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*7*
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU								
	162	Dunafoldvar II	HU								
	163	Dunafoldvar I	HU								
	164	Kalocsa	HU								
	165	Gerjen	HU								
	166	Baja	HU								
	167	Mohacs	HU								
	168	Drobeta Turnu Severin	RO								
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO								
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO								
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO								
	182	Cernavoda*	RO								
	183	Tulcea	RO								
	184	Sfantu Gheorge Tulcea	RO								
Clyde	185	Clyde Estuary	UK								
Lough Neagh	186	Lough Neagh	UK								
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S11: Time averages

YEAR : 2014
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE								
Gulf Of Bothnia	2	Forsmark (F135)	SE								
	3	Bottenhavet (C14)	SE								
	4	Bottenviken (A5)	SE								
Kemijoki	5	Kemi	FI								
Oulujoki	6	Oulu	FI								
Kymijoki	7	Kotka	FI								
Narva	8	Narva	EE								
Gulf Of Finland	9	Gulf Of Finland, N8	EE								
	10	Gulf Of Finland, EE17	EE								
	11	Gulf Of Finland, PE	EE								
	12	Gulf Of Finland, PW	EE								
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT								
	16	Skirvyte	LT								
Vistula	17	Krakow Tyniec	PL								
	18	Annopol	PL								
	19	Plock	PL								
	20	Kiezmark	PL								
Oder	21	Bohumin	CZ								
	22	Chalupki	PL								
	23	Wroclaw	PL								
	25	Krajnik	PL								
Baltic Sea	26	Oskarshamn (S36)	SE								
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL								
	32	Baltic Sea P-39	PL								
	33	Moen	DK								
	34	Gedser Odde	DK								
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK								
	37	Langeland Baelt	DK								
The Great Belt	38	Halskov Rev	DK								
	39	Asnaes Rev	DK								
The Sound	40	The Sound S	DK								
	41	The Sound N(A)	DK								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S12: Time averages

YEAR : 2014
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK								
	45	Ringhals (35)	SE								
Skagerrak	46	Fjaellbacka	SE								
Elbe	47	Hrensko	CZ								
	48	Wedel	DE								
	49	Cuxhaven	DE								
Rhine	50	Lauterbourg	FR								
	51	Worms	DE								
	52	Trebur	DE								
	53	Koblenz	DE								
	54	Lobith	NL								
Moselle	55	Wincheringen	DE								
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE								
	58	Andenne	BE								
	59	Huy	BE								
	60	Lixhe	BE								
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES						Δ		
	79	Isla Christina	ES						Δ		
	80	Puerto de Cadiz	ES						Δ		
	81	Estrecho de Gibraltar	ES						Δ		
	82	Puerto De Las Palmas	ES						Δ		

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S13: Time averages

YEAR : 2014
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	1
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	95	Embalse de Torrejon	ES	16	< RL	< RL	< RL	< RL	< RL	< RL	9
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	1		< RL			< RL	< RL	4
Guadiana	98	Balbuena	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	99	Puente Palmas	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	100	San Lucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	11
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	1
Ebro	107	Garona Arriba	ES	14	< RL	< RL	< RL	< RL	< RL	< RL	7
	108	Garona Abajo	ES	27	< RL	< RL	< RL	< RL	< RL	< RL	2
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	112	Ribarroja	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	113	Asco Abajo	ES	25	< RL	< RL	< RL	< RL	< RL	< RL	9
	114	Garcia	ES								
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR								
	118	Tricastin	FR								
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S14: Time averages

YEAR : 2014
SAMPLE TYPE : surface water ($Bq\ l^{-1}$)
NUCLIDE CATEGORY : residual-β

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES						Δ		
	122	Cabo de San Antonio	ES						Δ		
	123	Puerto de Palma	ES						Δ		
	124	Puerto de Tarragona	ES						Δ		
	126	Cabo de Creus	ES						Δ		
	127	Rotondella	IT								
	128	Xwejni	MT								
	129	Lapsi	MT								
	130	Wied Ghammieq	MT								
	131	Polis	CY								
	132	Paphos	CY								
	133	Limassol	CY								
	134	Larnaca	CY								
	135	Paralimni	CY								
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	*24*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*2*
	142	Dravograd	SI								
Sava	143	Krsko	SI								
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU								
	150	Mindszent	HU								
	151	Tiszasziget II	HU								
	152	Tiszasziget I	HU								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S15: Time averages

DENSE

YEAR : 2014

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : residual-β

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE								
	155	Wolfsthal	AT	*12*	*< RL*	*< RL*	*< RL*	*< RL*	*< RL*	< RL	*4*
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU								
	162	Dunafoldvar II	HU								
	163	Dunafoldvar I	HU								
	164	Kalocsa	HU								
	165	Gerjen	HU								
	166	Baja	HU								
	167	Mohacs	HU								
	168	Drobeta Turnu Severin	RO								
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO								
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO								
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO								
	182	Cernavoda*	RO								
	183	Tulcea	RO								
	184	Sfantu Gheorge Tulcea	RO								
Clyde	185	Clyde Estuary	UK								
Lough Neagh	186	Lough Neagh	UK								
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR								

RL: reporting level for residual-β In surface water, i.e. 6.0 E-01 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S16: Time averages

YEAR : 2012
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE	2		< RL	< RL		< RL	< RL	9
Gulf Of Bothnia	2	Forsmark (F135)	SE	1				< RL	< RL	< RL	10
	3	Bottenhavet (C14)	SE	1			< RL		< RL	< RL	9
	4	Bottenviken (A5)	SE	1			< RL		< RL	< RL	9
Kemijoki	5	Kemi	FI	2		< RL		< RL	< RL	< RL	5
Oulujoki	6	Oulu	FI	2		< RL		< RL	< RL	< RL	10
Kymijoki	7	Kotka	FI	2		< RL		< RL	< RL	< RL	10
Narva	8	Narva	EE	4		< RL	< RL	< RL	< RL	< RL	10
Gulf Of Finland	9	Gulf Of Finland, N8	EE	1		< RL			< RL	< RL	5
	10	Gulf Of Finland, EE17	EE	1		< RL			< RL	< RL	5
	11	Gulf Of Finland, PE	EE	1		< RL			< RL	< RL	5
	12	Gulf Of Finland, PW	EE	1		< RL			< RL	< RL	5
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	16	Skirvyte	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	2
Vistula	17	Krakow Tyniec	PL	2		< RL	< RL		< RL	< RL	5
	18	Annopol	PL	2		< RL	< RL		< RL	< RL	5
	19	Plock	PL	2		< RL	< RL		< RL	< RL	8
	20	Kiezmark	PL	2		< RL	< RL		< RL	< RL	5
Oder	21	Bohumin	CZ	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	22	Chalupki	PL	2		< RL	< RL		< RL	< RL	5
	23	Wroclaw	PL								
	25	Krajnik	PL	2		< RL	< RL		< RL	< RL	5
Baltic Sea	26	Oskarshamn (S36)	SE	1			< RL		< RL	< RL	9
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL	2		< RL	< RL		< RL	< RL	5
	32	Baltic Sea P-39	PL								
	33	Moen	DK	2		< RL		< RL	< RL	< RL	6
	34	Gedser Odde	DK	2		< RL		< RL	< RL	< RL	6
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK	2		< RL		< RL	< RL	< RL	12
	37	Langeland Baelt	DK	2		< RL		< RL	< RL	< RL	12
The Great Belt	38	Halskov Rev	DK	2		< RL		< RL	< RL	< RL	6
	39	Asnaes Rev	DK	2		< RL		< RL	< RL	< RL	12
The Sound	40	The Sound S	DK	2		< RL		< RL	< RL	< RL	6
	41	The Sound N(A)	DK	2		< RL		< RL	< RL	< RL	12

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S17: Time averages

YEAR : 2012

SAMPLE TYPE : surface water (Bq l^{-1})

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK	2		< RL		< RL	< RL	< RL	6
	45	Ringhals (35)	SE	2		< RL		< RL	< RL	< RL	6
Skagerrak	46	Fjaellbacka	SE	2		< RL	< RL		< RL	< RL	4
Elbe	47	Hrensko	CZ	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	48	Wedel	DE	11	< RL	< RL	< RL	< RL	< RL	< RL	11
	49	Cuxhaven	DE	7	< RL	< RL	< RL	< RL	< RL	< RL	11
Rhine	50	Lauterbourg	FR								
	51	Worms	DE	11	< RL	< RL	< RL	< RL	< RL	< RL	4
	52	Trebur	DE	16	< RL	< RL	< RL	< RL	< RL	< RL	11
	53	Koblenz	DE	21	< RL	< RL	< RL	< RL	< RL	< RL	11
	54	Lobith	NL								
Moselle	55	Wincheringen	DE	11	< RL	< RL	< RL	< RL	< RL	< RL	9
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE	4		< RL	< RL	< RL	< RL	< RL	10
	58	Andenne	BE	28	< RL	< RL	< RL	< RL	< RL	< RL	10
	59	Huy	BE	26	< RL	< RL	< RL	< RL	< RL	< RL	4
	60	Lixhe	BE	28	< RL	< RL	< RL	< RL	< RL	< RL	4
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	79	Isla Christina	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	80	Puerto de Cadiz	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	81	Estrecho de Gibraltar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	82	Puerto De Las Palmas	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S18: Time averages

YEAR : 2012
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	2
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	1
	95	Embalse de Torrejon	ES	17	< RL	< RL	< RL	< RL	< RL	< RL	5
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	10	< RL	< RL	< RL	< RL	< RL	< RL	10
Guadiana	98	Balbuena	ES	2	< RL		< RL		< RL	< RL	3
	99	Puente Palmas	ES	3	< RL	< RL	< RL		< RL	< RL	3
	100	San Lucar	ES	3	< RL	< RL	< RL		< RL	< RL	3
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	3
Ebro	107	Garona Arriba	ES	13	< RL	< RL	< RL	< RL	< RL	< RL	7
	108	Garona Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	4
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	112	Ribarroja	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	8
	113	Asco Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	5
	114	Garcia	ES	8	< RL	< RL	< RL	< RL	< RL	< RL	5
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR	5	< RL	< RL	< RL	< RL	< RL	< RL	2
	118	Tricastin	FR	1	< RL				< RL	< RL	1
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S19: Time averages

YEAR : 2012
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	122	Cabo de San Antonio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	123	Puerto de Palma	ES	4	< RL	< RL		< RL	< RL	< RL	10
	124	Puerto de Tarragona	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	126	Cabo de Creus	ES	8	< RL	< RL	< RL	< RL	< RL	< RL	3
	127	Rotondella	IT	2		< RL	< RL		< RL	< RL	5
	128	Xwejni	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	129	Lapsi	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	130	Wied Ghammieq	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	131	Polis	CY	1	< RL	< RL	< RL	< RL	< RL	< RL	1
	132	Paphos	CY								
	133	Limassol	CY	2	< RL	< RL	< RL	< RL	< RL	< RL	1
	134	Larnaca	CY	1	< RL	< RL	< RL	< RL	< RL	< RL	1
	135	Paralimni	CY	1	< RL	< RL	< RL	< RL	< RL	< RL	1
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	24	< RL	< RL	< RL	< RL	< RL	< RL	1
	142	Dravograd	SI	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Sava	143	Krsko	SI								
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	150	Mindszent	HU								
	151	Tiszasziget II	HU								
	152	Tiszasziget I	HU	3	< RL	< RL	< RL	< RL	< RL	< RL	1

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S20: Time averages

DENSE

YEAR : 2012

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE	10	< RL	< RL	< RL	< RL	< RL	< RL	11
	155	Wolfsthal	AT	12	< RL	< RL	< RL	< RL	< RL	< RL	6
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	7
	162	Dunafoldvar II	HU	3	< RL	< RL		< RL	< RL	< RL	10
	163	Dunafoldvar I	HU								
	164	Kalocsa	HU								
	165	Gerjen	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	7
	166	Baja	HU	3	< RL	< RL	< RL	< RL	< RL	< RL	1
	167	Mohacs	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	1
	168	Drobeta Turnu Severin	RO								
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO								
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO								
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO								
	182	Cernavoda*	RO	10	< RL	< RL	< RL	< RL	< RL	< RL	3
	183	Tulcea	RO								
	184	Sfantu Gheorge Tulcea	RO	10	< RL	< RL	< RL	< RL	< RL	< RL	10
Clyde	185	Clyde Estuary	UK	4	< RL	< RL	< RL	< RL	< RL	< RL	3
Lough Neagh	186	Lough Neagh	UK	1	< RL				< RL	< RL	1
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR	2		< RL		< RL	< RL	< RL	10

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S21: Time averages

YEAR : 2013

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE	2		< RL	< RL		< RL	< RL	9
Gulf Of Bothnia	2	Forsmark (F135)	SE	1				< RL	< RL	< RL	10
	3	Bottenhavet (C14)	SE	1				< RL	< RL	< RL	10
	4	Bottenviken (A5)	SE	1				< RL	< RL	< RL	10
Kemijoki	5	Kemi	FI	2		< RL		< RL	< RL	< RL	5
Oulujoki	6	Oulu	FI	2		< RL		< RL	< RL	< RL	5
Kymijoki	7	Kotka	FI	2		< RL		< RL	< RL	< RL	10
Narva	8	Narva	EE	4		< RL	< RL	< RL	< RL	< RL	4
Gulf Of Finland	9	Gulf Of Finland, N8	EE	1			< RL		< RL	< RL	9
	10	Gulf Of Finland, EE17	EE	1			< RL		< RL	< RL	9
	11	Gulf Of Finland, PE	EE	1			< RL		< RL	< RL	9
	12	Gulf Of Finland, PW	EE	1			< RL		< RL	< RL	9
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	16	Skirvyte	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	10
Vistula	17	Krakow Tyniec	PL	2		< RL	< RL		< RL	< RL	5
	18	Annopol	PL	2		< RL	< RL		< RL	< RL	8
	19	Plock	PL	2		< RL		< RL	< RL	< RL	6
	20	Kiezmark	PL	2		< RL	< RL		< RL	< RL	6
Oder	21	Bohumin	CZ	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	22	Chalupki	PL	2		< RL	< RL		< RL	< RL	8
	23	Wroclaw	PL								
	25	Krajnik	PL	2		< RL	< RL		< RL	< RL	5
Baltic Sea	26	Oskarshamn (S36)	SE	1				< RL	< RL	< RL	11
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL	2		< RL	< RL		< RL	< RL	8
	32	Baltic Sea P-39	PL								
	33	Moen	DK	2		< RL		< RL	< RL	< RL	5
	34	Gedser Odde	DK	2		< RL		< RL	< RL	< RL	6
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK	2		< RL		< RL	< RL	< RL	6
	37	Langeland Baelt	DK	2		< RL		< RL	< RL	< RL	6
The Great Belt	38	Halskov Rev	DK	2		< RL		< RL	< RL	< RL	6
	39	Asnaes Rev	DK	2		< RL		< RL	< RL	< RL	6
The Sound	40	The Sound S	DK	2		< RL		< RL	< RL	< RL	6
	41	The Sound N(A)	DK	2		< RL		< RL	< RL	< RL	6

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S22: Time averages

DENSE

YEAR : 2013
SAMPLE TYPE : surface water (Bq l^{-1})
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK	2		< RL		< RL	< RL	< RL	6
	45	Ringhals (35)	SE	2		< RL	< RL		< RL	< RL	9
Skagerrak	46	Fjaellbacka	SE	2		< RL	< RL		< RL	< RL	5
Elbe	47	Hrensko	CZ	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	48	Wedel	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	3
	49	Cuxhaven	DE	11	< RL	< RL	< RL	< RL	< RL	< RL	2
Rhine	50	Lauterbourg	FR								
	51	Worms	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	6
	52	Trebur	DE	15	< RL	< RL	< RL	< RL	< RL	< RL	5
	53	Koblenz	DE	21	< RL	< RL	< RL	< RL	< RL	< RL	11
	54	Lobith	NL								
Moselle	55	Wincheringen	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	10
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE	4		< RL	< RL	< RL	< RL	< RL	9
	58	Andenne	BE	27	< RL	< RL	< RL	< RL	< RL	< RL	4
	59	Huy	BE	26	< RL	< RL	< RL	< RL	< RL	< RL	4
	60	Lixhe	BE	27	< RL	< RL	< RL	< RL	< RL	< RL	3
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	79	Isla Christina	ES	4	< RL		< RL	< RL	< RL	< RL	7
	80	Puerto de Cadiz	ES	4	< RL		< RL	< RL	< RL	< RL	7
	81	Estrecho de Gibraltar	ES	4	< RL		< RL	< RL	< RL	< RL	12
	82	Puerto De Las Palmas	ES	4	< RL		< RL	< RL	< RL	< RL	2

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S23: Time averages

YEAR : 2013
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	10
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	11
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	3
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	95	Embalse de Torrejon	ES	16	< RL	< RL	< RL	< RL	< RL	< RL	5
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	10	< RL	< RL	< RL	< RL	< RL	< RL	11
Guadiana	98	Balbuena	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	99	Puente Palmas	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	100	San Lucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	5
Ebro	107	Garona Arriba	ES	13	< RL	< RL	< RL	< RL	< RL	< RL	8
	108	Garona Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	7
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	112	Ribarroja	ES	11	< RL	< RL	< RL	< RL	< RL	< RL	11
	113	Asco Abajo	ES	26	< RL	< RL	< RL	< RL	< RL	< RL	11
	114	Garcia	ES	8	< RL	< RL	< RL	< RL	< RL	< RL	8
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR	4	< RL	< RL	< RL		< RL	< RL	3
	118	Tricastin	FR								
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S24: Time averages

YEAR : 2013

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

DENSE

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	122	Cabo de San Antonio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	123	Puerto de Palma	ES	3	< RL		< RL		< RL	< RL	9
	124	Puerto de Tarragona	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	2
	126	Cabo de Creus	ES	8	< RL		< RL	< RL	< RL	< RL	8
	127	Rotondella	IT	2		< RL		< RL	< RL	< RL	6
	128	Xwejni	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	129	Lapsi	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	130	Wied Ghammieq	MT	4	< RL	< RL	< RL	1.7E+00	< RL	1.7E+00	12
	131	Polis	CY	1			< RL		< RL	< RL	7
	132	Paphos	CY	1		< RL			< RL	< RL	5
	133	Limassol	CY	2		< RL			< RL	< RL	4
	134	Larnaca	CY	2		< RL	< RL		< RL	< RL	5
	135	Paralimni	CY	2		< RL			< RL	< RL	5
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	24	< RL	< RL	< RL	< RL	< RL	< RL	1
	142	Dravograd	SI	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Sava	143	Krsko	SI	4	< RL	< RL	< RL	< RL	< RL	< RL	2
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU	5	< RL	< RL	< RL	< RL	< RL	< RL	2
	150	Mindszent	HU								
	151	Tiszasziget II	HU	1	< RL				< RL	< RL	1
	152	Tiszasziget I	HU	6	< RL	< RL	< RL	< RL	< RL	< RL	1

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S25: Time averages

YEAR : 2013

SAMPLE TYPE : surface water (Bq l^{-1})

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	6
	155	Wolfsthal	AT	12	< RL	< RL	< RL	< RL	< RL	< RL	6
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	1
	162	Dunafoldvar II	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	163	Dunafoldvar I	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	164	Kalocsa	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	165	Gerjen	HU	10	< RL	< RL	< RL	< RL	< RL	< RL	2
	166	Baja	HU	3	< RL	< RL	< RL	< RL	< RL	< RL	1
	167	Mohacs	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	1
	168	Drobeta Turnu Severin	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	11
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	4
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	10
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO								
	182	Cernavoda*	RO	24	< RL	< RL	< RL	< RL	< RL	< RL	1
	183	Tulcea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	2
	184	Sfantu Gheorge Tulcea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	6
Clyde	185	Clyde Estuary	UK	4	< RL	< RL	< RL	< RL	< RL	< RL	3
Lough Neagh	186	Lough Neagh	UK								
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR	2		< RL		< RL	< RL	< RL	4

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S26: Time averages

DENSE

YEAR : 2014
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Indalsaelven	1	Oestersund-Storsjoen	SE	2		< RL		< RL	< RL	< RL	10
Gulf Of Bothnia	2	Forsmark (F135)	SE	1			< RL		< RL	< RL	9
	3	Bottenhavet (C14)	SE	1			< RL		< RL	< RL	9
	4	Bottenviken (A5)	SE	1			< RL		< RL	< RL	9
Kemijoki	5	Kemi	FI	2		< RL		< RL	< RL	< RL	5
Oulujoki	6	Oulu	FI	2		< RL		< RL	< RL	< RL	5
Kymijoki	7	Kotka	FI	2		< RL		< RL	< RL	< RL	5
Narva	8	Narva	EE	4		< RL	< RL	< RL	< RL	< RL	4
Gulf Of Finland	9	Gulf Of Finland, N8	EE	1			< RL		< RL	< RL	8
	10	Gulf Of Finland, EE17	EE	1			< RL		< RL	< RL	8
	11	Gulf Of Finland, PE	EE	1			< RL		< RL	< RL	8
	12	Gulf Of Finland, PW	EE	1			< RL		< RL	< RL	8
Daugava	13	Daugavpils	LV								
	14	Riga	LV								
Neman	15	Above Druskininkai	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	16	Skirvyte	LT	4	< RL	< RL	< RL	< RL	< RL	< RL	10
Vistula	17	Krakow Tyniec	PL	2		< RL	< RL		< RL	< RL	5
	18	Annopol	PL	2		< RL		< RL	< RL	< RL	10
	19	Plock	PL	2		< RL	< RL		< RL	< RL	4
	20	Kiezmark	PL	2		< RL	< RL		< RL	< RL	8
Oder	21	Bohumin	CZ								
	22	Chalupki	PL	2		< RL		< RL	< RL	< RL	5
	23	Wroclaw	PL								
	25	Krajnik	PL	2		< RL		< RL	< RL	< RL	5
Baltic Sea	26	Oskarshamn (S36)	SE	1				< RL	< RL	< RL	10
	27	Baltic Sea P-140	PL								
	28	Baltic Sea P-1	PL								
	29	Baltic Sea P-116	PL								
	30	Baltic Sea P-110	PL								
	31	Baltic Sea P-5	PL	2		< RL		< RL	< RL	< RL	10
	32	Baltic Sea P-39	PL								
	33	Moen	DK	1		< RL			< RL	< RL	6
	34	Gedser Odde	DK	1		< RL			< RL	< RL	6
	35	Luebeck Bay	DE								
	36	Femern Baelt	DK	1		< RL			< RL	< RL	6
	37	Langeland Baelt	DK	1		< RL			< RL	< RL	6
The Great Belt	38	Halskov Rev	DK	1		< RL			< RL	< RL	6
	39	Asnaes Rev	DK	1		< RL			< RL	< RL	6
The Sound	40	The Sound S	DK	1		< RL			< RL	< RL	6
	41	The Sound N(A)	DK	1		< RL			< RL	< RL	6

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

Table S27: Time averages

YEAR	:	2014
SAMPLE TYPE	:	surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY	:	caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Kattegat	42	Kattegat-413	DK	1		< RL			< RL	< RL	6
	45	Ringhals (35)	SE	2		< RL	< RL		< RL	< RL	5
Skagerrak	46	Fjaellbacka	SE	2		< RL	< RL		< RL	< RL	9
Elbe	47	Hrensko	CZ								
	48	Wedel	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	12
	49	Cuxhaven	DE	3	< RL				< RL	< RL	3
Rhine	50	Lauterbourg	FR								
	51	Worms	DE	13	< RL	< RL	< RL	< RL	< RL	< RL	7
	52	Trebur	DE	17	< RL	< RL	< RL	< RL	< RL	< RL	1
	53	Koblenz	DE	26	< RL	< RL	< RL	< RL	< RL	< RL	3
	54	Lobith	NL								
Moselle	55	Wincheringen	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	6
Meuse	56	Chooz (Givet)	FR								
	57	Heer-Agimont	BE	4		< RL	< RL	< RL	< RL	< RL	5
	58	Andenne	BE	26	< RL	< RL	< RL	< RL	< RL	< RL	10
	59	Huy	BE	26	< RL	< RL	< RL	< RL	< RL	< RL	7
	60	Lixhe	BE	26	< RL	< RL	< RL	< RL	< RL	< RL	12
	61	Eijsden	NL								
North Sea	63	Terschelling, 100 km from coast	NL								
	64	Noordwijk, 70 km from coast	NL								
	65	Noordwijk, 10 km from coast	NL								
Seine	66	Le Vesinet	FR								
Channel	67	Wimereux	FR								
	68	Jobourg	FR								
	69	La Hague-Jardeheu	FR								
Loire	70	Dampierre en Burly	FR								
	71	Angers (EDF)	FR								
Garonne	72	Bordeaux	FR								
Atlantic Ocean	73	Pornichet	FR								
	74	Arcachon	FR								
	75	St Pierre D'Oleron	FR								
	78	Cabo Silleiro	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	79	Isla Christina	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	80	Puerto de Cadiz	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	81	Estrecho de Gibraltar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	82	Puerto De Las Palmas	ES	4	< RL	< RL		< RL	< RL	< RL	5

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S28: Time averages

YEAR : 2014

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mino	83	Lugo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	10
	84	Orense	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	85	Caldelas De Tuy	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
Duero	86	Garray	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	87	Quintanilla	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	88	Villalcampo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
Tagus	89	Trillo Arriba	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	6
	90	Zorita Arriba	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	8
	91	Aranjuez	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	92	Toledo	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	93	Talavera	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	94	Valdecanas	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	2
	95	Embalse de Torrejon	ES	16	< RL	< RL	< RL	< RL	< RL	< RL	5
	96	Vila Velha de Rodao	PT								
	97	Valada Do Ribatejo	PT	12	< RL	< RL	< RL	< RL	< RL	< RL	7
Guadiana	98	Balbuena	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	99	Puente Palmas	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	100	San Lucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
Jucar	103	Venta De Juan Romero	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	104	Embalse De Alarcon	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	105	Alcala Del Jucar	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	8
	106	Cofrentes Abajo	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	8
Ebro	107	Garona Arriba	ES	14	< RL	< RL	< RL	< RL	< RL	< RL	8
	108	Garona Abajo	ES	27	< RL	< RL	< RL	< RL	< RL	< RL	5
	109	Mendavia	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	110	Zaragoza-Rio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	111	Sastago	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	112	Ribarroja	ES	12	< RL	< RL	< RL	< RL	< RL	< RL	8
	113	Asco Abajo	ES	25	< RL	< RL	< RL	< RL	< RL	< RL	7
	114	Garcia	ES	8	< RL	< RL	< RL	< RL	< RL	< RL	11
	115	Cherta	ES								
Rhone	116	Saint Alban	FR								
	117	Cruas (Aval)	FR								
	118	Tricastin	FR								
	119	Roquemaure (Marcoule)	FR								

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S29: Time averages

YEAR : 2014
SAMPLE TYPE : surface water (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Mediterranean Sea	120	Garrucha	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	122	Cabo de San Antonio	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	123	Puerto de Palma	ES	5	< RL	< RL	< RL	< RL	< RL	< RL	9
	124	Puerto de Tarragona	ES	4	< RL	< RL	< RL	< RL	< RL	< RL	9
	126	Cabo de Creus	ES	8	< RL	< RL	< RL	< RL	< RL	< RL	9
	127	Rotondella	IT	1				< RL	< RL	< RL	10
	128	Xwejni	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	4
	129	Lapsi	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	5
	130	Wied Ghammieq	MT	4	< RL	< RL	< RL	< RL	< RL	< RL	12
	131	Polis	CY	1			< RL		< RL	< RL	7
	132	Paphos	CY								
	133	Limassol	CY								
	134	Larnaca	CY								
	135	Paralimni	CY	1		< RL			< RL	< RL	6
Maritsa	136	Kostenec	BG								
	137	Plovdiv	BG								
	138	Mirovo	BG								
	139	Harmanli	BG								
	140	Svilengrad	BG								
Drau	141	Schwabegg	AT	24	< RL	< RL	< RL	< RL	< RL	< RL	1
	142	Dravograd	SI	4	< RL		< RL	< RL	< RL	< RL	9
Sava	143	Krsko	SI	4	< RL	< RL		< RL	< RL	< RL	3
Tisza	144	Tiszabecs	HU								
	145	Gergelyiugornya	HU								
	146	Zahony	HU								
	147	Tiszabercel	HU								
	148	Rakamaz	HU								
	149	Szolnok	HU	5	< RL	< RL	< RL	< RL	< RL	< RL	1
	150	Mindszent	HU								
	151	Tiszasziget II	HU								
	152	Tiszasziget I	HU	5	< RL	< RL	< RL	< RL	< RL	< RL	1

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

Table S30: Time averages

YEAR : 2014

SAMPLE TYPE : surface water (Bq l $^{-1}$)

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Catchment		Locality		N	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual avg.	Monthly max	M
Danube	154	Vilshofen	DE	12	< RL	< RL	< RL	< RL	< RL	< RL	11
	155	Wolfsthal	AT	12	< RL	< RL	< RL	< RL	< RL	< RL	8
	156	Rajka	HU								
	157	Szob	HU								
	158	Budapest - North I	HU								
	159	Budapest - Danube	HU								
	160	Nagyteteny	HU								
	161	Dunaujvaros	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	7
	162	Dunafoldvar II	HU	3	< RL		< RL	< RL	< RL	< RL	1
	163	Dunafoldvar I	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	1
	164	Kalocsa	HU	4	< RL	< RL	< RL	< RL	< RL	< RL	7
	165	Gerjen	HU	9	< RL	< RL	< RL	< RL	< RL	< RL	5
	166	Baja	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	1
	167	Mohacs	HU	2	< RL	< RL	< RL	< RL	< RL	< RL	7
	168	Drobeta Turnu Severin	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	5
	169	Novo Selo	BG								
	170	Ruse	BG								
	172	Bechet	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	3
	173	Oriahovo	BG								
	174	Baykal	BG								
	175	Nikopol	BG								
	176	Belene	BG								
	177	Zimnicea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	4
	178	Svishtov	BG								
	179	Ruse	BG								
	180	Silistra	BG								
	181	Calarasi	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	2
	182	Cernavoda*	RO	24	< RL	< RL	< RL	< RL	< RL	< RL	3
	183	Tulcea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	5
	184	Sfantu Gheorge Tulcea	RO	12	< RL	< RL	< RL	< RL	< RL	< RL	8
Clyde	185	Clyde Estuary	UK	4	< RL	< RL	< RL	< RL	< RL	< RL	6
Lough Neagh	186	Lough Neagh	UK								
Faughan	187	Faughan	UK								
Sava	188	Zagreb	HR	4		< RL	< RL	< RL	< RL	< RL	6

RL: reporting level for ^{137}Cs In surface water, i.e. 1.0 BQ/L (see Appendix B)
*: sampling location downstream of a nuclear power plant

N: Number of measurements considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

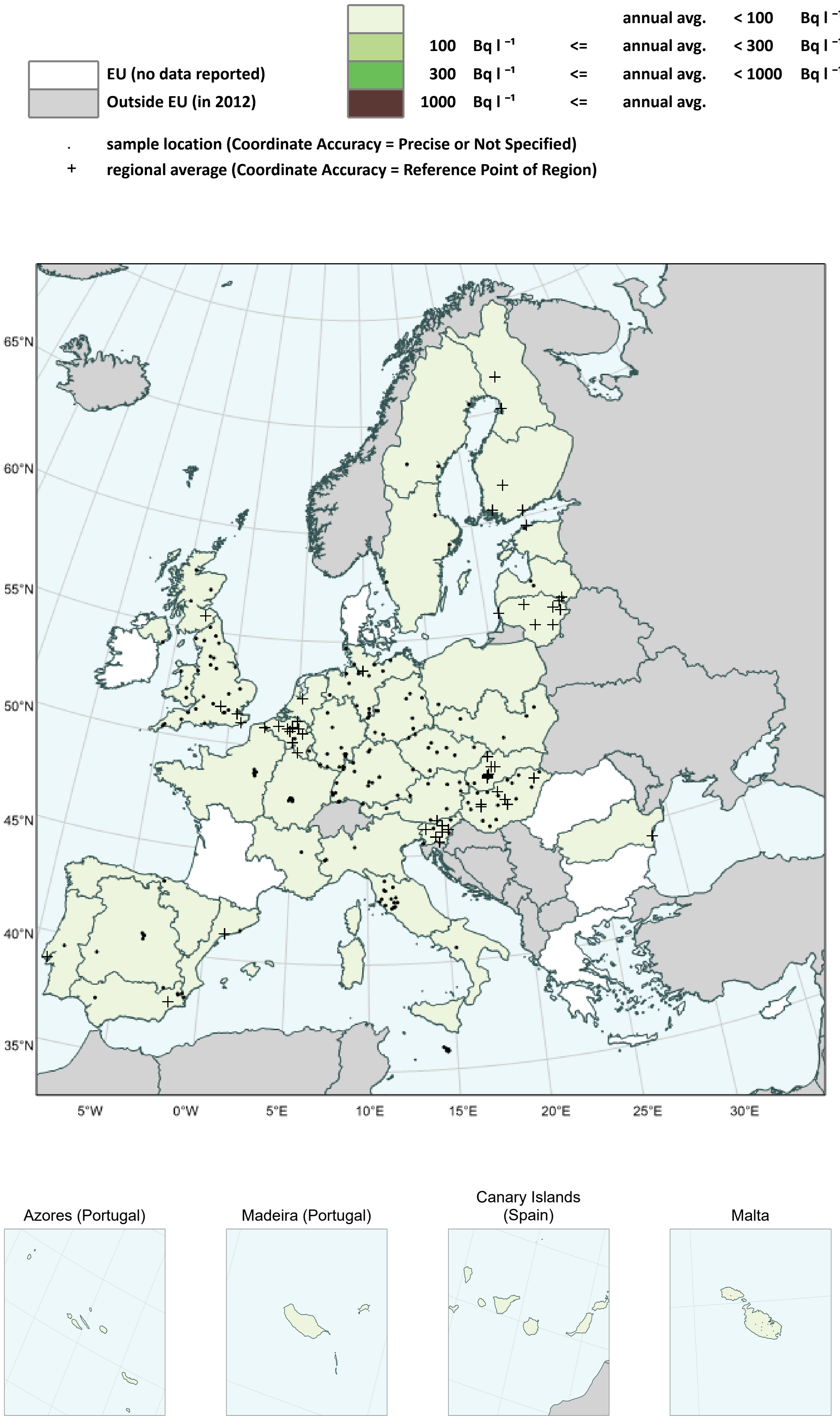


Fig.W1

Sampling locations and geographical averages by year for ^3H in drinking water, 2012

Table W1: Geographical and time averages

DENSE

YEAR : 2012
SAMPLE TYPE : drinking water (Bq l $^{-1}$)
NUCLIDE CATEGORY : tritium (^{3}H)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	109	9	< RL	< RL	< RL	< RL	< RL	< RL	1
BE	49	13	< RL	< RL	< RL	< RL	< RL	< RL	7
BG									
CY									
CZ	64	9	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-N	44	15	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	27	11	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-S	70	19	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	31	10	< RL	< RL	< RL	< RL	< RL	< RL	7
DE	172	55	< RL	< RL	< RL	< RL	< RL	< RL	6
DK									
EE	4	2	< RL			< RL	< RL	< RL	2
ES-N	12	1	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-C	40	6	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	38	6	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	44	3	< RL	< RL	< RL	< RL	< RL	< RL	6
ES	134	16	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW	10	5	< RL		< RL		< RL	< RL	3
FR-NE	16	8		< RL	< RL		< RL	< RL	9
FR-SW									
FR-SE	1	1				< RL	< RL	< RL	10
FR	27	14	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-EN	123	26	< RL	< RL	< RL	< RL	< RL	< RL	10
GB-WL	18	4	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	9
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB	170	35	< RL	< RL	< RL	< RL	< RL	< RL	7
GR									
HU	51	22	< RL	< RL	< RL	< RL	< RL	< RL	5
IE									
IT-N	15	3	< RL	< RL	< RL	< RL	< RL	< RL	5
IT-C	37	15		< RL	< RL	< RL	< RL	< RL	11
IT-S	1	1		< RL			< RL	< RL	5
IT	53	19	< RL	< RL	< RL	< RL	< RL	< RL	11
LT	72	7	< RL	< RL	< RL	< RL	< RL	< RL	7
LU	3	1	< RL		< RL		< RL	< RL	1
LV	12	4		< RL	< RL	< RL	< RL	< RL	5
MT	13	12	< RL	< RL	< RL	< RL	< RL	< RL	1
NL	24	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	5	5	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	23	2	< RL	< RL	< RL	< RL	< RL	< RL	11
RO-N									
RO-S	16	1	< RL	< RL	< RL	< RL	< RL	< RL	9
RO	16	1	< RL	< RL	< RL	< RL	< RL	< RL	9
SE-N	6	3		< RL	< RL	< RL	< RL	< RL	10
SE-S	6	3		< RL		< RL	< RL	< RL	10
SE	12	6		< RL	< RL	< RL	< RL	< RL	10
SI	14	11	< RL	< RL	< RL	< RL	< RL	< RL	7
SK	82	9	< RL	< RL	< RL	< RL	< RL	< RL	4

RL: reporting level for ^{3}H In drinking water, i.e. 1.0 E+02 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

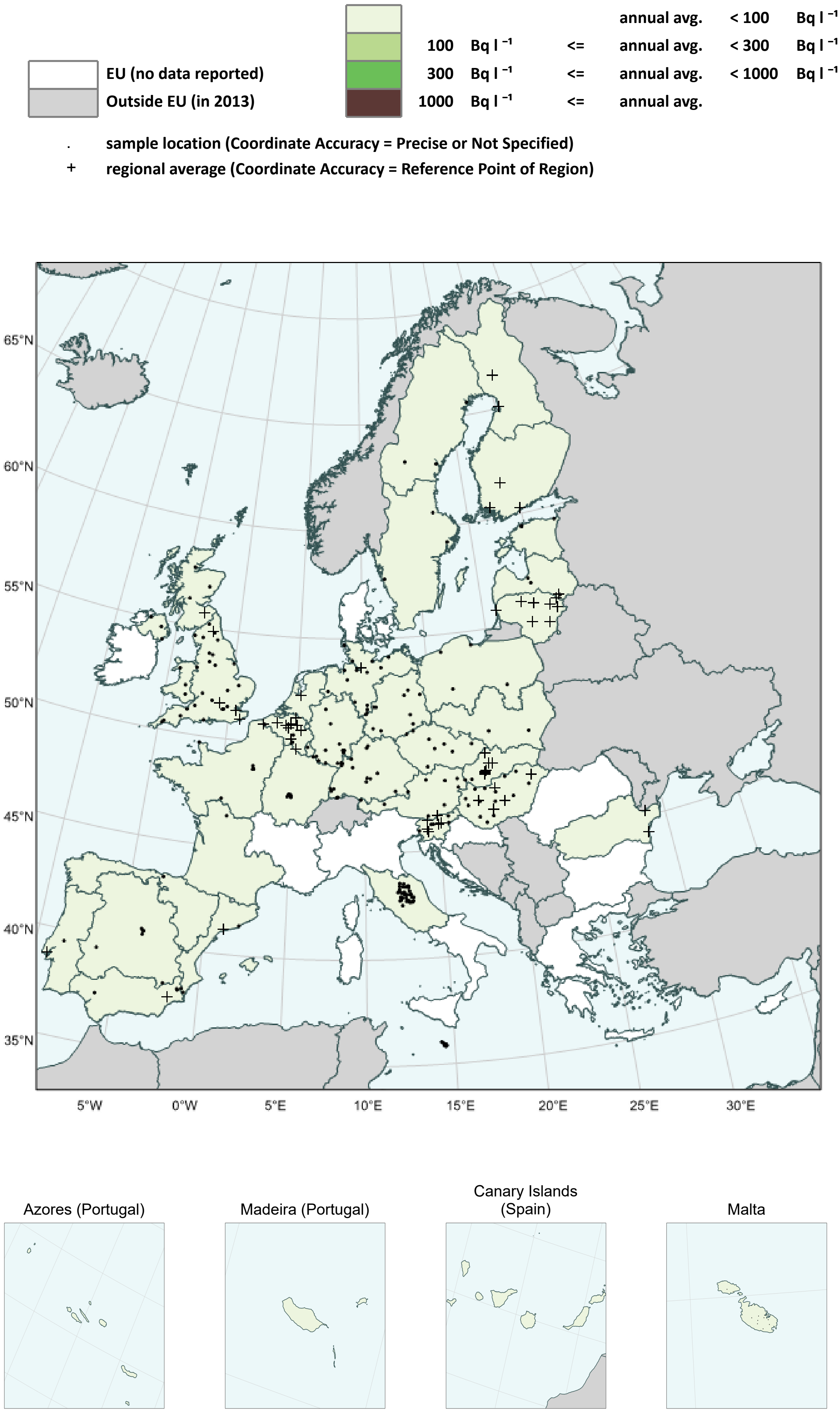


Fig.W2

Sampling locations and geographical averages by year for ³H in drinking water, 2013

Table W2: Geographical and time averages

YEAR : 2013
SAMPLE TYPE : drinking water (Bq l $^{-1}$)
NUCLIDE CATEGORY : tritium (^{3}H)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	109	9	< RL	< RL	< RL	< RL	< RL	< RL	11
BE	47	12	< RL	< RL	< RL	< RL	< RL	< RL	9
BG									
CY									
CZ	60	8	< RL	< RL	< RL	< RL	< RL	< RL	9
DE-N	51	15	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	45	13	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-S	69	18	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-E	28	10	< RL	< RL	< RL	< RL	< RL	< RL	12
DE	193	56	< RL	< RL	< RL	< RL	< RL	< RL	1
DK									
EE	5	3	< RL	< RL		< RL	< RL	< RL	2
ES-N	12	1	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-C	40	6	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-S	40	6	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-E	40	3	< RL	< RL	< RL	< RL	< RL	< RL	7
ES	132	16	< RL	< RL	< RL	< RL	< RL	< RL	9
FI-N	4	2		< RL		< RL	< RL	< RL	4
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW	11	6	< RL	< RL	< RL	< RL	< RL	< RL	9
FR-NE	9	9			< RL	< RL	< RL	< RL	10
FR-SW	1	1		< RL			< RL	< RL	4
FR-SE									
FR	21	16	< RL	< RL	< RL	< RL	< RL	< RL	9
GB-EN	124	27	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-WL	17	4	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	9
GB-NI	13	3	< RL	< RL	< RL	< RL	< RL	< RL	8
GB	178	38	< RL	< RL	< RL	< RL	< RL	< RL	8
GR									
HR-A									
HR-C									
HR									
HU	69	19	< RL	< RL	< RL	< RL	< RL	< RL	1
IE									
IT-N									
IT-C	37	37			< RL	< RL	< RL	< RL	10
IT-S									
IT	37	37			< RL	< RL	< RL	< RL	10
LT	73	8	< RL	< RL	< RL	< RL	< RL	< RL	3
LU	3	1	< RL		< RL		< RL	< RL	7
LV	15	4	< RL	< RL	< RL	< RL	< RL	< RL	5
MT	14	13	< RL	< RL	< RL	< RL	< RL	< RL	10
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	4	4	< RL	< RL	< RL	< RL	< RL	< RL	12
PL-S	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	6	6	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	22	2	< RL	< RL	< RL	< RL	< RL	< RL	7
RO-N									
RO-S	61	2	< RL	< RL	< RL	< RL	< RL	< RL	3
RO	61	2	< RL	< RL	< RL	< RL	< RL	< RL	3
SE-N	6	3		< RL	< RL		< RL	< RL	4
SE-S	6	3		< RL	< RL	< RL	< RL	< RL	9
SE	12	6		< RL	< RL	< RL	< RL	< RL	4
SI	11	11		< RL	< RL		< RL	< RL	7
SK	85	9	< RL	< RL	< RL	< RL	< RL	< RL	2

RL: reporting level for ^{3}H In drinking water, i.e. 1.0 E+02 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

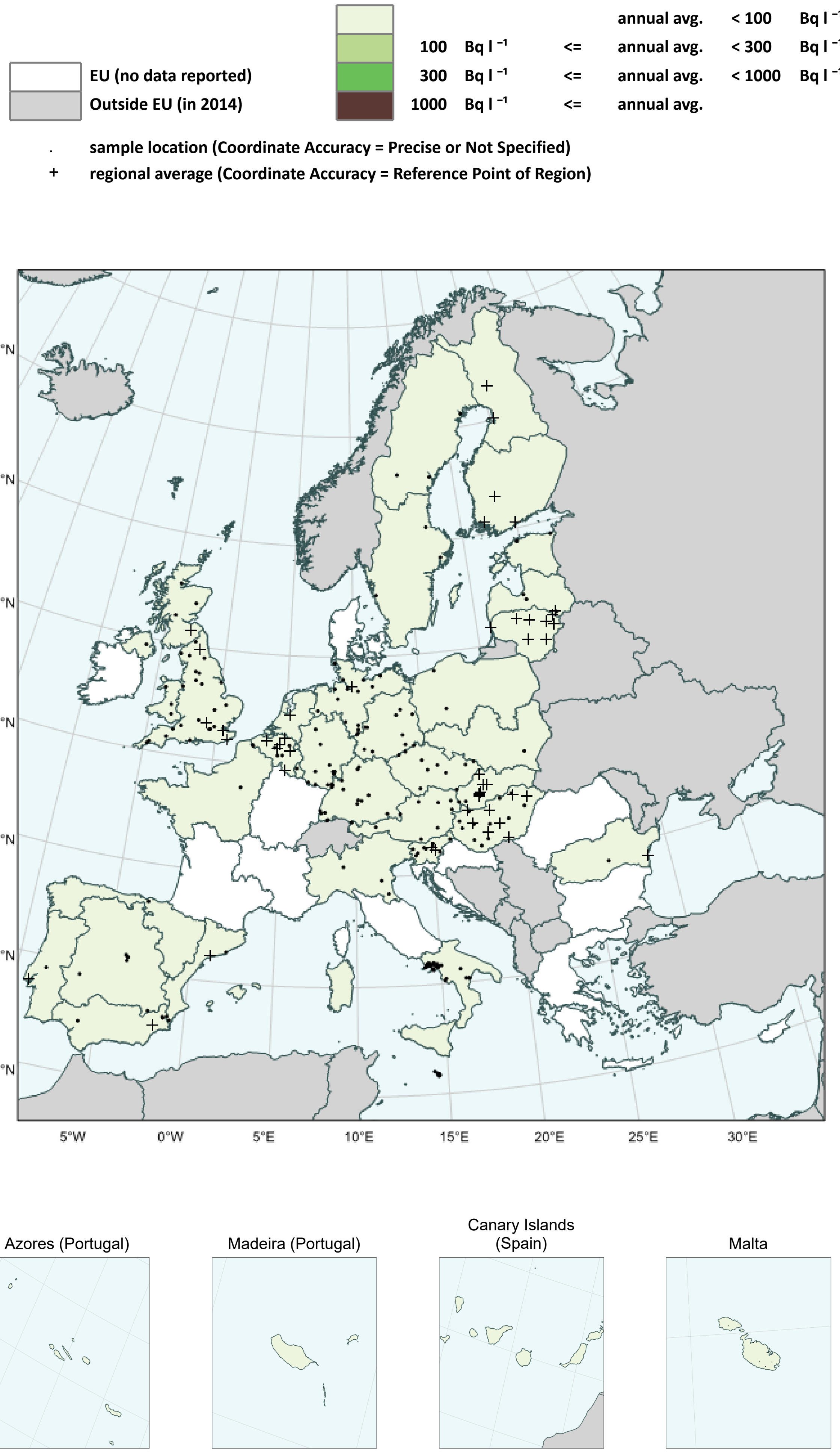


Fig.W3

Sampling locations and geographical averages by year for ³H in drinking water, 2014

Table W3: Geographical and time averages

YEAR : **2014**

SAMPLE TYPE : **drinking water (Bq l $^{-1}$)**

NUCLIDE CATEGORY : **tritium (^{3}H)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	100	9	< RL	< RL	< RL	< RL	< RL	< RL	3
BE	48	12	< RL	< RL	< RL	< RL	< RL	< RL	5
BG									
CY									
CZ	72	11	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-N	48	15	< RL	< RL	< RL	< RL	< RL	< RL	4
DE-C	22	11	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-S	75	18	< RL	< RL	< RL	< RL	< RL	< RL	5
DE-E	31	10	< RL	< RL	< RL	< RL	< RL	< RL	1
DE	176	54	< RL	< RL	< RL	< RL	< RL	< RL	12
DK									
EE	6	3	< RL	< RL		< RL	< RL	< RL	2
ES-N	12	1	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-C	40	6	< RL	< RL	< RL	< RL	< RL	< RL	1
ES-S	40	6	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	39	3	< RL	< RL	< RL	< RL	< RL	< RL	8
ES	131	16	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	4
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW	6	1		< RL	< RL	< RL	< RL	< RL	10
FR-NE									
FR-SW									
FR-SE									
FR	6	1		< RL	< RL	< RL	< RL	< RL	10
GB-EN	120	25	< RL	< RL	< RL	< RL	< RL	< RL	10
GB-WL	18	4	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	25	4	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI	1	1	< RL				< RL	< RL	1
GB	164	34	< RL	< RL	< RL	< RL	< RL	< RL	11
GR									
HR-A									
HR-C									
HR									
HU	65	21	< RL	< RL	< RL	< RL	< RL	< RL	7
IE									
IT-N	16	3	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C									
IT-S	90	44	< RL	< RL	< RL	< RL	< RL	< RL	6
IT	106	47	< RL	< RL	< RL	< RL	< RL	< RL	1
LT	80	8	< RL	< RL	< RL	< RL	< RL	< RL	2
LU	6	1	< RL	< RL	< RL	< RL	< RL	< RL	5
LV	16	4		< RL	< RL	< RL	< RL	< RL	9
MT	7	7		< RL	< RL		< RL	< RL	4
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	1	1	< RL	< RL	< RL	< RL	< RL	< RL	12
PL	3	3	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	24	2	< RL	< RL	< RL	< RL	< RL	< RL	2
RO-N									
RO-S	77	2	< RL	< RL	< RL	< RL	< RL	< RL	1
RO	77	2	< RL	< RL	< RL	< RL	< RL	< RL	1
SE-N	5	3	< RL	< RL	< RL		< RL	< RL	3
SE-S	5	3	< RL	< RL	< RL		< RL	< RL	3
SE	10	6	< RL	< RL	< RL		< RL	< RL	3
SI	14	11	< RL	< RL	< RL	< RL	< RL	< RL	6
SK	86	9	< RL	< RL	< RL	< RL	< RL	< RL	6

RL: reporting level for ^{3}H In drinking water, i.e. 1.0 E+02 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

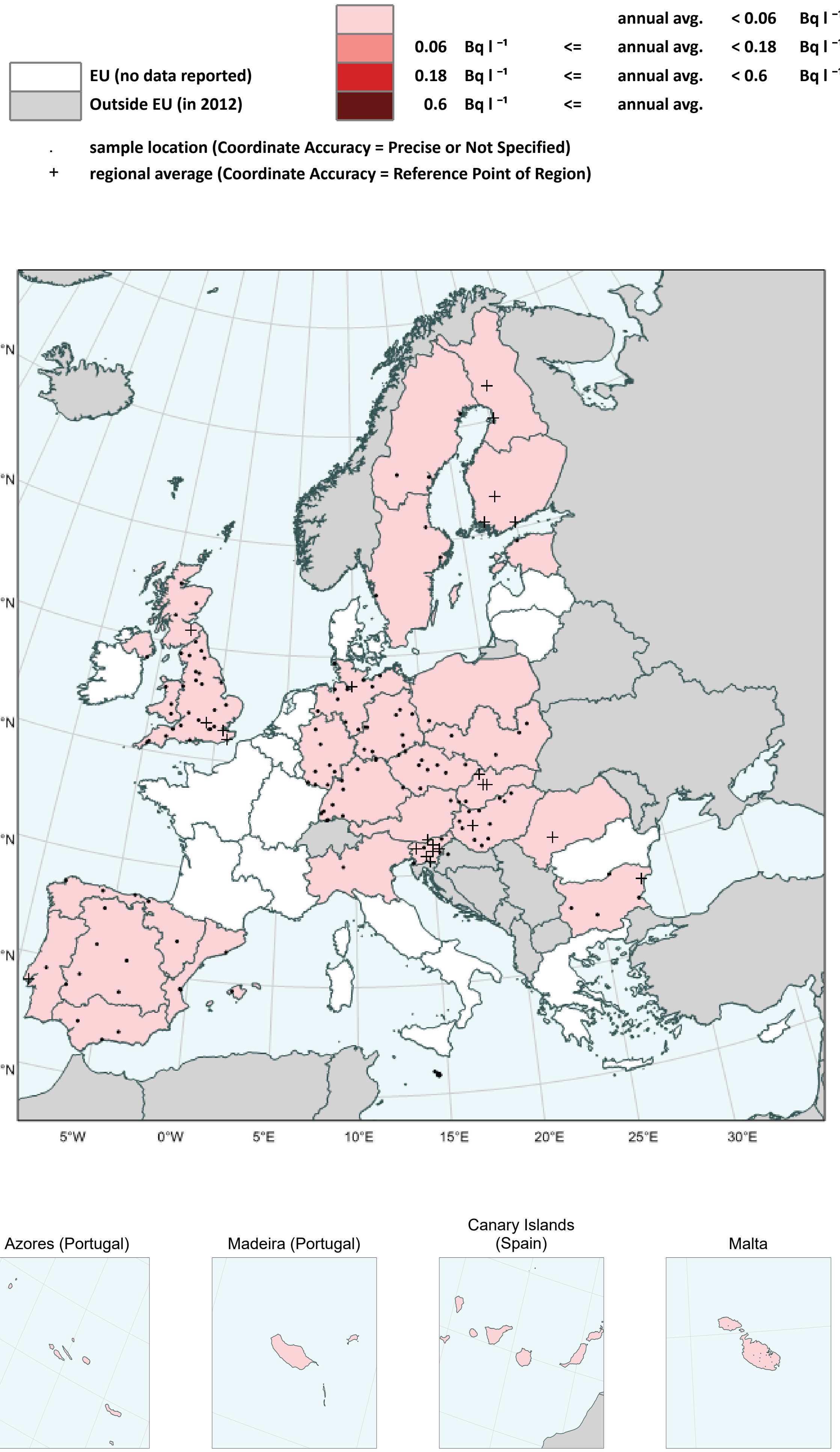


Fig.W4

Sampling locations and geographical averages by year for ^{90}Sr in drinking water, 2012

Table W4: Geographical and time averages

DENSE

YEAR : 2012

SAMPLE TYPE : drinking water (Bq l $^{-1}$)

NUCLIDE CATEGORY : strontium-90 (^{90}Sr)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	1
BE							Δ		
BG	15	5	< RL	< RL	< RL	< RL	< RL	< RL	8
CY									
CZ	29	9	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	27	11	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-C	18	8	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-S	19	13	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	22	9	< RL	< RL	< RL	< RL	< RL	< RL	2
DE	86	41	< RL	< RL	< RL	< RL	< RL	< RL	10
DK									
EE	2	1	< RL			< RL	< RL	< RL	2
ES-N	29	5	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-C	45	7	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	40	4	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-E	24	4	< RL	< RL	< RL	< RL	< RL	< RL	1
ES	138	20	< RL	< RL	< RL	< RL	< RL	< RL	10
FI-N	4	2		< RL		< RL	< RL	< RL	4
FI-S	6	3		< RL		< RL	< RL	< RL	4
FI	10	5		< RL		< RL	< RL	< RL	4
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	123	26	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	19	4	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	2
GB	171	35	< RL	< RL	< RL	< RL	< RL	< RL	4
GR									
HU	26	12	< RL	< RL	< RL	< RL	< RL	< RL	12
IE									
IT-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-C									
IT-S									
IT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	9
LT									
LU									
LV									
MT	13	12	< RL	< RL	< RL	< RL	< RL	< RL	1
NL									
PL-N	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	5	5	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	23	2	< RL	< RL	< RL	< RL	< RL	< RL	8
RO-N	2	1	< RL	< RL	< RL	< RL	< RL	< RL	12
RO-S									
RO	2	1	< RL	< RL	< RL	< RL	< RL	< RL	12
SE-N	6	3		< RL	< RL	< RL	< RL	< RL	10
SE-S	6	3		< RL		< RL	< RL	< RL	10
SE	12	6		< RL	< RL	< RL	< RL	< RL	10
SI	14	11	< RL	< RL	< RL	< RL	< RL	< RL	4
SK	34	5	< RL	< RL	< RL	< RL	< RL	< RL	4

RL: reporting level for ^{90}Sr In drinking water, i.e. 6.0 E-02 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

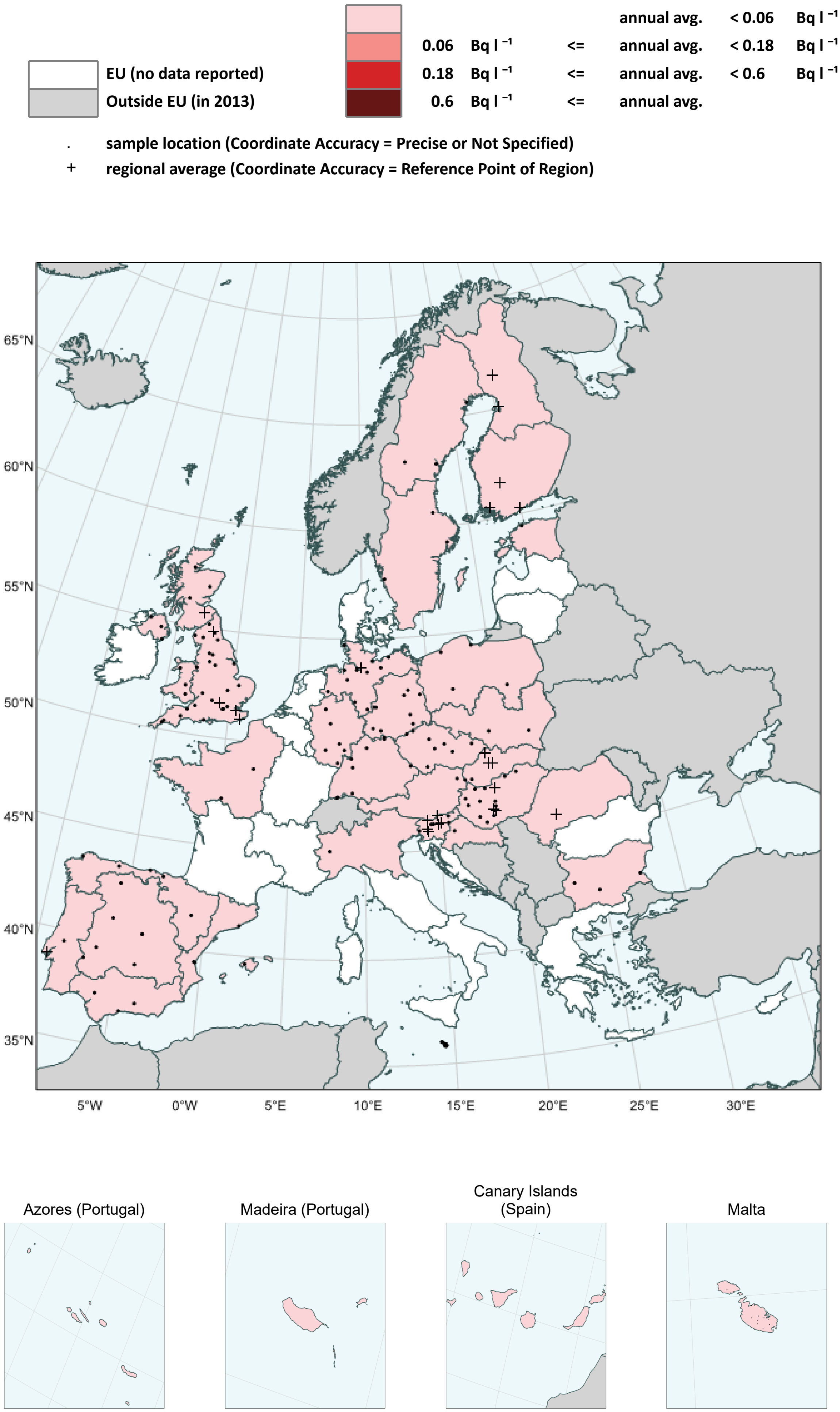


Fig.W5

Sampling locations and geographical averages by year for ^{90}Sr in drinking water, 2013

Table W5: Geographical and time averages

YEAR : 2013

SAMPLE TYPE : drinking water (Bq l $^{-1}$)

NUCLIDE CATEGORY : strontium-90 (^{90}Sr)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	10
BE							Δ		
BG	8	3	< RL	< RL	< RL	< RL	< RL	< RL	11
CY									
CZ	31	8	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-N	37	12	< RL	< RL	< RL	< RL	< RL	< RL	8
DE-C	14	6	< RL	< RL	< RL	< RL	< RL	< RL	9
DE-S	18	10	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-E	21	9	< RL	< RL	< RL	< RL	< RL	< RL	2
DE	90	37	< RL	< RL	< RL	< RL	< RL	< RL	10
DK									
EE	2	1	< RL			< RL	< RL	< RL	2
ES-N	29	5	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-C	44	7	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-S	40	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES-E	24	4	< RL	< RL	< RL	< RL	< RL	< RL	2
ES	137	20	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW	2	2		< RL	< RL	< RL	< RL	< RL	6
FR-NE									
FR-SW									
FR-SE									
FR	2	2		< RL	< RL	< RL	< RL	< RL	6
GB-EN	124	27	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	17	4	< RL	< RL	< RL	< RL	< RL	< RL	11
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-NI	13	3	< RL	< RL	< RL	< RL	< RL	< RL	2
GB	178	38	< RL	< RL	< RL	< RL	< RL	< RL	4
GR									
HR-A									
HR-C	4	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	4	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	48	16	< RL	< RL	< RL	< RL	< RL	< RL	10
IE									
IT-N	1	1				< RL	< RL	< RL	12
IT-C									
IT-S									
IT	1	1				< RL	< RL	< RL	12
LT									
LU									
LV									
MT	14	13	< RL	< RL	< RL	< RL	< RL	< RL	5
NL									
PL-N	4	4	< RL	< RL	< RL	< RL	< RL	< RL	12
PL-S	2	2	< RL	< RL	< RL	< RL	< RL	< RL	12
PL	6	6	< RL	< RL	< RL	< RL	< RL	< RL	12
PT	21	2	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-N	2	1	< RL			< RL	< RL	< RL	1
RO-S									
RO	2	1	< RL			< RL	< RL	< RL	1
SE-N	5	3		< RL	< RL		< RL	< RL	4
SE-S	5	3		< RL	< RL		< RL	< RL	4
SE	10	6		< RL	< RL		< RL	< RL	4
SI	11	11		< RL	< RL		< RL	< RL	6
SK	34	5	< RL	< RL	< RL	< RL	< RL	< RL	7

RL: reporting level for ^{90}Sr In drinking water, i.e. 6.0 E-02 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

		annual avg.	< 0.06	Bq l⁻¹
0.06 Bq l⁻¹	<=	annual avg.	< 0.18	Bq l⁻¹
0.18 Bq l⁻¹	<=	annual avg.	< 0.6	Bq l⁻¹
0.6 Bq l⁻¹	<=	annual avg.		

EU (no data reported)
Outside EU (in 2014)

. sample location (Coordinate Accuracy = Precise or Not Specified)
+ regional average (Coordinate Accuracy = Reference Point of Region)

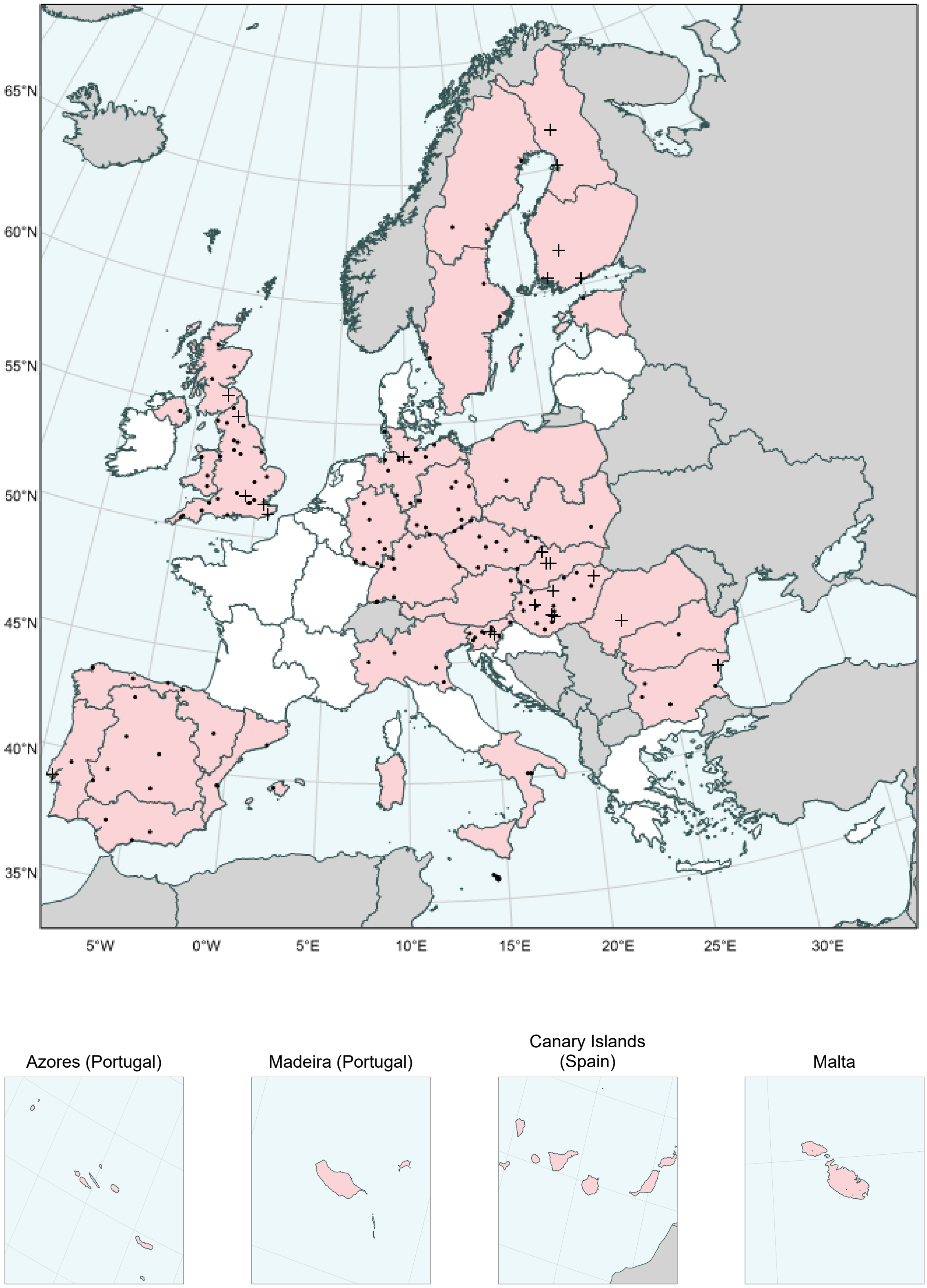


Fig.W6

Sampling locations and geographical averages by year for ^{90}Sr in drinking water, 2014

Table W6: Geographical and time averages

YEAR : 2014

SAMPLE TYPE : drinking water (Bq l $^{-1}$)

NUCLIDE CATEGORY : strontium-90 (^{90}Sr)

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	10
BE							Δ		
BG	17	5	< RL	< RL	< RL	< RL	< RL	< RL	1
CY									
CZ	34	11	< RL	< RL	< RL	< RL	< RL	< RL	9
DE-N	33	11	< RL	< RL	< RL	< RL	< RL	< RL	4
DE-C	18	8	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-S	22	10	< RL	< RL	< RL	< RL	< RL	< RL	10
DE-E	23	9	< RL	< RL	< RL	< RL	< RL	< RL	3
DE	96	38	< RL	< RL	< RL	< RL	< RL	< RL	10
DK									
EE	2	1	< RL			< RL	< RL	< RL	10
ES-N	29	5	< RL	< RL	< RL	< RL	< RL	< RL	1
ES-C	44	7	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-S	32	4	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	24	4	< RL	< RL	< RL	< RL	< RL	< RL	9
ES	129	20	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	120	25	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-WL	18	4	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-NI	1	1	< RL				< RL	< RL	1
GB	163	34	< RL	< RL	< RL	< RL	< RL	< RL	5
GR									
HR-A									
HR-C									
HR									
HU	42	19	< RL	< RL	< RL	< RL	< RL	< RL	4
IE									
IT-N	10	4	< RL	< RL	< RL	< RL	< RL	< RL	6
IT-C									
IT-S	3	3		< RL			< RL	< RL	5
IT	13	7	< RL	< RL	< RL	< RL	< RL	< RL	4
LT									
LU									
LV									
MT	7	7		< RL	< RL		< RL	< RL	7
NL									
PL-N	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	3	3	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	24	2	< RL	< RL	< RL	< RL	< RL	< RL	3
RO-N	2	1	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-S	1	1				< RL	< RL	< RL	11
RO	3	2	< RL	< RL	< RL	< RL	< RL	< RL	1
SE-N	6	3	6.0E-02	< RL	< RL	< RL	< RL	6.0E-02	3
SE-S	6	3	6.0E-02	< RL	< RL	< RL	< RL	6.0E-02	3
SE	12	6	6.0E-02	< RL	< RL	< RL	< RL	6.0E-02	3
SI	14	11	< RL	< RL	< RL	< RL	< RL	< RL	3
SK	35	5	< RL	< RL	< RL	< RL	< RL	< RL	4

RL: reporting level for ^{90}Sr In drinking water, i.e. 6.0 E-02 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

EU (no data reported)				annual avg.	< 0.1	Bq l⁻¹
Outside EU (in 2012)	0.1	Bq l⁻¹	<=	annual avg.	< 0.3	Bq l⁻¹
	0.3	Bq l⁻¹	<=	annual avg.	< 1	Bq l⁻¹
	1	Bq l⁻¹	<=	annual avg.		

. sample location (Coordinate Accuracy = Precise or Not Specified)

\+ regional average (Coordinate Accuracy = Reference Point of Region)

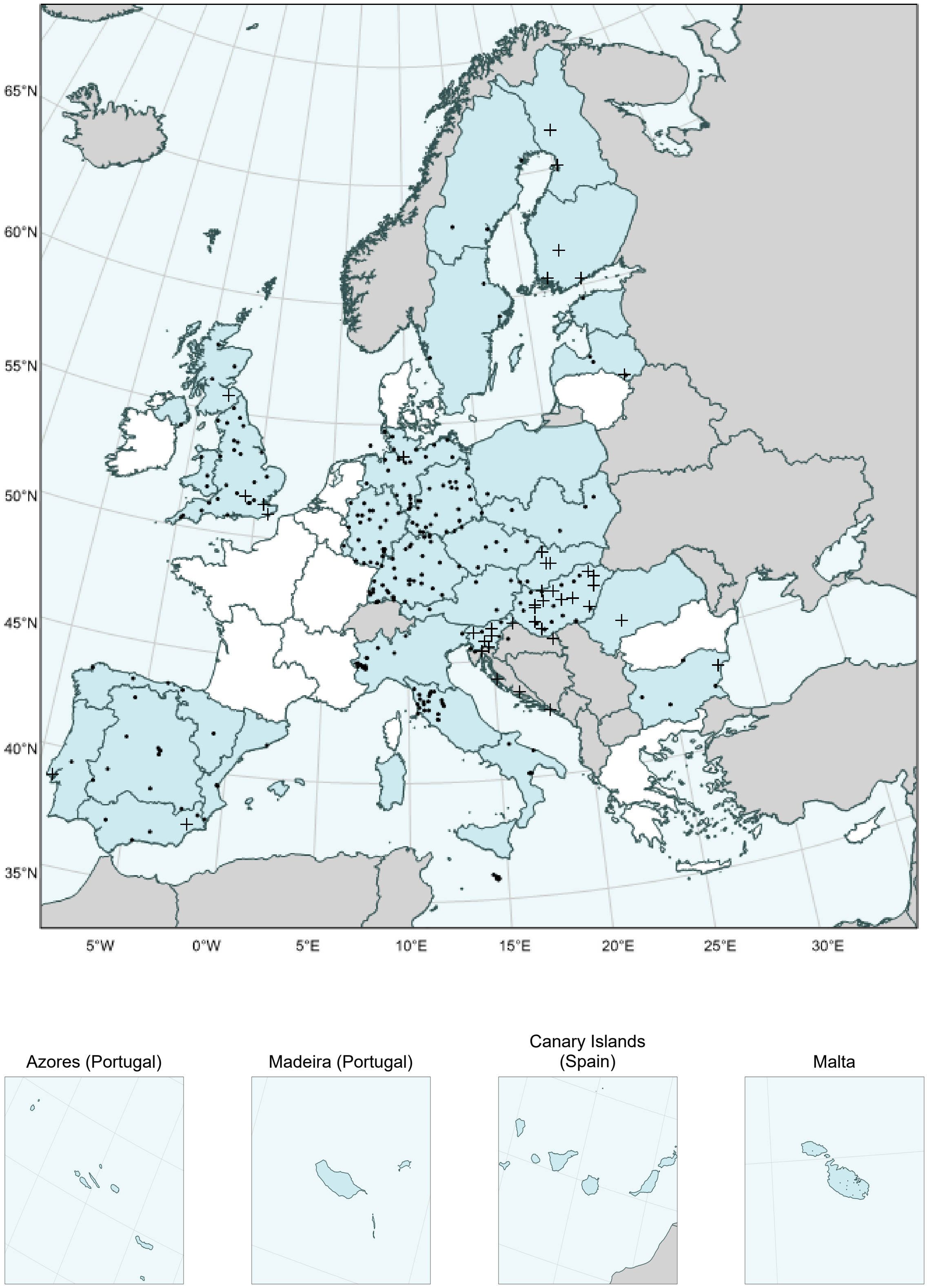


Fig.W7

Sampling locations and geographical averages by year for ^{137}Cs in drinking water, 2012

Table W7: Geographical and time averages

YEAR : **2012**
SAMPLE TYPE : **drinking water (Bq l^{-1})**
NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	48	4	< RL	< RL	< RL	< RL	< RL	< RL	11
BE							Δ		
BG	14	5	< RL	< RL	< RL	< RL	< RL	1.0E-01	9
CY									
CZ	54	7	< RL	< RL	< RL	< RL	< RL	< RL	4
DE-N	67	22	< RL	< RL	< RL	< RL	< RL	< RL	8
DE-C	67	23	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-S	122	39	< RL	< RL	< RL	< RL	< RL	< RL	5
DE-E	88	24	< RL	< RL	< RL	< RL	< RL	< RL	12
DE	344	108	< RL	< RL	< RL	< RL	< RL	< RL	12
DK									
EE	2	1	< RL			< RL	< RL	< RL	2
ES-N	60	5	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-C	89	11	< RL	< RL	< RL	< RL	< RL	< RL	11
ES-S	56	6	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-E	37	4	< RL	< RL	< RL	< RL	< RL	< RL	9
ES	242	26	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	4
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW									
FR-NE									
FR-SW									
FR-SE							Δ		
FR							Δ		
GB-EN	123	26	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	19	4	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-NI	5	1	< RL	< RL	< RL	< RL	< RL	< RL	1
GB	171	35	< RL	< RL	< RL	< RL	< RL	< RL	5
GR									
HU	72	31	< RL	< RL	< RL	< RL	< RL	< RL	6
IE									
IT-N	34	16	< RL	< RL	< RL	< RL	< RL	< RL	10
IT-C	37	23	< RL	< RL	< RL	< RL	< RL	< RL	8
IT-S	7	5		< RL	< RL	< RL	< RL	< RL	4
IT	78	44	< RL	< RL	< RL	< RL	< RL	< RL	8
LT									
LU	22	1	< RL	< RL	< RL	< RL	< RL	< RL	9
LV	11	4		< RL	< RL	< RL	< RL	< RL	5
MT	13	12	< RL	< RL	< RL	< RL	< RL	< RL	6
NL									
PL-N	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	5	5	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	23	2	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-N	1	1				< RL	< RL	< RL	12
RO-S									
RO	1	1				< RL	< RL	< RL	12
SE-N	6	3		< RL	< RL	< RL	< RL	< RL	10
SE-S	6	3		< RL		< RL	< RL	< RL	10
SE	12	6		< RL	< RL	< RL	< RL	< RL	10
SI	10	9	< RL	< RL		< RL	< RL	< RL	6
SK	36	5	< RL	< RL	< RL	< RL	< RL	< RL	12

RL: reporting level for ^{137}Cs In drinking water, i.e. 1.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

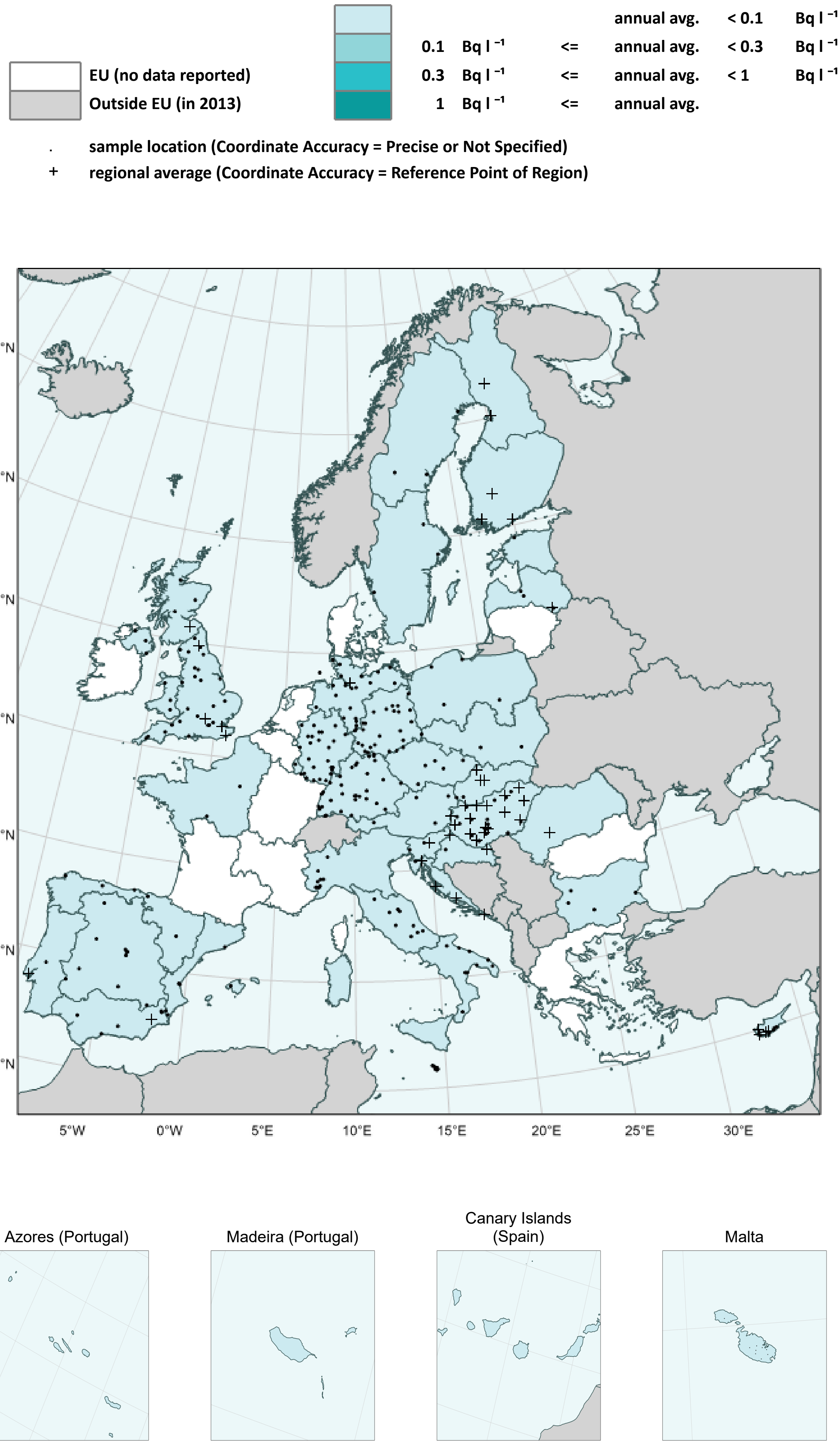


Fig.W8

Sampling locations and geographical averages by year for ^{137}Cs in drinking water, 2013

Table W8: Geographical and time averages

YEAR : **2013**
SAMPLE TYPE : **drinking water (Bq l^{-1})**
NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	48	4	< RL	< RL	< RL	< RL	< RL	< RL	12
BE							Δ		
BG	11	4	< RL	< RL	< RL	< RL	< RL	< RL	7
CY	9	9	< RL				< RL	< RL	2
CZ	56	7	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-N	78	22	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-C	92	25	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-S	114	34	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-E	86	24	< RL	< RL	< RL	< RL	< RL	< RL	11
DE	370	105	< RL	< RL	< RL	< RL	< RL	< RL	8
DK									
EE	2	1	< RL			< RL	< RL	< RL	2
ES-N	60	5	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-C	90	11	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-S	60	8	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-E	46	5	< RL	< RL	< RL	< RL	< RL	< RL	11
ES	256	29	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW	2	2		< RL	< RL	< RL	< RL	< RL	11
FR-NE									
FR-SW									
FR-SE									
FR	2	2		< RL	< RL	< RL	< RL	< RL	11
GB-EN	124	27	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	17	4	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-SC	24	4	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-NI	13	3	< RL	< RL	< RL	< RL	< RL	< RL	1
GB	178	38	< RL	< RL	< RL	< RL	< RL	< RL	4
GR									
HR-A	5	5		< RL		< RL	< RL	< RL	11
HR-C	6	3	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	11	8	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	106	34	< RL	< RL	< RL	< RL	< RL	< RL	2
IE									
IT-N	11	9	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C	14	9	< RL	< RL	< RL	< RL	< RL	< RL	6
IT-S	11	9		< RL	< RL	< RL	< RL	< RL	9
IT	36	27	< RL	< RL	< RL	< RL	< RL	< RL	9
LT									
LU	26	1	< RL	< RL	< RL	< RL	< RL	< RL	10
LV	15	4	< RL	< RL	< RL	< RL	< RL	< RL	2
MT	14	13	< RL	< RL	< RL	< RL	< RL	< RL	6
NL									
PL-N	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	2	2	< RL	< RL	< RL	< RL	< RL	< RL	12
PL	6	6	< RL	< RL	< RL	< RL	< RL	< RL	12
PT	22	2	< RL	< RL	< RL	< RL	< RL	< RL	11
RO-N	2	1	< RL	< RL	< RL	< RL	< RL	< RL	2
RO-S									
RO	2	1	< RL	< RL	< RL	< RL	< RL	< RL	2
SE-N	6	3		< RL	< RL		< RL	< RL	4
SE-S	6	3		< RL	< RL	< RL	< RL	< RL	4
SE	12	6		< RL	< RL	< RL	< RL	< RL	4
SI	3	3		< RL			< RL	< RL	4
SK	36	5	< RL	< RL	< RL	< RL	< RL	< RL	12

RL: reporting level for ^{137}Cs In drinking water, i.e. 1.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

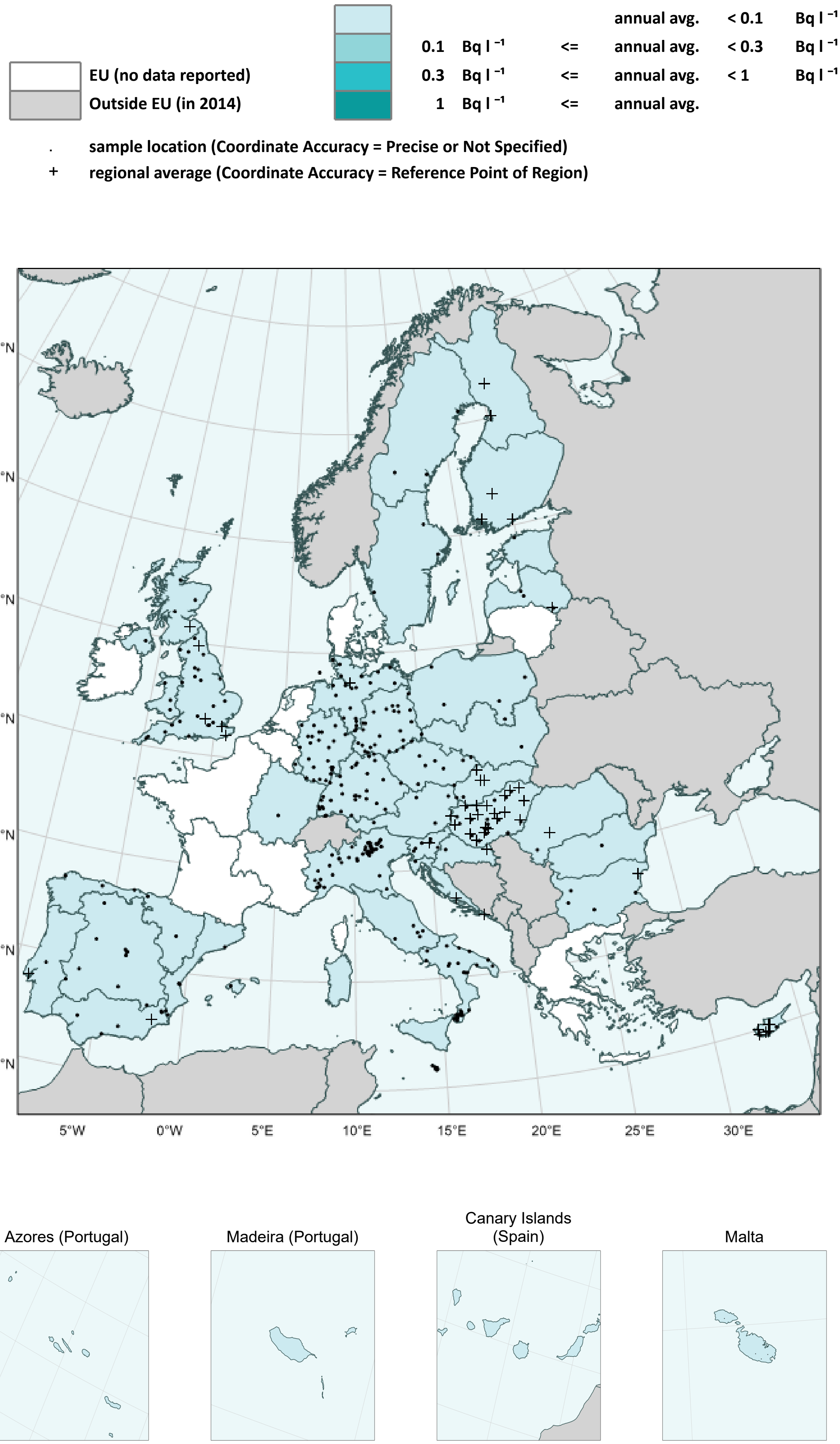


Fig.W9

Sampling locations and geographical averages by year for ^{137}Cs in drinking water, 2014

Table W9: Geographical and time averages

YEAR : 2014

SAMPLE TYPE : drinking water (Bq l^{-1})

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	48	4	< RL	< RL	< RL	< RL	< RL	< RL	1
BE							Δ		
BG	19	5	< RL	< RL	< RL	< RL	< RL	< RL	5
CY	9	9				< RL	< RL	< RL	10
CZ	65	11	< RL	< RL	< RL	< RL	< RL	< RL	2
DE-N	73	21	< RL	< RL	< RL	< RL	< RL	< RL	5
DE-C	64	23	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-S	117	34	< RL	< RL	< RL	< RL	< RL	< RL	2
DE-E	93	24	< RL	< RL	< RL	< RL	< RL	< RL	8
DE	347	102	< RL	< RL	< RL	< RL	< RL	< RL	2
DK									
EE	2	1	< RL			< RL	< RL	< RL	2
ES-N	60	5	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-C	89	11	< RL	< RL	< RL	< RL	< RL	< RL	11
ES-S	63	8	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-E	50	5	< RL	< RL	< RL	< RL	< RL	< RL	3
ES	262	29	< RL	< RL	< RL	< RL	< RL	< RL	3
FI-N	4	2		< RL		< RL	< RL	< RL	10
FI-S	6	3		< RL		< RL	< RL	< RL	10
FI	10	5		< RL		< RL	< RL	< RL	10
FR-NW									
FR-NE	1	1		< RL			< RL	< RL	5
FR-SW									
FR-SE									
FR	1	1		< RL			< RL	< RL	5
GB-EN	120	25	< RL	< RL	< RL	< RL	< RL	< RL	11
GB-WL	18	4	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-SC	25	4	< RL	< RL	< RL	< RL	< RL	< RL	10
GB-NI	1	1	< RL				< RL	< RL	1
GB	164	34	< RL	< RL	< RL	< RL	< RL	< RL	10
GR									
HR-A	3	3		< RL	< RL	< RL	< RL	< RL	10
HR-C	6	2	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	9	5	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	131	40	< RL	< RL	< RL	< RL	< RL	< RL	12
IE									
IT-N	98	51	< RL	< RL	< RL	< RL	< RL	< RL	8
IT-C	6	5		< RL		< RL	< RL	< RL	12
IT-S	35	33	< RL	< RL	< RL	< RL	< RL	< RL	1
IT	139	89	< RL	< RL	< RL	< RL	< RL	< RL	5
LT									
LU	22	1	< RL	< RL	< RL	< RL	< RL	< RL	5
LV	16	4		< RL	< RL	< RL	< RL	< RL	4
MT	7	7		< RL	< RL		< RL	< RL	4
NL									
PL-N	13	5	< RL	< RL	< RL	< RL	< RL	< RL	3
PL-S	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	14	6	< RL	< RL	< RL	< RL	< RL	< RL	3
PT	23	2	< RL	< RL	< RL	< RL	< RL	< RL	2
RO-N	3	2	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-S	1	1				< RL	< RL	< RL	11
RO	4	3	< RL	< RL	< RL	< RL	< RL	< RL	1
SE-N	6	3	< RL	< RL	< RL	< RL	< RL	< RL	9
SE-S	6	3	< RL	< RL	< RL	< RL	< RL	< RL	9
SE	12	6	< RL	< RL	< RL	< RL	< RL	< RL	9
SI	7	7	< RL	< RL		< RL	< RL	< RL	5
SK	36	5	< RL	< RL	< RL	< RL	< RL	< RL	3

RL: reporting level for ^{137}Cs In drinking water, i.e. 1.0 E-01 BQ/L (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

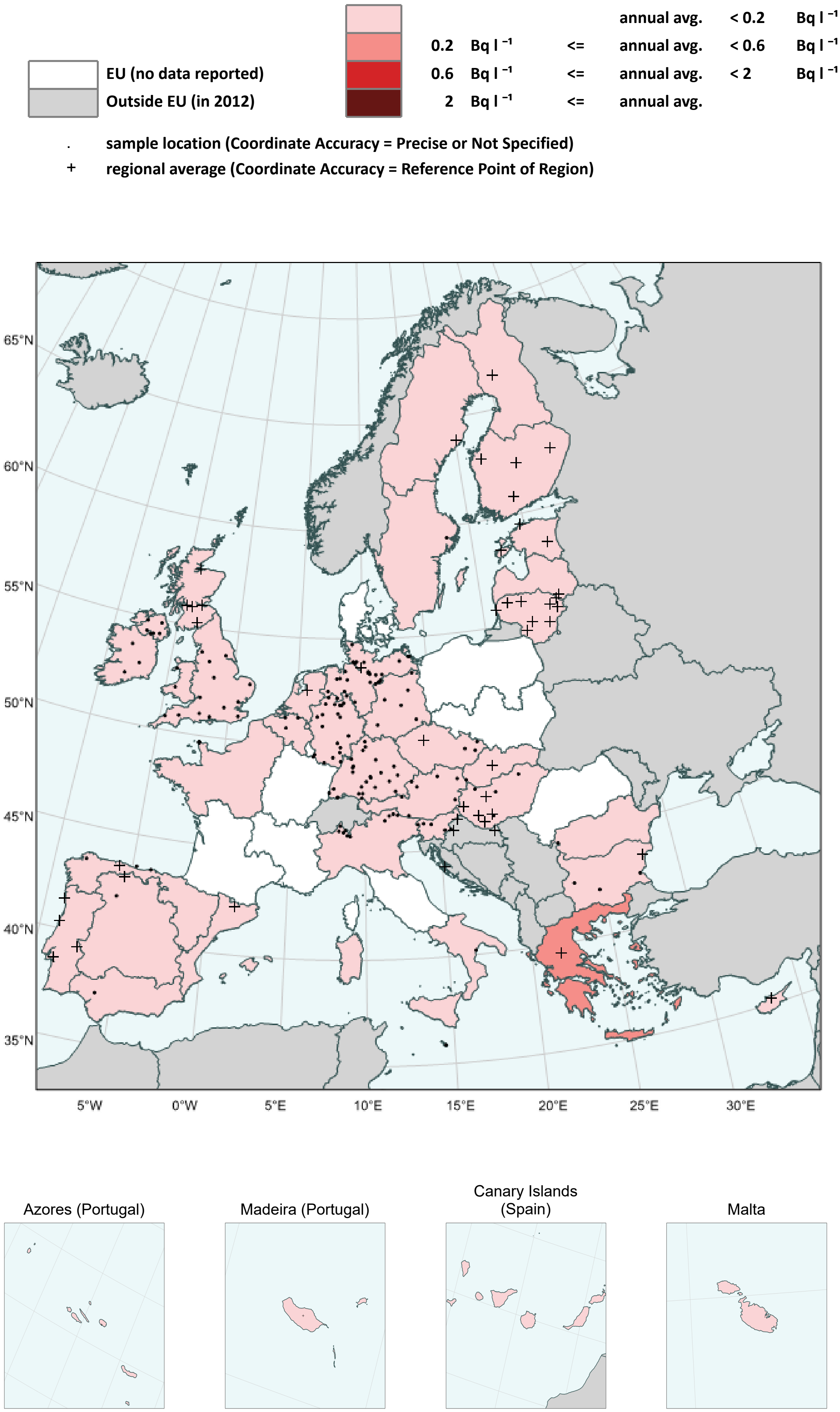


Fig.M1

Sampling locations and geographical averages by year for ^{90}Sr in milk, 2012

Table M1: Geographical and time averages

YEAR : **2012**

SAMPLE TYPE : **milk (Bq l^{-1})**

NUCLIDE CATEGORY : **strontium-90 (^{90}Sr)**

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	19	8	< RL	< RL	< RL	< RL	< RL	< RL	1
BE	40	3	< RL	< RL	< RL	< RL	< RL	< RL	3
BG	22	4	< RL	< RL	< RL	< RL	< RL	< RL	12
CY	6	1	< RL	< RL	< RL	< RL	< RL	< RL	1
CZ	6	4	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	128	29	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-C	71	21	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-S	75	24	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	58	6	< RL	< RL	< RL	< RL	< RL	< RL	7
DE	332	80	< RL	< RL	< RL	< RL	< RL	< RL	12
DK									
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	2
FI-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	7
FI-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	7
FI	20	5	< RL	< RL	< RL	< RL	< RL	< RL	7
FR-NW	9	4		< RL			< RL	< RL	6
FR-NE									
FR-SW									
FR-SE									
FR	9	4		< RL			< RL	< RL	6
GB-EN	154	13	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	24	2	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	7
GB-NI	36	5	< RL	< RL	< RL	< RL	< RL	< RL	4
GB	242	25	< RL	< RL	< RL	< RL	< RL	< RL	5
GR	11	1	< RL	2.3E-01	3.7E-01	2.3E-01	2.5E-01	4.8E-01	9
HU	60	9	< RL	< RL	< RL	< RL	< RL	< RL	1
IE	15	4	< RL	< RL	< RL	< RL	< RL	< RL	11
IT-N	32	10	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C									
IT-S	1	1				< RL	< RL	< RL	10
IT	33	11	< RL	< RL	< RL	< RL	< RL	< RL	1
LT	40	11	< RL	< RL	< RL	< RL	< RL	< RL	2
LU									
LV	3	1	< RL				< RL	< RL	1
MT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	3
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N									
PL-S									
PL									
PT	35	6	< RL	< RL	< RL	< RL	< RL	< RL	4
RO-N									
RO-S	1	1			< RL		< RL	< RL	7
RO	1	1			< RL		< RL	< RL	7
SE-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	5
SE-S	4	1	< RL	< RL	< RL	< RL	< RL	< RL	2
SE	8	2	< RL	< RL	< RL	< RL	< RL	< RL	11
SI	30	4	< RL	< RL	< RL	< RL	< RL	< RL	2
SK	11	2	< RL	< RL	< RL	< RL	< RL	< RL	4

RL: reporting level for ^{90}Sr In milk, i.e. 2.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

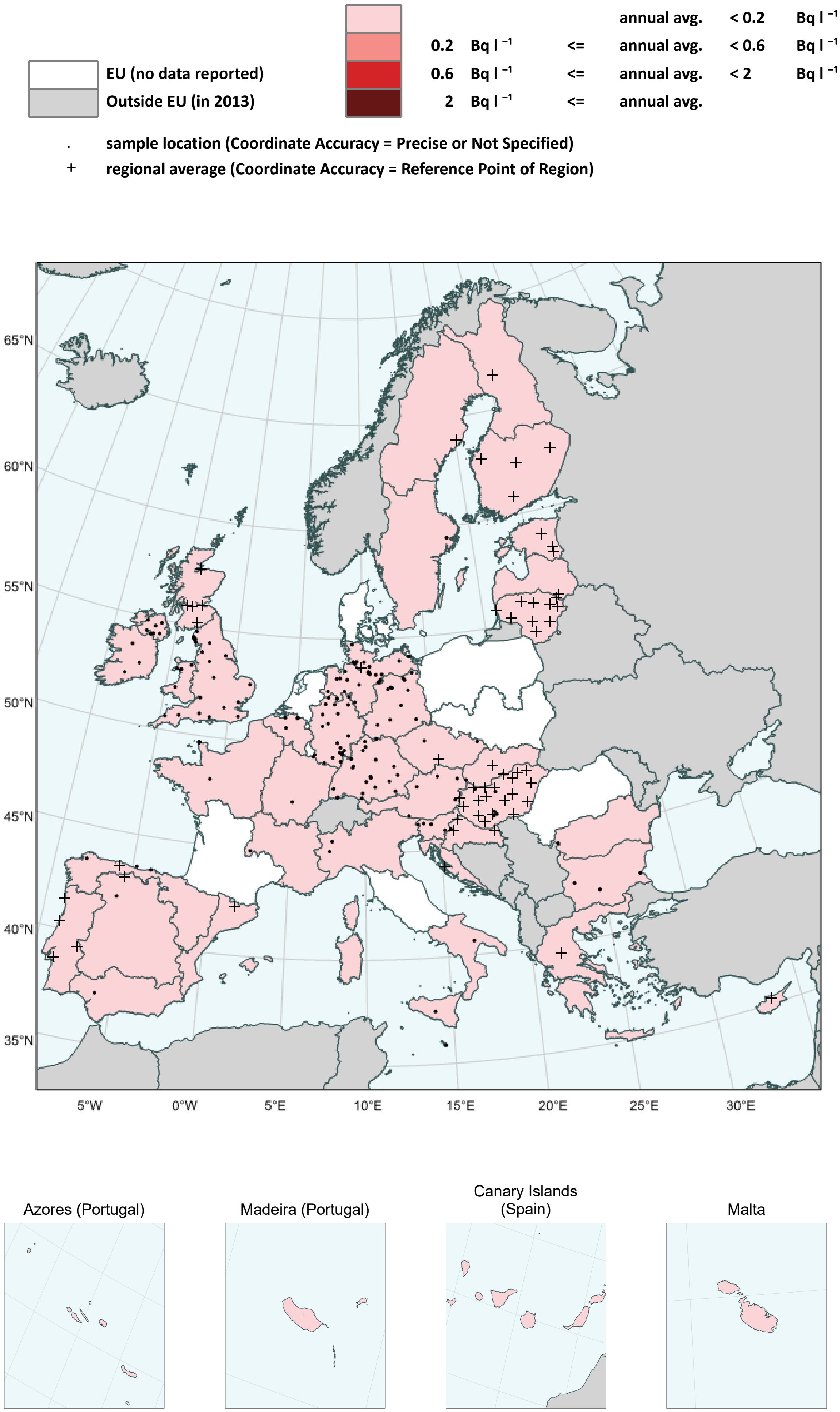


Fig.M2

Sampling locations and geographical averages by year for ^{90}Sr in milk, 2013

Table M2: Geographical and time averages

YEAR : **2013**

SAMPLE TYPE : **milk (Bq l $^{-1}$)**

NUCLIDE CATEGORY : **strontium-90 (^{90}Sr)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	18	6	< RL	< RL	< RL	< RL	< RL	< RL	4
BE	41	4	< RL	< RL	< RL	< RL	< RL	< RL	3
BG	18	3	< RL	< RL	< RL	< RL	< RL	< RL	10
CY	6	1		< RL	< RL		< RL	< RL	8
CZ	6	3	< RL	< RL	< RL	< RL	< RL	< RL	4
DE-N	120	29	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-C	67	21	< RL	< RL	< RL	< RL	< RL	< RL	2
DE-S	65	20	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	74	11	< RL	< RL	< RL	< RL	< RL	< RL	12
DE	326	81	< RL	< RL	< RL	< RL	< RL	< RL	2
DK									
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	11
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	3
FI-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	10
FI-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	10
FI	20	5	< RL	< RL	< RL	< RL	< RL	< RL	10
FR-NW	9	5		< RL	< RL	< RL	< RL	< RL	10
FR-NE	1	1		< RL			< RL	< RL	6
FR-SW									
FR-SE	1	1		< RL			< RL	< RL	6
FR	11	7		< RL	< RL	< RL	< RL	< RL	10
GB-EN	210	34	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-WL	44	5	< RL	< RL	< RL	< RL	< RL	< RL	10
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	9
GB-NI	72	6	< RL	< RL	< RL	< RL	< RL	< RL	3
GB	354	50	< RL	< RL	< RL	< RL	< RL	< RL	3
GR	12	1	< RL	< RL	< RL	< RL	< RL	< RL	10
HR-A	12	1	< RL	< RL	< RL	< RL	< RL	< RL	10
HR-C	35	4	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	47	5	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	213	26	< RL	< RL	< RL	< RL	< RL	< RL	12
IE	16	4	< RL	< RL	< RL	< RL	< RL	< RL	11
IT-N	8	2	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-C									
IT-S	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
IT	10	4	< RL	< RL	< RL	< RL	< RL	< RL	9
LT	41	11	< RL	< RL	< RL	< RL	< RL	< RL	7
LU									
LV	8	1		< RL	< RL	< RL	< RL	< RL	4
MT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	3
NL									
PL-N									
PL-S									
PL									
PT	31	6	< RL	< RL	< RL	< RL	< RL	< RL	10
RO-N									
RO-S	1	1	< RL	< RL			< RL	< RL	1
RO	1	1	< RL	< RL			< RL	< RL	1
SE-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	3
SE-S	4	1	< RL	< RL	< RL	< RL	< RL	< RL	5
SE	8	2	< RL	< RL	< RL	< RL	< RL	< RL	3
SI	33	4	< RL	< RL	< RL	< RL	< RL	< RL	10
SK	14	2	< RL	< RL	< RL	< RL	< RL	< RL	7

RL: reporting level for ^{90}Sr In milk, i.e. 2.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

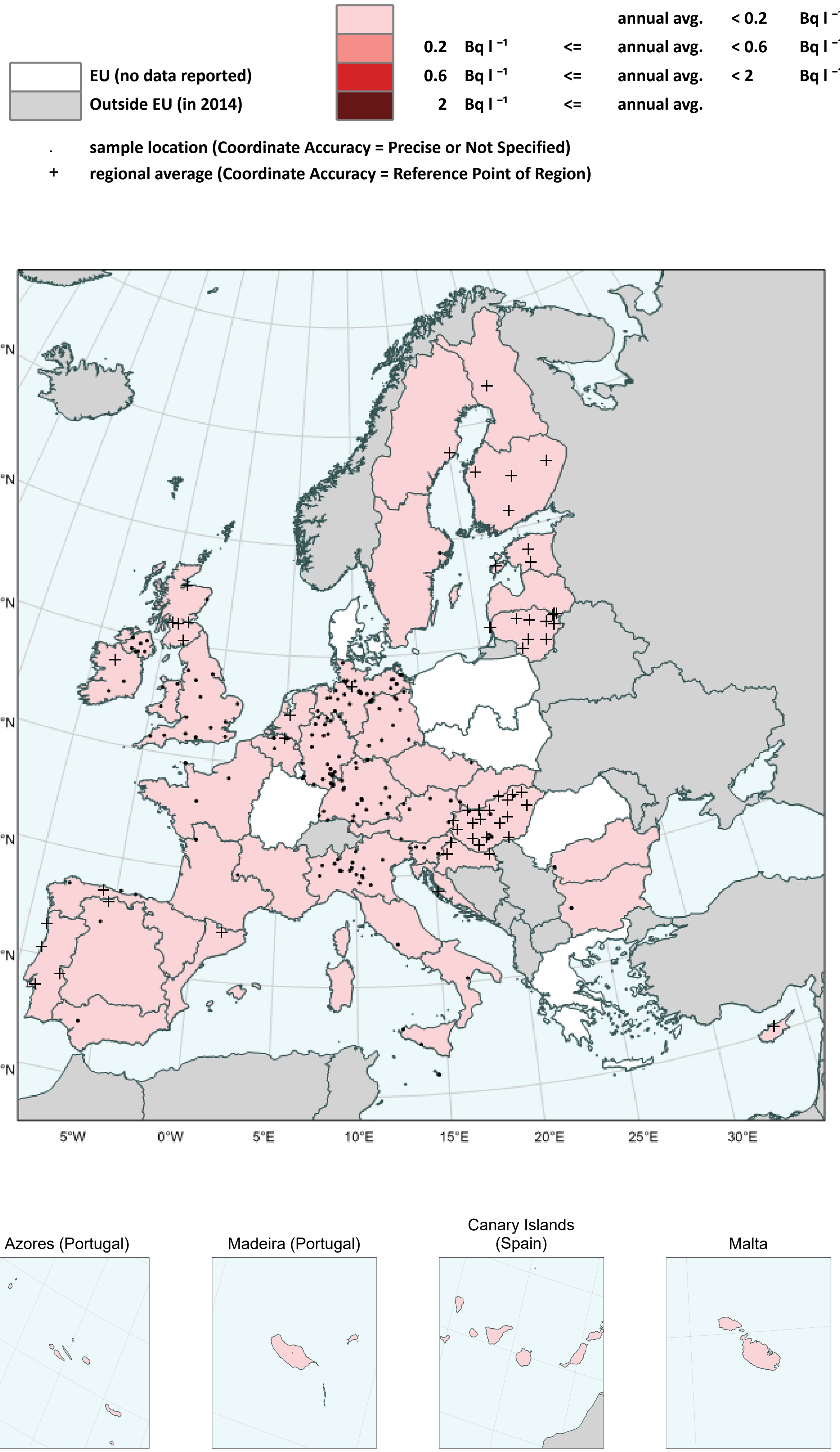


Fig.M3

Sampling locations and geographical averages by year for ^{90}Sr in milk, 2014

Table M3: Geographical and time averages

YEAR : **2014**

SAMPLE TYPE : **milk (Bq l^{-1})**

NUCLIDE CATEGORY : **strontium-90 (^{90}Sr)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	18	7	< RL	< RL	< RL	< RL	< RL	< RL	5
BE	44	6	< RL	< RL	< RL	< RL	< RL	< RL	12
BG	13	1	< RL	< RL	< RL	< RL	< RL	< RL	12
CY	3	1		< RL			< RL	< RL	4
CZ	4	1	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	122	32	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-C	71	22	< RL	< RL	< RL	< RL	< RL	< RL	10
DE-S	72	21	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-E	69	9	< RL	< RL	< RL	< RL	< RL	< RL	5
DE	334	84	< RL	< RL	< RL	< RL	< RL	< RL	10
DK									
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	1
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	11
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	2
FI-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	7
FI-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	7
FI	20	5	< RL	< RL	< RL	< RL	< RL	< RL	7
FR-NW	4	4		< RL		< RL	< RL	< RL	4
FR-NE									
FR-SW	1	1		< RL			< RL	< RL	6
FR-SE	1	1		< RL			< RL	< RL	6
FR	6	6		< RL		< RL	< RL	< RL	4
GB-EN	145	13	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-WL	36	3	< RL	< RL	< RL	< RL	< RL	< RL	2
GB-SC	91	6	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-NI	70	6	< RL	< RL	< RL	< RL	< RL	< RL	9
GB	342	28	< RL	< RL	< RL	< RL	< RL	< RL	2
GR									
HR-A	7	1	< RL	< RL	< RL	< RL	< RL	< RL	3
HR-C	28	3	< RL	< RL	< RL	< RL	< RL	< RL	1
HR	35	4	< RL	< RL	< RL	< RL	< RL	< RL	8
HU	202	25	< RL	< RL	< RL	< RL	< RL	< RL	12
IE	14	4	< RL	< RL	< RL	< RL	< RL	< RL	5
IT-N	60	17	< RL	< RL	< RL	< RL	< RL	< RL	10
IT-C	1	1			< RL	< RL	< RL	< RL	9
IT-S	6	3	< RL	< RL	< RL	< RL	< RL	< RL	4
IT	67	21	< RL	< RL	< RL	< RL	< RL	< RL	10
LT	45	12	< RL	< RL	< RL	< RL	< RL	< RL	12
LU									
LV	8	2	< RL	< RL	< RL	< RL	< RL	< RL	1
MT	3	1		< RL	< RL		< RL	< RL	4
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N									
PL-S									
PL									
PT	36	6	< RL	< RL	< RL	< RL	< RL	< RL	10
RO-N									
RO-S	1	1				< RL	< RL	< RL	10
RO	1	1				< RL	< RL	< RL	10
SE-N	4	1	< RL	< RL		< RL	< RL	< RL	2
SE-S	4	1	< RL	< RL		< RL	< RL	< RL	10
SE	8	2	< RL	< RL		< RL	< RL	< RL	12
SI	32	4	< RL	< RL	< RL	< RL	< RL	< RL	5
SK	3	1	< RL	< RL	< RL		< RL	< RL	5

RL: reporting level for ^{90}Sr In milk, i.e. 2.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

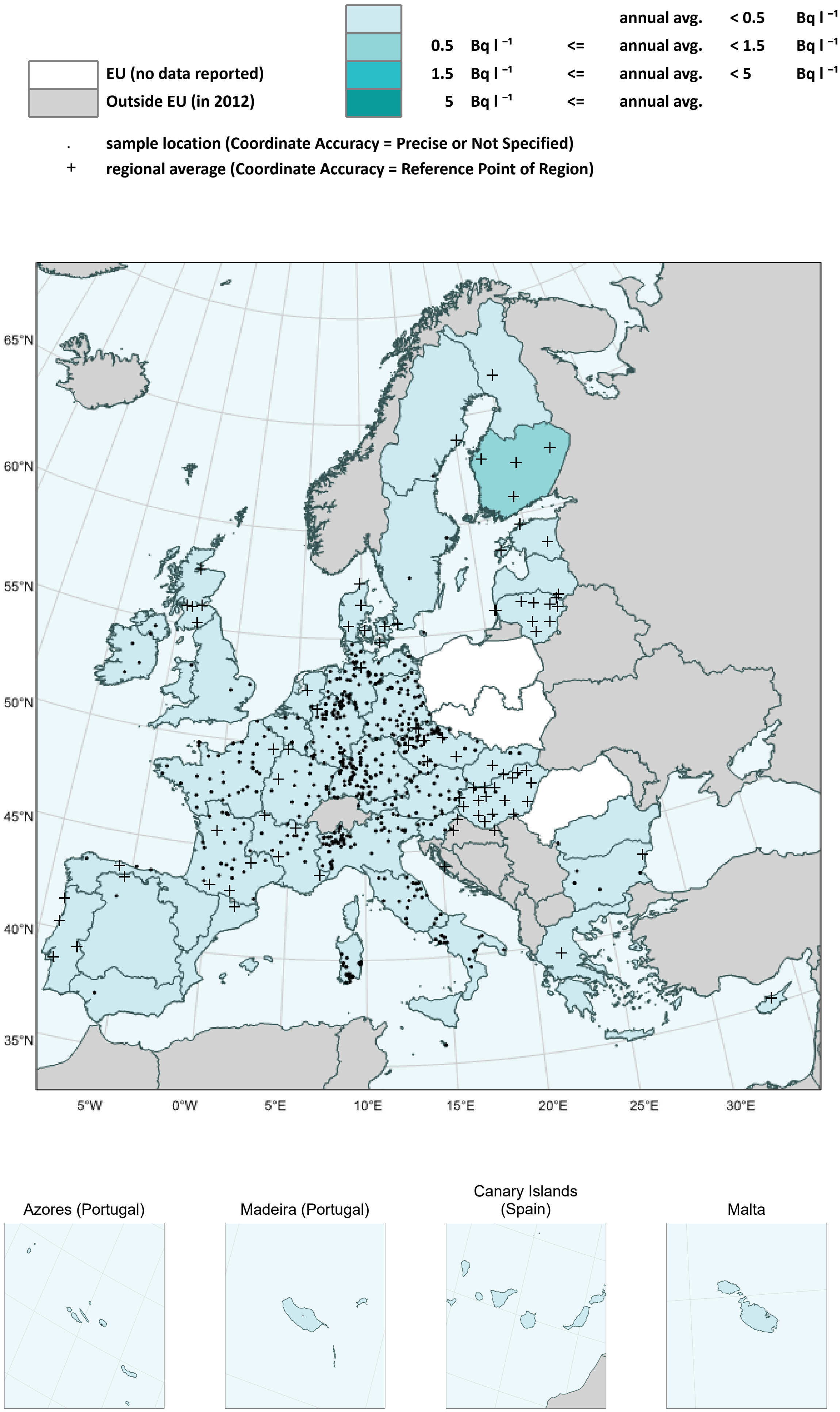


Fig.M4

Sampling locations and geographical averages by year for ^{137}Cs in milk, 2012

Table M4: Geographical and time averages

YEAR : 2012
SAMPLE TYPE : milk (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	173	29	< RL	< RL	< RL	< RL	< RL	< RL	7
BE	159	3	< RL	< RL	< RL	< RL	< RL	< RL	2
BG	22	5	< RL	< RL	< RL	< RL	< RL	< RL	9
CY	6	1	< RL	< RL	< RL	< RL	< RL	< RL	7
CZ	67	51	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-N	373	45	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-C	240	49	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-S	354	72	< RL	< RL	< RL	< RL	< RL	< RL	11
DE-E	320	45	< RL	< RL	< RL	< RL	< RL	< RL	2
DE	1287	211	< RL	< RL	< RL	< RL	< RL	< RL	11
DK	40	7	< RL	< RL	< RL	< RL	< RL	< RL	6
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	5
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	8
FI-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	7
FI-S	16	4	5.1E-01	< RL	5.8E-01	5.4E-01	5.3E-01	5.8E-01	7
FI	20	5	< RL	< RL	5.2E-01	< RL	< RL	5.2E-01	7
FR-NW	67	40	< RL	< RL	< RL	< RL	< RL	< RL	10
FR-NE	28	21	< RL	< RL	< RL	< RL	< RL	< RL	10
FR-SW	37	25	< RL	< RL	< RL	< RL	< RL	< RL	9
FR-SE	19	16	< RL	< RL	< RL	< RL	< RL	< RL	9
FR	151	102	< RL	< RL	< RL	< RL	< RL	< RL	9
GB-EN	12	2	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-WL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-NI	12	1	< RL	< RL	< RL	< RL	< RL	< RL	2
GB	64	9	< RL	< RL	< RL	< RL	< RL	< RL	2
GR	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	203	25	< RL	< RL	< RL	< RL	< RL	< RL	3
IE	24	4	< RL	< RL	< RL	< RL	< RL	< RL	3
IT-N	280	55	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-C	145	21	< RL	< RL	< RL	< RL	< RL	< RL	3
IT-S	272	41	< RL	< RL	< RL	< RL	< RL	< RL	12
IT	697	117	< RL	< RL	< RL	< RL	< RL	< RL	9
LT	45	11	< RL	< RL	< RL	< RL	< RL	< RL	8
LU	33	3	< RL	< RL	< RL	< RL	< RL	< RL	4
LV	8	1	< RL	< RL	< RL	< RL	< RL	< RL	3
MT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	6
NL	24	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N									
PL-S									
PL									
PT	35	6	< RL	< RL	< RL	< RL	< RL	< RL	4
RO-N									
RO-S	1	1			< RL		< RL	< RL	7
RO	1	1			< RL		< RL	< RL	7
SE-N	8	2	< RL	< RL	< RL	< RL	< RL	< RL	11
SE-S	12	3	< RL	< RL	< RL	< RL	< RL	< RL	5
SE	20	5	< RL	< RL	< RL	< RL	< RL	< RL	11
SI	30	4	< RL	< RL	< RL	< RL	< RL	< RL	7
SK	24	4	< RL	< RL	< RL	< RL	< RL	< RL	11

RL: reporting level for ^{137}Cs In milk, i.e. 5.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

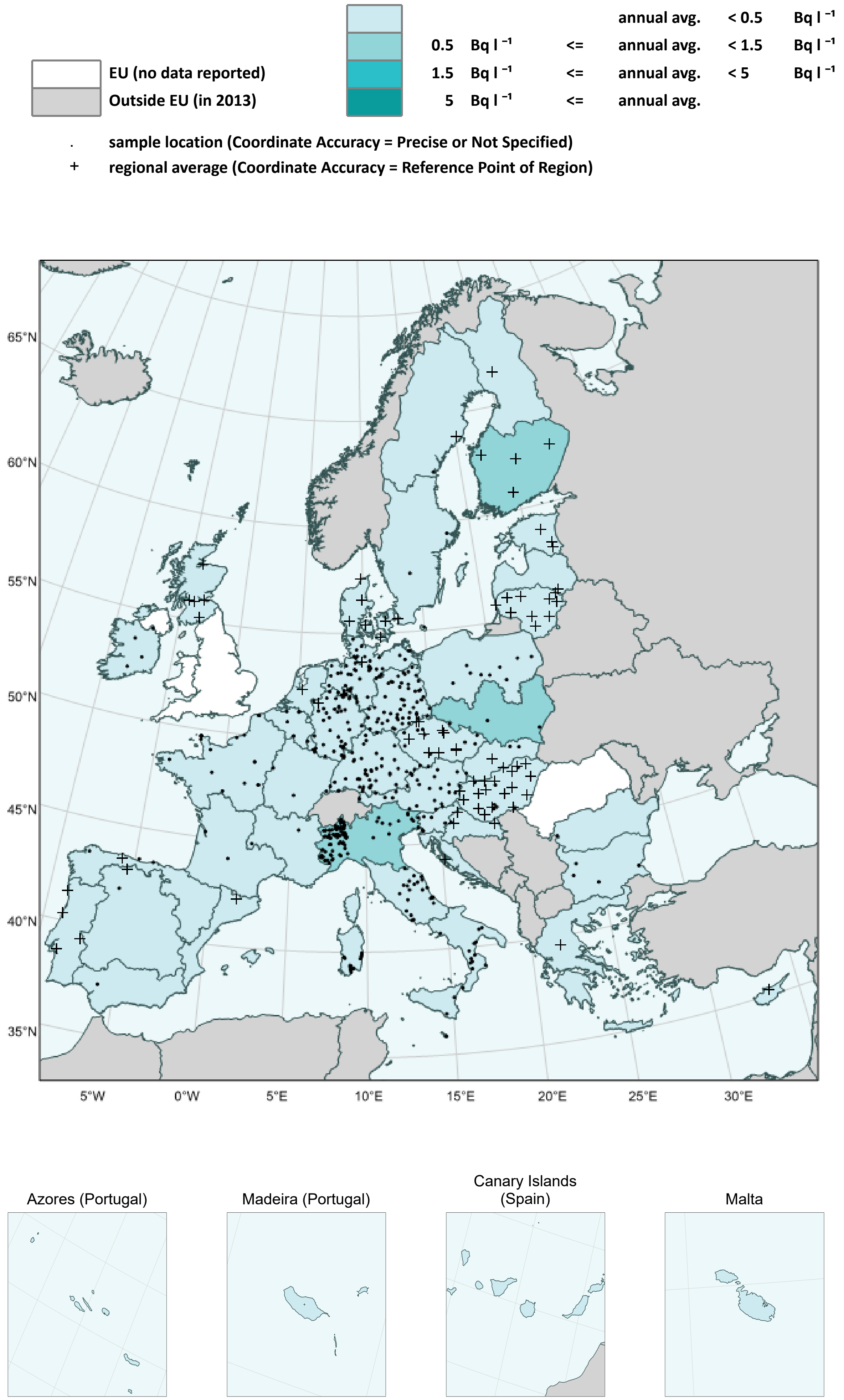


Fig.M5

Sampling locations and geographical averages by year for ^{137}Cs in milk, 2013

Table M5: Geographical and time averages

YEAR : 2013
SAMPLE TYPE : milk (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	178	27	< RL	< RL	< RL	< RL	< RL	< RL	9
BE	158	4	< RL	< RL	< RL	< RL	< RL	< RL	10
BG	23	4	< RL	< RL	< RL	< RL	< RL	< RL	8
CY	6	1		< RL	< RL		< RL	< RL	5
CZ	58	20	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-N	370	44	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-C	223	45	< RL	< RL	< RL	< RL	< RL	< RL	4
DE-S	323	44	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-E	295	51	< RL	< RL	< RL	< RL	< RL	< RL	4
DE	1211	184	< RL	< RL	< RL	< RL	< RL	< RL	4
DK	39	7	< RL	< RL	< RL	< RL	< RL	< RL	8
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	9
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	4
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	9
FI-N	4	1	< RL	< RL	< RL	< RL	< RL	< RL	10
FI-S	16	4	6.7E-01	< RL	5.3E-01	5.6E-01	5.6E-01	6.7E-01	1
FI	20	5	5.8E-01	< RL	< RL	5.1E-01	< RL	5.8E-01	1
FR-NW	30	18	< RL	< RL	< RL	< RL	< RL	< RL	11
FR-NE	10	5		< RL	< RL	< RL	< RL	< RL	11
FR-SW	4	2		< RL		< RL	< RL	< RL	4
FR-SE	2	2	< RL	< RL			< RL	< RL	6
FR	46	27	< RL	< RL	< RL	< RL	< RL	< RL	4
GB-EN									
GB-WL									
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-NI									
GB	28	5	< RL	< RL	< RL	< RL	< RL	< RL	1
GR	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HR-A	12	1	< RL	< RL	< RL	< RL	< RL	< RL	8
HR-C	35	4	< RL	< RL	< RL	< RL	< RL	< RL	2
HR	47	5	< RL	< RL	< RL	< RL	< RL	< RL	2
HU	268	29	< RL	< RL	< RL	< RL	< RL	< RL	9
IE	23	4	< RL	< RL	< RL	< RL	< RL	< RL	10
IT-N	196	95	< RL	< RL	1.6E+00	< RL	5.4E-01	2.9E+00	8
IT-C	58	24	< RL	< RL	< RL	< RL	< RL	< RL	7
IT-S	121	29	< RL	< RL	< RL	< RL	< RL	< RL	5
IT	375	148	< RL	< RL	< RL	< RL	< RL	8.4E-01	8
LT	42	11	< RL	< RL	< RL	< RL	< RL	< RL	7
LU	36	3	< RL	< RL	< RL	< RL	< RL	< RL	11
LV	8	1		< RL	< RL	< RL	< RL	< RL	10
MT	4	1	< RL	< RL	< RL	< RL	< RL	< RL	9
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	31	9	< RL	8.3E-01	< RL	< RL	< RL	8.3E-01	4
PL-S	11	2	6.6E-01	6.5E-01	5.9E-01	1.3E+00	8.1E-01	2.7E+00	12
PL	42	11	< RL	7.0E-01	< RL	8.9E-01	6.0E-01	1.5E+00	12
PT	37	6	< RL	< RL	< RL	< RL	< RL	< RL	10
RO-N									
RO-S	1	1	< RL	< RL			< RL	< RL	1
RO	1	1	< RL	< RL			< RL	< RL	1
SE-N	8	2	< RL	< RL	< RL	< RL	< RL	< RL	11
SE-S	12	3	< RL	< RL	< RL	< RL	< RL	< RL	8
SE	20	5	< RL	< RL	< RL	< RL	< RL	< RL	3
SI	30	4	< RL	< RL	< RL	< RL	< RL	< RL	9
SK	25	4	< RL	< RL	< RL	< RL	< RL	< RL	5

RL: reporting level for ^{137}Cs In milk, i.e. 5.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

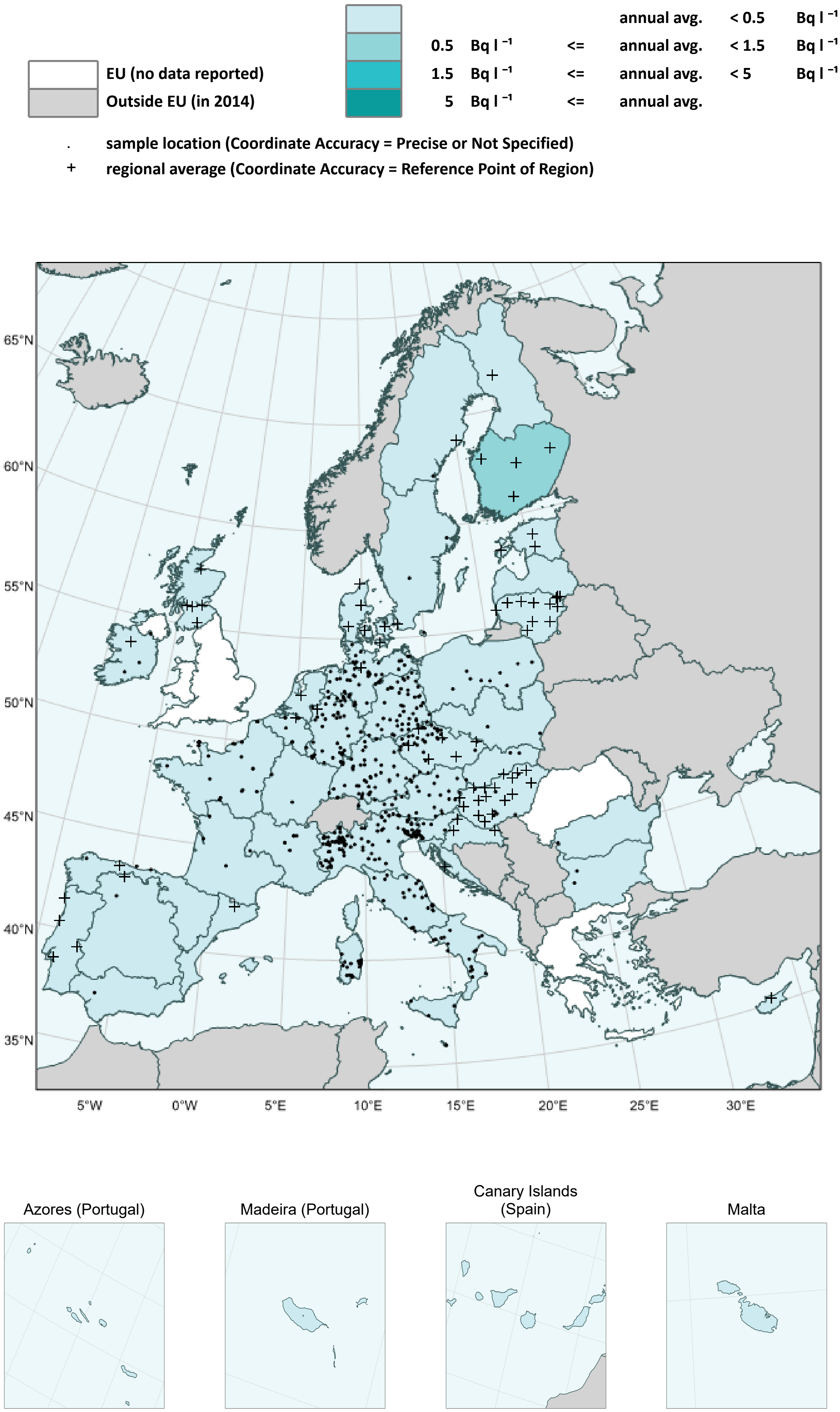


Fig.M6

Sampling locations and geographical averages by year for ^{137}Cs in milk, 2014

Table M6: Geographical and time averages

YEAR : 2014
SAMPLE TYPE : milk (Bq l $^{-1}$)
NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	178	28	< RL	< RL	< RL	< RL	< RL	< RL	9
BE	161	6	< RL	< RL	< RL	< RL	< RL	< RL	4
BG	14	2	< RL	< RL	< RL	< RL	< RL	< RL	10
CY	3	1		< RL			< RL	< RL	4
CZ	55	39	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-N	355	44	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	228	41	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-S	308	45	< RL	< RL	< RL	< RL	< RL	< RL	3
DE-E	284	45	< RL	< RL	< RL	< RL	< RL	< RL	12
DE	1175	175	< RL	< RL	< RL	< RL	< RL	< RL	6
DK	42	7	< RL	< RL	< RL	< RL	< RL	< RL	6
EE	12	3	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-N	40	4	< RL	< RL	< RL	< RL	< RL	< RL	7
ES-C	8	2	< RL	< RL	< RL	< RL	< RL	< RL	5
ES-S	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
ES-E	12	1	< RL	< RL	< RL	< RL	< RL	< RL	8
ES	72	8	< RL	< RL	< RL	< RL	< RL	< RL	7
FI-N	12	1	< RL	< RL	< RL	< RL	< RL	< RL	11
FI-S	48	4	< RL	5.3E-01	6.2E-01	7.6E-01	6.0E-01	9.6E-01	10
FI	60	5	< RL	< RL	5.5E-01	6.7E-01	5.3E-01	8.3E-01	10
FR-NW	41	24	< RL	< RL	< RL	< RL	< RL	< RL	2
FR-NE	10	6		< RL	< RL	< RL	< RL	< RL	6
FR-SW	6	3		< RL		< RL	< RL	< RL	6
FR-SE	9	7		< RL		< RL	< RL	< RL	5
FR	66	40	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-EN									
GB-WL									
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	8
GB-NI									
GB	28	5	< RL	< RL	< RL	< RL	< RL	< RL	8
GR									
HR-A	7	1	< RL	< RL	< RL	< RL	< RL	< RL	9
HR-C	28	3	< RL	< RL	< RL	< RL	< RL	< RL	12
HR	35	4	< RL	< RL	< RL	< RL	< RL	< RL	12
HU	273	25	< RL	< RL	< RL	< RL	< RL	< RL	3
IE	23	4	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-N	459	113	< RL	< RL	< RL	< RL	< RL	5.1E-01	9
IT-C	102	28	< RL	< RL	< RL	< RL	< RL	< RL	7
IT-S	157	39	< RL	< RL	< RL	< RL	< RL	< RL	10
IT	718	180	< RL	< RL	< RL	< RL	< RL	< RL	9
LT	42	10	< RL	< RL	< RL	< RL	< RL	< RL	10
LU	35	3	< RL	< RL	< RL	< RL	< RL	< RL	5
LV	8	2	< RL	< RL	< RL	< RL	< RL	< RL	3
MT	3	1		< RL	< RL		< RL	< RL	4
NL	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-N	40	9	< RL	5.5E-01	< RL	< RL	< RL	6.5E-01	5
PL-S	11	2	< RL	< RL	< RL	7.3E-01	< RL	9.0E-01	12
PL	51	11	< RL	5.4E-01	< RL	5.1E-01	< RL	6.9E-01	11
PT	36	6	< RL	< RL	< RL	< RL	< RL	< RL	12
RO-N									
RO-S	1	1				< RL	< RL	< RL	10
RO	1	1				< RL	< RL	< RL	10
SE-N	8	2	< RL	< RL	< RL	< RL	< RL	5.9E-01	10
SE-S	12	3	< RL	< RL	< RL	< RL	< RL	< RL	11
SE	20	5	< RL	< RL	< RL	< RL	< RL	< RL	10
SI	33	4	< RL	< RL	< RL	< RL	< RL	< RL	1
SK	12	3	< RL	< RL	< RL	< RL	< RL	< RL	11

RL: reporting level for ^{137}Cs In milk, i.e. 5.0 E-01 BQ/L (see Appendix B)

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

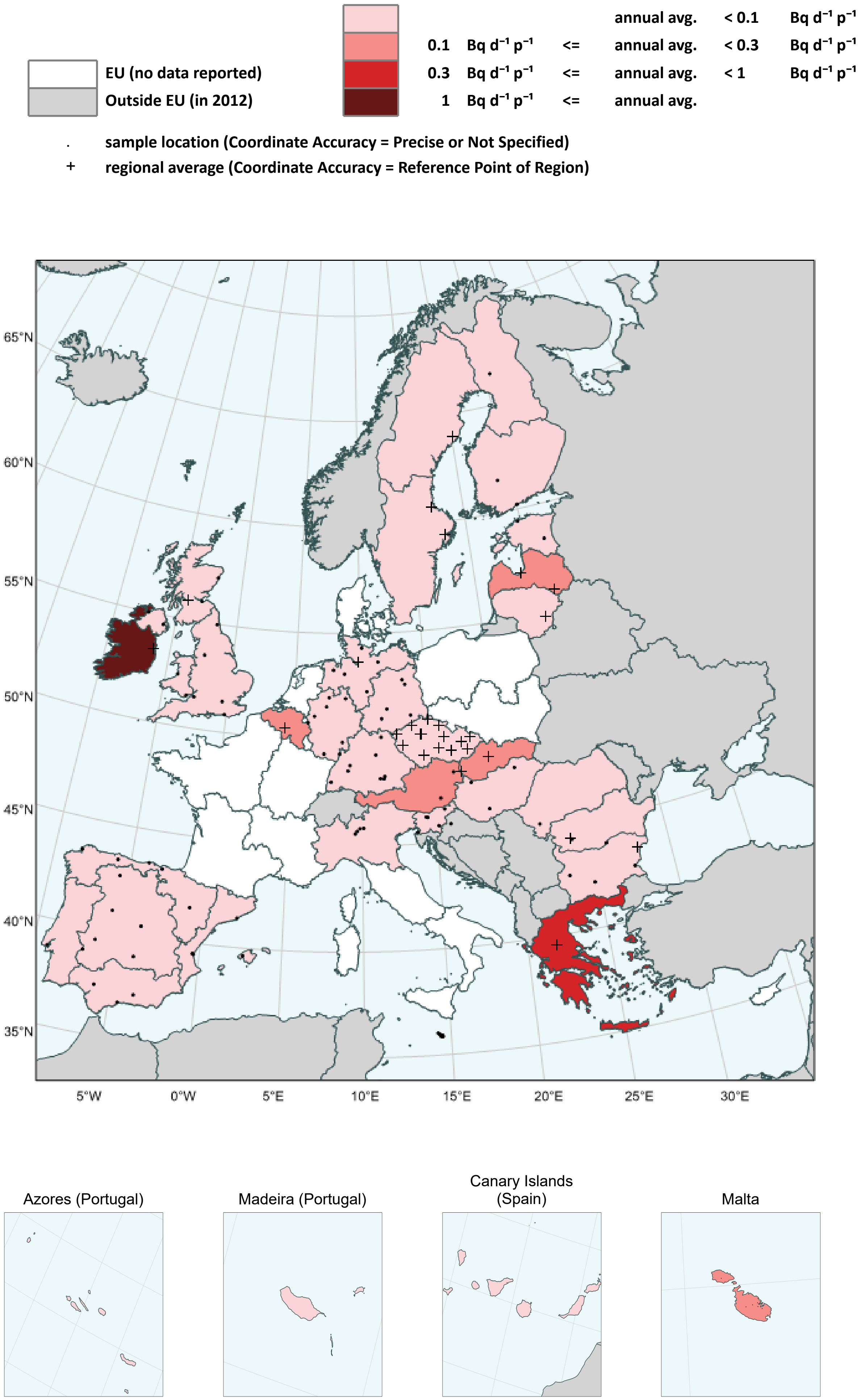


Fig.D1

Sampling locations and geographical averages by year for ^{90}Sr in mixed diet, 2012

Table D1: Geographical and time averages

YEAR : **2012**

SAMPLE TYPE : **mixed diet (Bq d^{-1} p^{-1})**

NUCLIDE CATEGORY : **strontium-90 (^{90}Sr)**

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	8	2	1.2E-01	< RL	< RL	< RL	1.0E-01	1.3E-01	2
BE	3	1	< RL	2.2E-01	1.7E-01		1.5E-01	2.2E-01	4
BG	16	5	< RL	< RL	< RL	1.1E-01	< RL	1.2E-01	12
CY									
CZ	22	14	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	30	6	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	32	8	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-S	27	8	< RL	< RL	1.1E-01	< RL	< RL	1.2E-01	9
DE-E	28	5	< RL	< RL	< RL	< RL	< RL	< RL	10
DE	117	27	< RL	< RL	< RL	< RL	< RL	< RL	9
DK									
EE	4	2	< RL			< RL	< RL	< RL	10
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-C	25	7	< RL	< RL	< RL	< RL	< RL	1.3E-01	7
ES-S	15	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES-E	17	4	< RL	< RL	< RL	< RL	< RL	< RL	1
ES	77	20	< RL	< RL	< RL	< RL	< RL	< RL	3
FI-N	1	1				< RL	< RL	< RL	10
FI-S	2	2				< RL	< RL	< RL	10
FI	3	3				< RL	< RL	< RL	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5	< RL	< RL	< RL	< RL	< RL	< RL	11
GB-WL	5	2	< RL	< RL	< RL	< RL	< RL	< RL	11
GB-SC	14	3	< RL	< RL	< RL	1.1E-01	< RL	1.5E-01	12
GB-NI	5	2	< RL	< RL	< RL	< RL	< RL	< RL	4
GB	32	12	< RL	< RL	< RL	< RL	< RL	1.5E-01	12
GR	11	1	2.0E-01	3.3E-01	5.0E-01	4.0E-01	3.6E-01	6.4E-01	7
HU	5	3	< RL		< RL		< RL	< RL	3
IE	6	1	7.1E-01	3.6E+00	6.2E-01	5.7E-01	1.4E+00	3.6E+00	4
IT-N	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
IT-C									
IT-S									
IT	4	4	< RL	< RL	< RL	< RL	< RL	< RL	1
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	1
LU									
LV	4	2		5.1E-01	2.2E-01	< RL	2.7E-01	5.1E-01	6
MT	12	11	1.4E-01	< RL	1.1E-01	< RL	1.0E-01	2.1E-01	7
NL							Δ		
PL-N									
PL-S									
PL									
PT	11	1	< RL	< RL	< RL	< RL	< RL	< RL	9
RO-N	1	1	< RL				< RL	< RL	3
RO-S	6	2	< RL	< RL			< RL	< RL	6
RO	7	3	< RL	< RL			< RL	< RL	6
SE-N	2	1		< RL		1.2E-01	< RL	1.2E-01	11
SE-S	4	2		< RL		< RL	< RL	1.2E-01	5
SE	6	3		< RL		< RL	< RL	< RL	5
SI	5	5	< RL		< RL	< RL	< RL	< RL	2
SK	8	2	1.2E-01	1.6E-01	< RL	1.3E-01	1.2E-01	1.6E-01	5

RL: reporting level for ^{90}Sr In mixed diet, i.e. 1.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

			annual avg.	< 0.1	$Bq\ d^{-1}\ p^{-1}$
0.1	$Bq\ d^{-1}\ p^{-1}$	<=	annual avg.	< 0.3	$Bq\ d^{-1}\ p^{-1}$
0.3	$Bq\ d^{-1}\ p^{-1}$	<=	annual avg.	< 1	$Bq\ d^{-1}\ p^{-1}$
1	$Bq\ d^{-1}\ p^{-1}$	<=	annual avg.		

EU (no data reported)
Outside EU (in 2013)

. sample location (Coordinate Accuracy = Precise or Not Specified)
+ regional average (Coordinate Accuracy = Reference Point of Region)

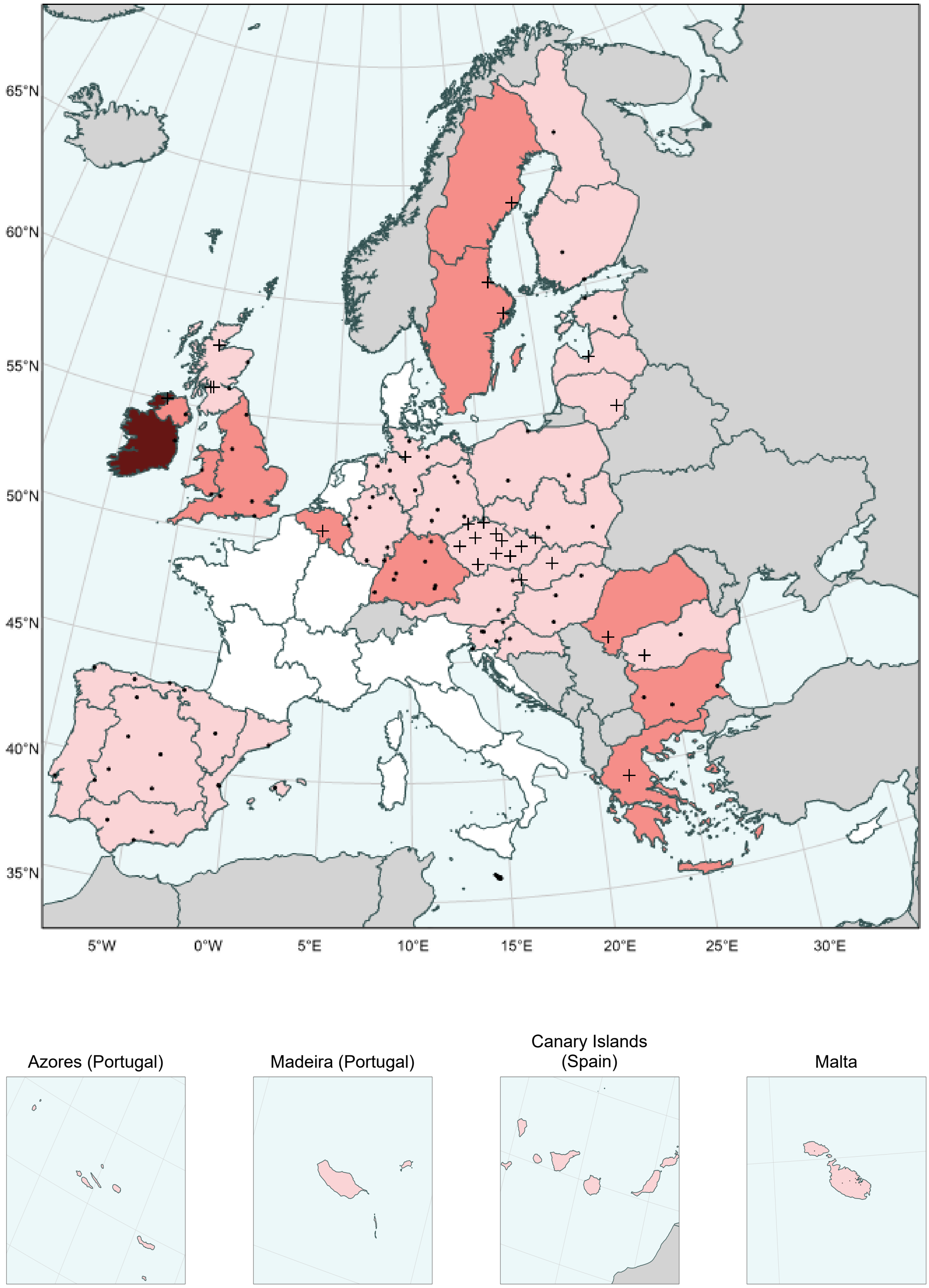


Fig.D2
Sampling locations and geographical averages by year for ^{90}Sr in mixed diet, 2013

Table D2: Geographical and time averages

YEAR : 2013
SAMPLE TYPE : mixed diet (Bq d^{-1} p^{-1})
NUCLIDE CATEGORY : strontium-90 (^{90}Sr)

DENSE

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	6	2	< RL	< RL	< RL	< RL	< RL	< RL	10
BE	2	1	1.5E-01			2.4E-01	2.0E-01	2.4E-01	12
BG	11	3	5.6E-01	< RL	< RL	< RL	2.1E-01	7.7E-01	2
CY									
CZ	19	12	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	35	6	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-C	32	8	< RL	< RL	< RL	< RL	< RL	1.1E-01	6
DE-S	24	7	1.2E-01	< RL	2.1E-01	1.5E-01	1.3E-01	2.2E-01	8
DE-E	27	5	< RL	< RL	< RL	< RL	< RL	< RL	8
DE	118	26	< RL	< RL	< RL	< RL	< RL	< RL	8
DK									
EE	4	2	< RL			< RL	< RL	< RL	10
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-C	26	7	< RL	< RL	< RL	< RL	< RL	< RL	2
ES-S	16	4	< RL	< RL	< RL	< RL	< RL	1.5E-01	3
ES-E	16	4	< RL	< RL	< RL	< RL	< RL	< RL	3
ES	78	20	< RL	< RL	< RL	< RL	< RL	< RL	8
FI-N	1	1				< RL	< RL	< RL	10
FI-S	2	2				< RL	< RL	< RL	11
FI	3	3				< RL	< RL	< RL	11
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5	1.8E-01	< RL	< RL	1.6E-01	1.1E-01	2.9E-01	1
GB-WL	5	2	< RL	1.6E-01	2.1E-01	1.5E-01	1.4E-01	2.1E-01	5
GB-SC	17	5	1.2E-01	< RL	< RL	< RL	< RL	1.6E-01	3
GB-NI	5	2	1.2E-01	< RL	< RL	2.7E-01	1.3E-01	2.7E-01	11
GB	35	14	1.4E-01	< RL	< RL	1.5E-01	1.2E-01	2.1E-01	11
GR	12	1	1.2E-01	1.0E-01	1.0E-01	1.0E-01	1.1E-01	1.6E-01	3
HR-A									
HR-C	5	1				< RL	< RL	< RL	12
HR	5	1				< RL	< RL	< RL	12
HU	7	3	< RL	< RL	< RL	< RL	< RL	< RL	4
IE	1	1	4.8E+00				4.8E+00	4.8E+00	2
IT-N									
IT-C									
IT-S									
IT									
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	11
LU									
LV	2	1			< RL	< RL	< RL	< RL	12
MT	12	11	< RL	< RL	< RL	< RL	< RL	< RL	9
NL							Δ		
PL-N	3	3	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	5	5	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
RO-N	1	1	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	2.3E-01	1
RO-S	5	2	< RL	< RL	< RL	< RL	< RL	< RL	12
RO	6	3	1.2E-01	< RL	< RL	< RL	< RL	1.2E-01	1
SE-N	2	1		1.3E-01		2.4E-01	1.9E-01	2.4E-01	11
SE-S	4	2		< RL		2.0E-01	1.3E-01	2.0E-01	10
SE	6	3		< RL		2.2E-01	1.6E-01	2.4E-01	11
SI	5	5	< RL	< RL			< RL	< RL	3
SK	8	2	< RL	< RL	< RL	< RL	< RL	< RL	2

RL: reporting level for ^{90}Sr In mixed diet, i.e. 1.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

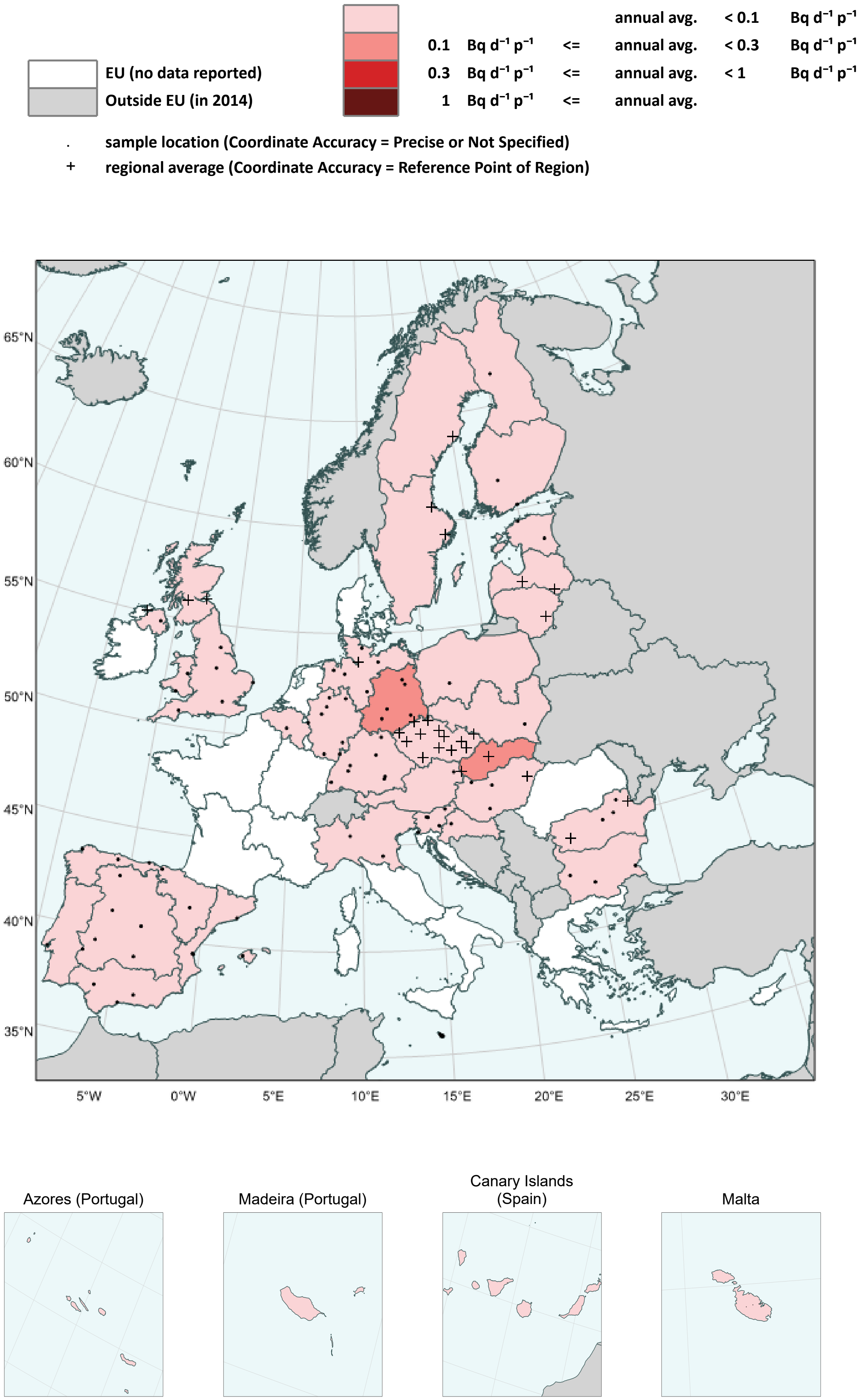


Fig.D3

Sampling locations and geographical averages by year for ^{90}Sr in mixed diet, 2014

Table D3: Geographical and time averages

DENSE

YEAR : **2014**
SAMPLE TYPE : **mixed diet (Bq d^{-1} p^{-1})**
NUCLIDE CATEGORY : **strontium-90 (^{90}Sr)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	4	1	< RL	< RL	1.0E-01	1.1E-01	< RL	1.1E-01	10
BE	2	1	< RL			< RL	< RL	< RL	10
BG	12	3	1.2E-01	< RL	< RL	< RL	< RL	1.2E-01	2
CY									
CZ	20	14	< RL	< RL	< RL	< RL	< RL	< RL	7
DE-N	32	6	< RL	< RL	< RL	< RL	< RL	< RL	6
DE-C	30	8	< RL	< RL	< RL	< RL	< RL	< RL	9
DE-S	22	7	< RL	< RL	< RL	< RL	< RL	1.1E-01	12
DE-E	31	5	< RL	< RL	< RL	2.9E-01	1.1E-01	3.6E-01	12
DE	115	26	< RL	< RL	< RL	1.4E-01	< RL	1.7E-01	12
DK									
EE	4	2	< RL			< RL	< RL	< RL	10
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-C	26	7	< RL	< RL	< RL	< RL	< RL	1.0E-01	2
ES-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-E	16	4	< RL	< RL	< RL	< RL	< RL	< RL	11
ES	78	20	< RL	< RL	< RL	< RL	< RL	< RL	2
FI-N	1	1				< RL	< RL	< RL	10
FI-S	2	2				< RL	< RL	< RL	10
FI	3	3				< RL	< RL	< RL	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5		< RL	< RL	< RL	< RL	< RL	12
GB-WL	5	2		< RL	< RL		< RL	< RL	5
GB-SC	13	2	< RL	< RL	< RL	< RL	< RL	1.3E-01	2
GB-NI	5	2			< RL	< RL	< RL	< RL	12
GB	31	11	< RL	< RL	< RL	< RL	< RL	1.3E-01	2
GR									
HR-A									
HR-C	5	1				< RL	< RL	< RL	11
HR	5	1				< RL	< RL	< RL	11
HU	11	4	< RL		< RL		< RL	< RL	7
IE									
IT-N	9	2	1.3E-01	< RL	< RL	< RL	< RL	1.3E-01	1
IT-C									
IT-S									
IT	9	2	1.3E-01	< RL	< RL	< RL	< RL	1.3E-01	1
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	7
LU									
LV	6	2	< RL	< RL	< RL	< RL	< RL	< RL	12
MT	6	5		< RL	< RL		< RL	< RL	4
NL							Δ		
PL-N	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL-S	1	1	< RL	< RL	< RL	< RL	< RL	< RL	1
PL	2	2	< RL	< RL	< RL	< RL	< RL	< RL	1
PT	11	1	< RL	< RL	< RL	< RL	< RL	< RL	2
RO-N									
RO-S	13	5	< RL	< RL	< RL	< RL	< RL	< RL	3
RO	13	5	< RL	< RL	< RL	< RL	< RL	< RL	3
SE-N	2	1		< RL		< RL	< RL	< RL	6
SE-S	4	2		< RL		< RL	< RL	< RL	5
SE	6	3		< RL		< RL	< RL	< RL	6
SI	5	5	< RL				< RL	< RL	3
SK	7	2	< RL	< RL	2.0E-01	5.7E-01	2.2E-01	5.7E-01	10

RL: reporting level for ^{90}Sr In mixed diet, i.e. 1.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

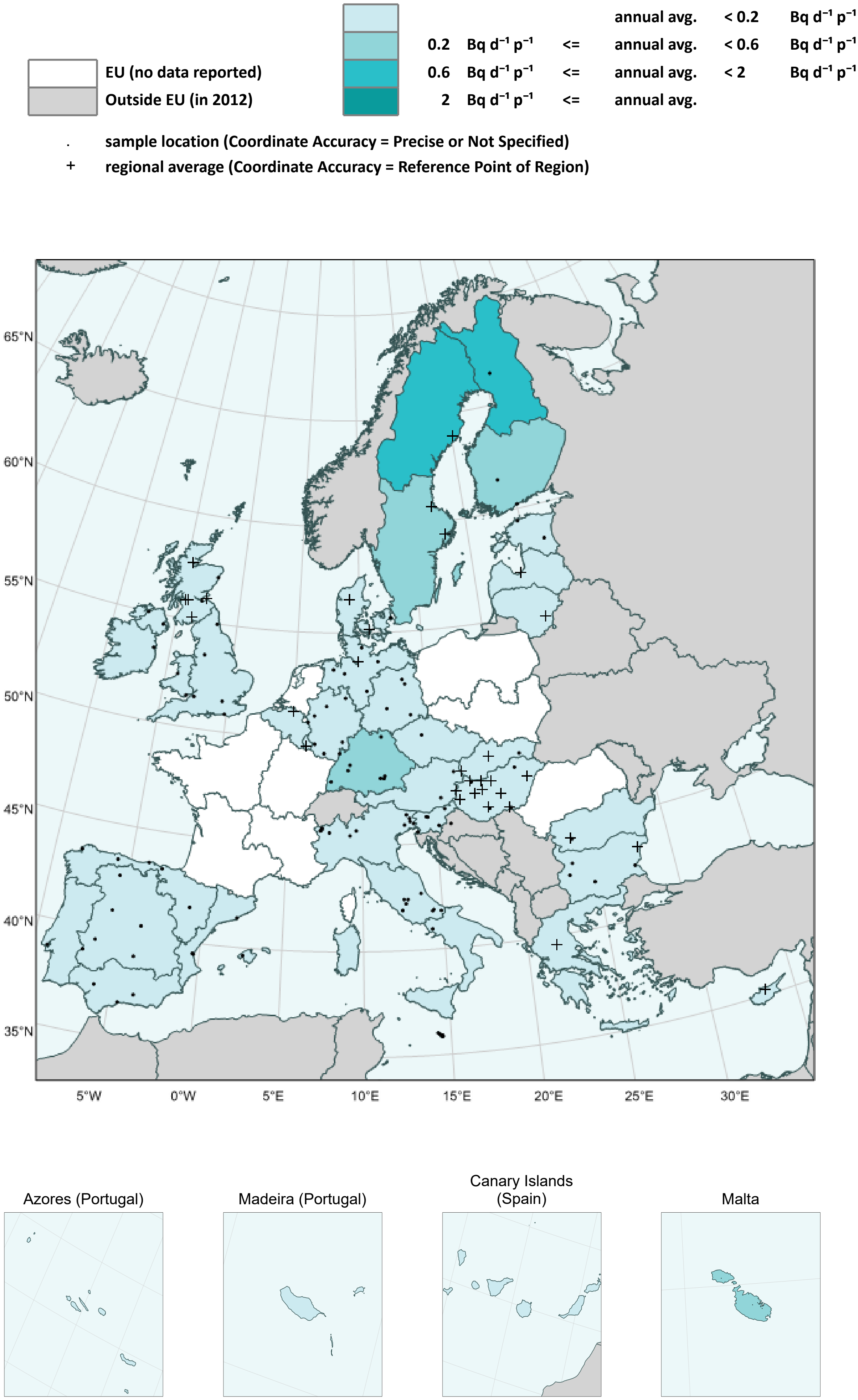


Fig.D4

Sampling locations and geographical averages by year for ^{137}Cs in mixed diet, 2012

Table D4: Geographical and time averages

DENSE

YEAR : 2012

SAMPLE TYPE : mixed diet (Bq d^{-1} p^{-1})

NUCLIDE CATEGORY : caesium-137 (^{137}Cs)

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	23	2	< RL	< RL	< RL	2.7E-01	< RL	7.3E-01	11
BE	6	1	< RL	< RL	< RL	< RL	< RL	< RL	4
BG	14	5	< RL	< RL	< RL	< RL	< RL	2.0E-01	8
CY	10	1	< RL	< RL	< RL	< RL	< RL	< RL	3
CZ	2	1	< RL	< RL	< RL	< RL	< RL	< RL	1
DE-N	126	6	< RL	< RL	< RL	2.7E-01	< RL	4.5E-01	11
DE-C	136	8	< RL	< RL	< RL	< RL	< RL	< RL	12
DE-S	124	7	< RL	< RL	4.7E-01	2.8E-01	2.4E-01	1.2E+00	9
DE-E	79	4	< RL	< RL	< RL	< RL	< RL	2.4E-01	10
DE	465	25	< RL	< RL	< RL	< RL	< RL	< RL	11
DK	3	3		< RL			< RL	< RL	6
EE	4	2	< RL			< RL	< RL	< RL	10
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	3
ES-C	28	7	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-E	16	4	< RL	< RL	< RL	< RL	< RL	< RL	1
ES	80	20	< RL	< RL	< RL	< RL	< RL	< RL	6
FI-N	7	1				8.9E-01	8.9E-01	8.9E-01	10
FI-S	14	2				5.9E-01	5.9E-01	5.9E-01	10
FI	21	3				6.9E-01	6.9E-01	6.9E-01	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-WL	5	2	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-SC	30	7	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-NI	5	2	< RL	< RL	< RL	< RL	< RL	< RL	4
GB	48	16	< RL	< RL	< RL	< RL	< RL	< RL	3
GR	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HU	30	17	< RL	< RL	< RL	3.4E-01	< RL	3.4E-01	11
IE	4	1	< RL				< RL	< RL	1
IT-N	23	12	< RL	< RL	< RL	3.7E-01	< RL	7.8E-01	12
IT-C	30	9	< RL	< RL	< RL	< RL	< RL	< RL	9
IT-S	1	1	< RL				< RL	< RL	3
IT	54	22	< RL	< RL	< RL	2.1E-01	< RL	4.3E-01	12
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	10
LU	13	1	< RL	< RL	< RL	< RL	< RL	< RL	11
LV	4	1	< RL	< RL	< RL	< RL	< RL	< RL	11
MT	10	9	< RL	3.3E-01	< RL	3.5E-01	2.4E-01	5.5E-01	4
NL							Δ		
PL-N									
PL-S									
PL									
PT	11	1	< RL	< RL	< RL	< RL	< RL	< RL	5
RO-N									
RO-S	6	2	< RL	< RL			< RL	< RL	3
RO	6	2	< RL	< RL			< RL	< RL	3
SE-N	2	1				1.7E+00	1.7E+00	1.9E+00	12
SE-S	5	2		< RL		7.0E-01	4.3E-01	7.0E-01	10
SE	7	3		< RL		1.1E+00	6.5E-01	1.5E+00	11
SI	5	5	< RL		< RL		< RL	< RL	3
SK	12	3	< RL	< RL	< RL	< RL	< RL	< RL	2

RL: reporting level for ^{137}Cs In mixed diet, i.e. 2.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

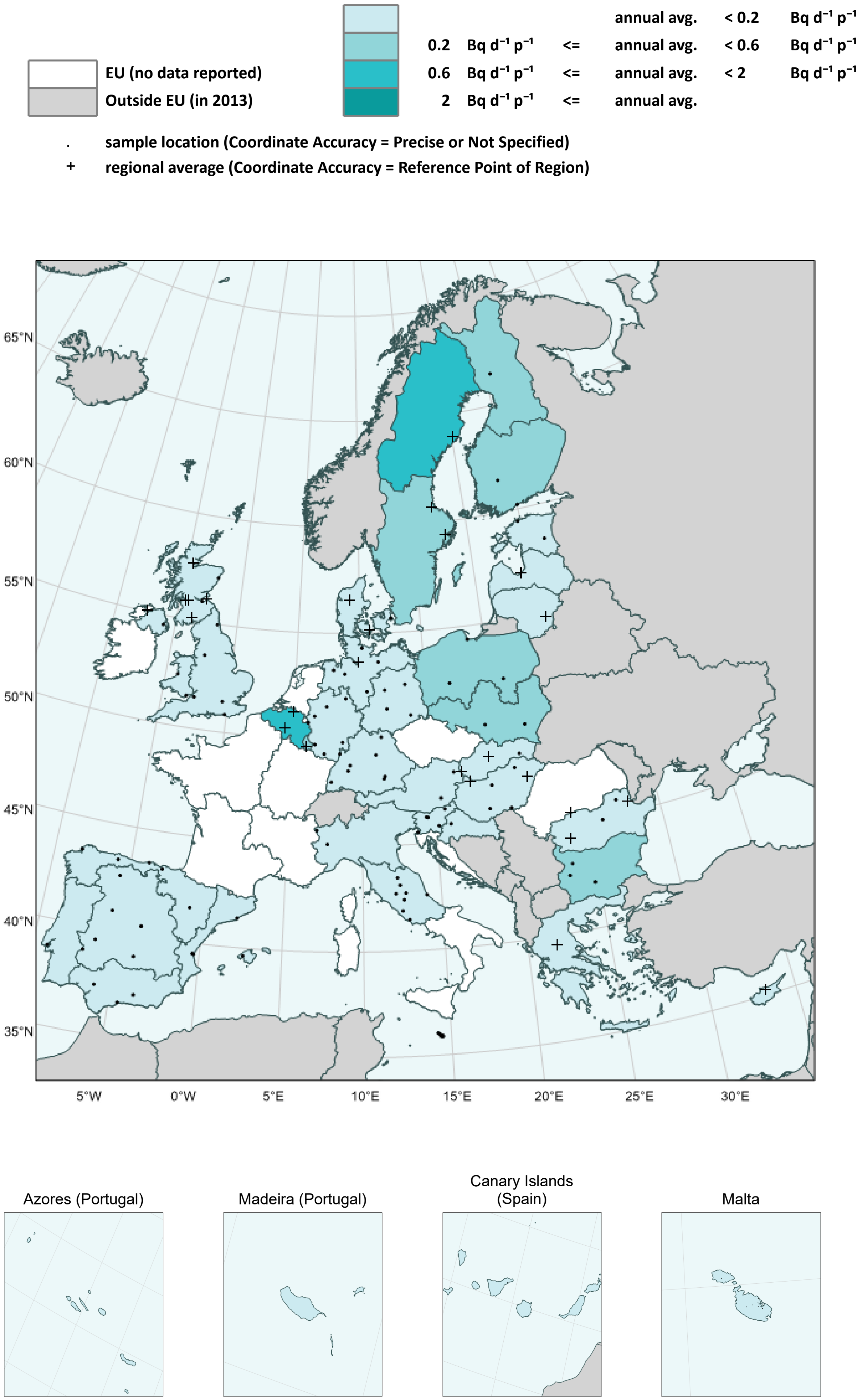


Fig.D5

Sampling locations and geographical averages by year for ^{137}Cs in mixed diet, 2013

Table D5: Geographical and time averages

YEAR : **2013**
SAMPLE TYPE : **mixed diet (Bq d^{-1} p^{-1})**
NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	22	2	< RL	< RL	< RL	< RL	< RL	< RL	10
BE	2	2		1.0E+00		< RL	6.0E-01	1.0E+00	5
BG	10	3	< RL	< RL	< RL	5.2E-01	2.1E-01	6.9E-01	11
CY	10	1		< RL			< RL	< RL	5
CZ									
DE-N	127	6	< RL	< RL	< RL	2.5E-01	< RL	3.7E-01	12
DE-C	131	8	< RL	< RL	< RL	< RL	< RL	2.8E-01	3
DE-S	106	7	< RL	< RL	< RL	< RL	< RL	2.3E-01	12
DE-E	99	4	< RL	< RL	< RL	< RL	< RL	< RL	3
DE	463	25	< RL	< RL	< RL	< RL	< RL	2.4E-01	3
DK	3	3		< RL			< RL	< RL	6
EE	4	2	< RL			< RL	< RL	< RL	2
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-C	28	7	< RL	< RL	< RL	< RL	< RL	< RL	10
ES-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	12
ES-E	16	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES	80	20	< RL	< RL	< RL	< RL	< RL	< RL	12
FI-N	7	1				3.6E-01	3.6E-01	3.6E-01	10
FI-S	14	2				5.5E-01	5.5E-01	6.2E-01	10
FI	21	3				5.0E-01	5.0E-01	5.2E-01	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5	< RL	< RL	< RL	< RL	< RL	< RL	1
GB-WL	5	2	< RL	< RL	< RL	< RL	< RL	< RL	5
GB-SC	30	7	< RL	< RL	< RL	< RL	< RL	< RL	7
GB-NI	5	2	< RL	< RL	< RL	< RL	< RL	< RL	4
GB	48	16	< RL	< RL	< RL	< RL	< RL	< RL	5
GR	11	1	< RL	< RL	< RL	< RL	< RL	< RL	1
HR-A									
HR-C	5	1				< RL	< RL	< RL	12
HR	5	1				< RL	< RL	< RL	12
HU	14	7	< RL	< RL	< RL	< RL	< RL	< RL	11
IE							Δ		
IT-N	3	2	< RL	< RL	< RL		< RL	< RL	3
IT-C	11	8	2.1E-01	< RL	2.0E-01	< RL	< RL	2.1E-01	3
IT-S									
IT	14	10	< RL	< RL	< RL	< RL	< RL	2.0E-01	6
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	9
LU	7	1	5.5E-01	< RL	< RL	1.0E+00	4.4E-01	1.0E+00	11
LV	4	1		< RL	< RL	< RL	< RL	< RL	5
MT	12	11	< RL	< RL	< RL	< RL	< RL	< RL	9
NL							Δ		
PL-N	3	3	4.2E-01	4.2E-01	4.2E-01	4.2E-01	4.2E-01	4.2E-01	1
PL-S	2	2	3.4E-01	3.4E-01	3.4E-01	3.4E-01	3.4E-01	3.4E-01	1
PL	5	5	3.9E-01	3.9E-01	3.9E-01	3.9E-01	3.9E-01	3.9E-01	1
PT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	10
RO-N									
RO-S	10	5	< RL	< RL	< RL	< RL	< RL	< RL	1
RO	10	5	< RL	< RL	< RL	< RL	< RL	< RL	1
SE-N	3	1		7.6E-01		2.1E+00	1.4E+00	2.1E+00	11
SE-S	5	2	7.0E-01	< RL		5.1E-01	4.4E-01	7.0E-01	1
SE	8	3	7.0E-01	4.4E-01		1.3E+00	8.1E-01	2.1E+00	11
SI	5	5	< RL	< RL			< RL	< RL	3
SK	12	3	< RL	< RL	< RL	< RL	< RL	5.0E-01	1

RL: reporting level for ^{137}Cs In mixed diet, i.e. 2.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

DENSE

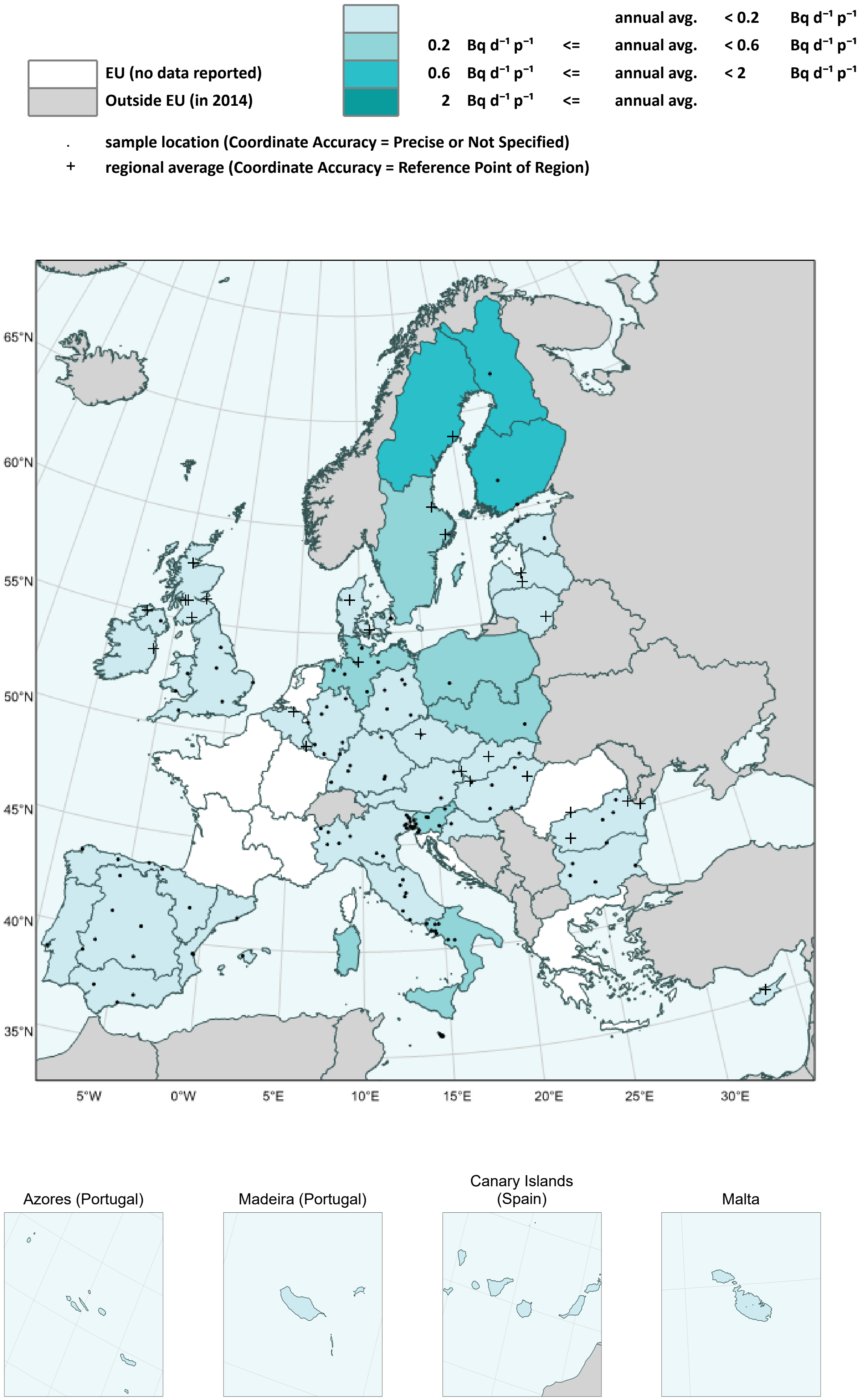


Fig.D6

Sampling locations and geographical averages by year for ^{137}Cs in mixed diet, 2014

Table D6: Geographical and time averages

YEAR : **2014**
SAMPLE TYPE : **mixed diet (Bq d^{-1} p^{-1})**
NUCLIDE CATEGORY : **caesium-137 (^{137}Cs)**

Country	N	L	1st quarter	2nd quarter	3rd quarter	4th quarter	Annual average	Monthly max	M
AT	23	2	< RL	< RL	< RL	< RL	< RL	2.1E-01	8
BE	1	1			< RL		< RL	< RL	9
BG	11	5	2.2E-01	< RL	< RL	< RL	< RL	2.3E-01	4
CY	10	1			< RL		< RL	< RL	7
CZ	4	2			< RL		< RL	< RL	8
DE-N	137	6	< RL	< RL	2.3E-01	2.9E-01	2.2E-01	3.5E-01	10
DE-C	131	8	< RL	< RL	< RL	< RL	< RL	< RL	10
DE-S	105	6	< RL	< RL	< RL	< RL	< RL	2.9E-01	5
DE-E	136	5	< RL	< RL	< RL	< RL	< RL	< RL	8
DE	509	25	< RL	< RL	< RL	< RL	< RL	< RL	10
DK	3	3		< RL			< RL	< RL	6
EE	4	2	< RL			< RL	< RL	< RL	2
ES-N	20	5	< RL	< RL	< RL	< RL	< RL	< RL	8
ES-C	26	7	< RL	< RL	< RL	< RL	< RL	< RL	6
ES-S	16	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES-E	16	4	< RL	< RL	< RL	< RL	< RL	< RL	5
ES	78	20	< RL	< RL	< RL	< RL	< RL	< RL	8
FI-N	7	1				8.7E-01	8.7E-01	8.7E-01	10
FI-S	14	2				7.2E-01	7.2E-01	7.2E-01	10
FI	21	3				7.7E-01	7.7E-01	7.7E-01	10
FR-NW									
FR-NE									
FR-SW									
FR-SE									
FR									
GB-EN	8	5		< RL	< RL	< RL	< RL	< RL	5
GB-WL	5	2		< RL	< RL		< RL	< RL	6
GB-SC	28	5	< RL	< RL	< RL	< RL	< RL	< RL	3
GB-NI	5	2			< RL	< RL	< RL	< RL	11
GB	46	14	< RL	< RL	< RL	< RL	< RL	< RL	5
GR									
HR-A									
HR-C	5	1				< RL	< RL	< RL	11
HR	5	1				< RL	< RL	< RL	11
HU	16	7	< RL	< RL	< RL		< RL	< RL	3
IE	2	1		< RL		< RL	< RL	< RL	10
IT-N	38	21	< RL	< RL	< RL	< RL	< RL	< RL	12
IT-C	9	6	< RL	< RL	< RL	< RL	< RL	< RL	2
IT-S	8	8	< RL	< RL	2.9E-01	2.9E-01	2.3E-01	6.0E-01	12
IT	55	35	< RL	< RL	< RL	< RL	< RL	< RL	8
LT	12	1	< RL	< RL	< RL	< RL	< RL	< RL	2
LU	12	1	< RL	< RL	2.3E-01	< RL	< RL	5.6E-01	8
LV	5	2	< RL	< RL	< RL	< RL	< RL	< RL	1
MT	6	5		< RL	< RL		< RL	< RL	4
NL							Δ		
PL-N	1	1	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	12
PL-S	1	1	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	12
PL	2	2	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	3.3E-01	12
PT	12	1	< RL	< RL	< RL	< RL	< RL	3.2E-01	11
RO-N									
RO-S	16	7	< RL	< RL	< RL	< RL	< RL	< RL	2
RO	16	7	< RL	< RL	< RL	< RL	< RL	< RL	2
SE-N	3	1		< RL		2.5E+00	1.4E+00	3.2E+00	11
SE-S	5	2	8.0E-01	< RL		< RL	3.7E-01	8.0E-01	1
SE	8	3	8.0E-01	< RL		2.1E+00	1.0E+00	3.0E+00	11
SI	5	5	2.3E-01				2.3E-01	2.3E-01	3
SK	12	3	< RL	< RL	< RL	< RL	< RL	2.0E-01	10

RL: reporting level for ^{137}Cs In mixed diet, i.e. 2.0 E-01 BQ/D.P (see Appendix B)
Δ: only constraint (<) values above the reporting level were reported

N: Number of measurements considered in calculating the annual concentration.
L: Number of sampling locations considered in calculating the annual concentration.
Monthly max: Maximum monthly average in the year.
M: Month during which the maximum occurred.

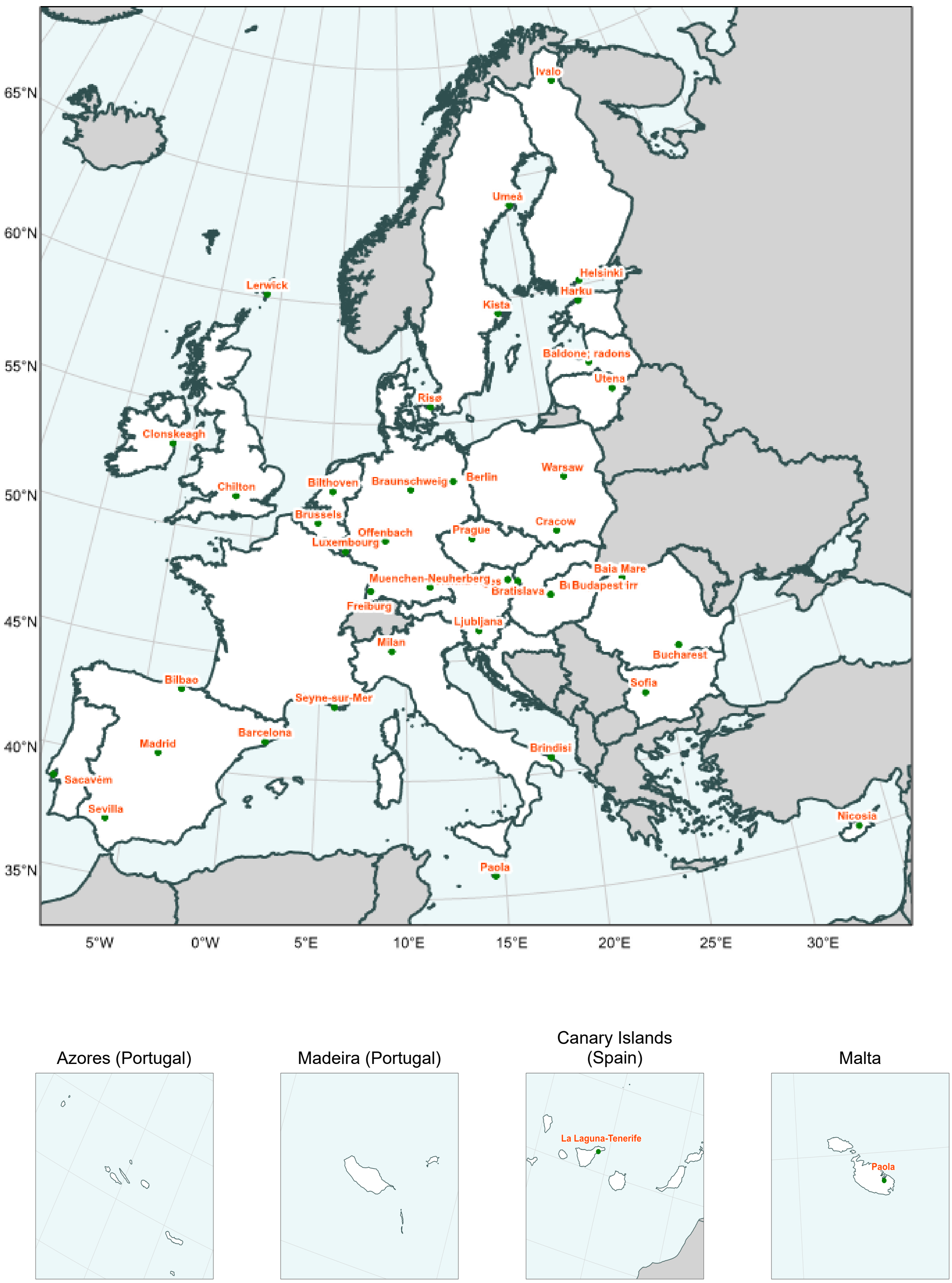


Fig. A7

Sampling locations for ^{7}Be and ^{137}Cs in airborne particulates considered in Figures A8 – A35

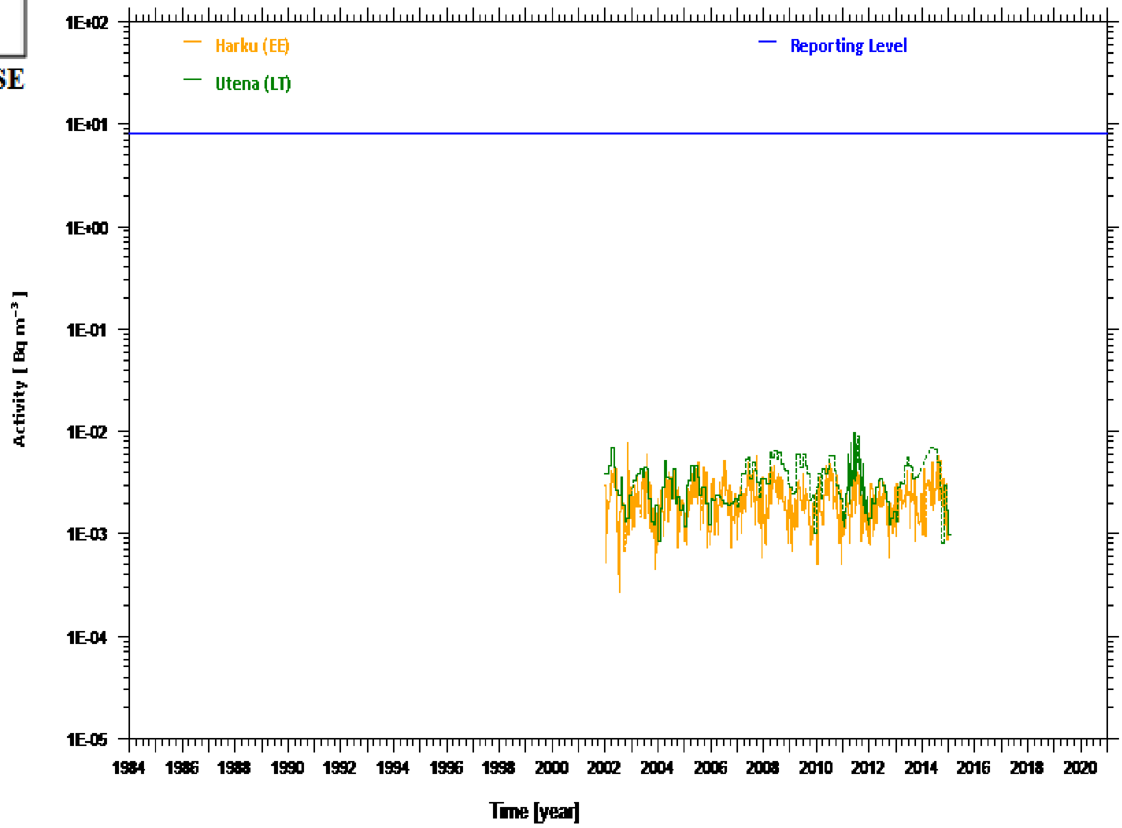


Fig. A8

Activity trends for ^{7}Be in airborne particulates (Harku and Utena)

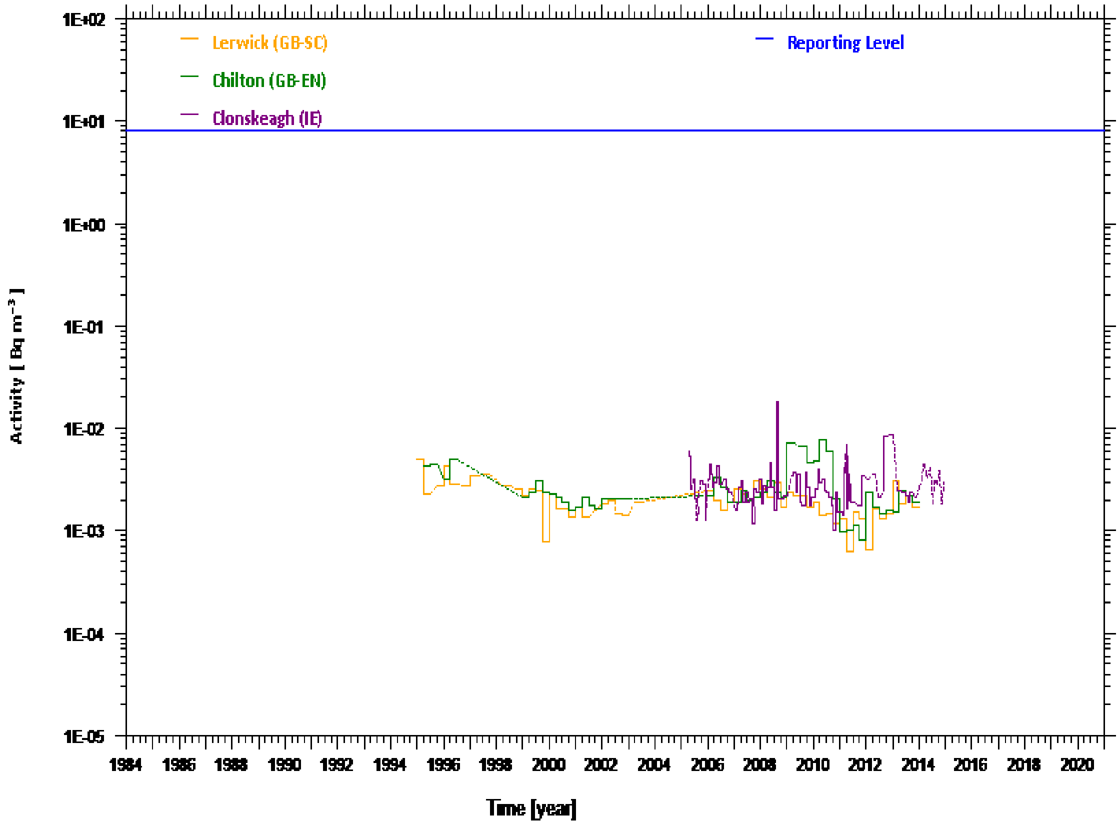


Fig. A9

Activity trends for ^{7}Be in airborne particulates (Lerwick, Chilton and Clonskeagh)

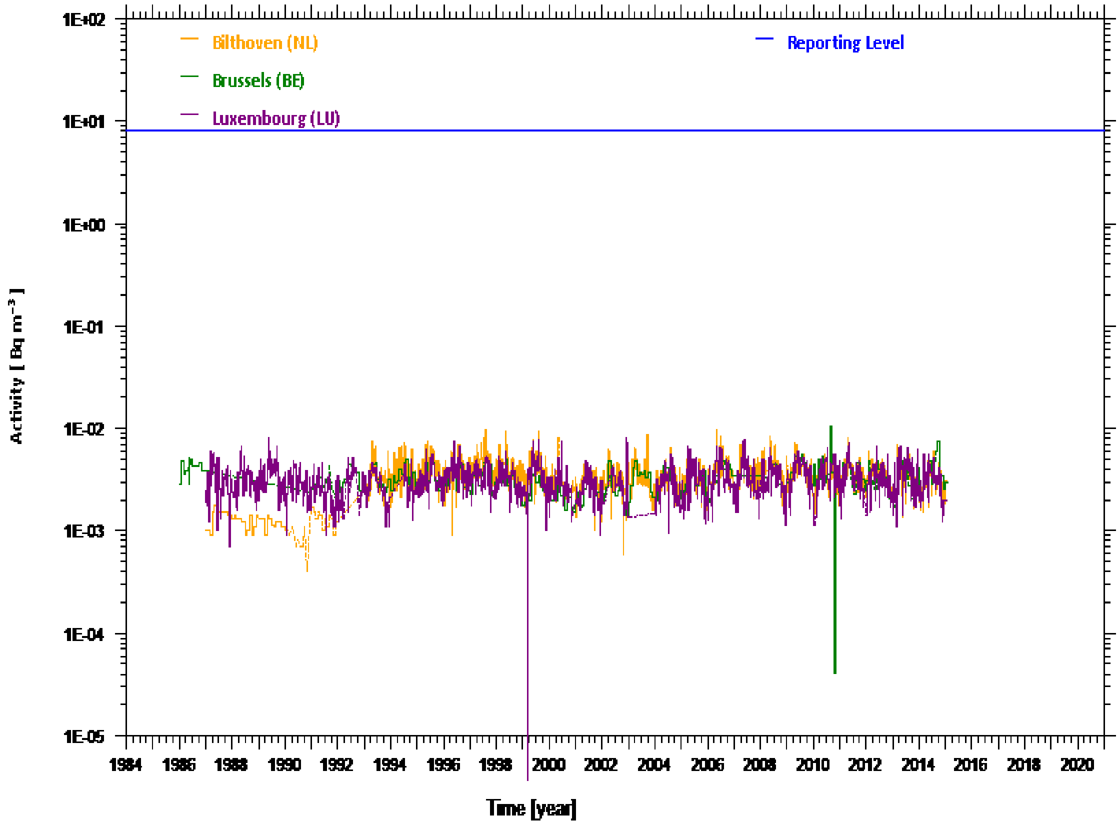


Fig. A10

Activity trends for ^{7}Be in airborne particulates (Bilthoven, Brussels and Luxembourg)

* The 7Be results for Bilthoven between 1987 and 1992 are underestimates due to a different sampling procedure and sample treatment

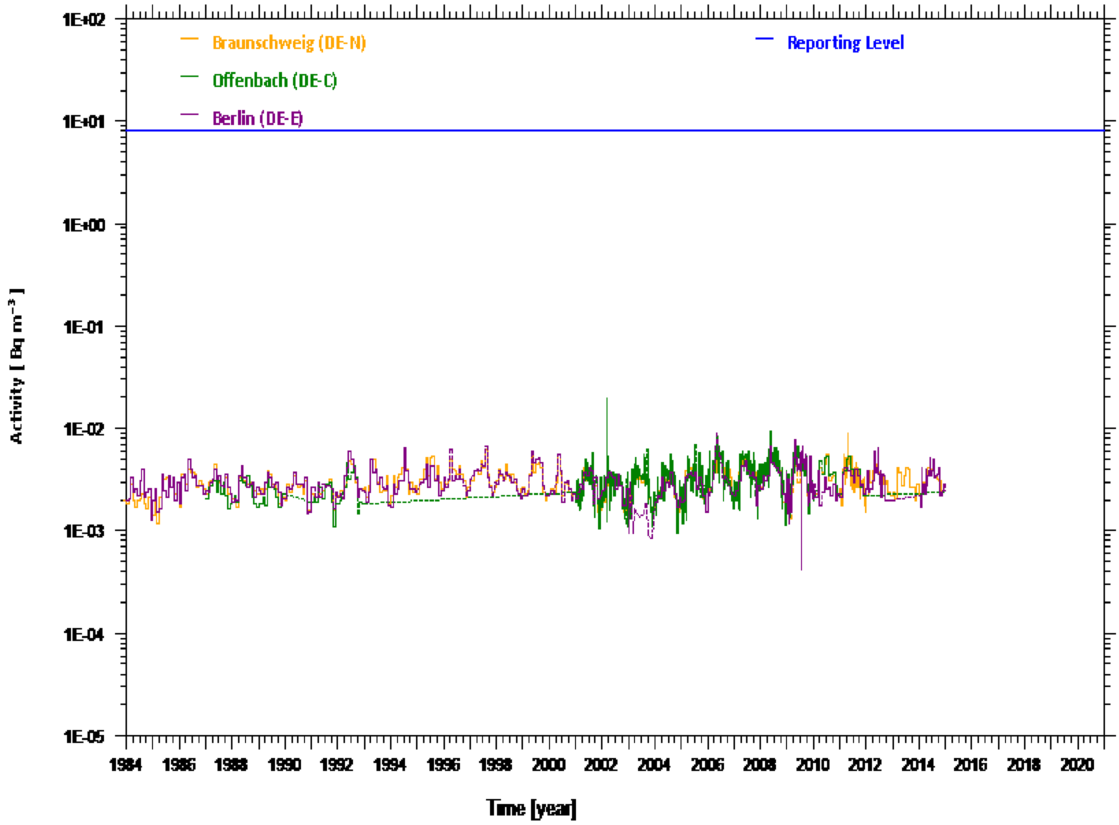
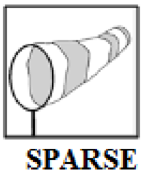


Fig. A11

Activity trends for ^{7}Be in airborne particulates (Braunschweig, Offenbach and Berlin)



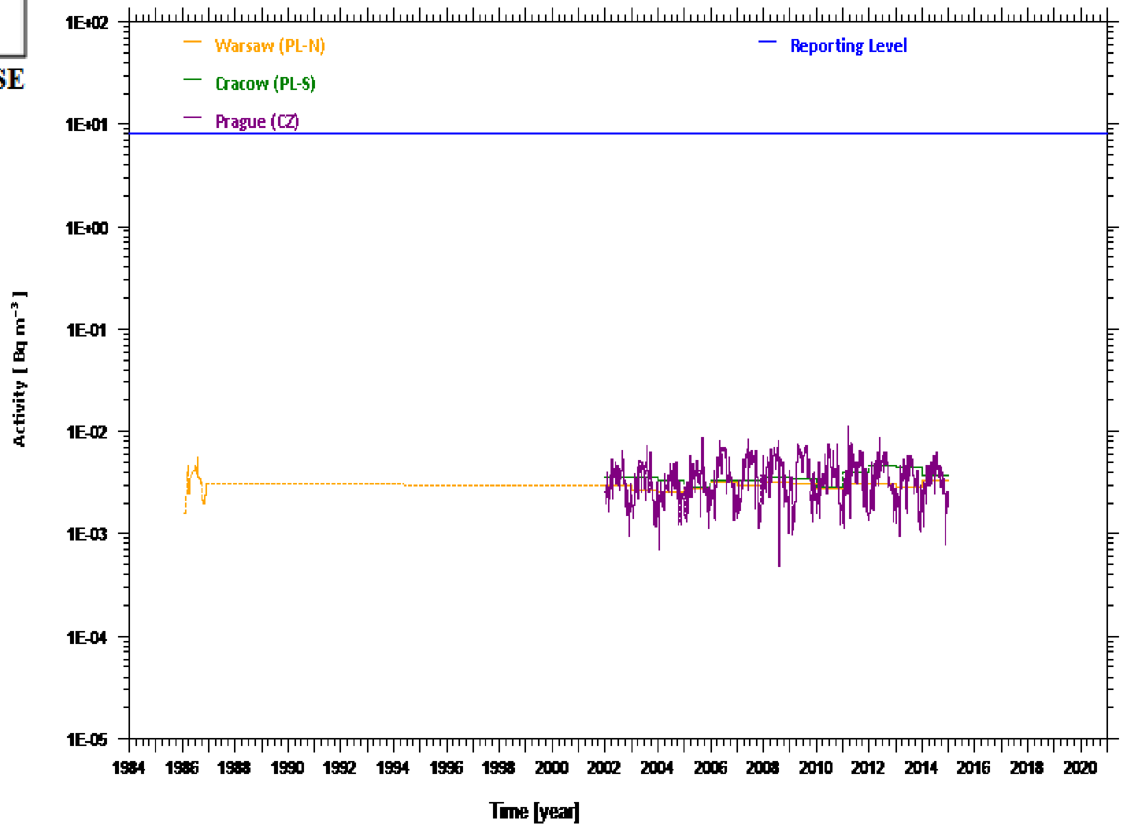


Fig. A12
Activity trends for ^{7}Be in airborne particulates (Warsaw, Cracow and Prague)

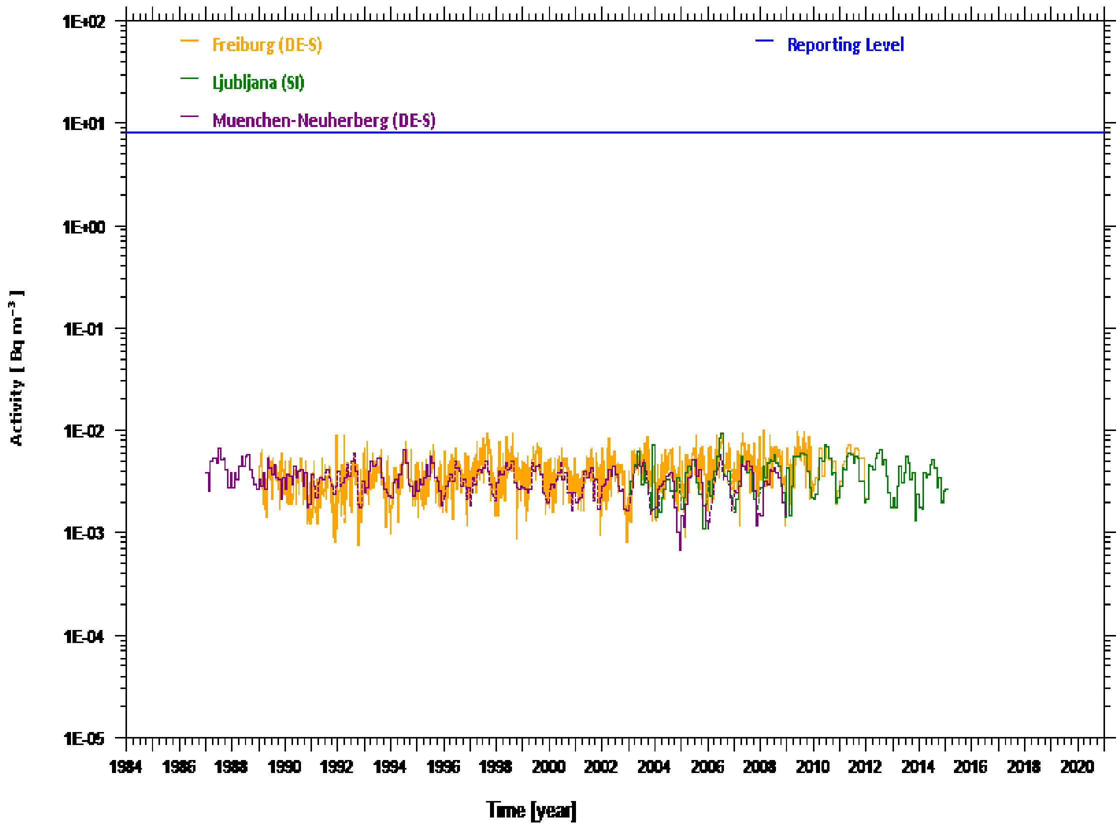


Fig. A13
Activity trends for ^{7}Be in airborne particulates (Freiburg, Ljubljana and Muenchen-Neuherberg)

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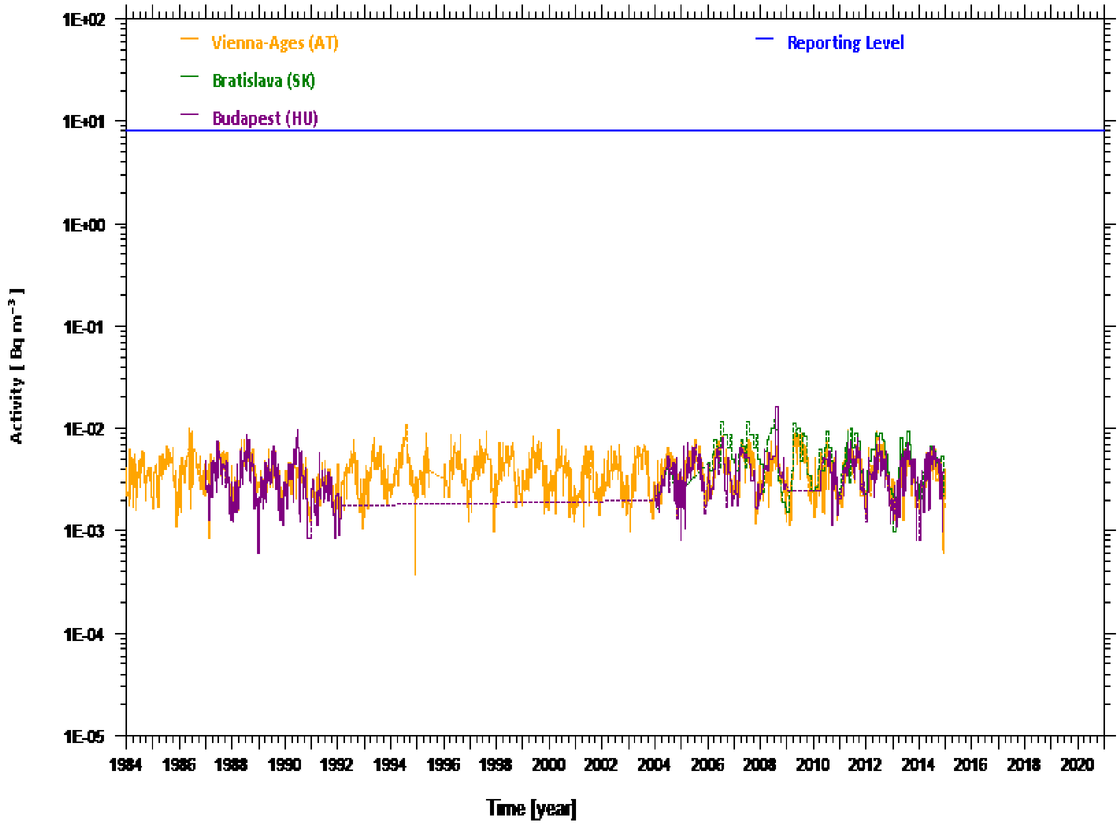


Fig. A14

Activity trends for ^{7}Be in airborne particulates (Vienna-Ages, Bratislava and Budapest)

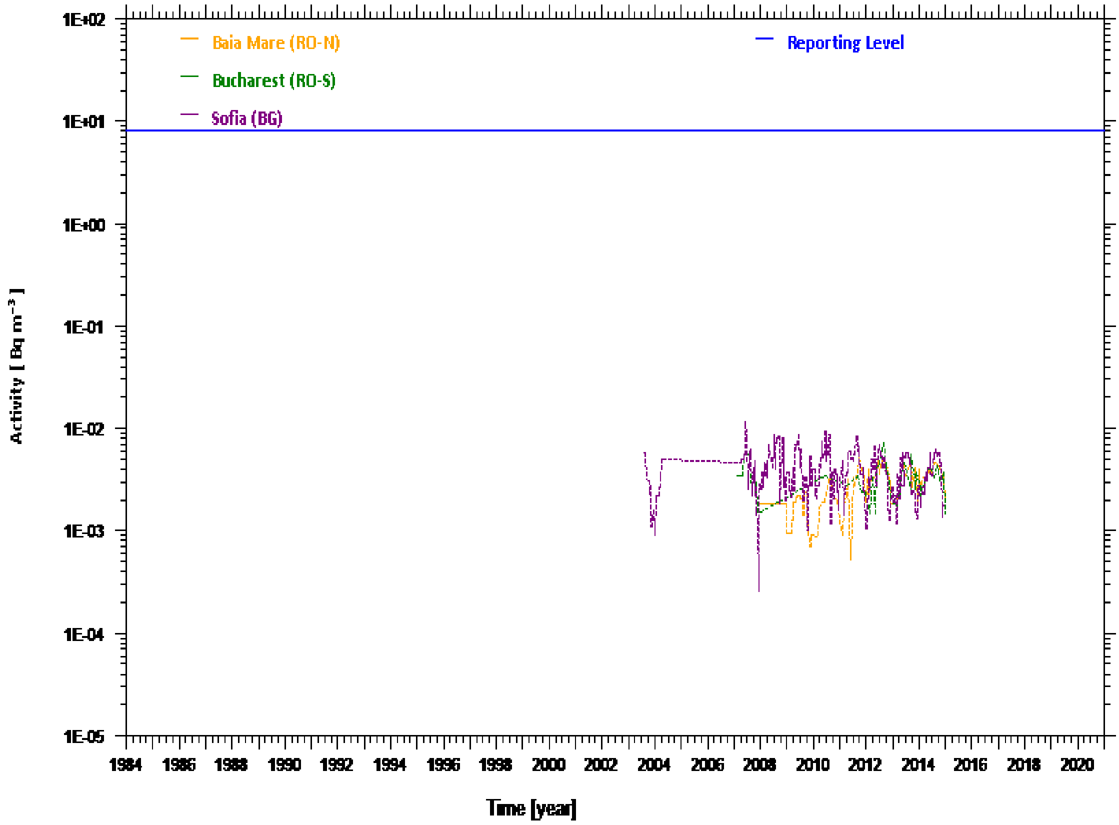
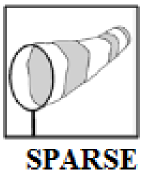


Fig. A15

Activity trends for ^{7}Be in airborne particulates (Baia Mare, Bucharest and Sofia)



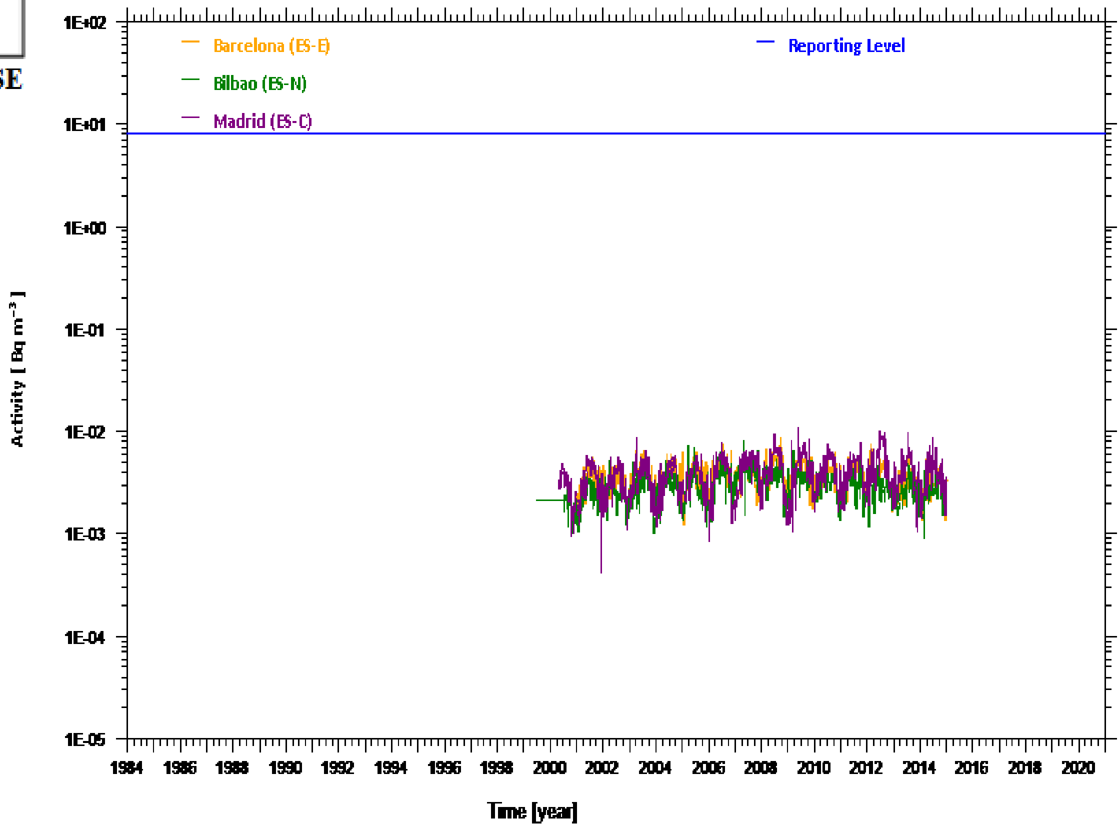


Fig. A16

Activity trends for ^{7}Be in airborne particulates (Barcelona, Bilbao and Madrid)

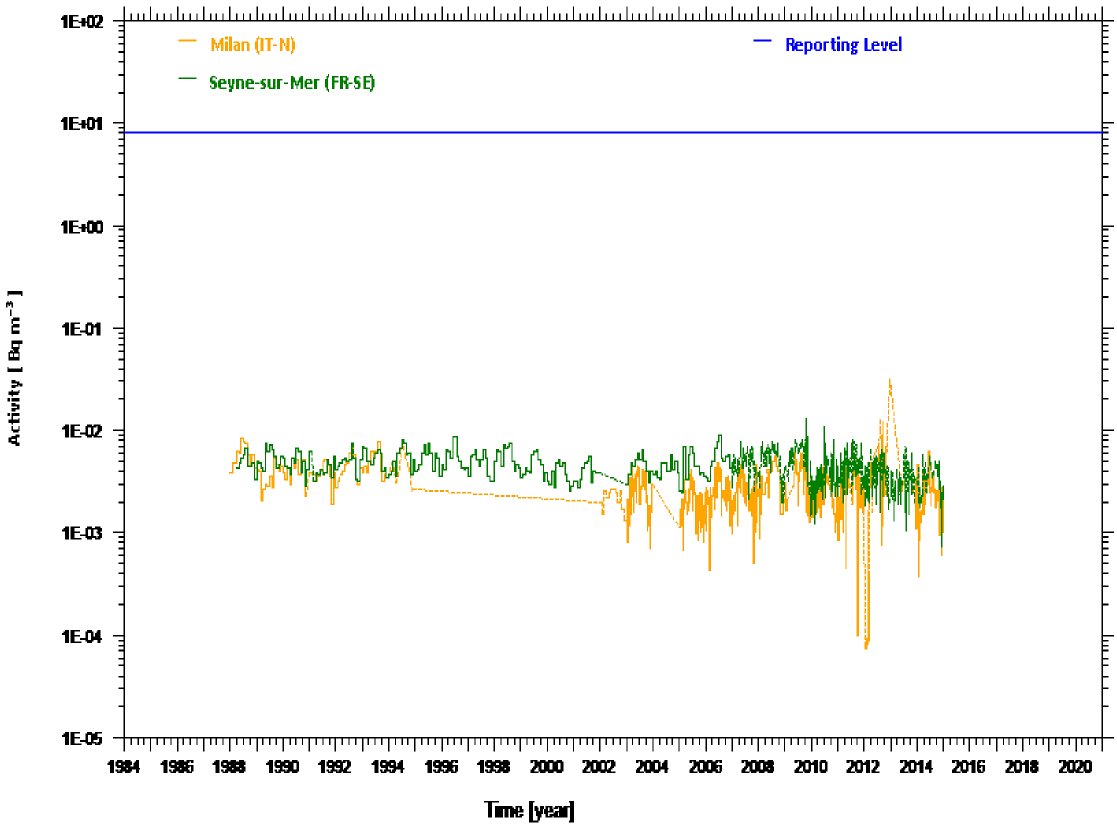


Fig. A17

Activity trends for ^{7}Be in airborne particulates (Milan and Seyne-sur-Mer)

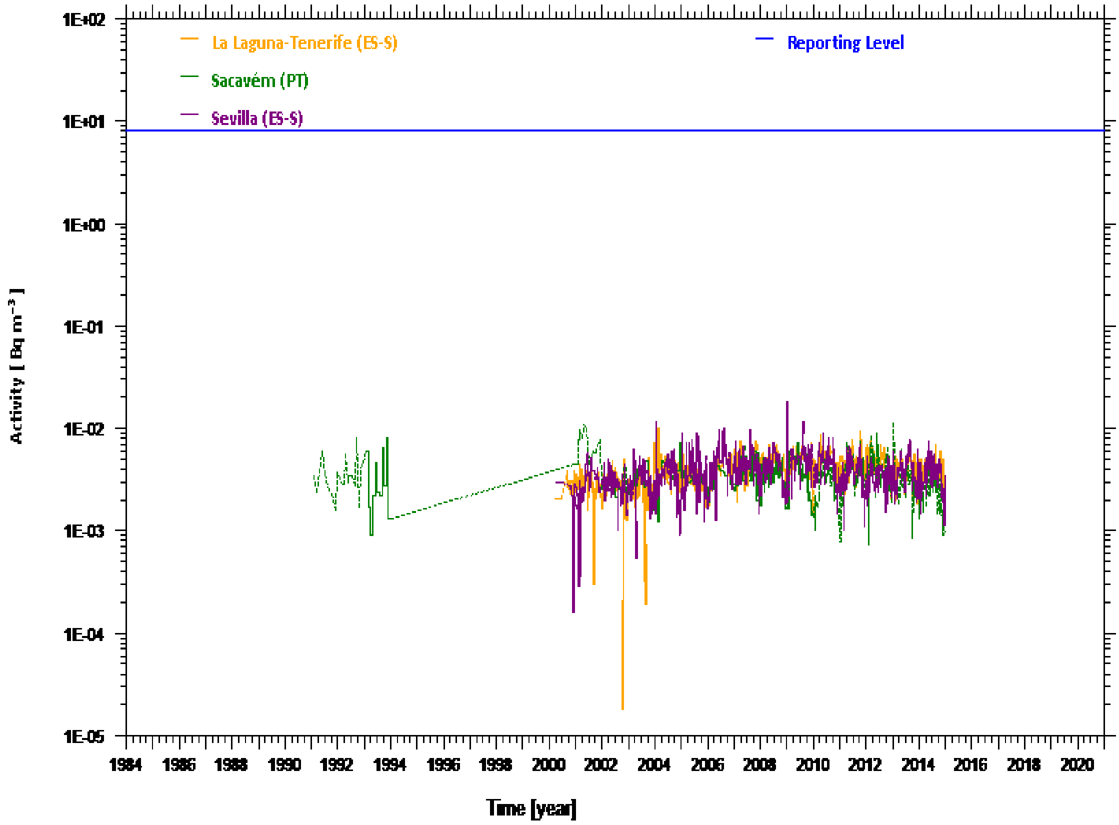


Fig. A18

Activity trends for ^{7}Be in airborne particulates (La Laguna-Tenerife, Sacavém and Sevilla)

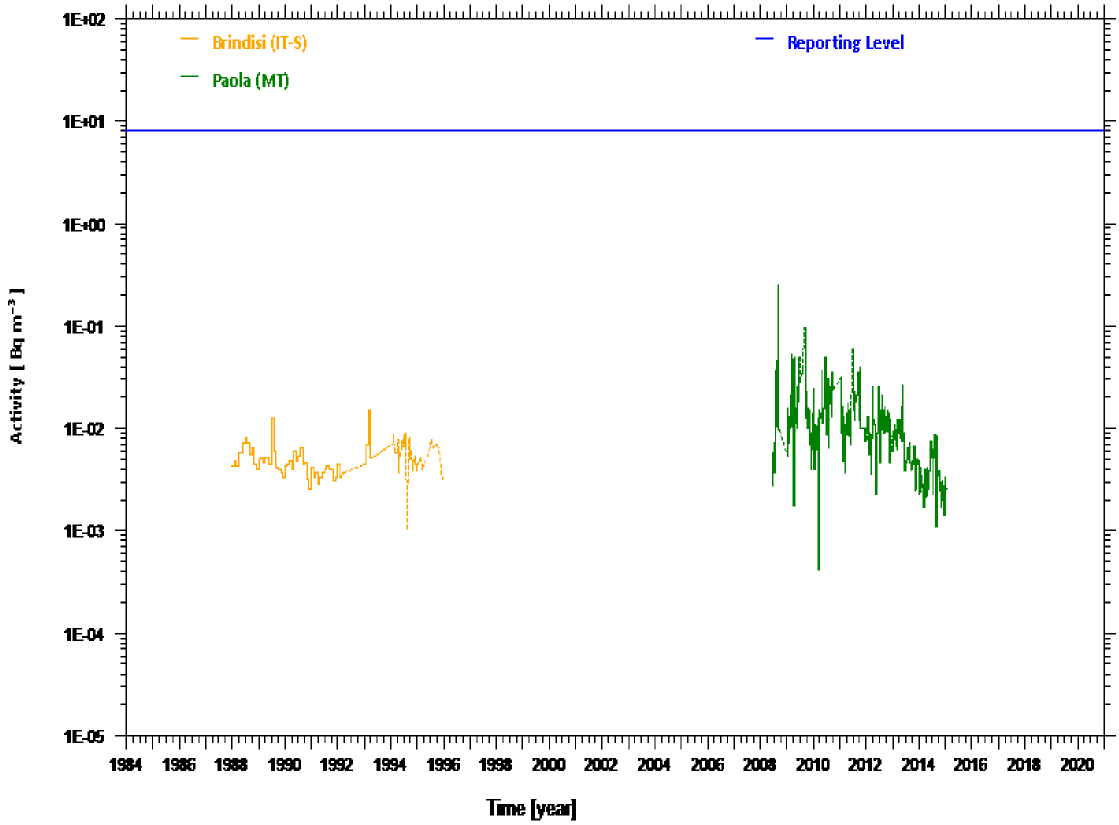
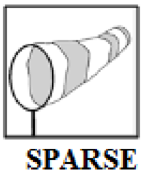


Fig. A19

Activity trends for ^{7}Be in airborne particulates (Brindisi and Paola)



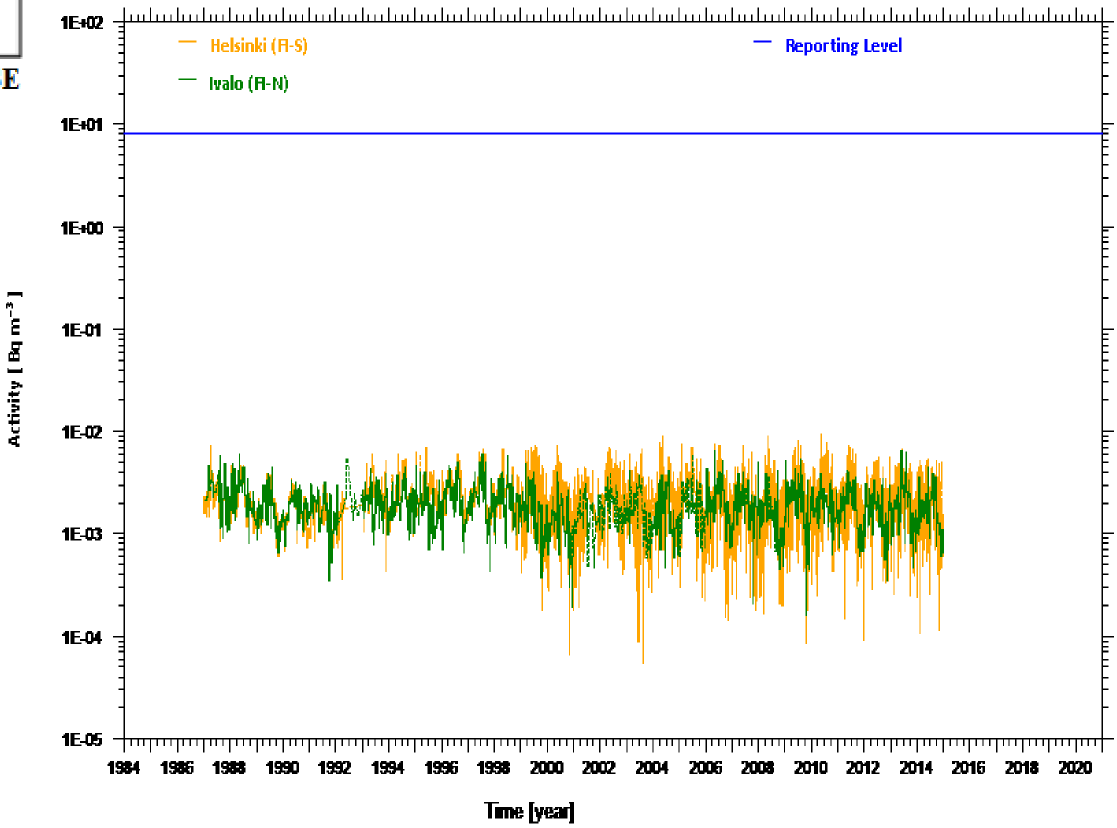


Fig. A20

Activity trends for ^{7}Be in airborne particulates (Helsinki and Ivalo)

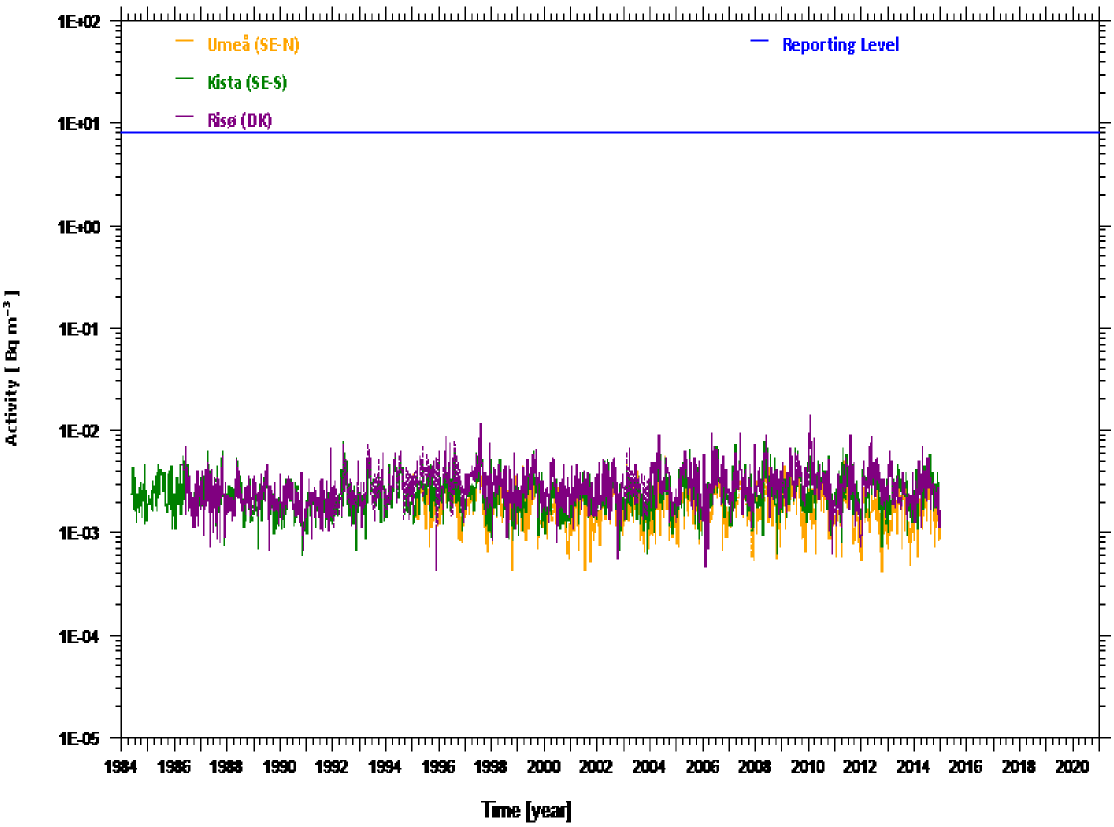


Fig. A21

Activity trends for ^{7}Be in airborne particulates (Umeå, Kista and Risø)

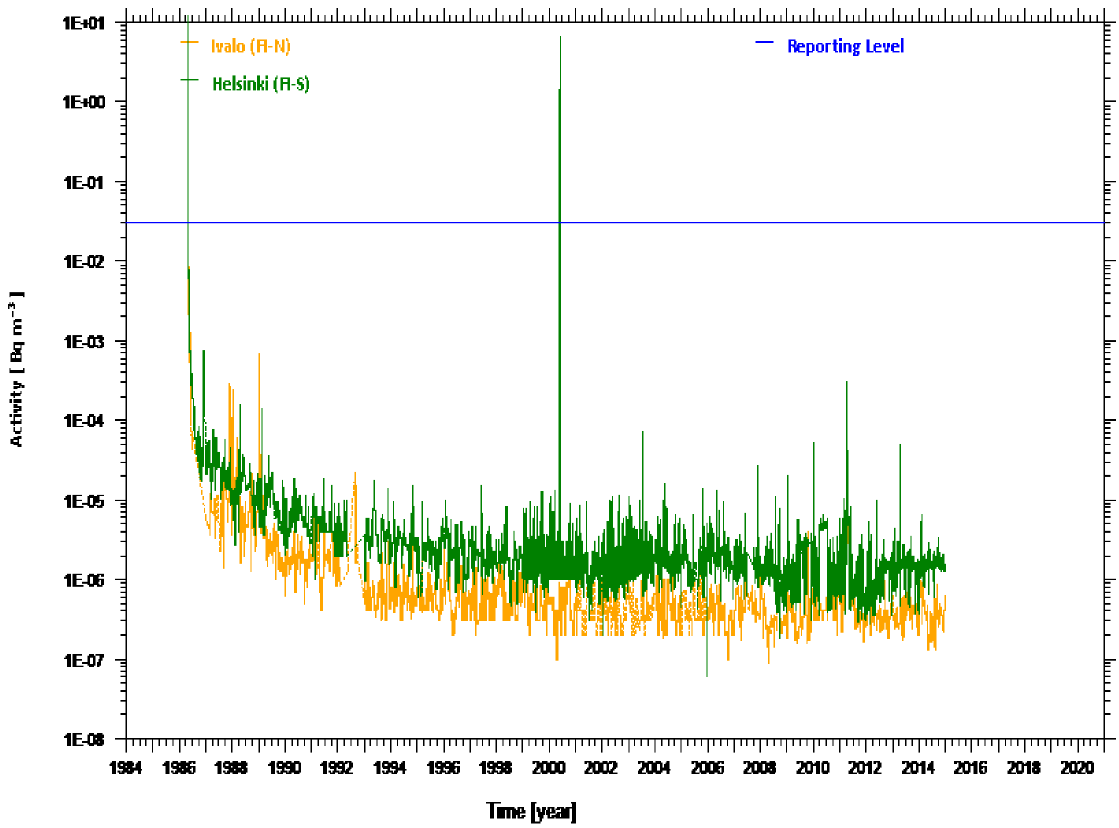


Fig. A22
Activity trends for ^{137}Cs in airborne particulates (Ivalo and Helsinki)

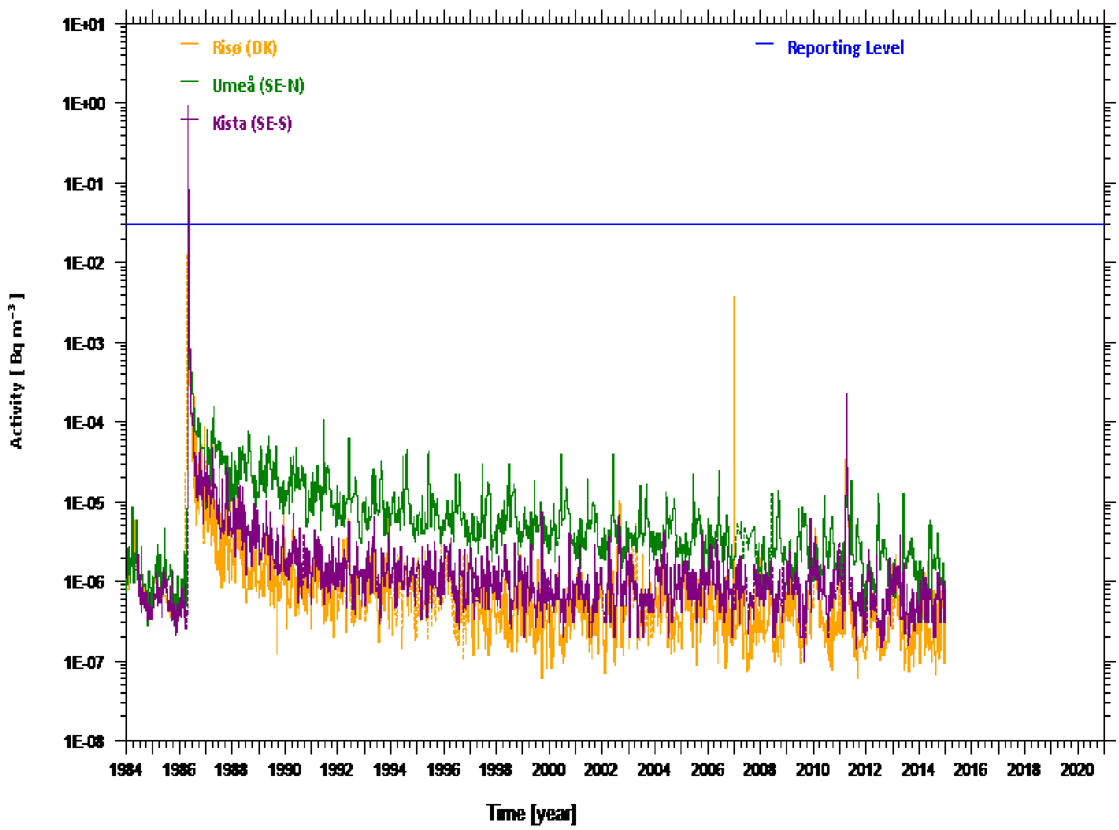


Fig. A23
Activity trends for ^{137}Cs in airborne particulates (Risø, Umeå and Kista)

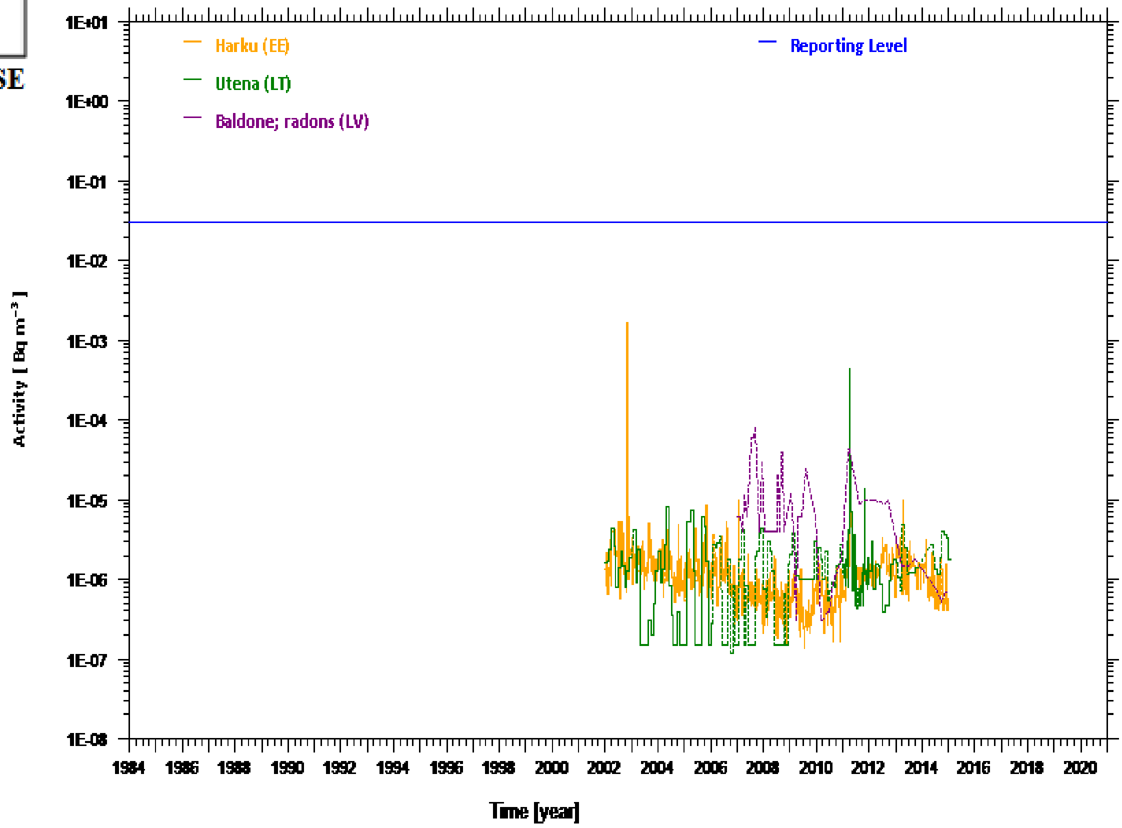


Fig. A24

Activity trends for ^{137}Cs in airborne particulates (Harku, Utena and Baldone; radons)

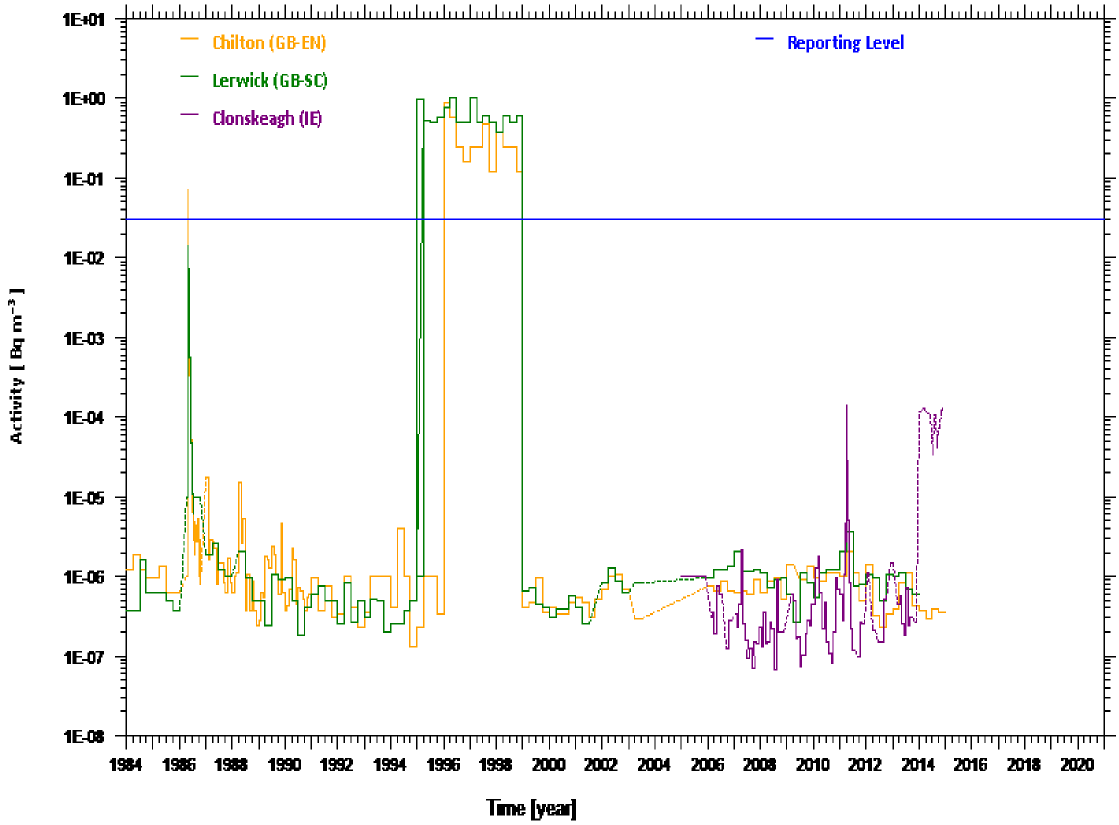


Fig. A25

Activity trends for ^{137}Cs in airborne particulates (Chilton, Lerwick and Clonskeagh)

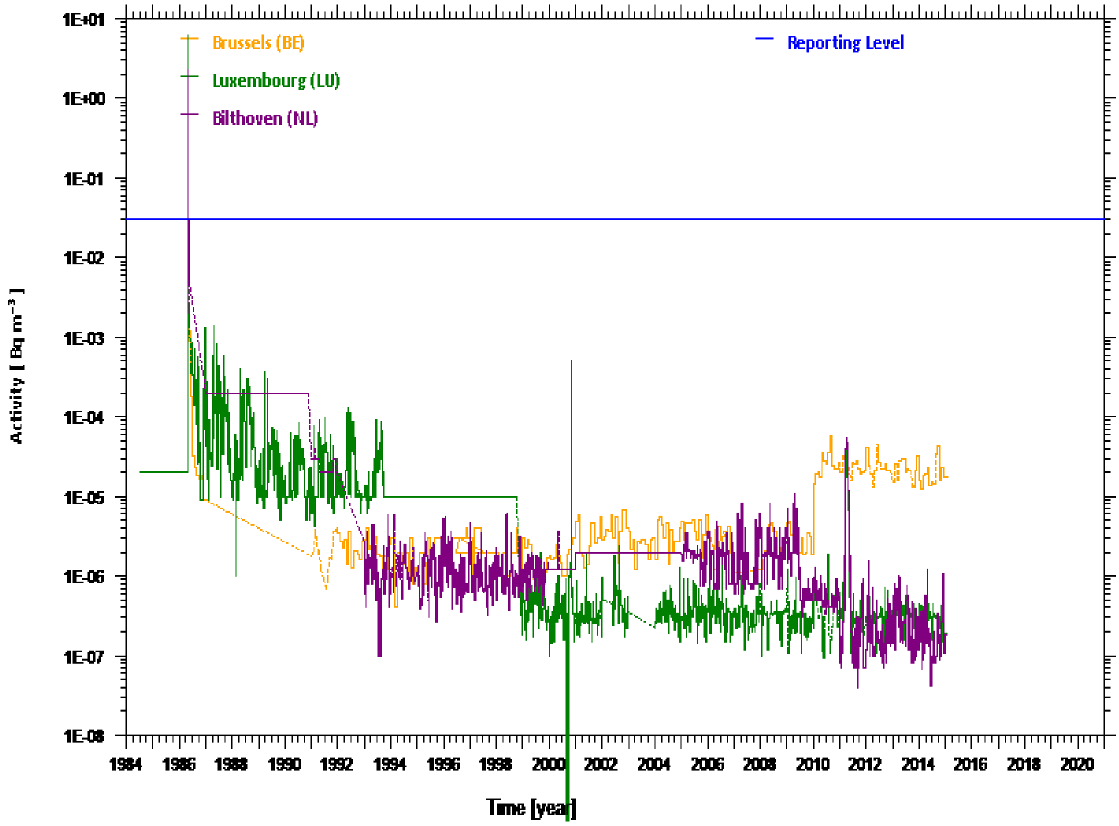


Fig. A26

Activity trends for ^{137}Cs in airborne particulates (Brussels, Luxembourg and Bilthoven)

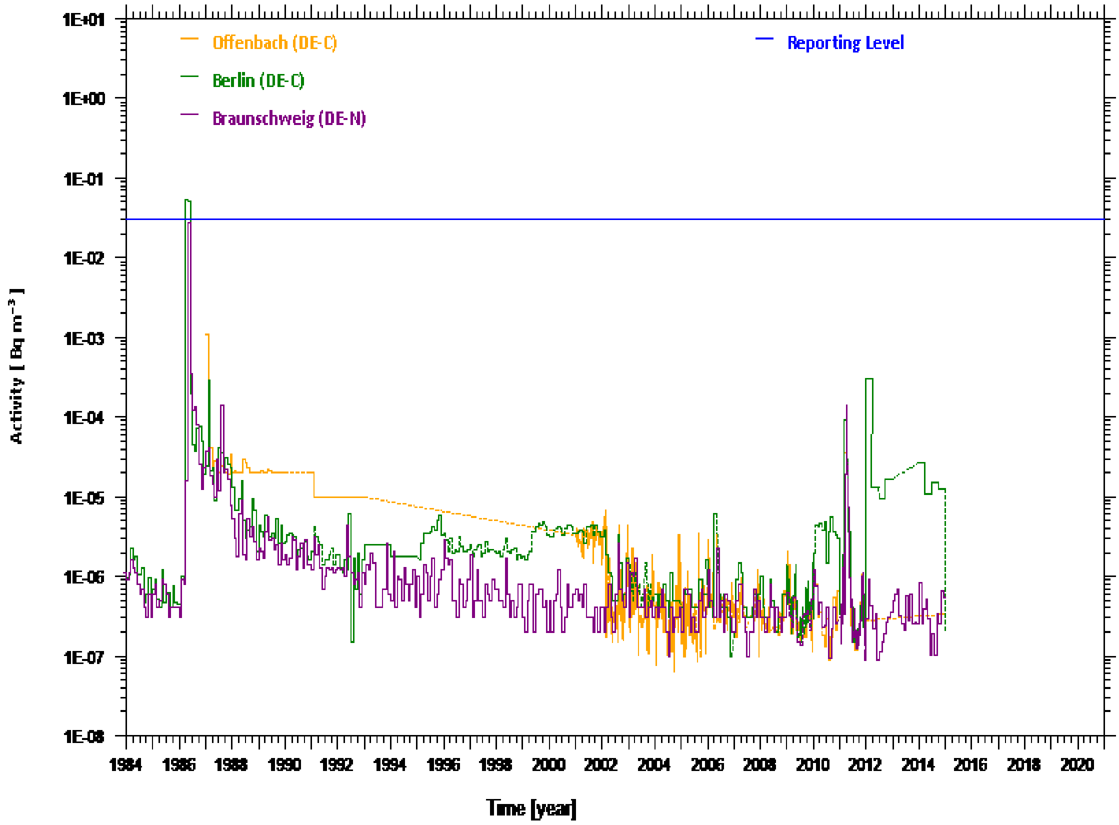


Fig. A27

Activity trends for ^{137}Cs in airborne particulates (Offenbach, Berlin and Braunschweig)

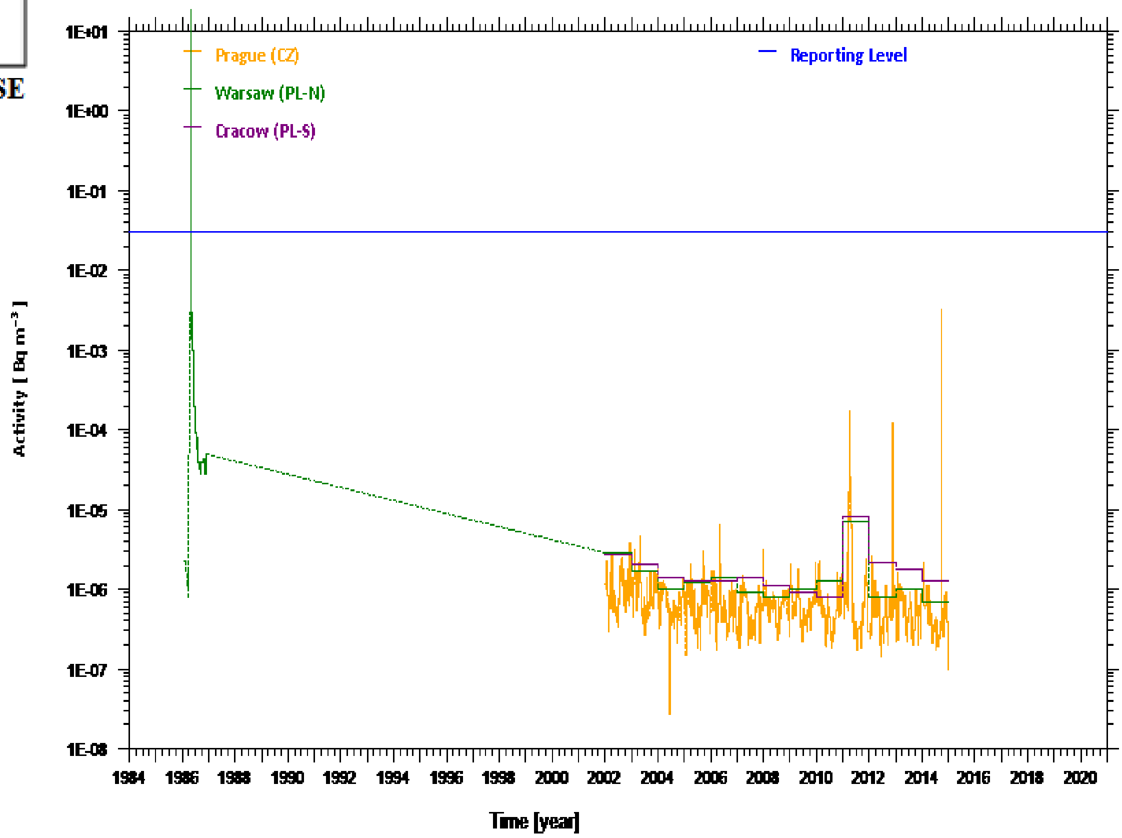


Fig. A28

Activity trends for ^{137}Cs in airborne particulates (Prague, Warsaw and Cracow)

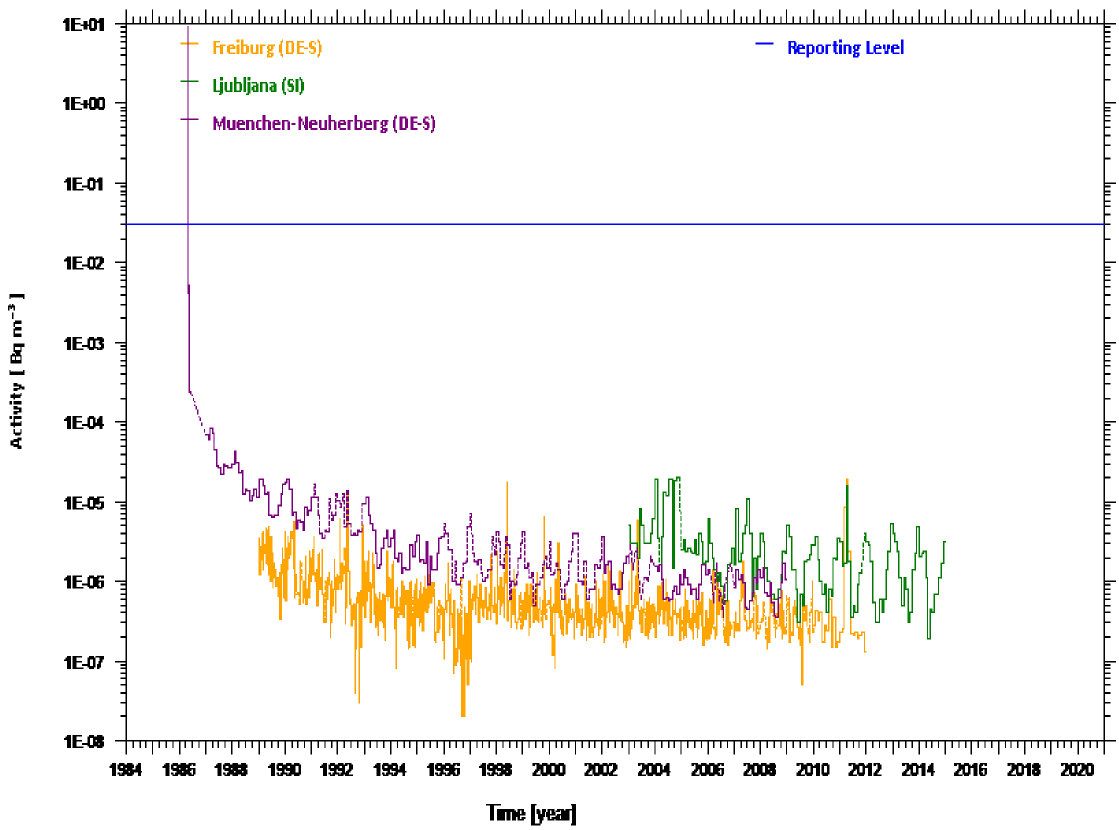


Fig. A29

Activity trends for ^{137}Cs in airborne particulates (Freiburg, Ljubljana and Muenchen-Neuherberg)

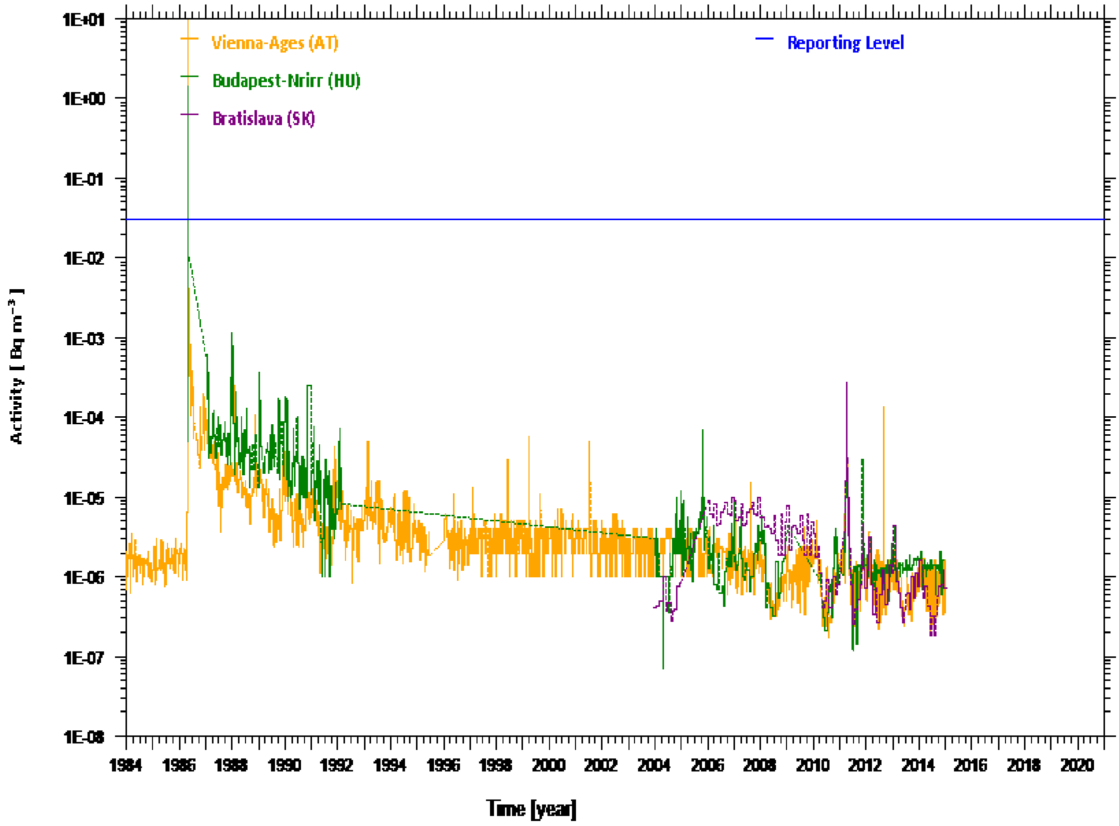


Fig. A30
Activity trends for ^{137}Cs in airborne particulates (Vienna-Ages, Budapest-Nrirr and Bratislava)

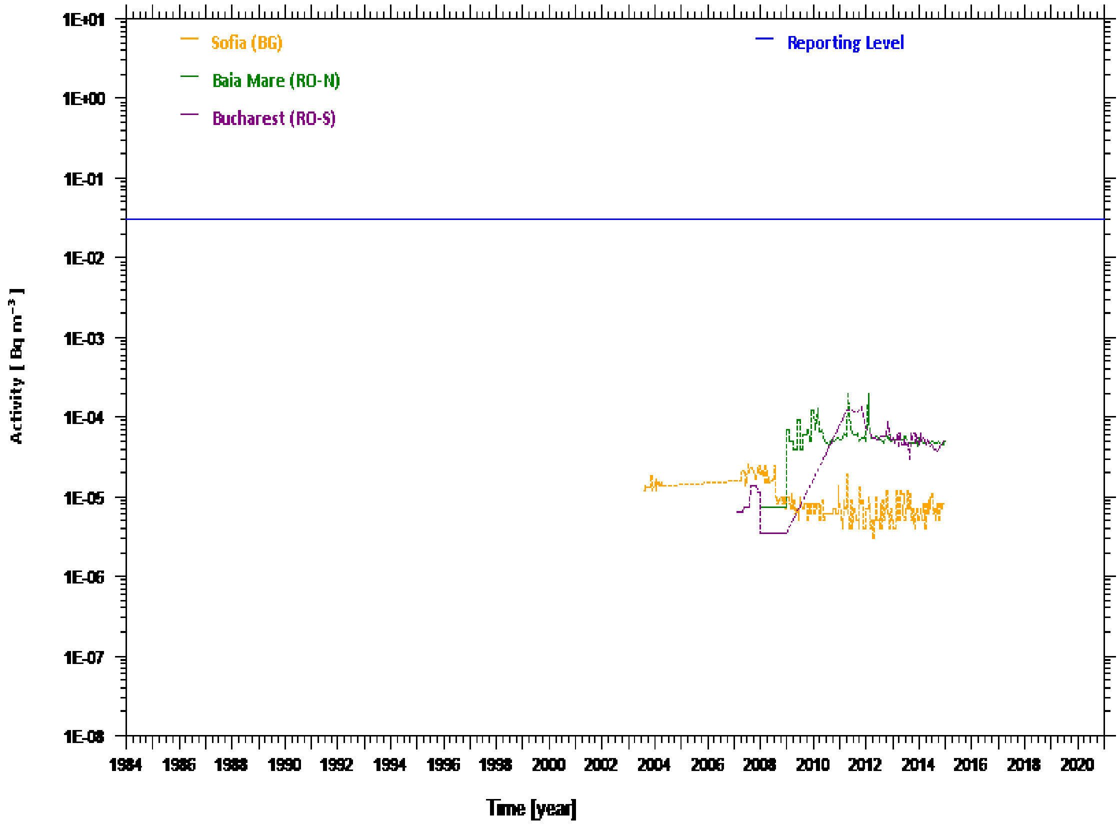


Fig. A31
Activity trends for ^{137}Cs in airborne particulates (Sofia, Baia Mare and Bucharest)

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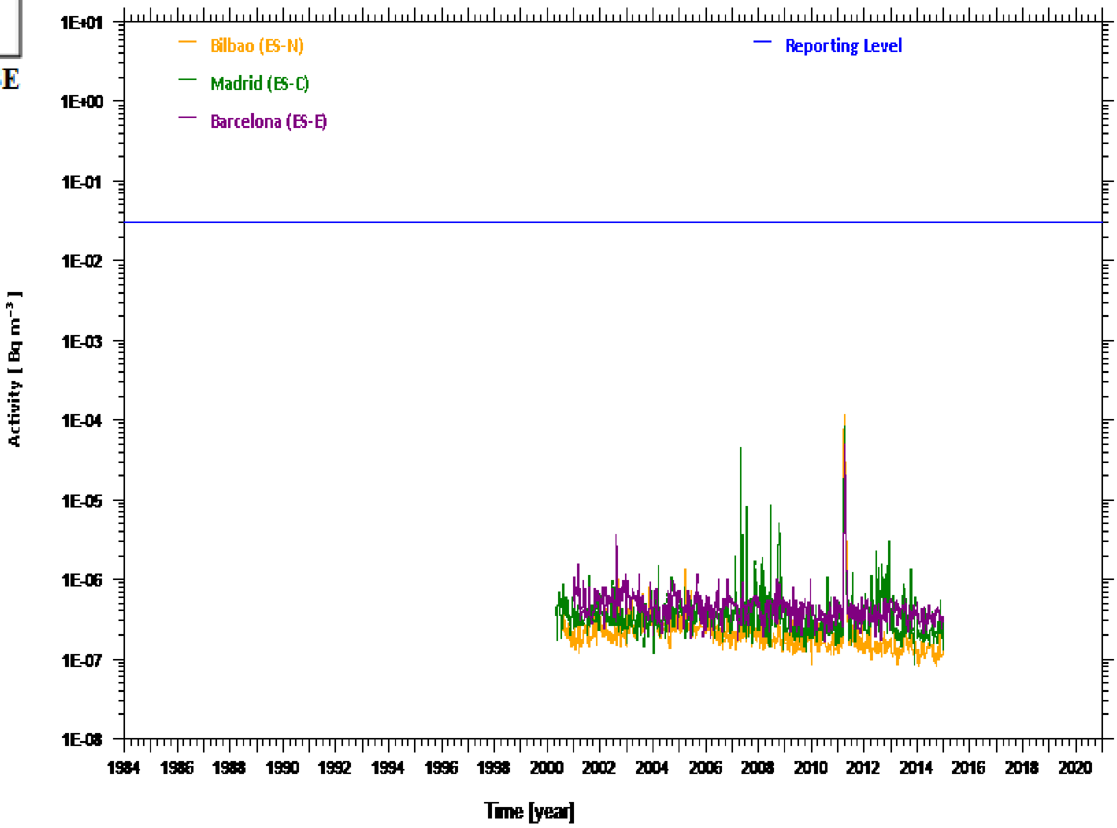


Fig. A32
Activity trends for ^{137}Cs in airborne particulates (Bilbao, Madrid and Barcelona)

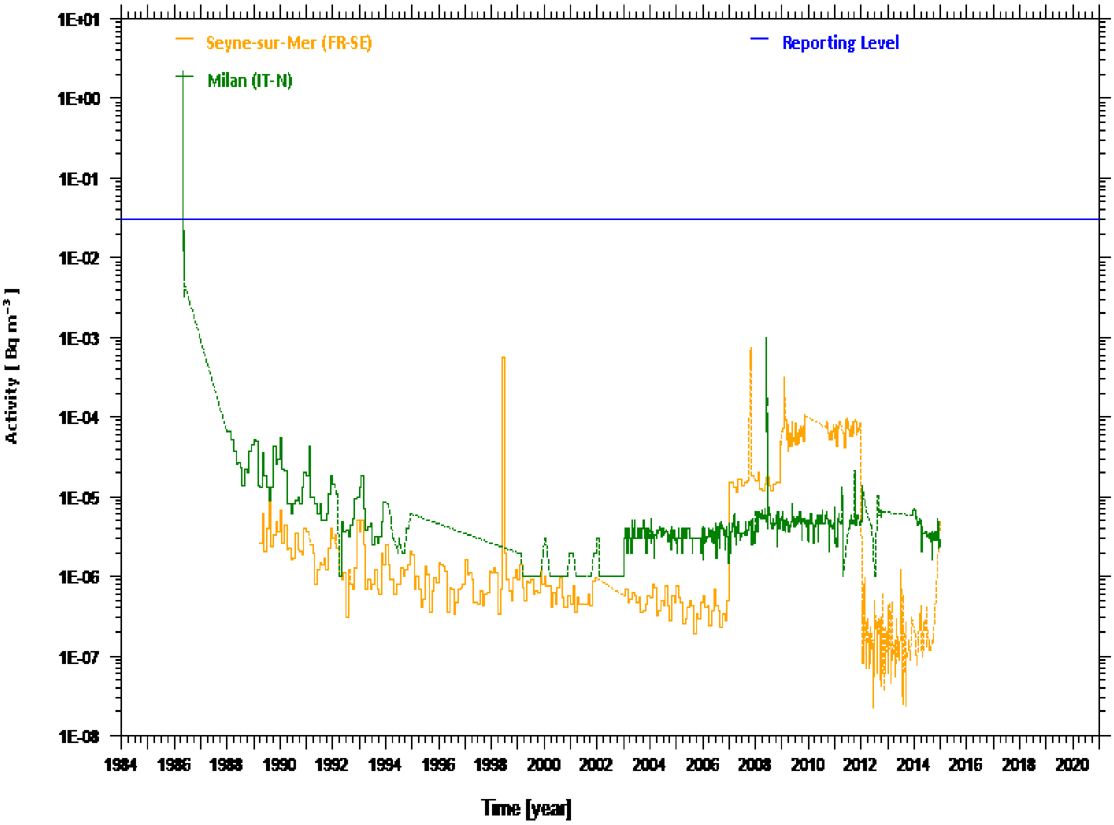


Fig. A33
Activity trends for ^{137}Cs in airborne particulates (Seyne-sur-Mer and Milan)

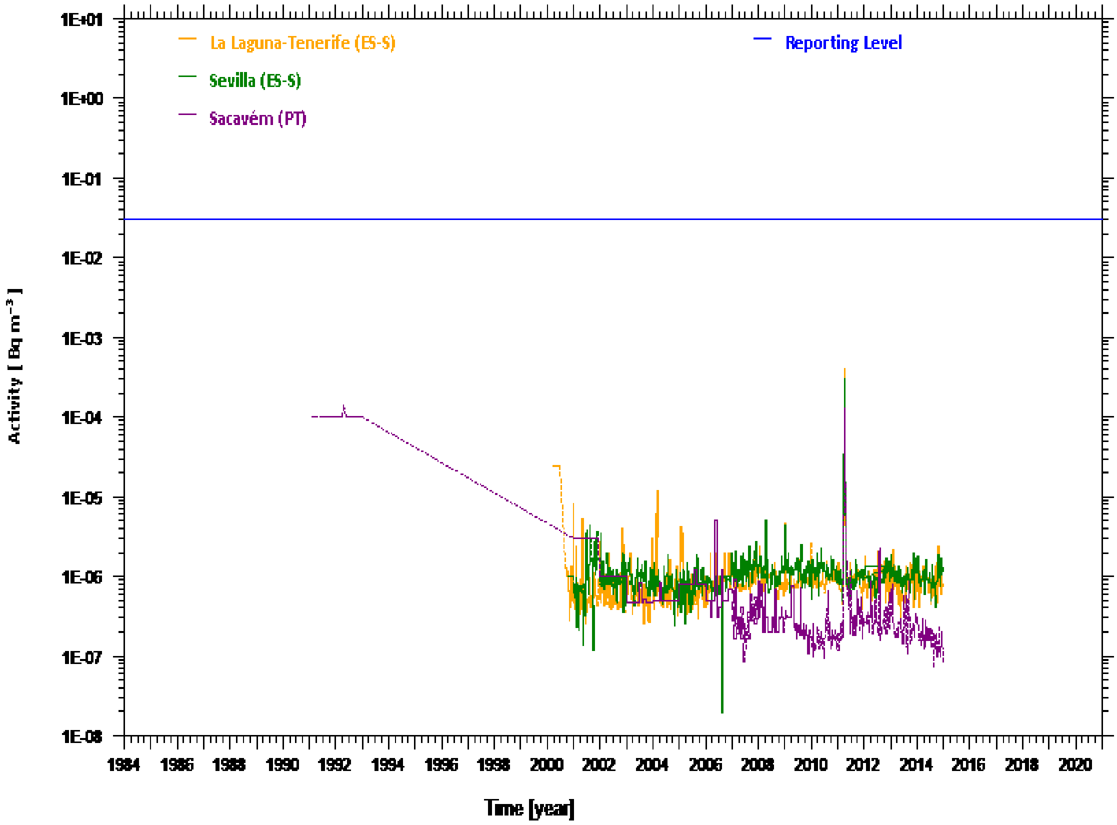


Fig. A34

Activity trends for ^{137}Cs in airborne particulates (La Laguna-Tenerife, Sevilla and Sacavém)

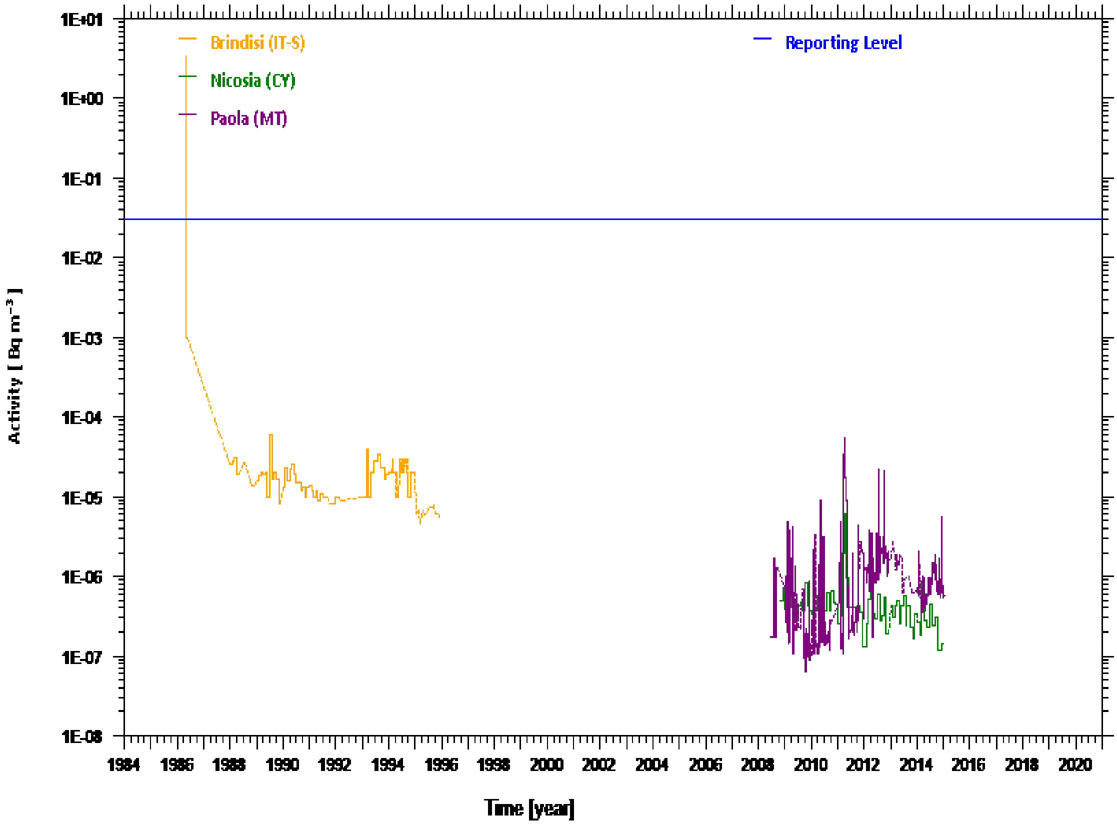


Fig. A35

Activity trends for ^{137}Cs in airborne particulates (Brindisi, Nicosia and Paola)

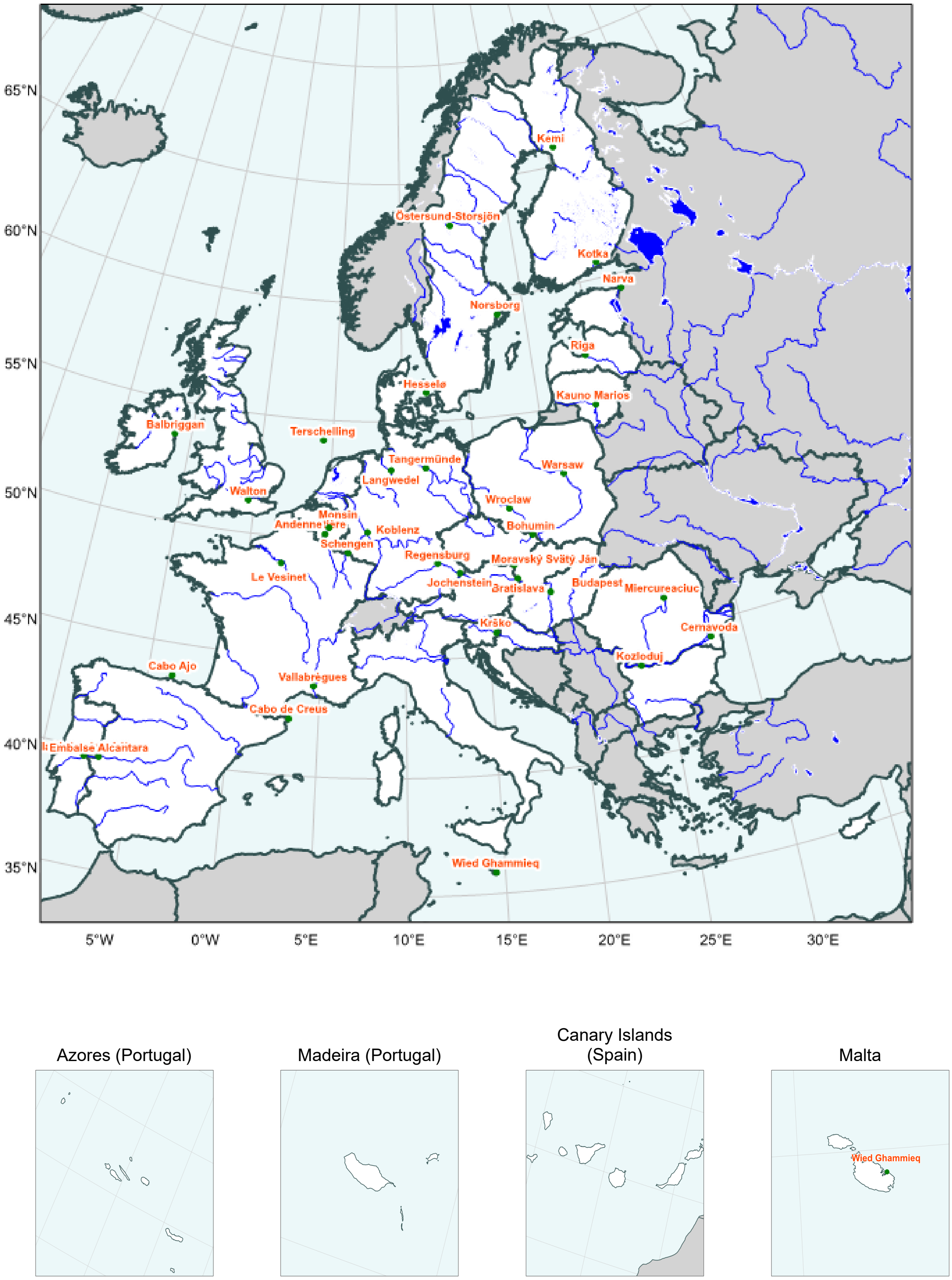


Fig. S11

Sampling locations for ^{137}Cs in surface water considered in Figures S12 – S26

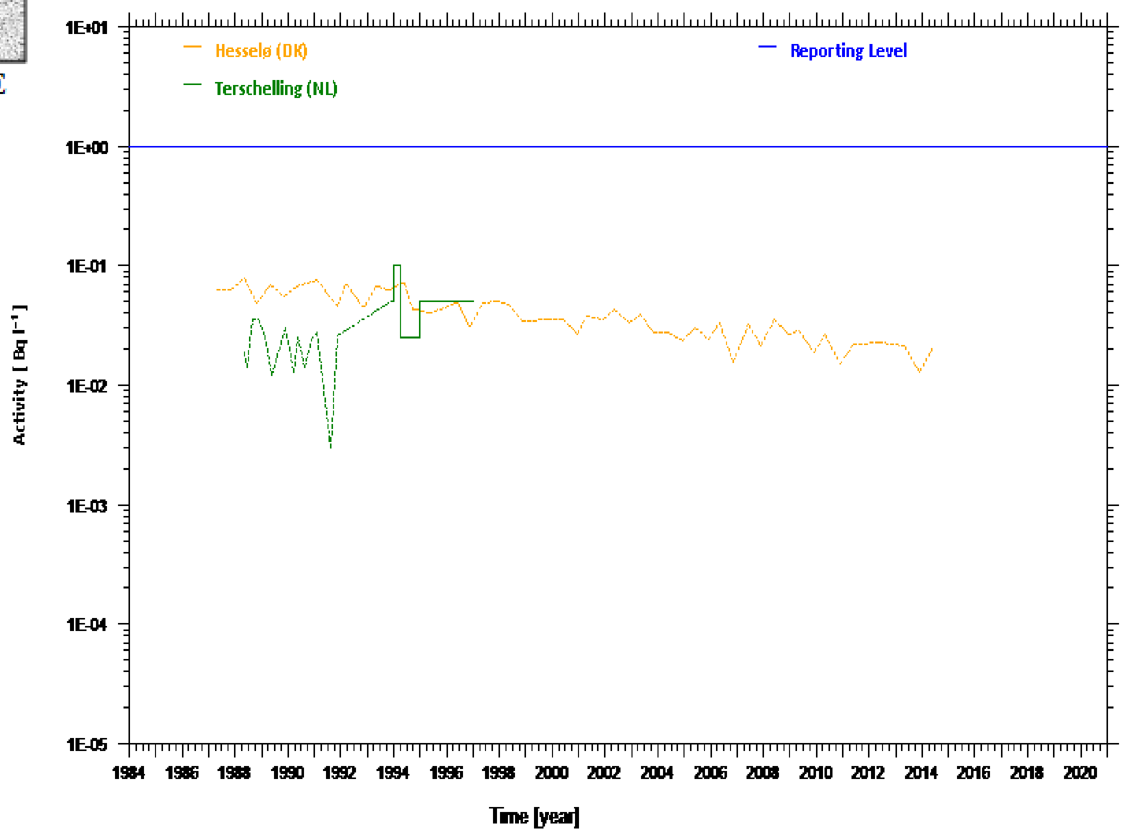


Fig. S12

Activity trends for ^{137}Cs in surface water (Hesselø and Terschelling)

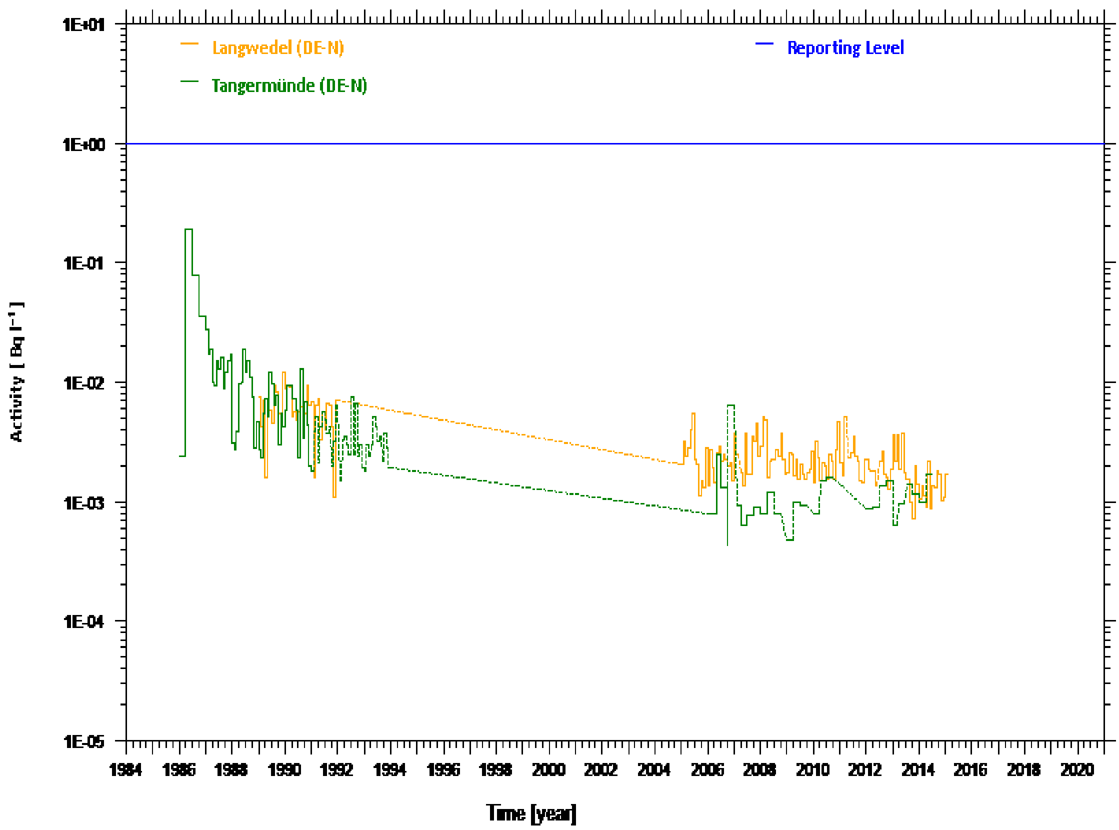


Fig. S13

Activity trends for ^{137}Cs in surface water (Langwedel and Tangermünde)

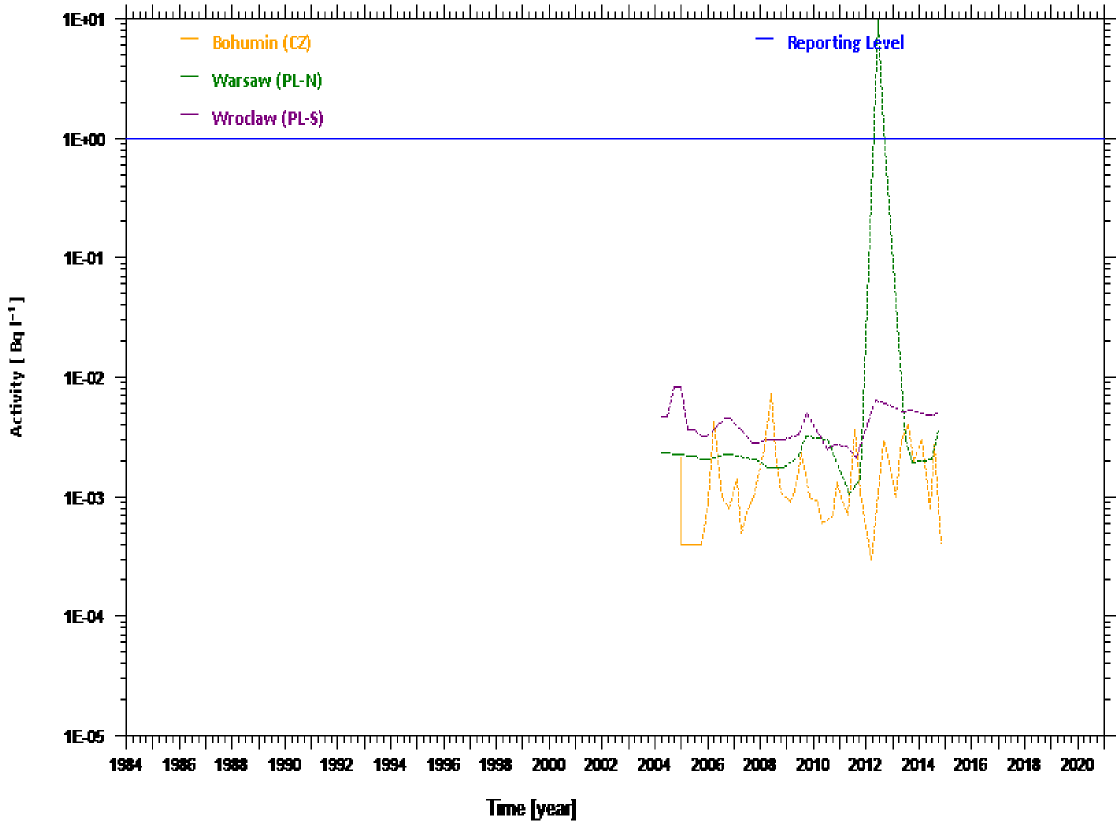


Fig. S14

Activity trends for ^{137}Cs in surface water (Bohumin, Warsaw and Wroclaw)

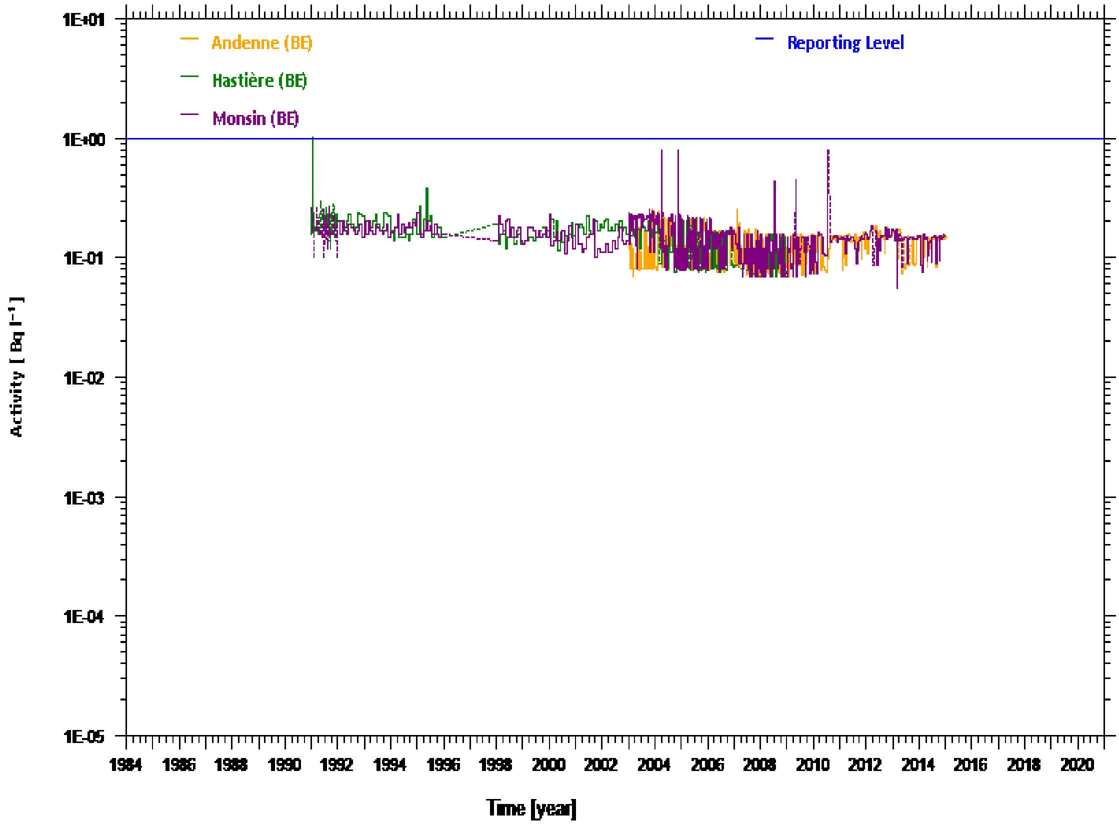


Fig. S15

Activity trends for ^{137}Cs in surface water (Andenne, Hastière and Monsin)

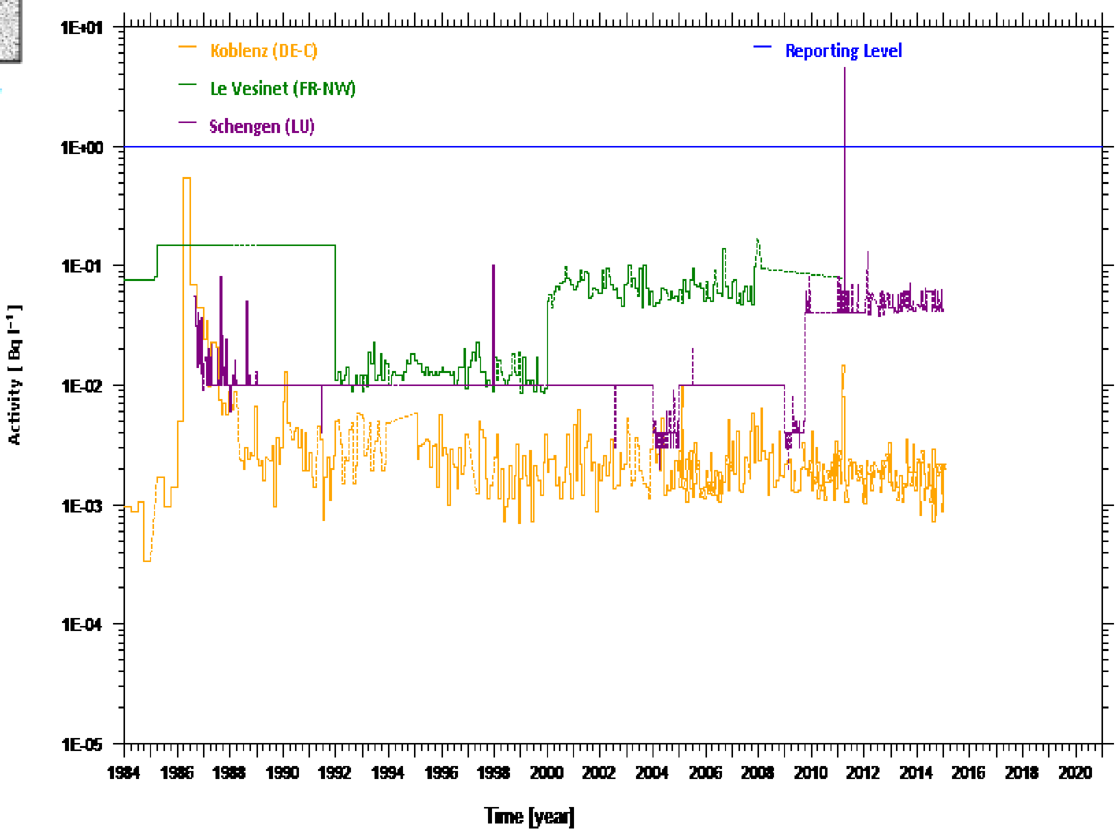


Fig. S16
Activity trends for ^{137}Cs in surface water (Koblenz, Le Vesinet and Schengen)

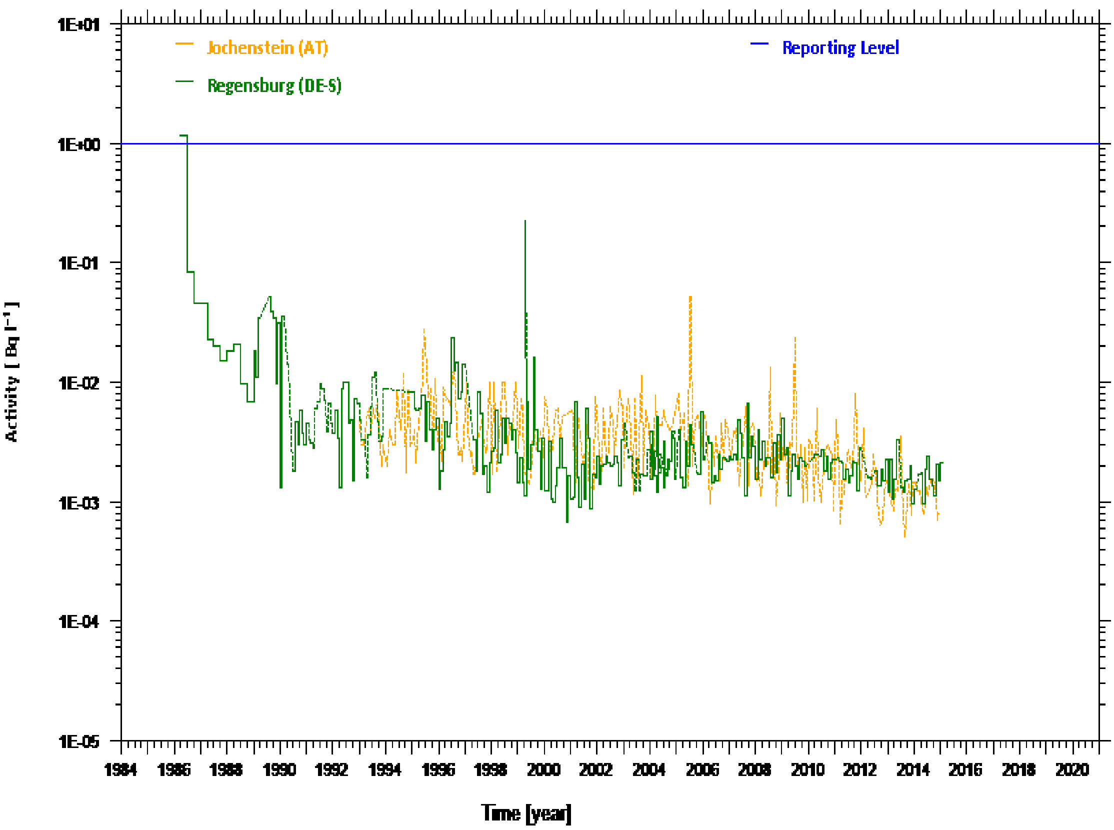


Fig. S17
Activity trends for ^{137}Cs in surface water (Jochenstein and Regensburg)

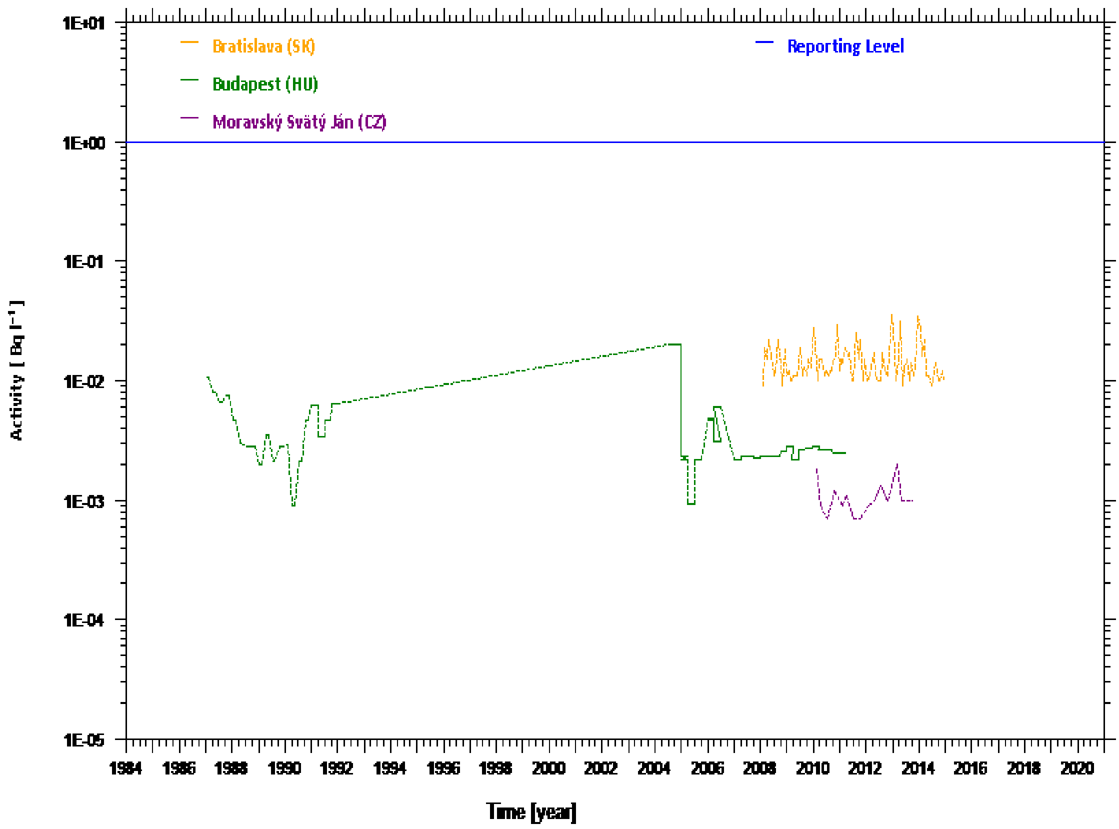


Fig. S18
Activity trends for ^{137}Cs in surface water (Bratislava, Budapest and Moravský Svätý Ján)

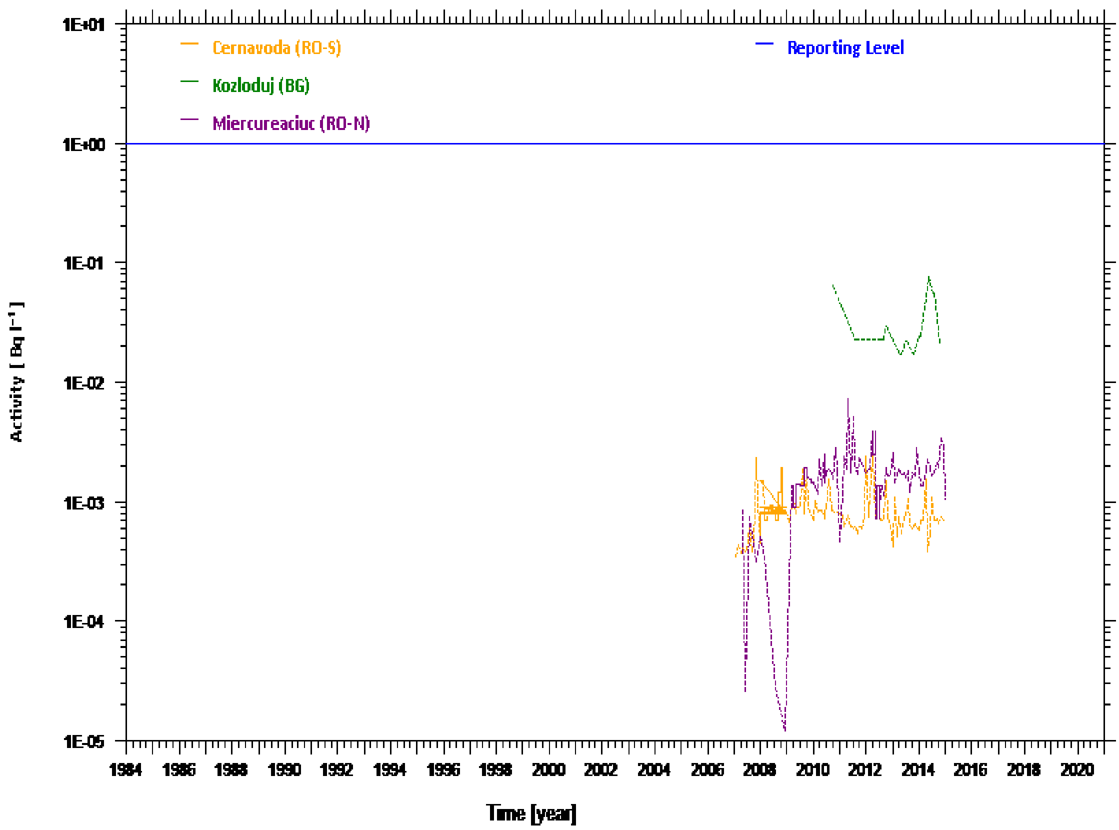
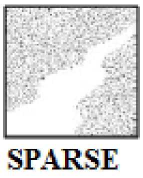


Fig. S19
Activity trends for ^{137}Cs in surface water (Cernavoda, Kozloduj and Miercureaciuc)



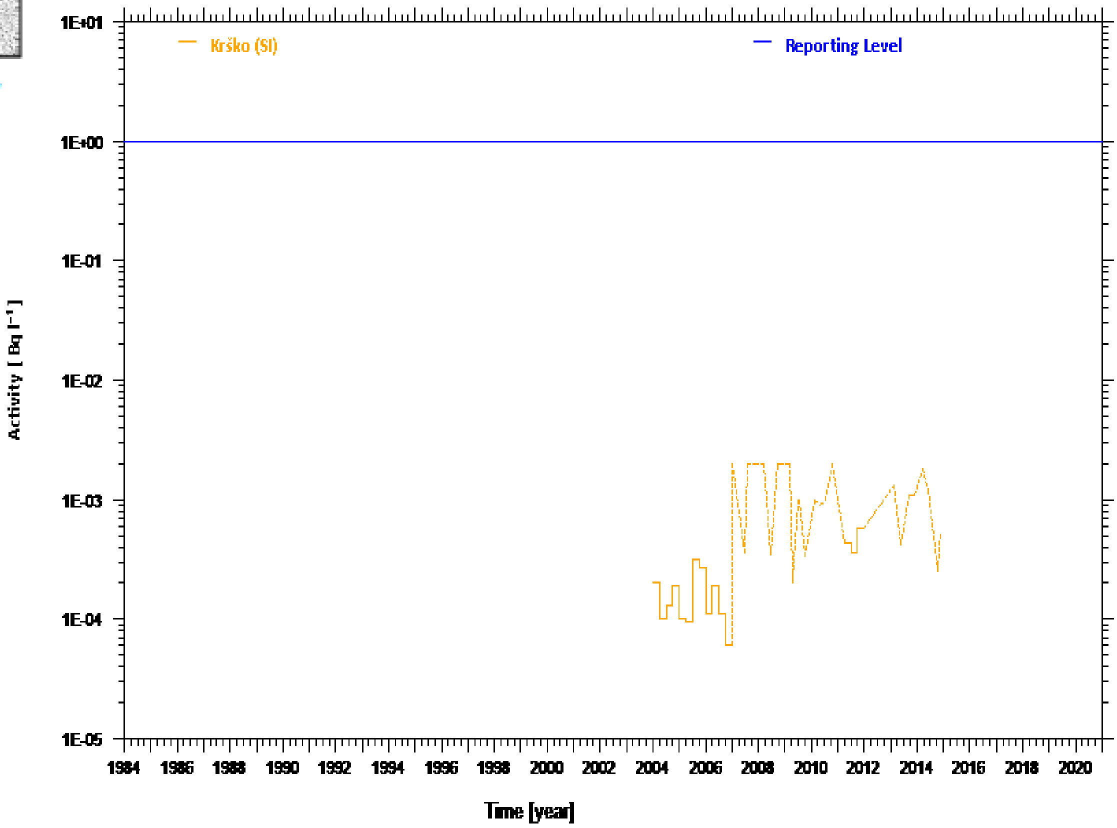


Fig. S20

Activity trends for ^{137}Cs in surface water (Krško)

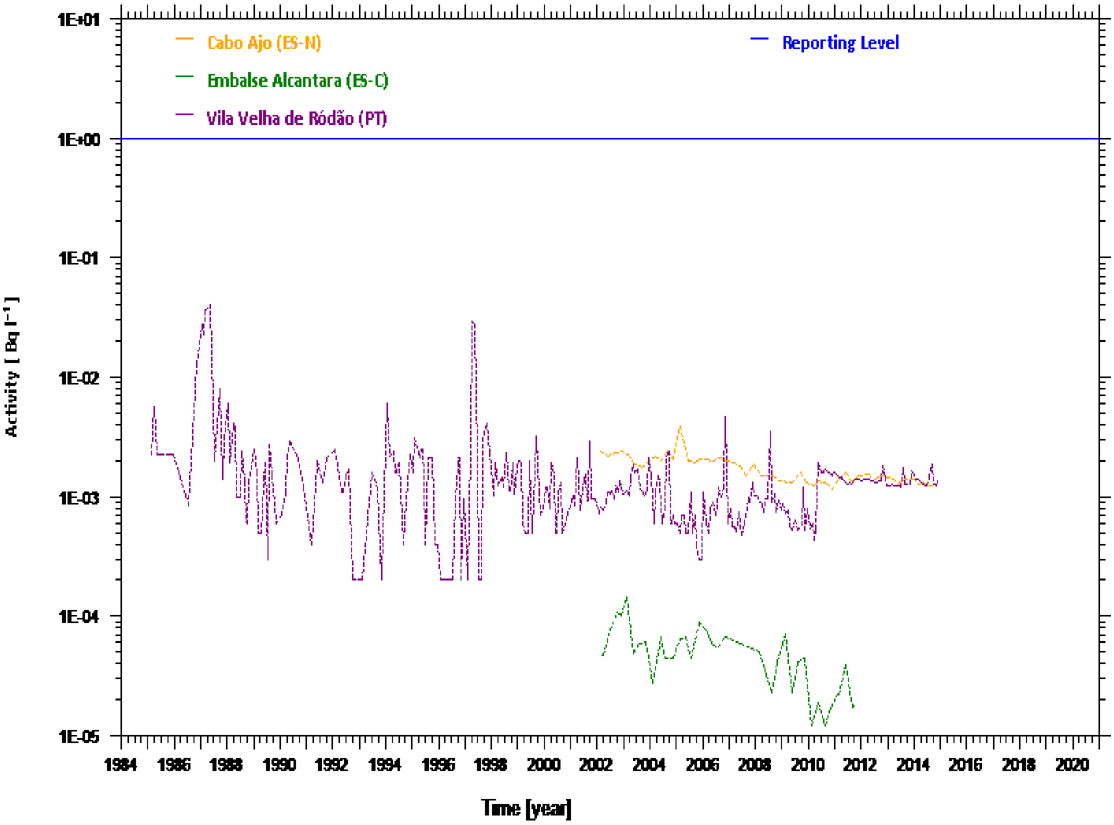
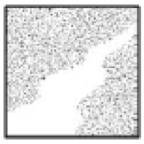


Fig. S21

Activity trends for ^{137}Cs in surface water (Cabo Ajo, Embalse Alcantara and Vila Velha de Ródão)



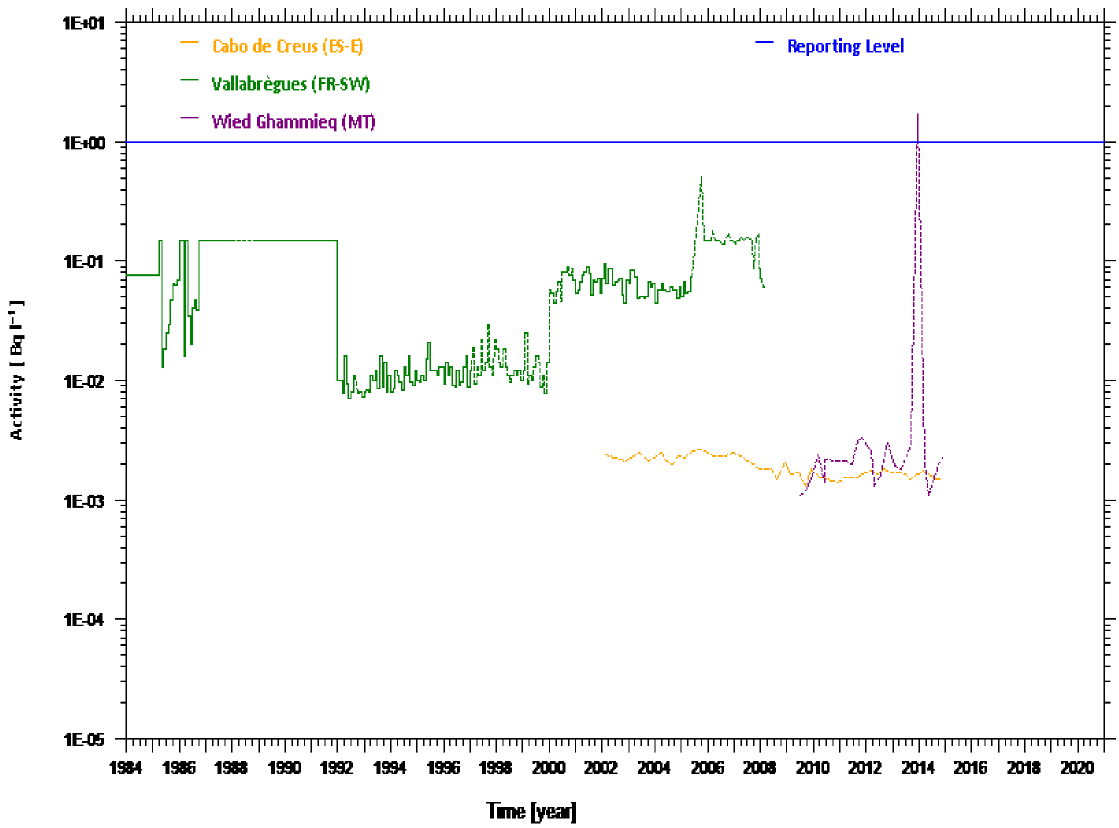


Fig. S22

Activity trends for ^{137}Cs in surface water (Cabo de Creus, Vallabrègues and Wied Ghammieq)

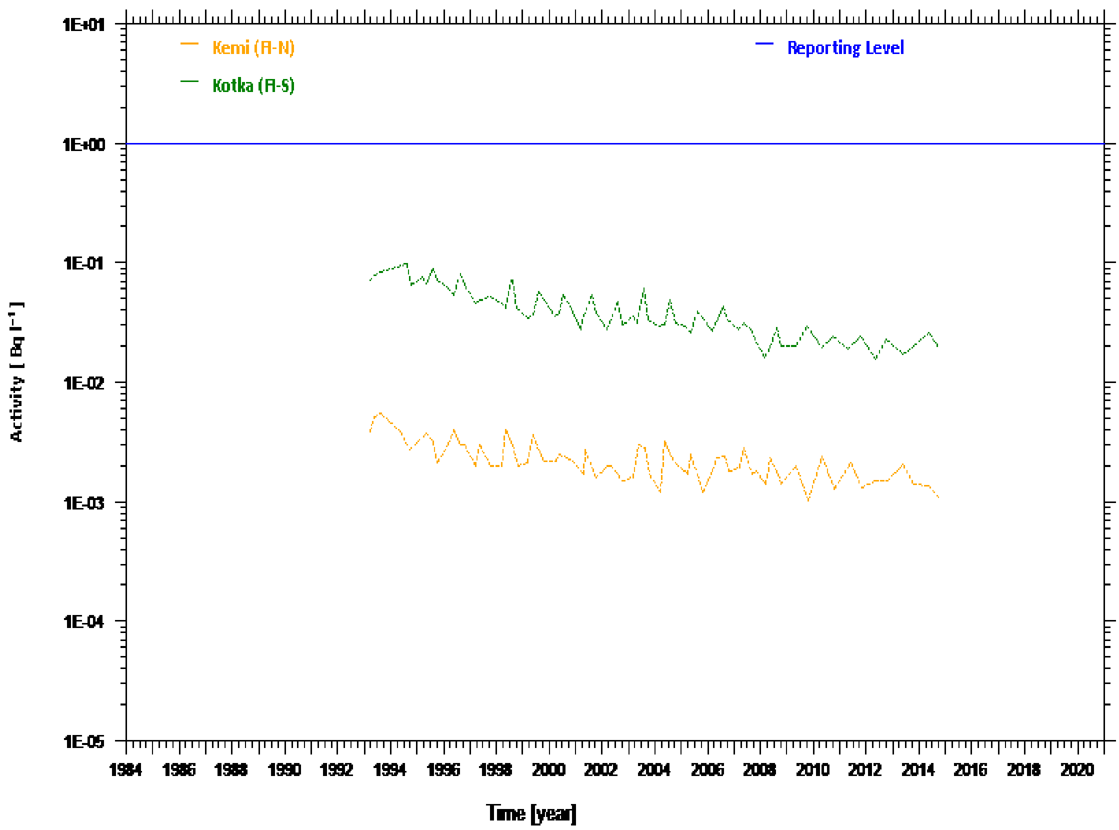


Fig. S23

Activity trends for ^{137}Cs in surface water (Kemi and Kotka)

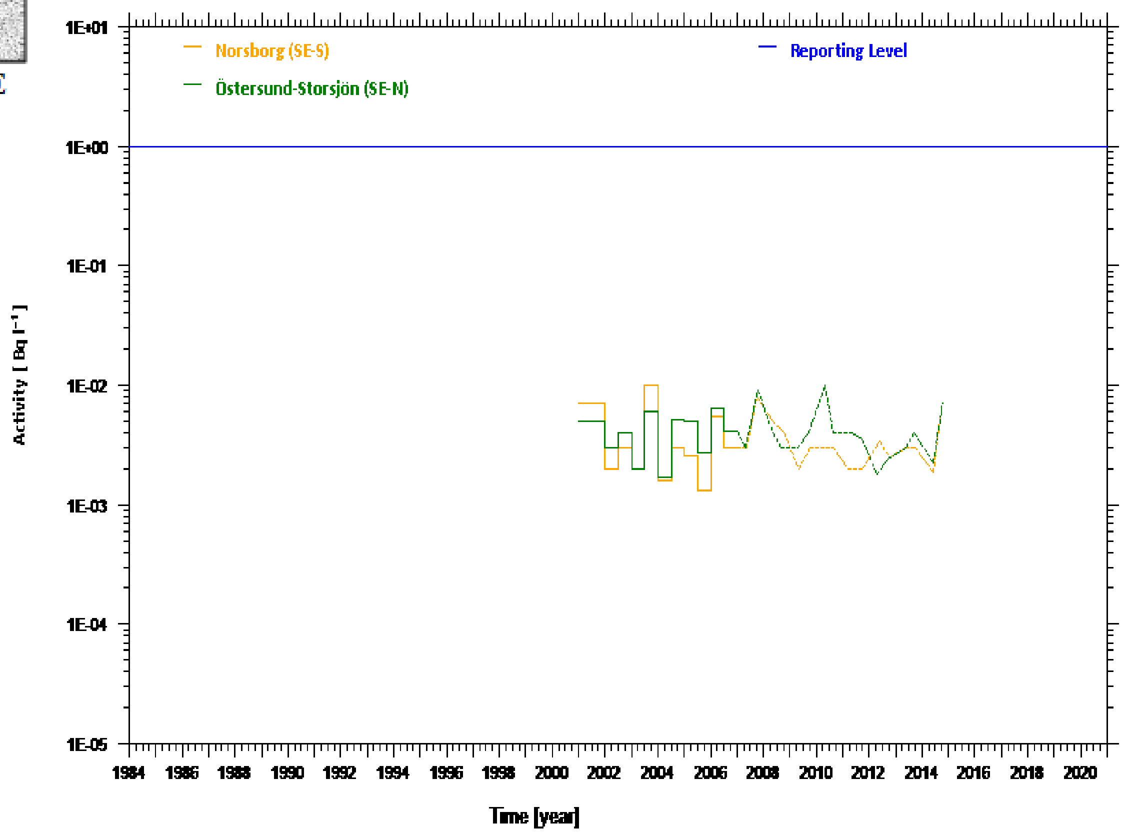


Fig. S24

Activity trends for ^{137}Cs in surface water (Norsborg and Östersund-Storsjön)

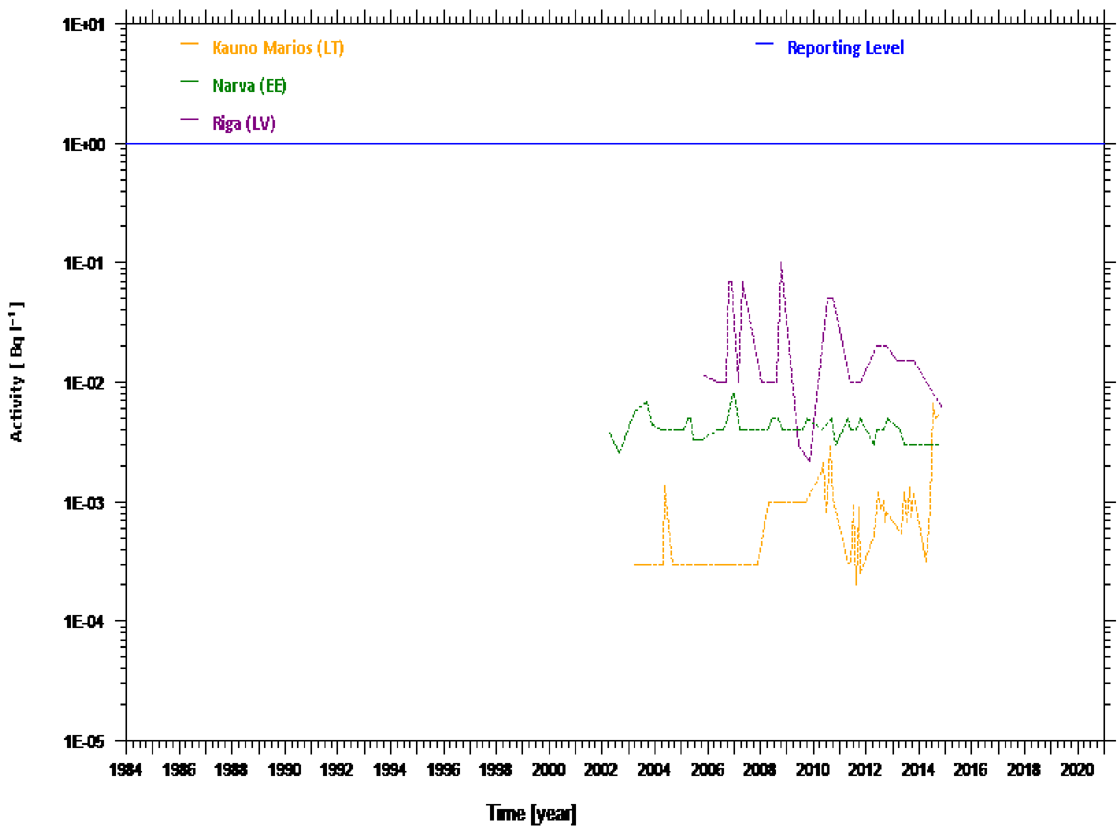


Fig. S25

Activity trends for ^{137}Cs in surface water (Kauno Marios, Narva and Riga)

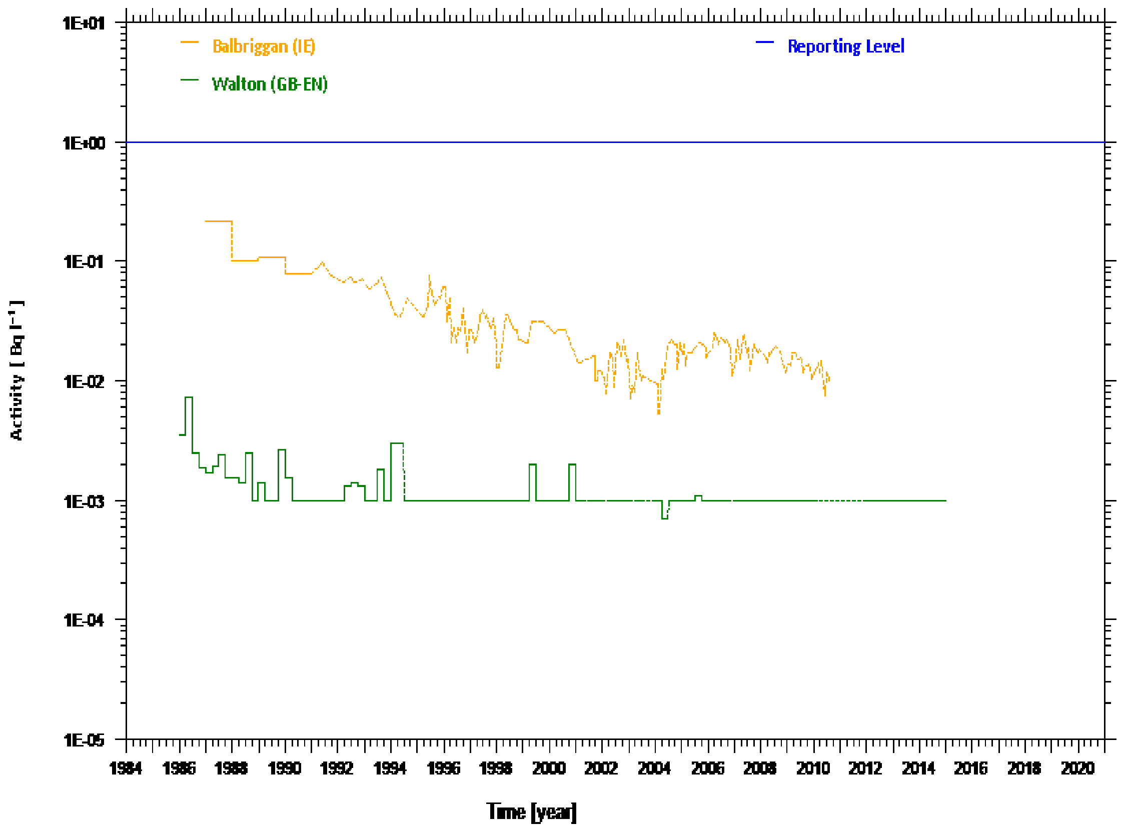


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Fig. S26

Activity trends for ^{137}Cs in surface water (Balbriggan and Walton)

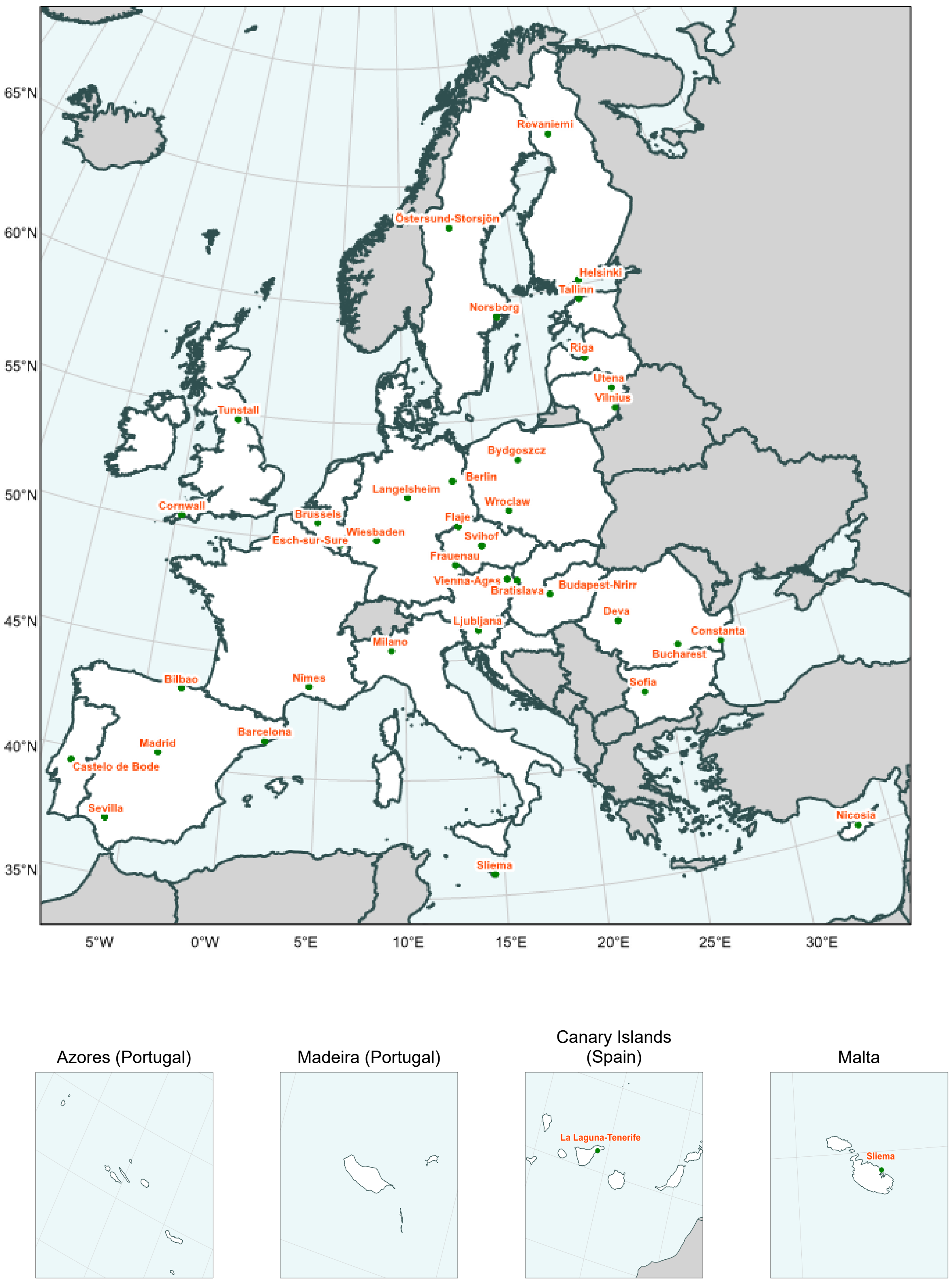
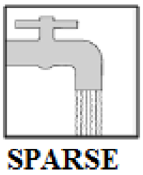


Fig. W10

Sampling locations for ^{3}H, ^{90}Sr and ^{137}Cs in drinking water considered in Figures W11 – W45



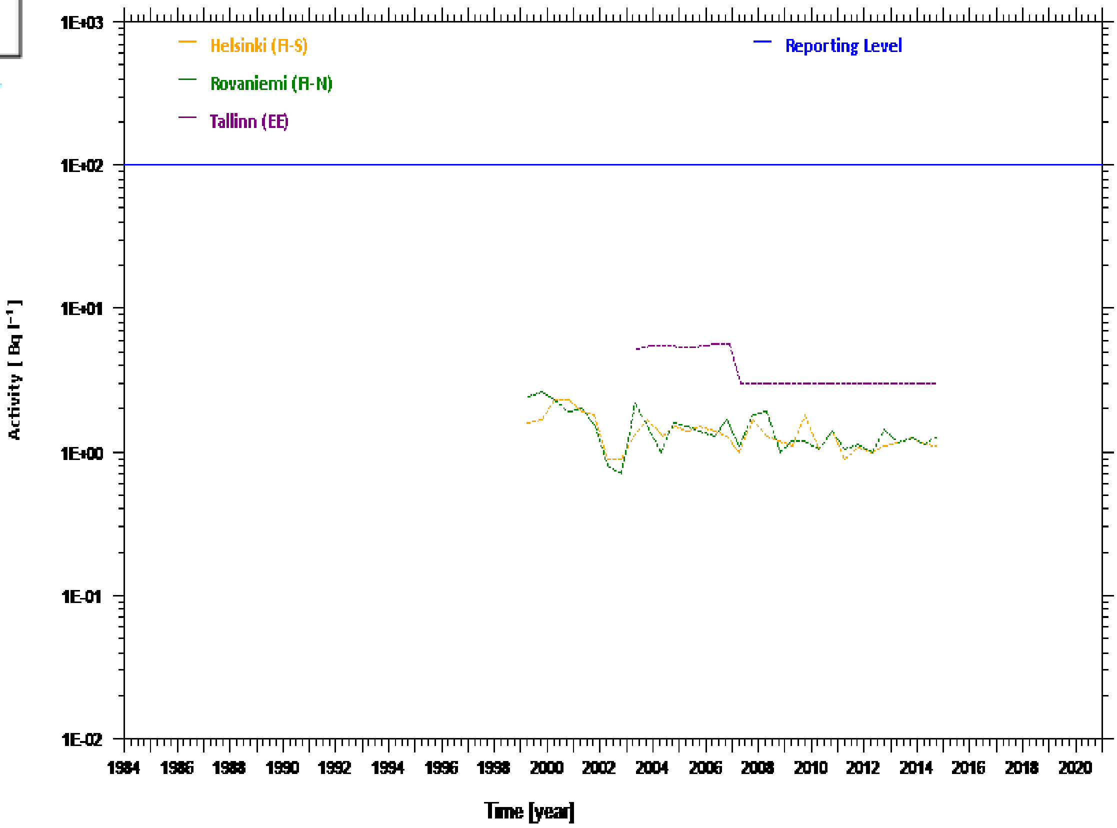


Fig. W11

Activity trends for ³H in drinking water (Helsinki, Rovaniemi and Tallinn)

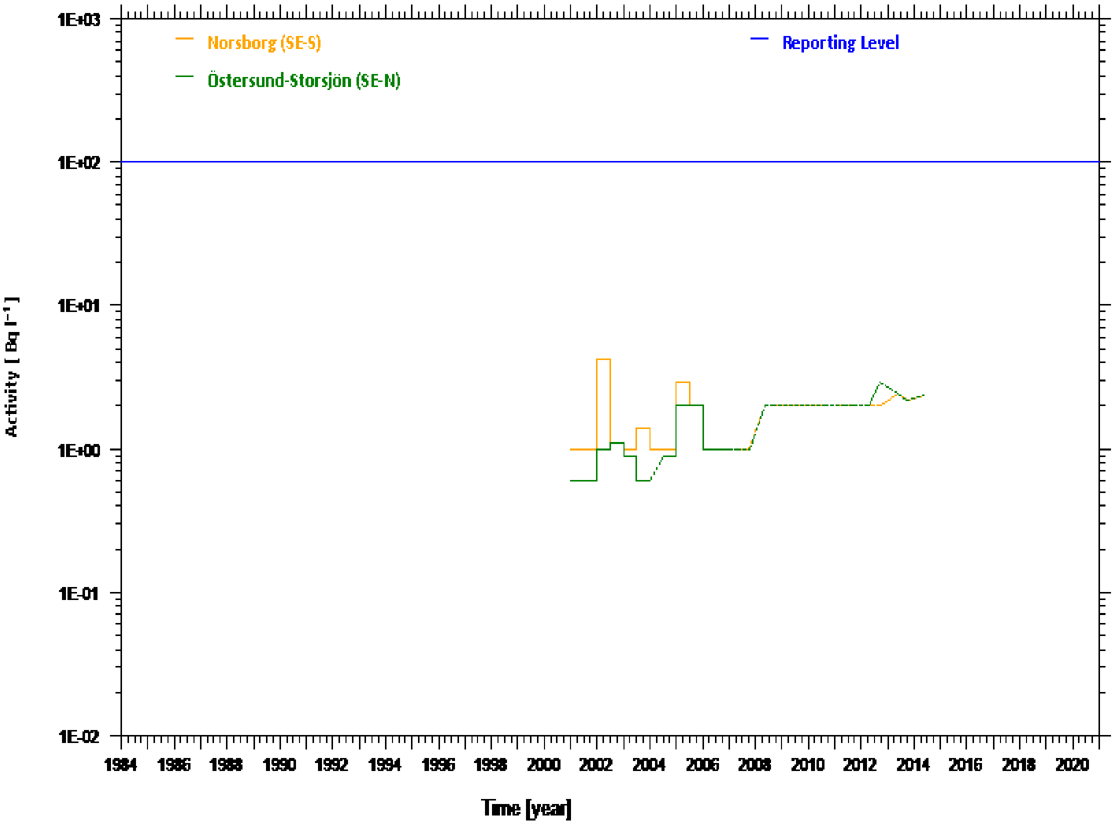


Fig. W12

Activity trends for ³H in drinking water (Norsborg and Östersund-Storsjön)

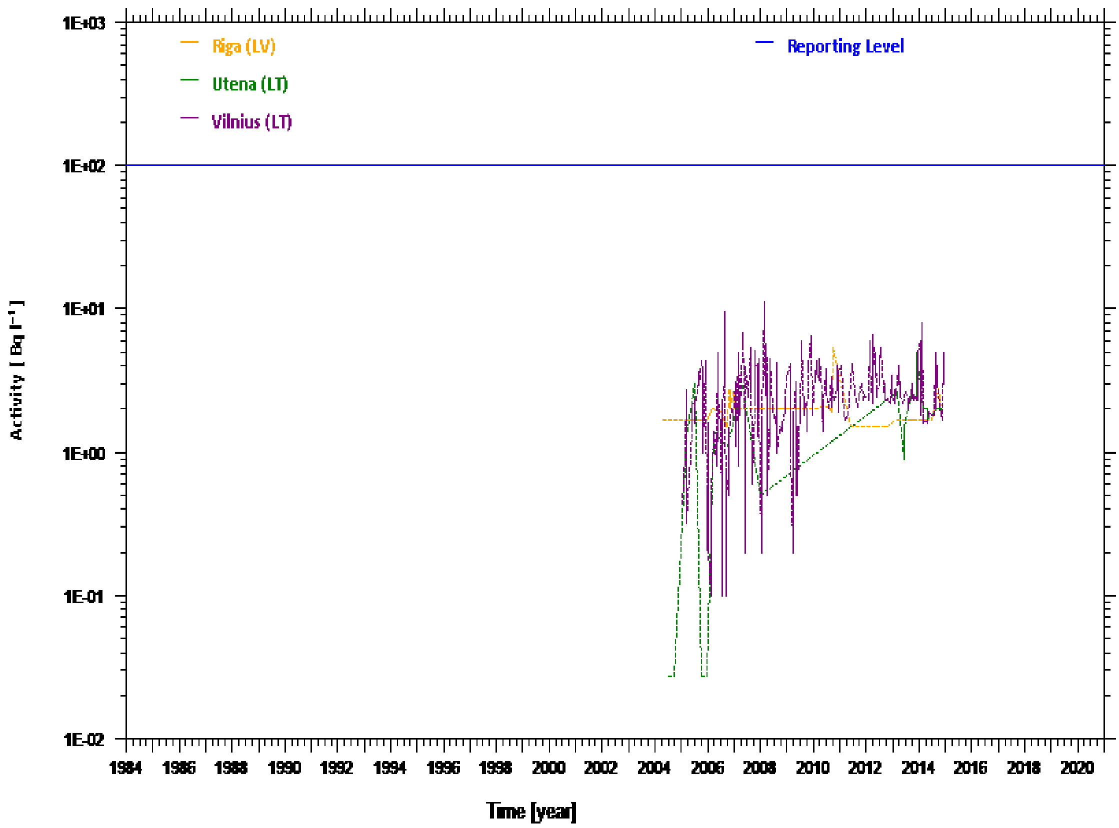


Fig. W13
Activity trends for ^3H in drinking water (Riga, Utena and Vilnius)

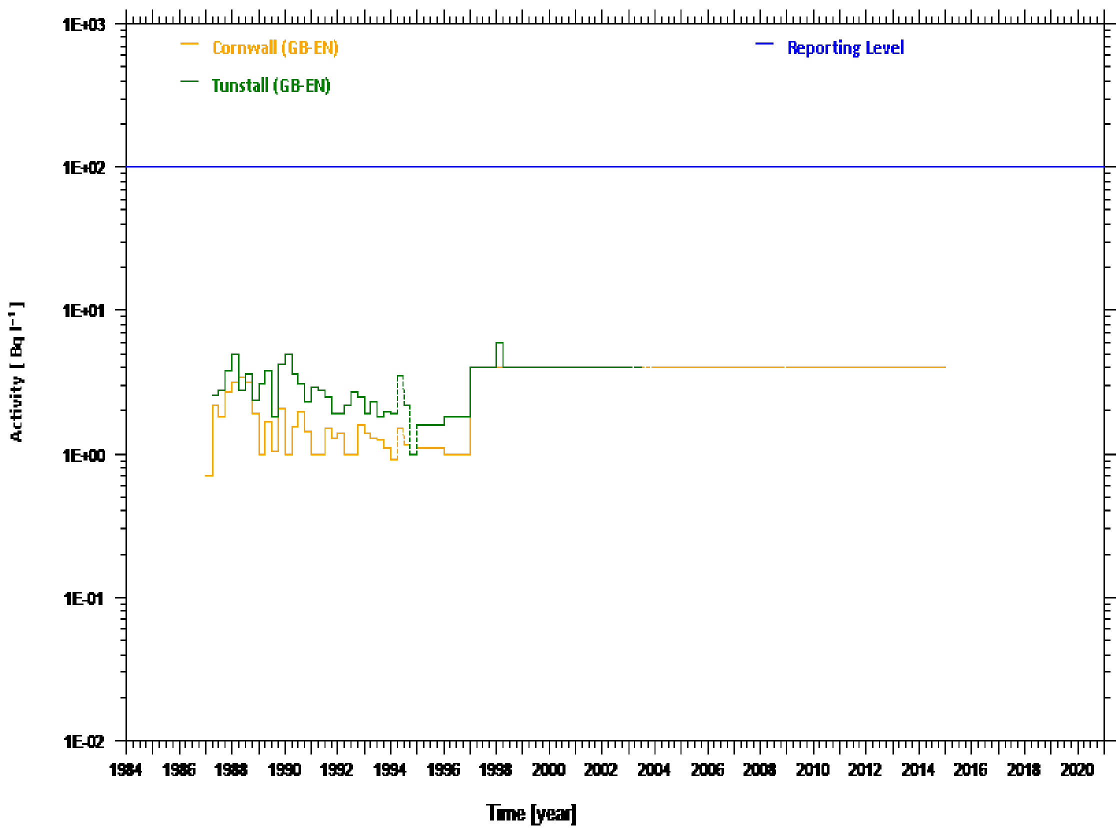


Fig. W14
Activity trends for ^3H in drinking water (Cornwall and Tunstall)

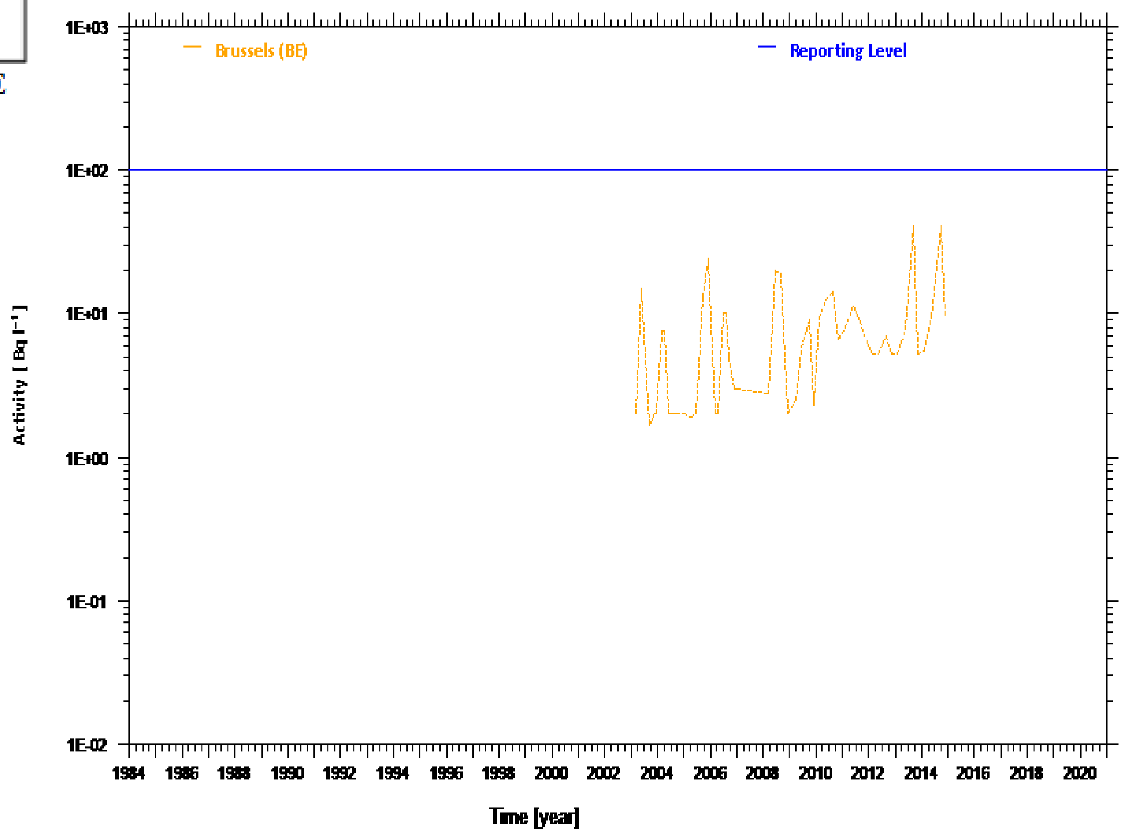


Fig. W15
Activity trends for ^{3}H in drinking water (Brussels)

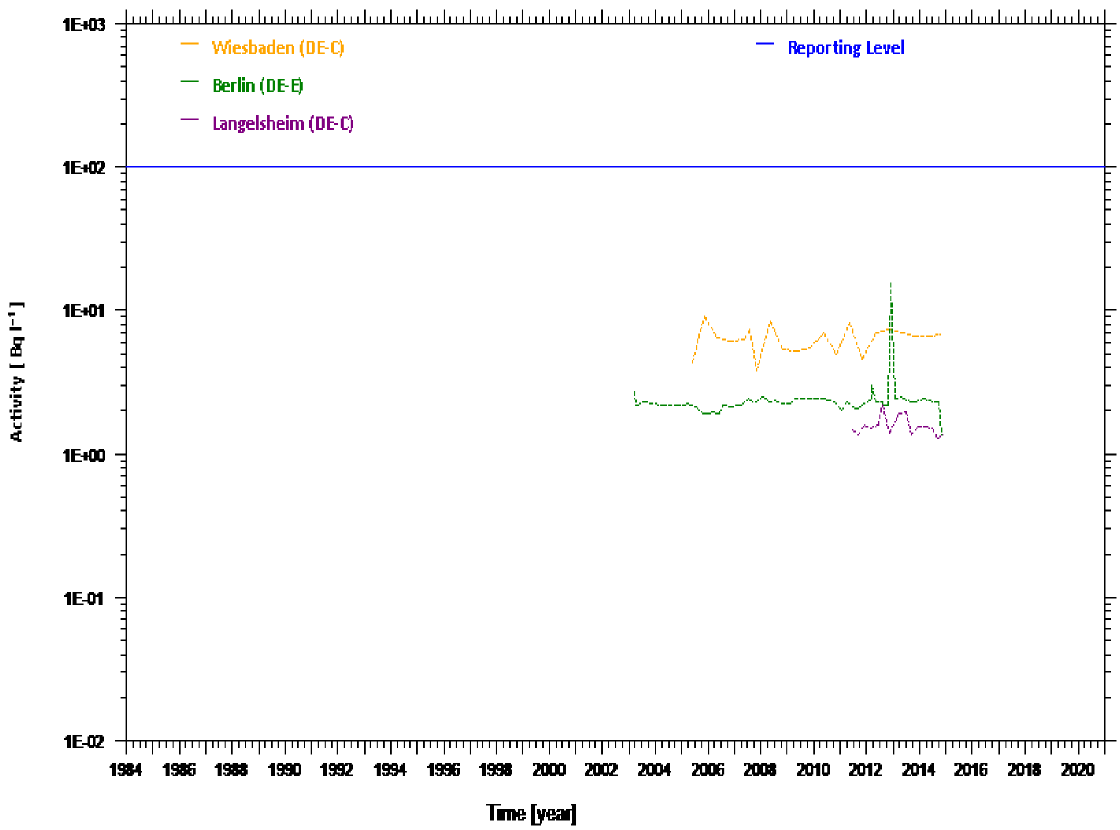
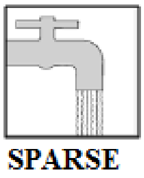


Fig. W16
Activity trends for ^{3}H in drinking water (Wiesbaden, Berlin and Langelsheim)



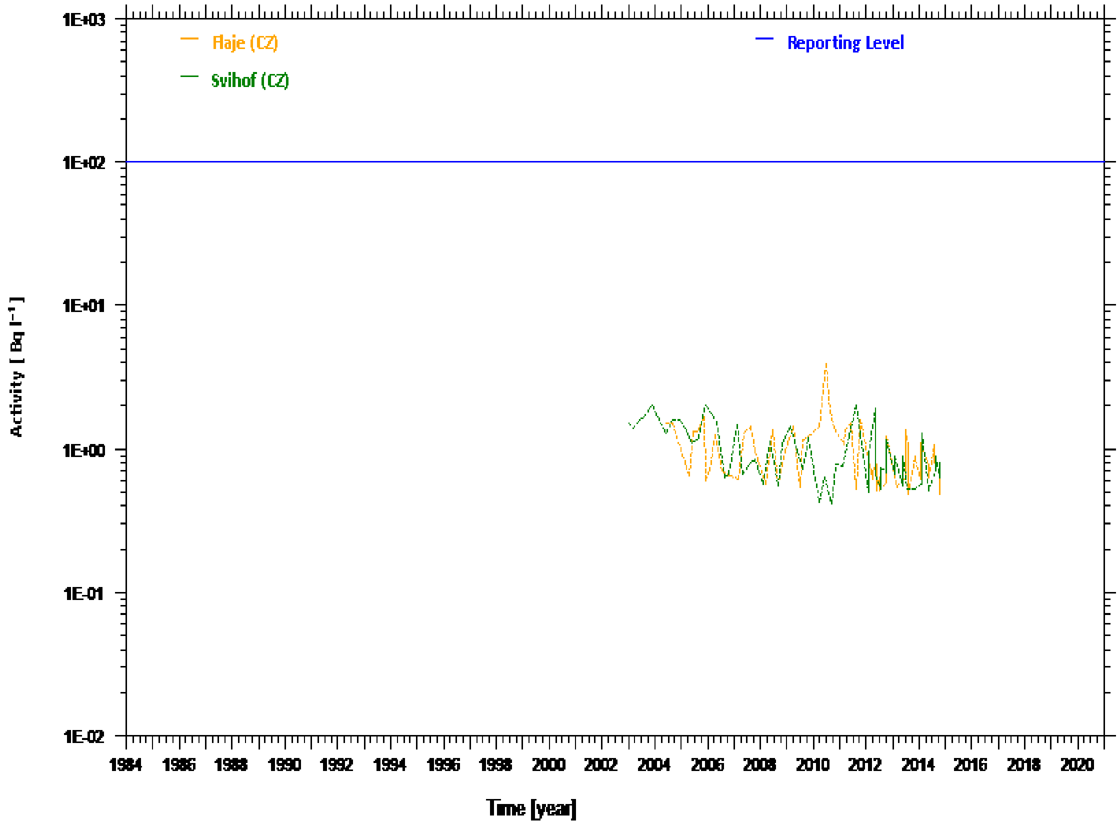


Fig. W17

Activity trends for ³H in drinking water (Flaje and Svihof)

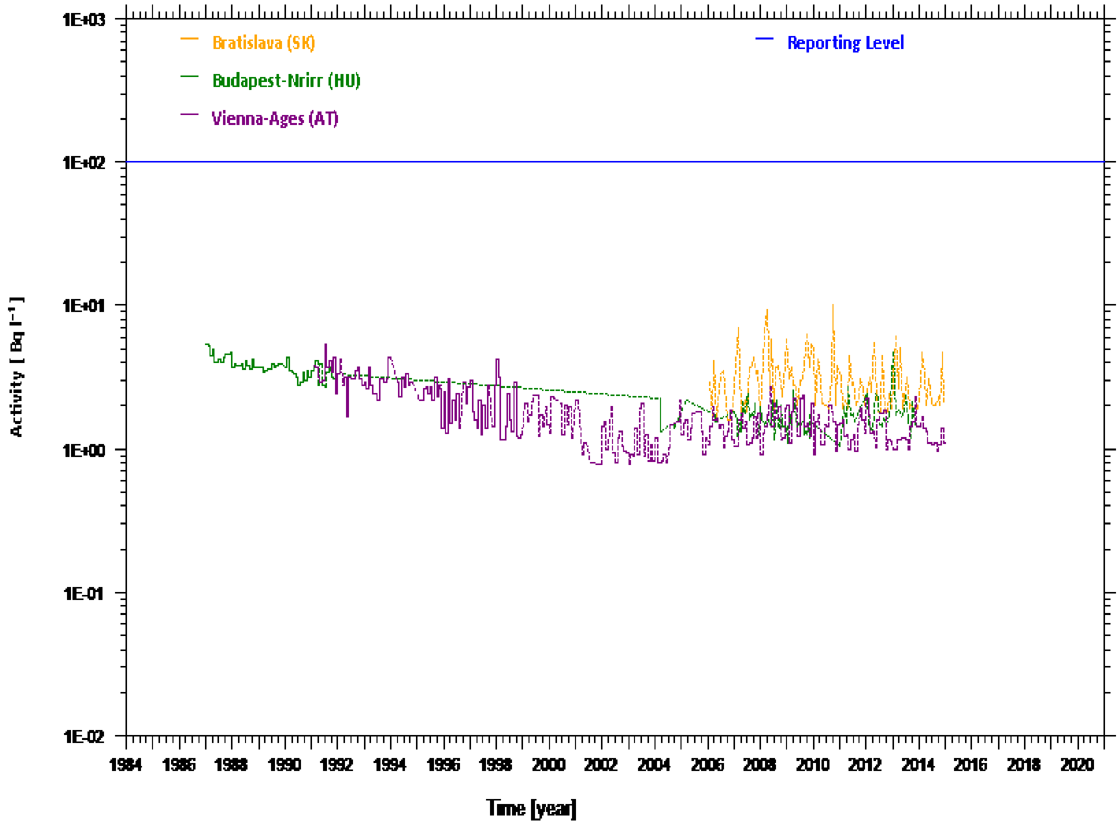


Fig. W18

Activity trends for ³H in drinking water (Bratislava, Budapest-Nrirr and Vienna-Ages)

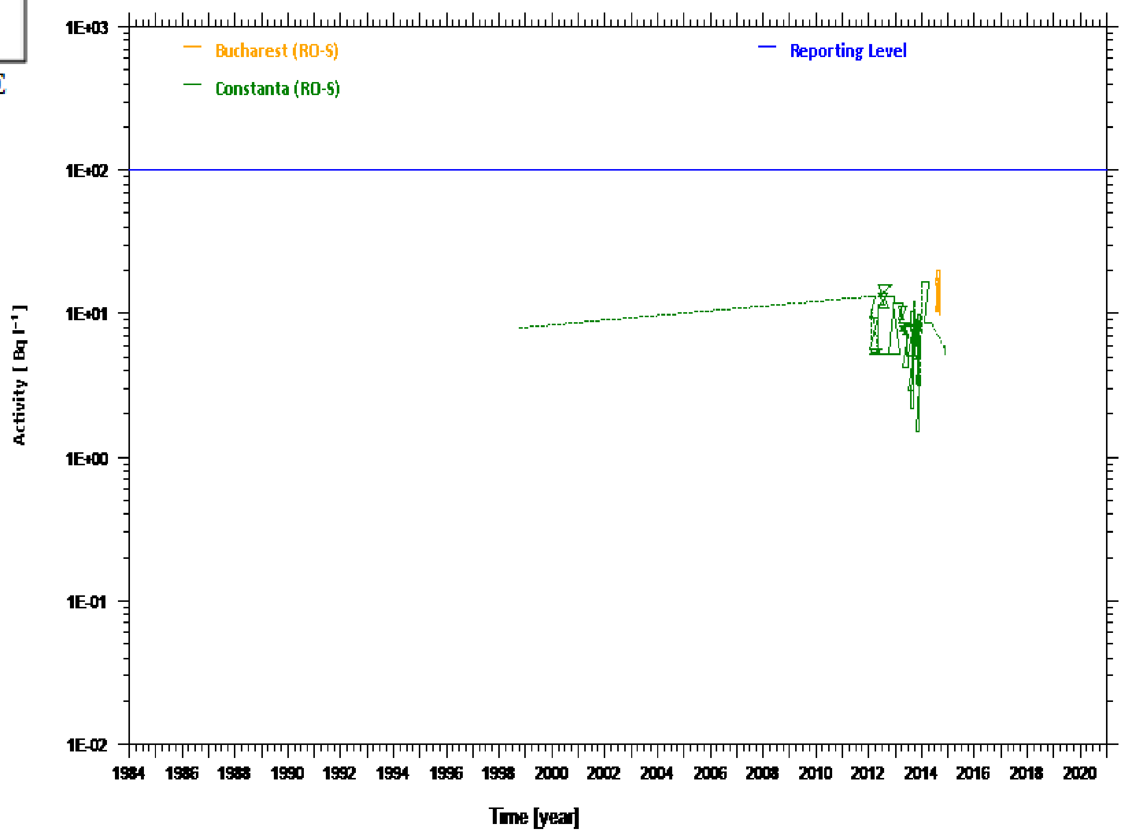


Fig. W19

Activity trends for ³H in drinking water (Bucharest and Constanta)

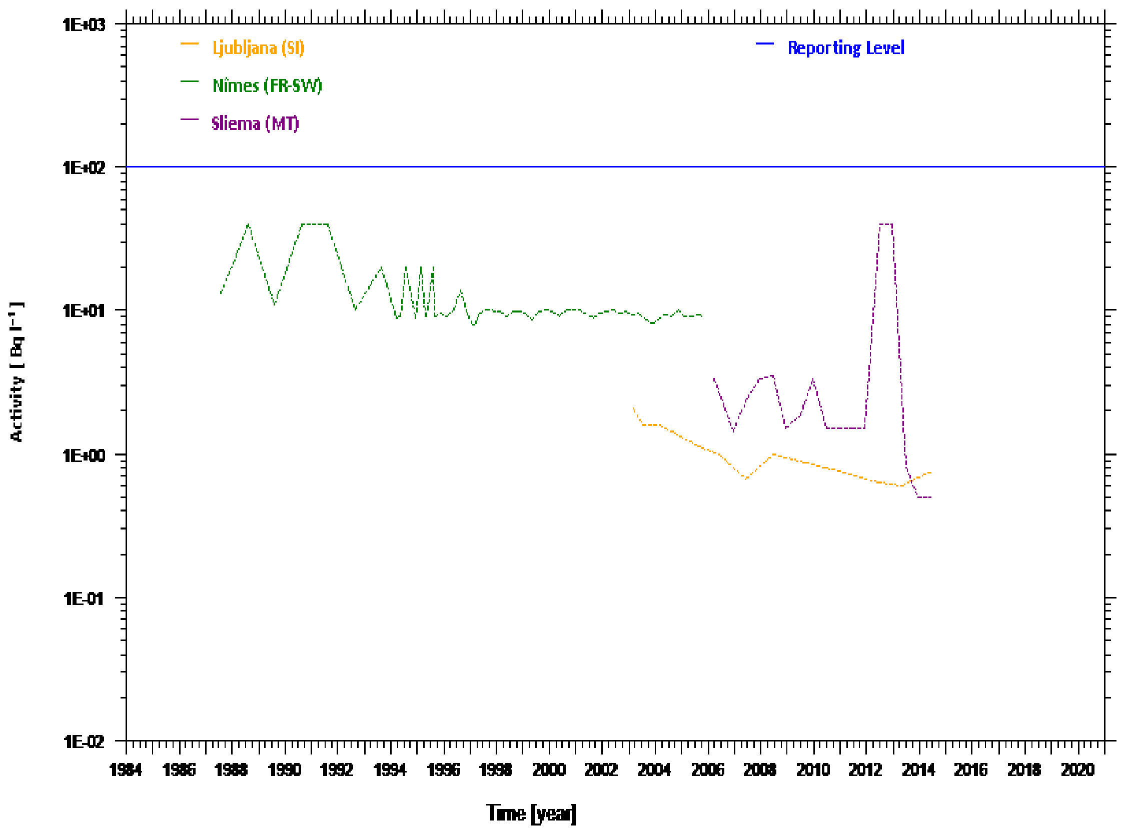


Fig. W20

Activity trends for ³H in drinking water (Ljubljana, Nîmes and Sliema)

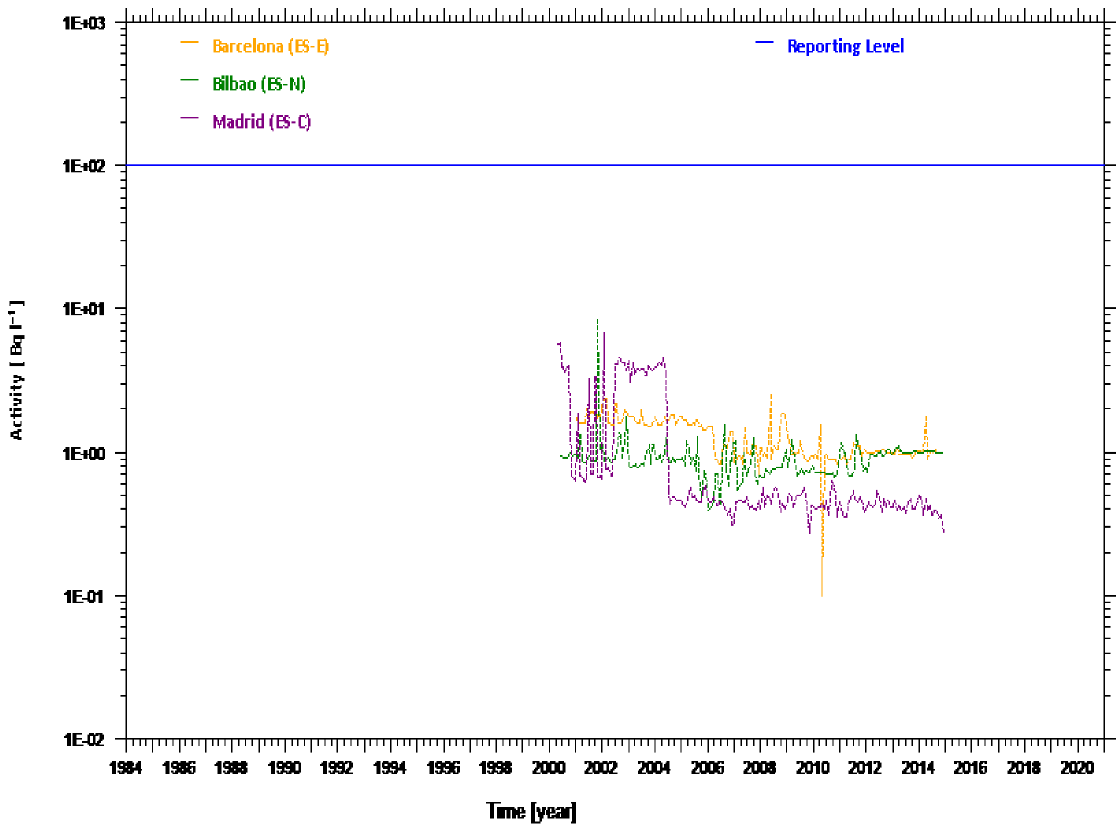


Fig. W21

Activity trends for ^3H in drinking water (Barcelona, Bilbao and Madrid)

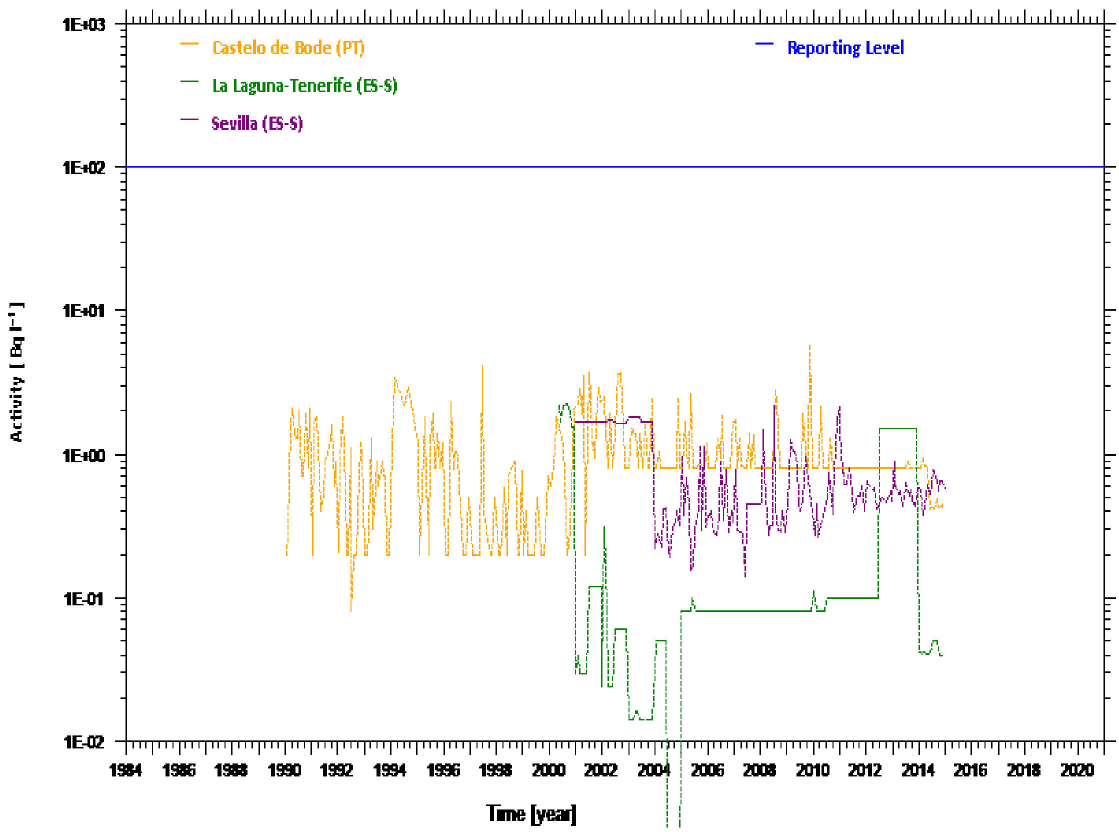


Fig. W22

Activity trends for ^3H in drinking water (Castelo de Bode, La Laguna-Tenerife and Sevilla)

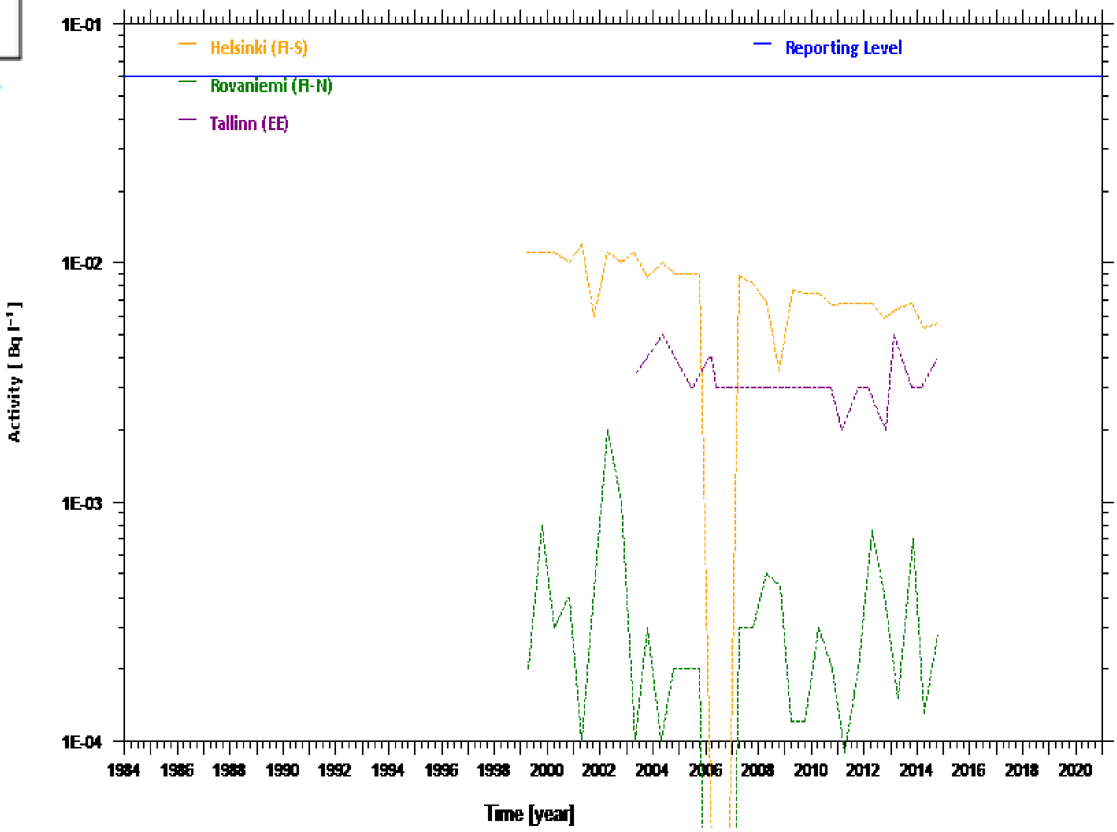


Fig. W23

Activity trends for ^{90}Sr in drinking water (Helsinki, Rovaniemi and Tallinn)

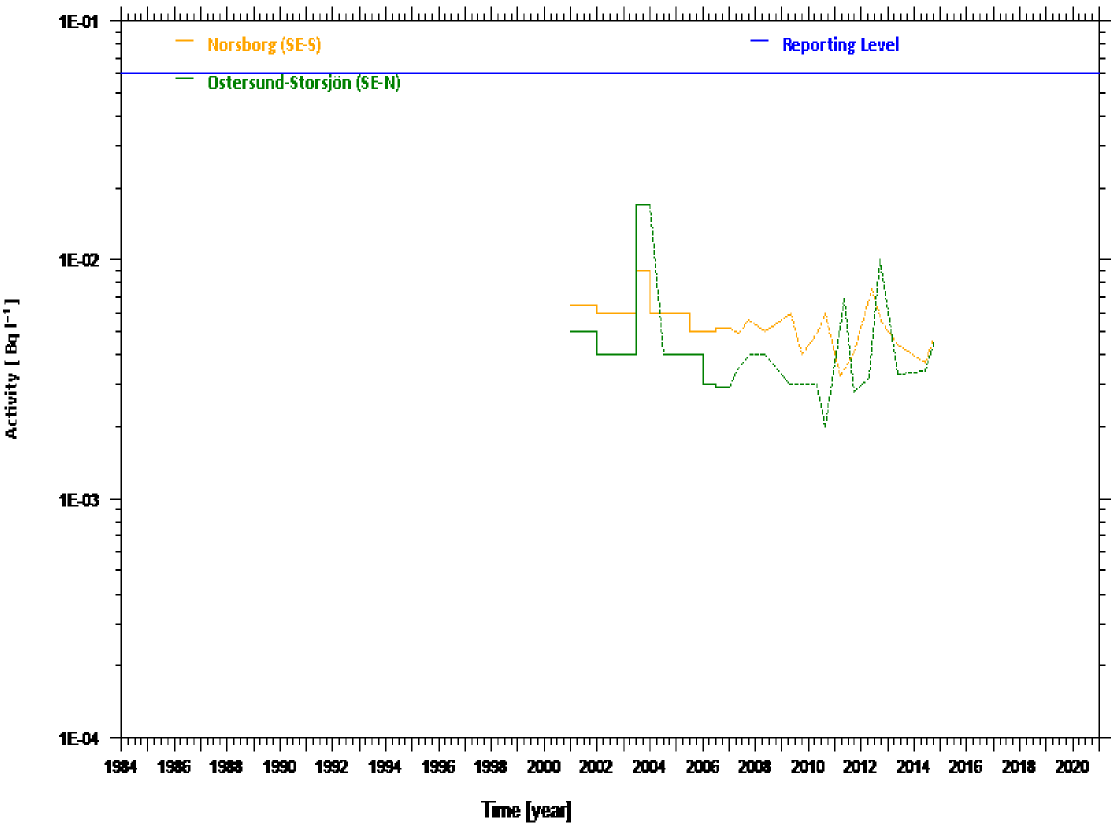


Fig. W24

Activity trends for ^{90}Sr in drinking water (Norsborg and Östersund-Storsjön)

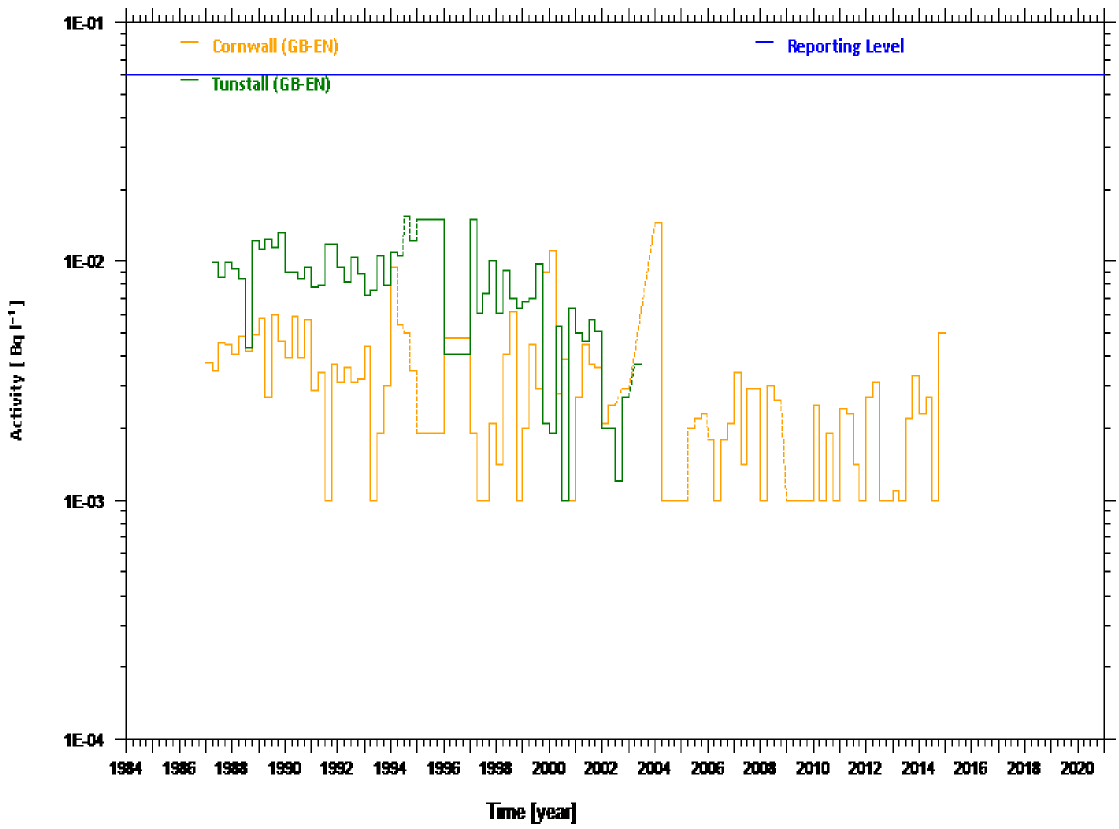


Fig. W25

Activity trends for ^{90}Sr in drinking water (Cornwall and Tunstall)

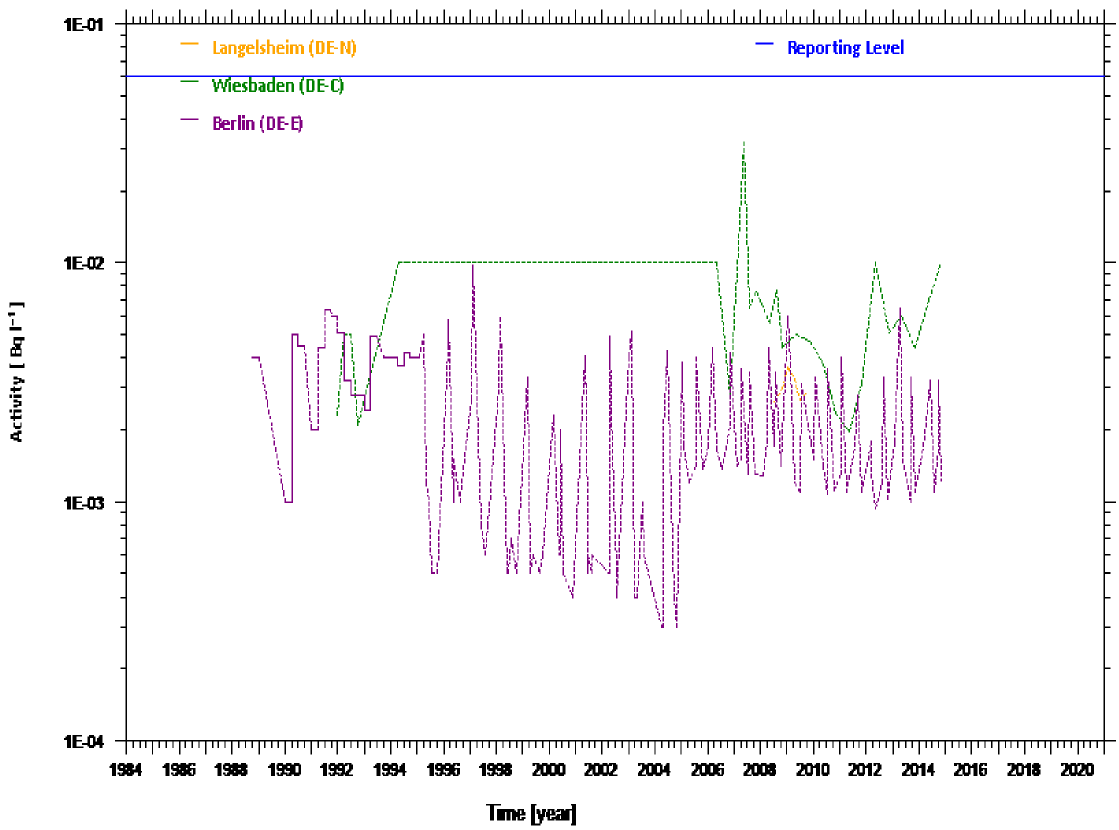


Fig. W26

Activity trends for ^{90}Sr in drinking water (Langelsheim, Wiesbaden and Berlin)

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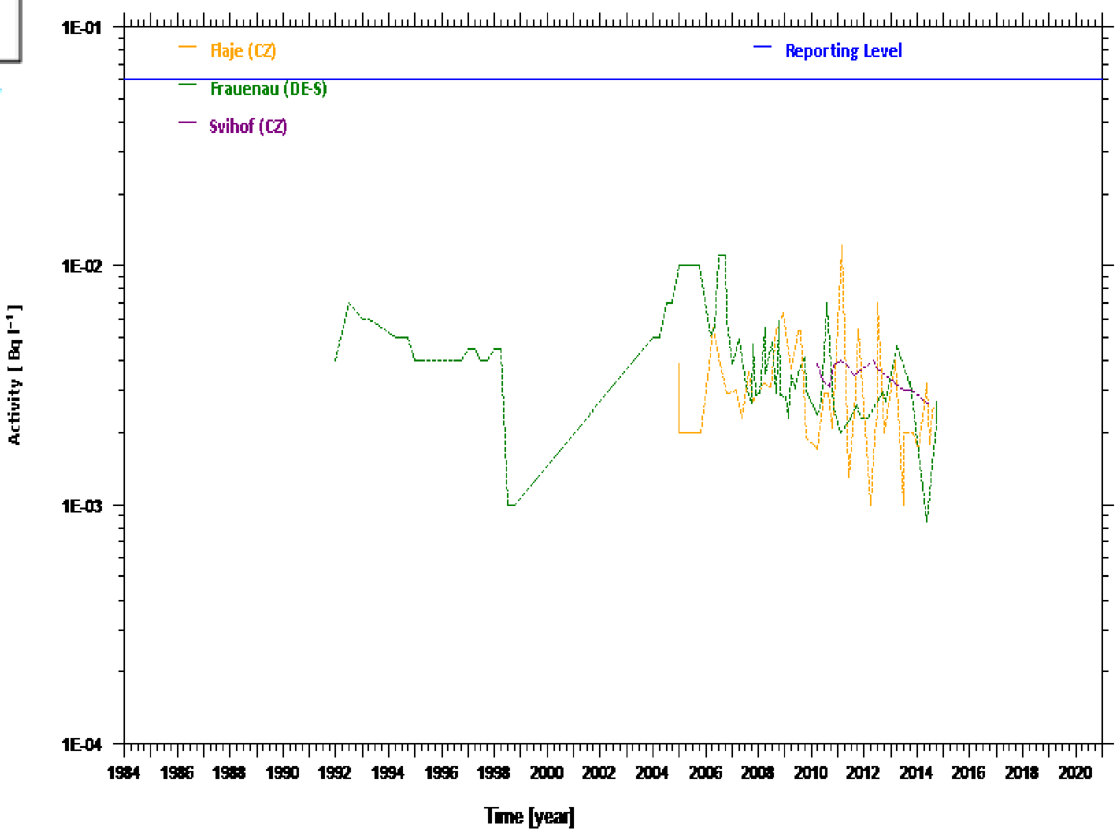

Fig. W27

Activity trends for ^{90}Sr in drinking water (Flaje, Frauenau and Svihof)

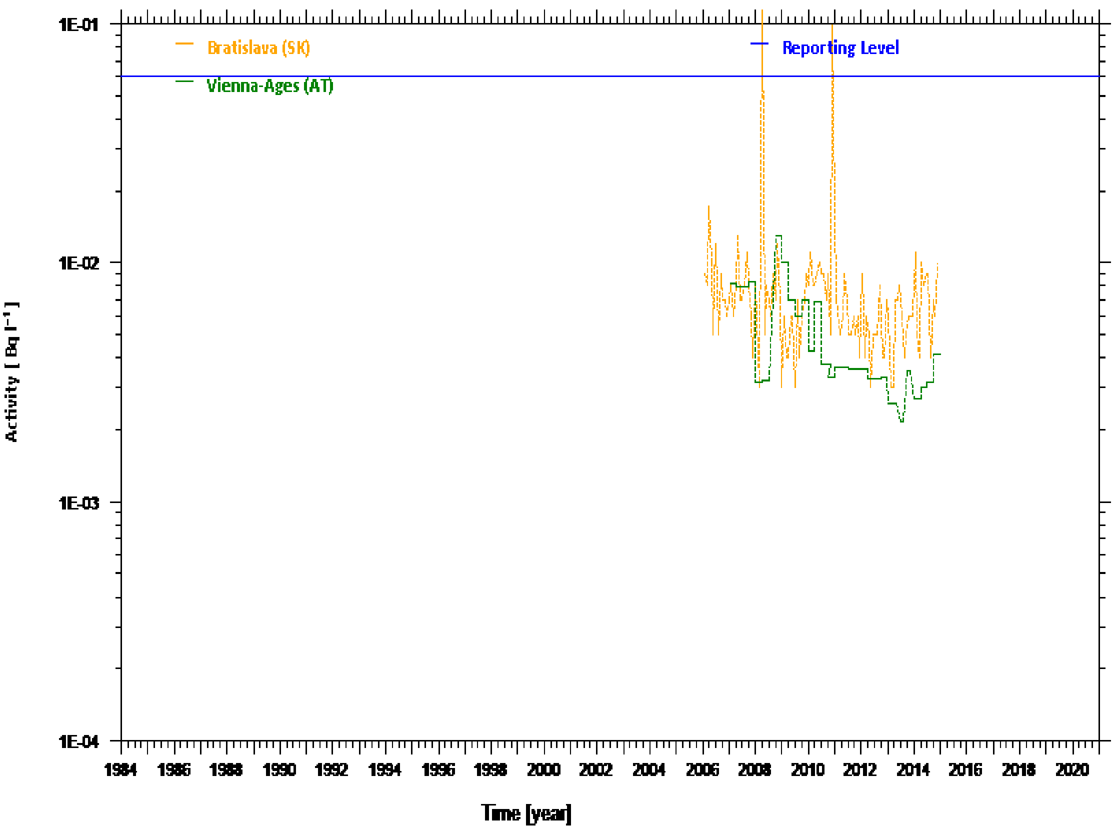

Fig. W28

Activity trends for ^{90}Sr in drinking water (Bratislava and Vienna-Ages)

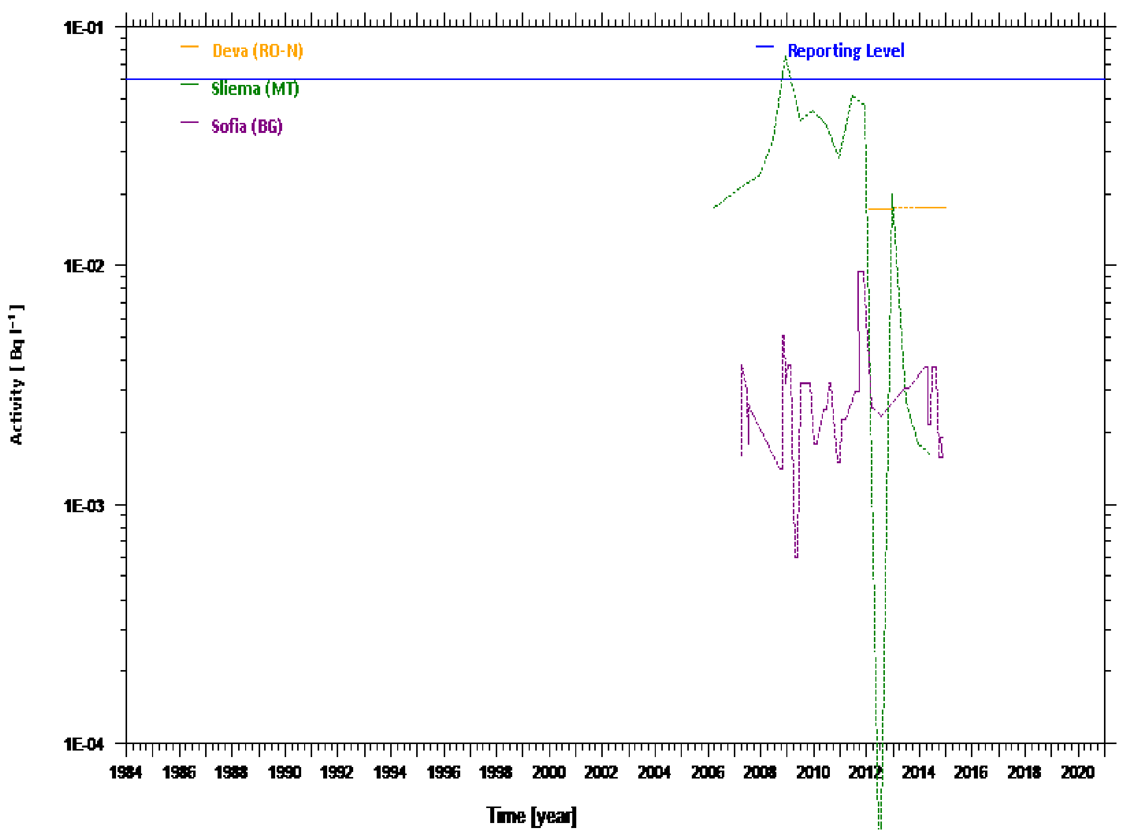

Fig. W29

Activity trends for ^{90}Sr in drinking water (Deva, Sliema and Sofia)

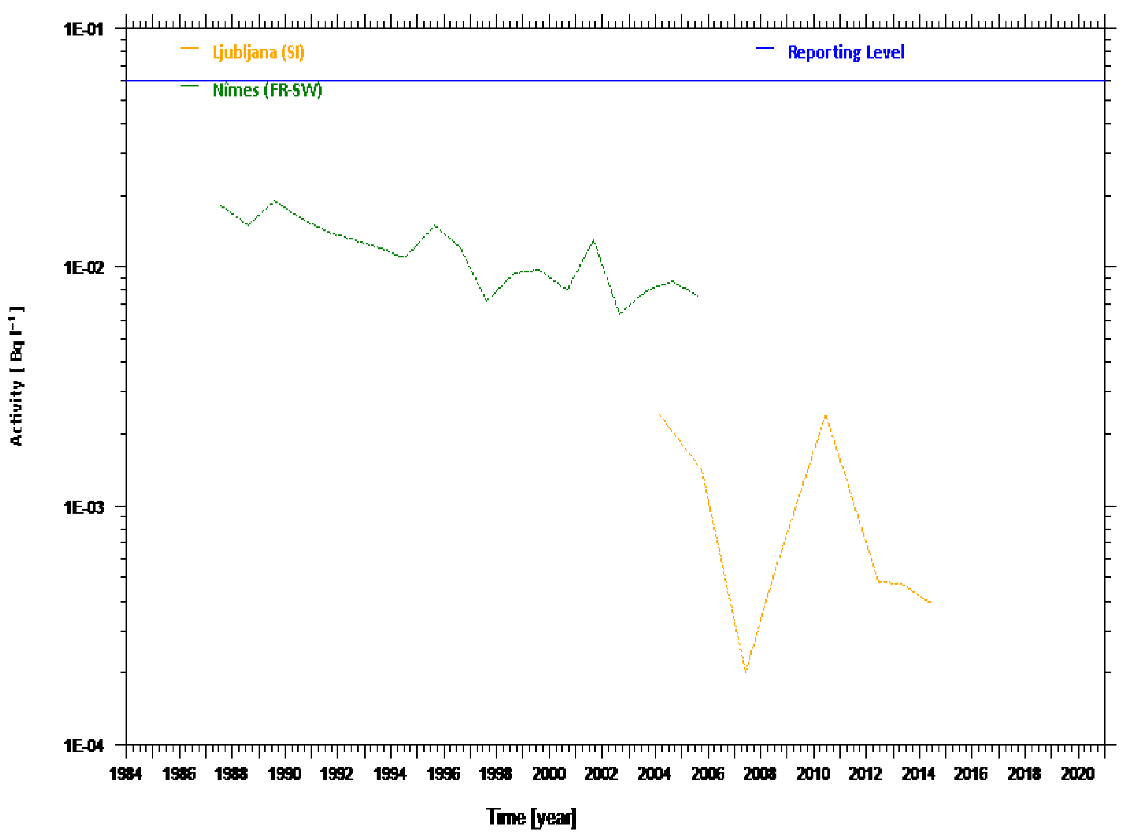

Fig. W30

Activity trends for ^{90}Sr in drinking water (Ljubljana and Nîmes)

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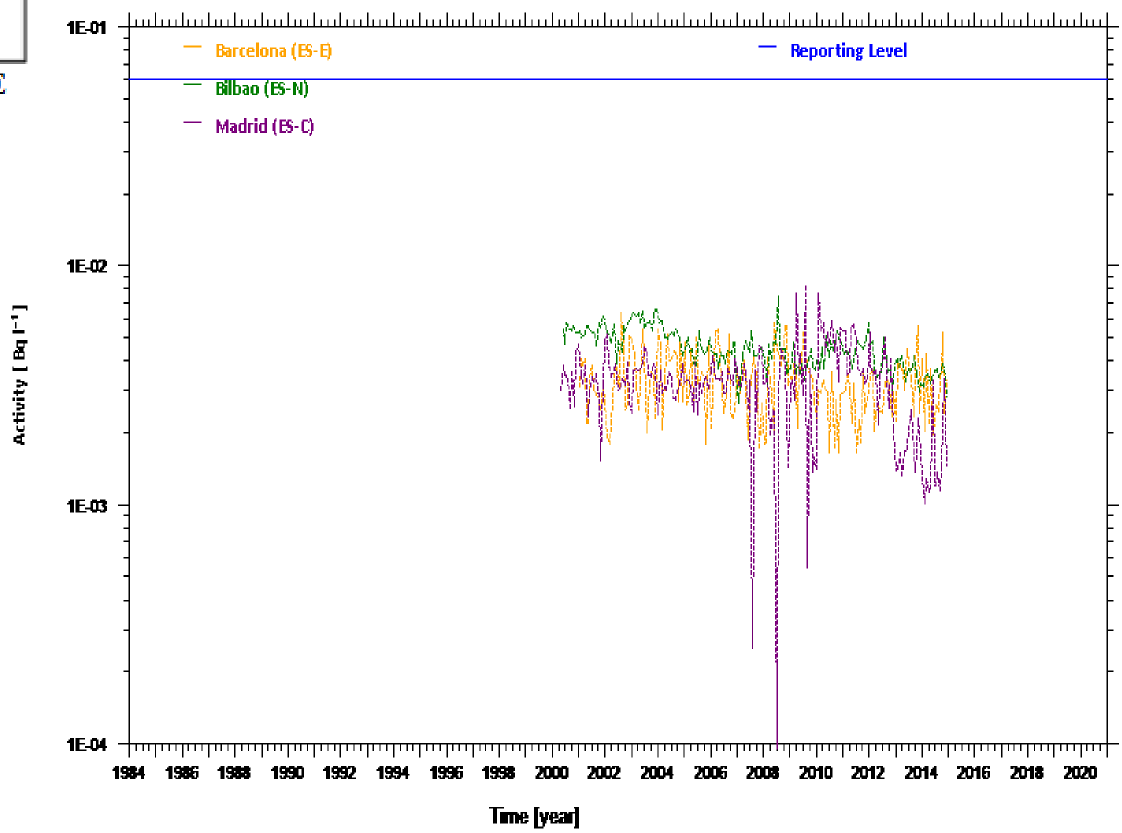

Fig. W31
Activity trends for ^{90}Sr in drinking water (Barcelona, Bilbao and Madrid)

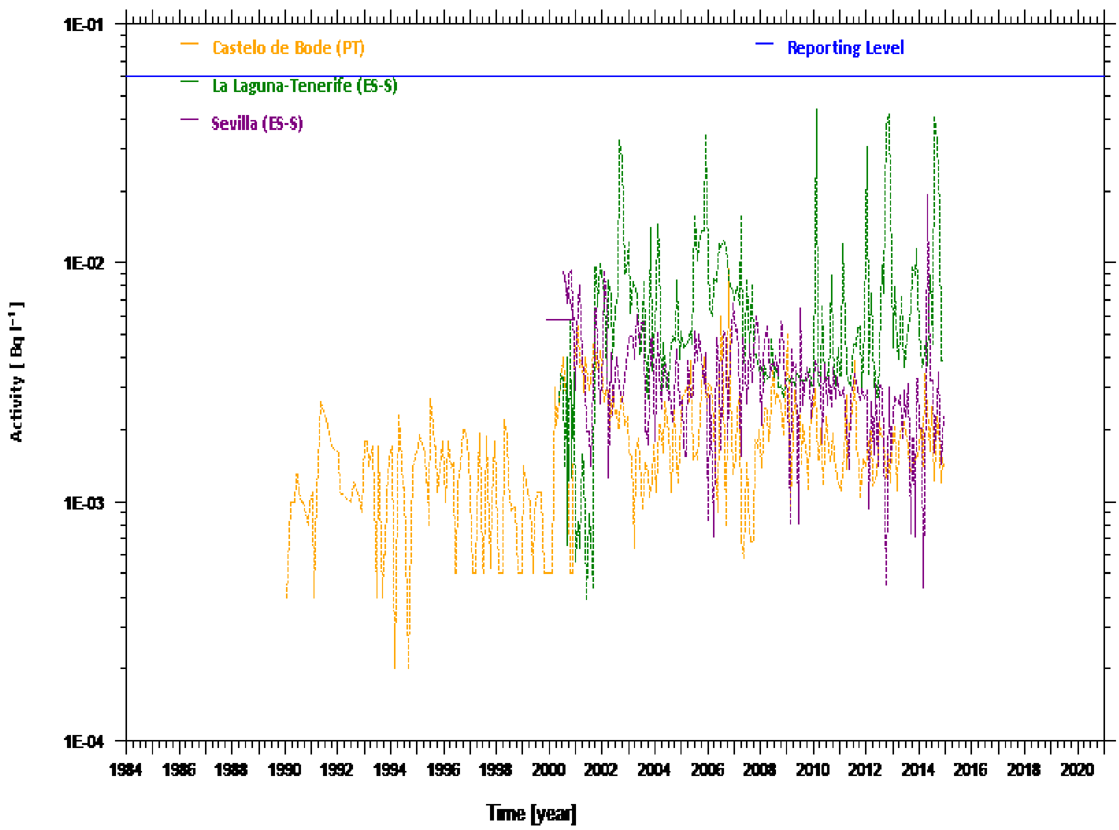

Fig. W32
Activity trends for ^{90}Sr in drinking water (Castelo de Bode, La Laguna-Tenerife and Sevilla)

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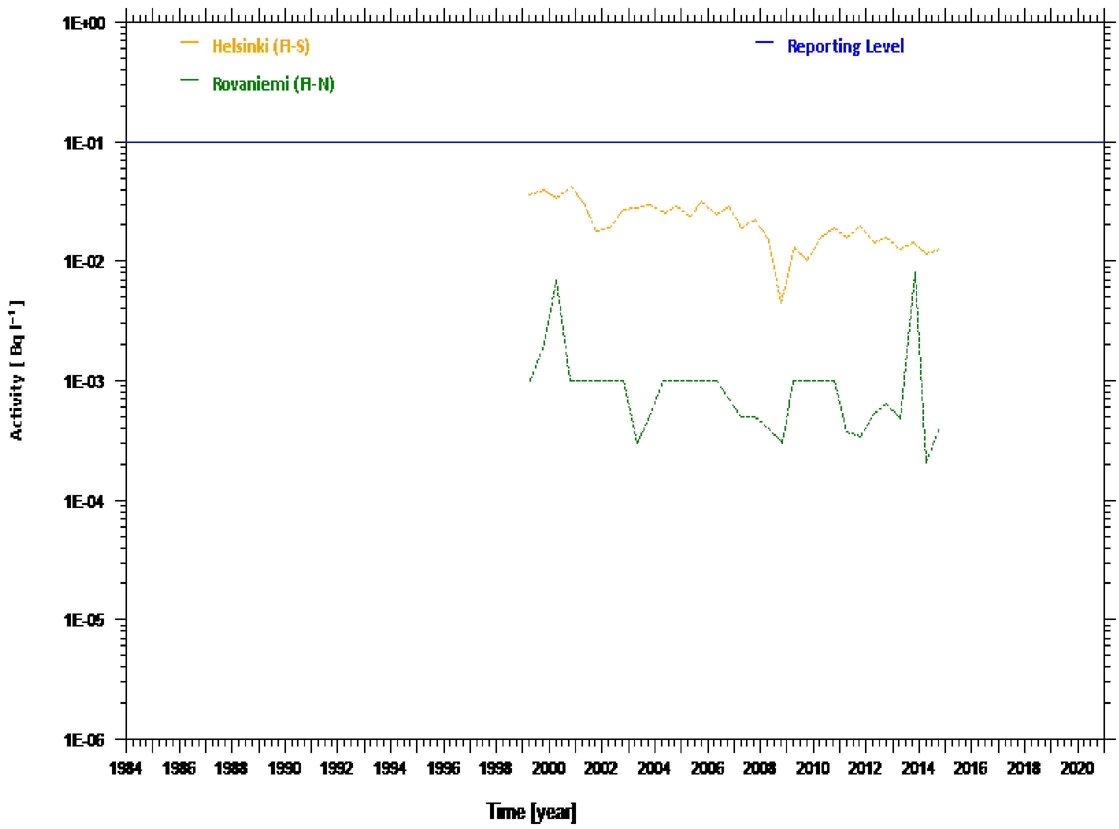


Fig. W33
Activity trends for ^{137}Cs in drinking water (Helsinki and Rovaniemi)

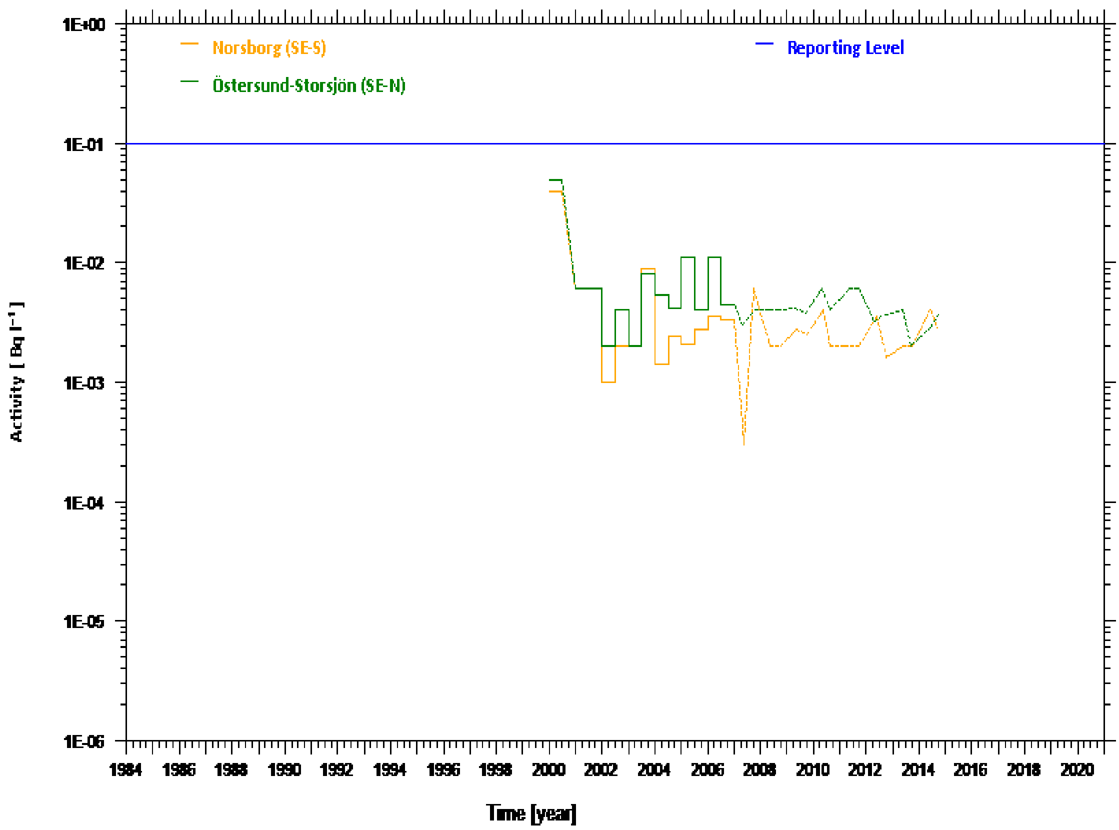
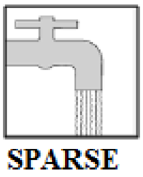


Fig. W34
Activity trends for ^{137}Cs in drinking water (Norsborg and Östersund-Storsjön)



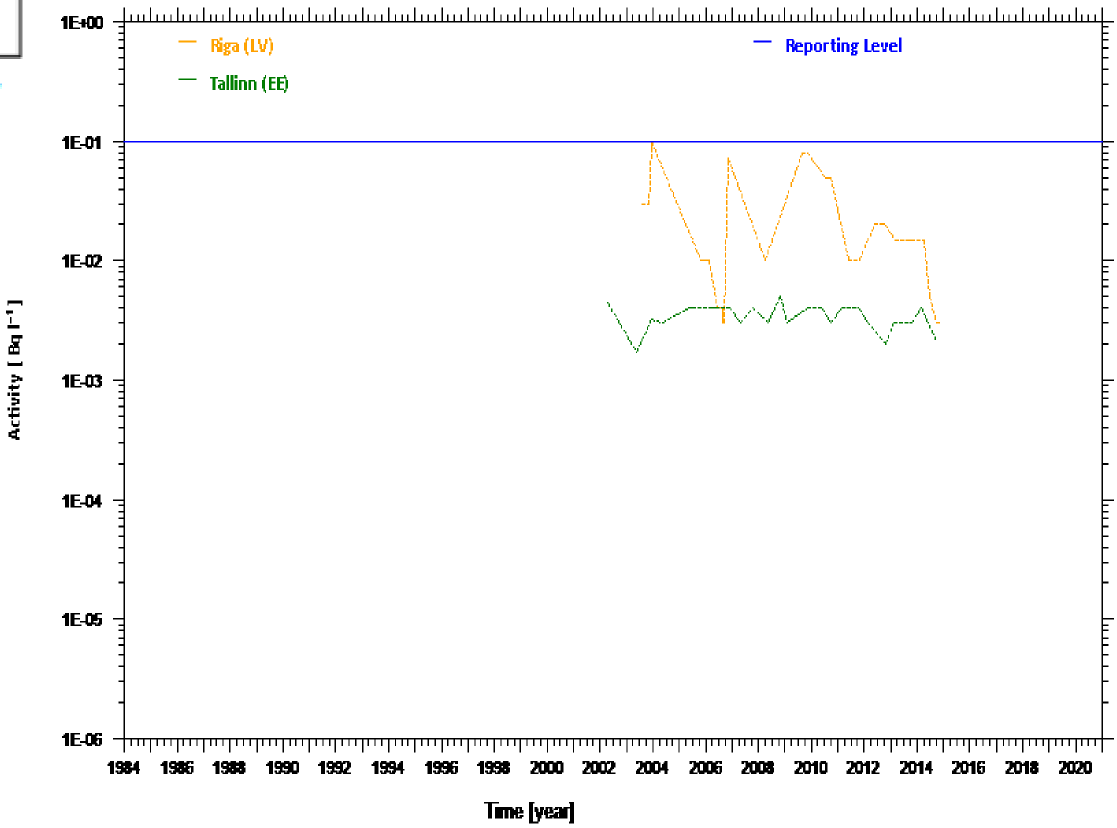


Fig. W35
Activity trends for ^{137}Cs in drinking water (Riga and Tallinn)

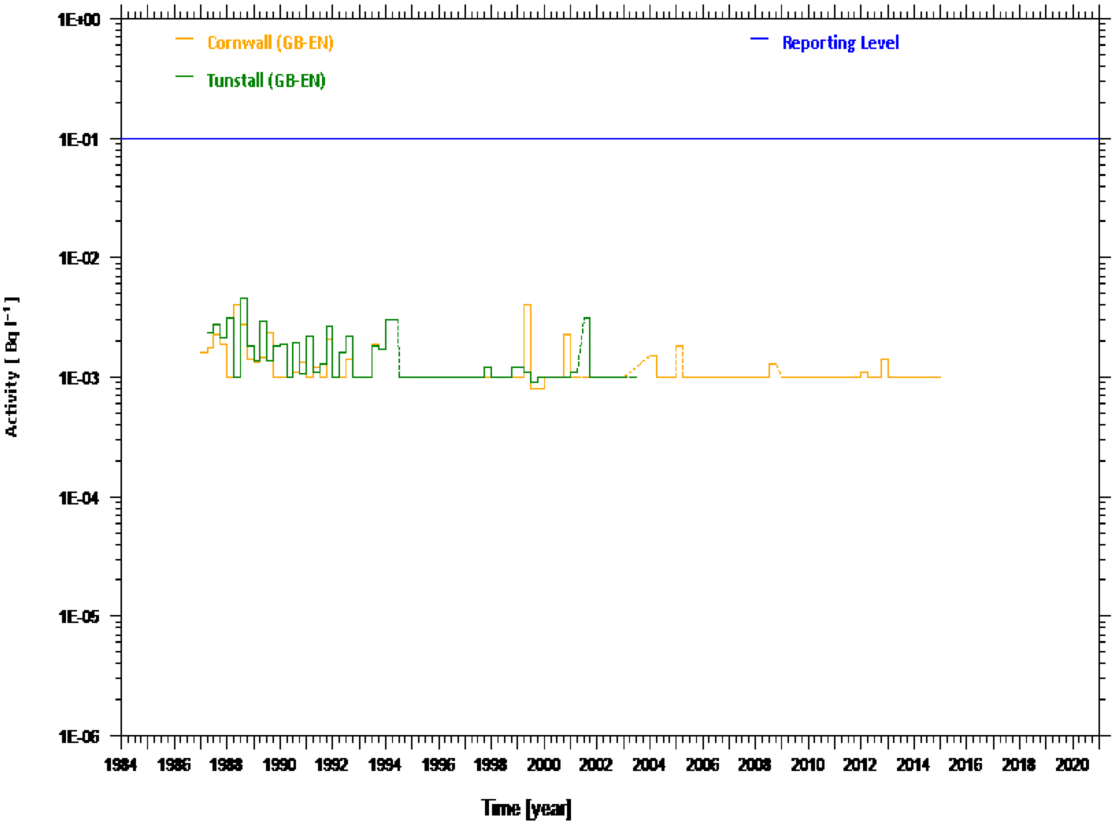


Fig. W36
Activity trends for ^{137}Cs in drinking water (Cornwall and Tunstall)

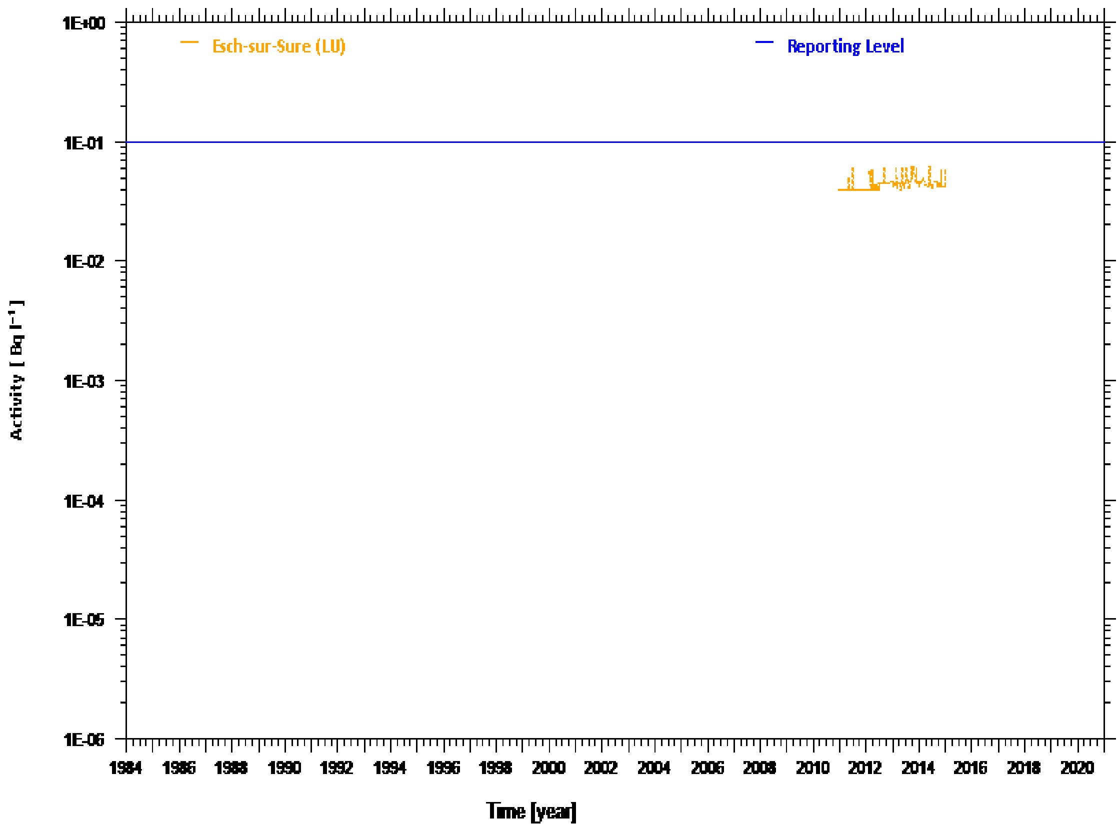


Fig. W37
Activity trends for ^{137}Cs in drinking water (Esch-sur-Sure)

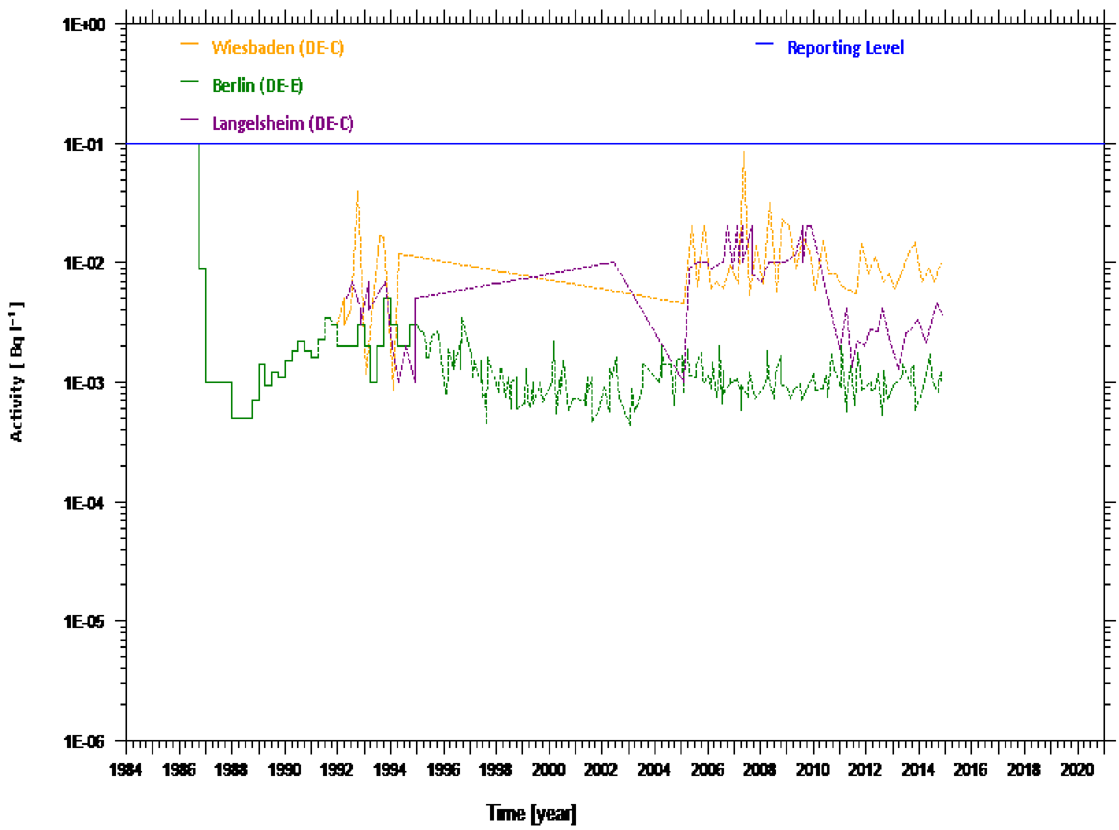


Fig. W38
Activity trends for ^{137}Cs in drinking water (Wiesbaden, Berlin and Langelsheim)

SPARSE

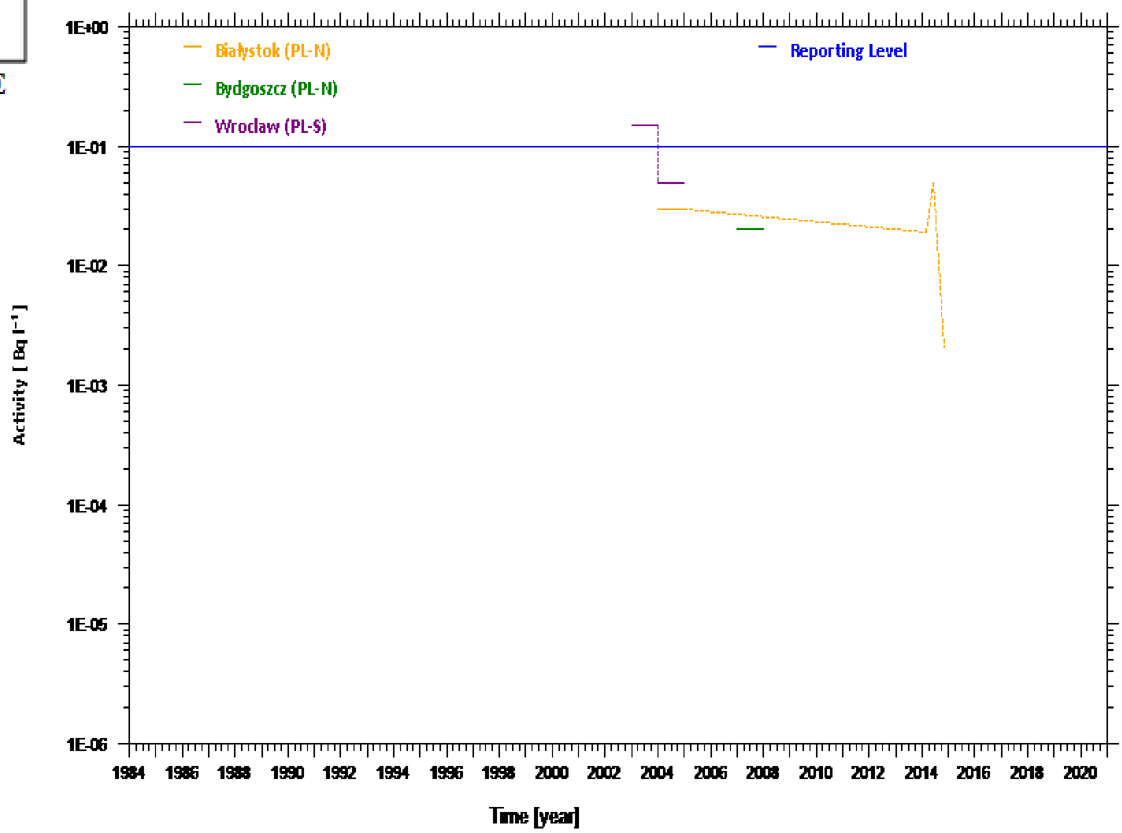


Fig. W39

Activity trends for ^{137}Cs in drinking water (Białystok, Bydgoszcz and Wroclaw)

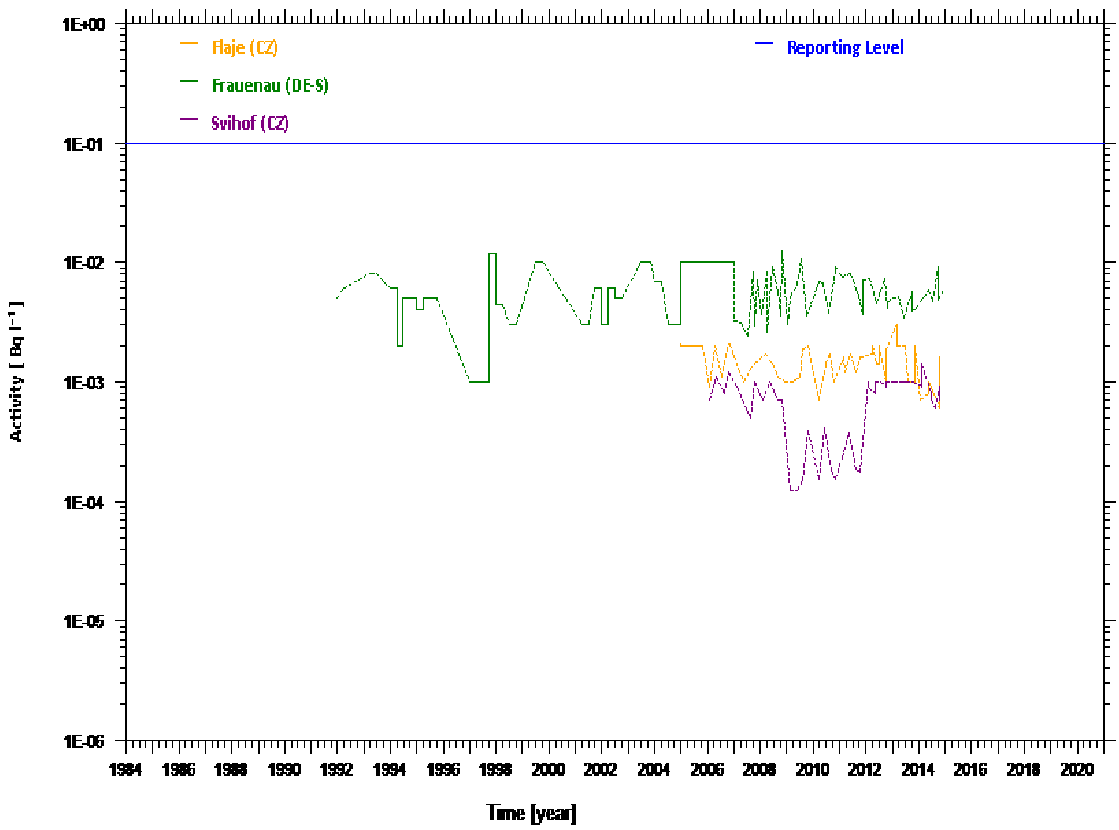
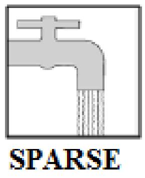


Fig. W40

Activity trends for ^{137}Cs in drinking water (Flaje, Frauenau and Svihof)



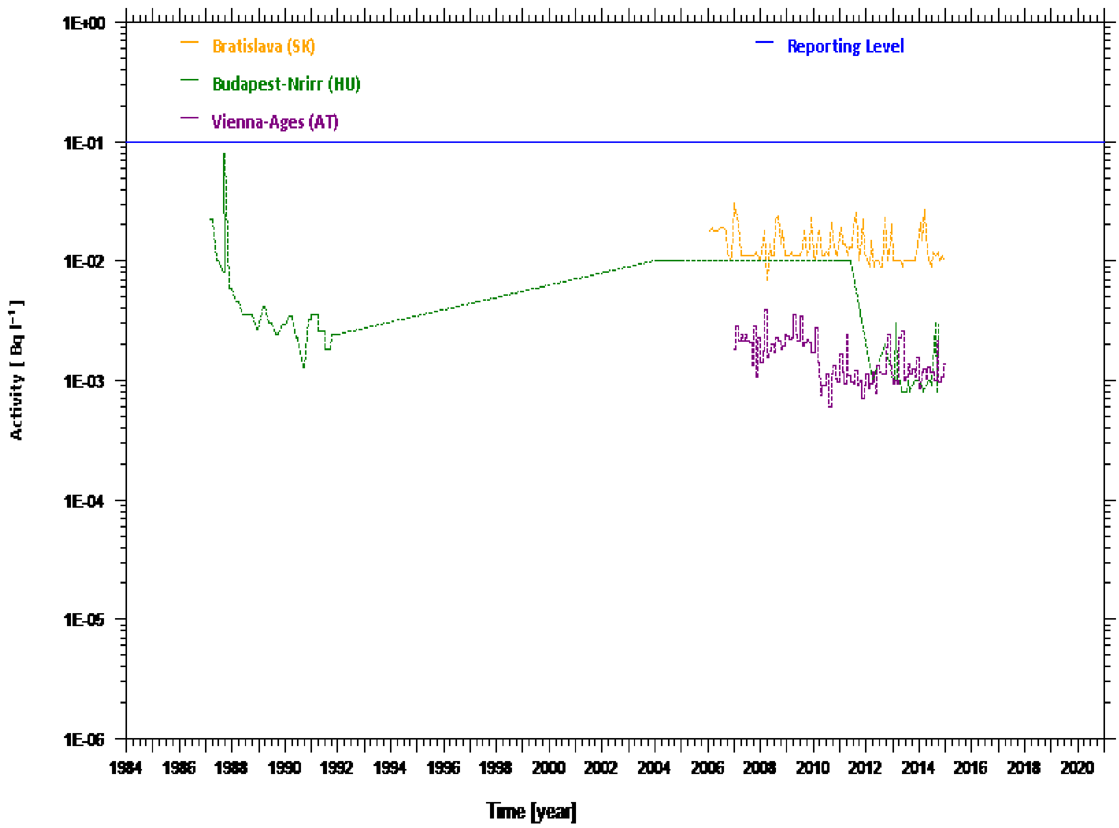


Fig. W41

Activity trends for ^{137}Cs in drinking water (Bratislava, Budapest-Nrirr and Vienna-Ages)

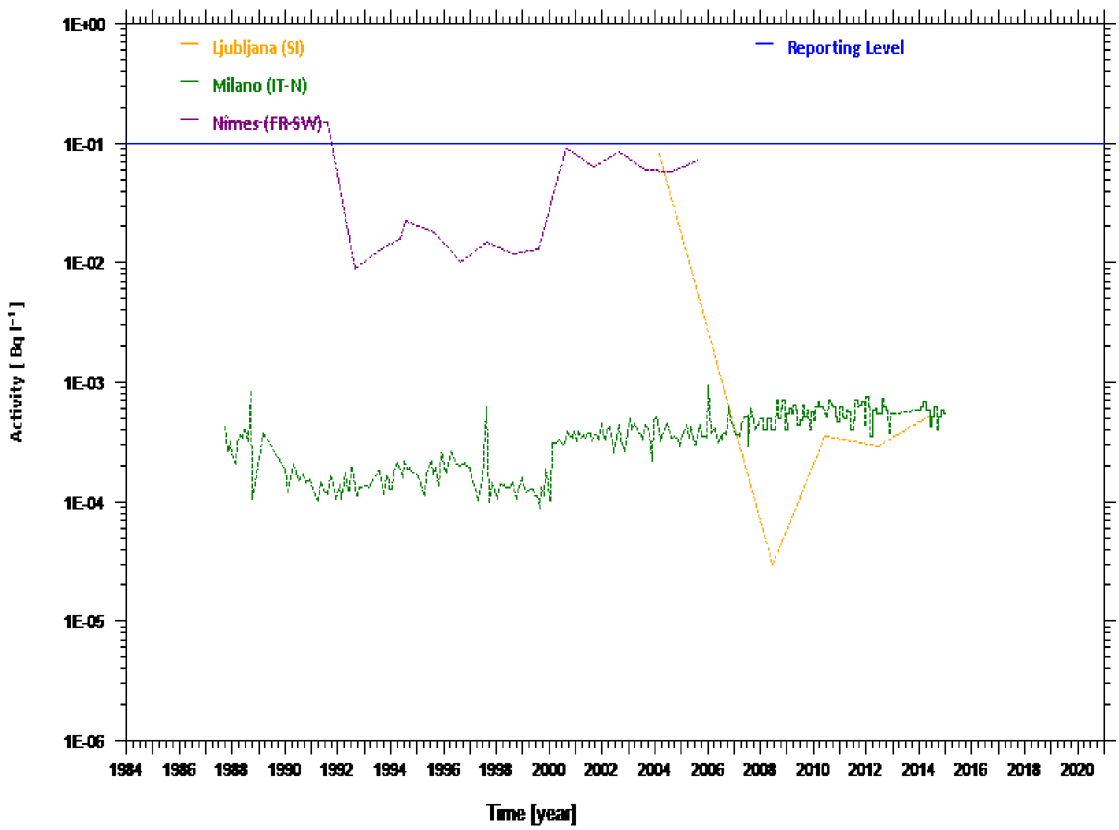


Fig. W42

Activity trends for ^{137}Cs in drinking water (Ljubljana, Milano and Nîmes)

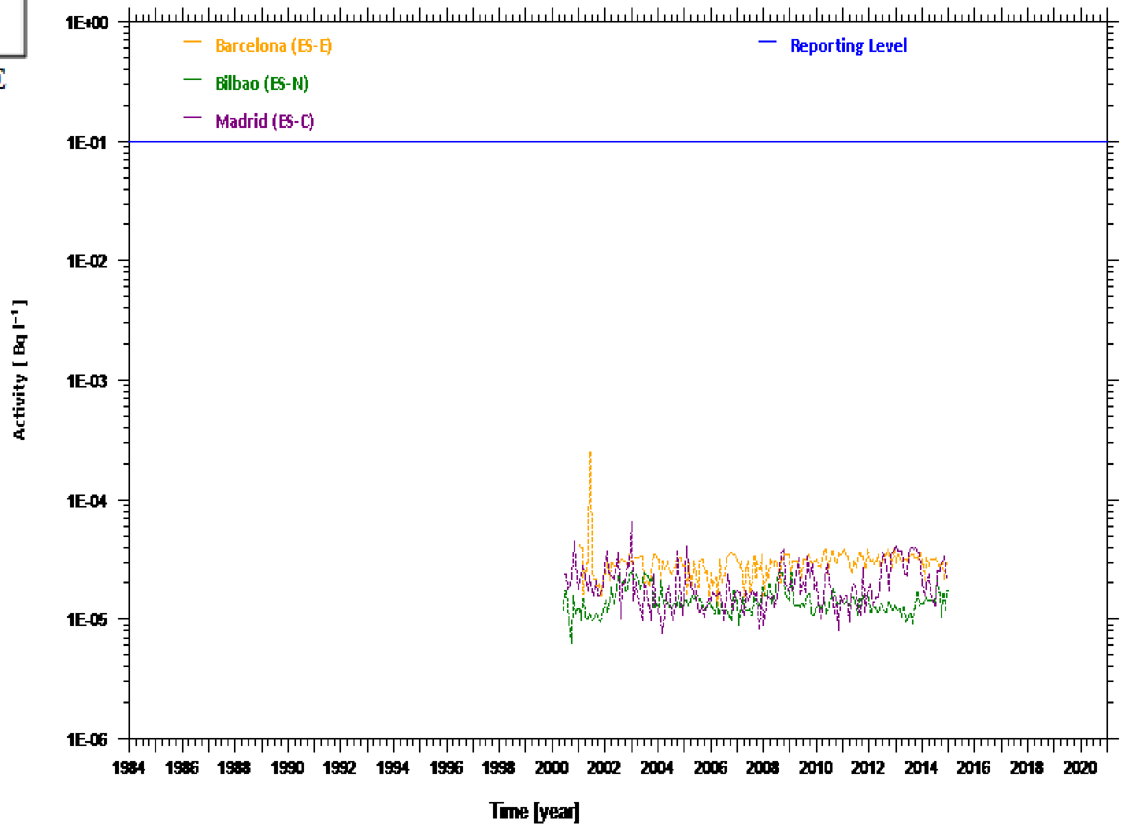


Fig. W43
Activity trends for ^{137}Cs in drinking water (Barcelona, Bilbao and Madrid)

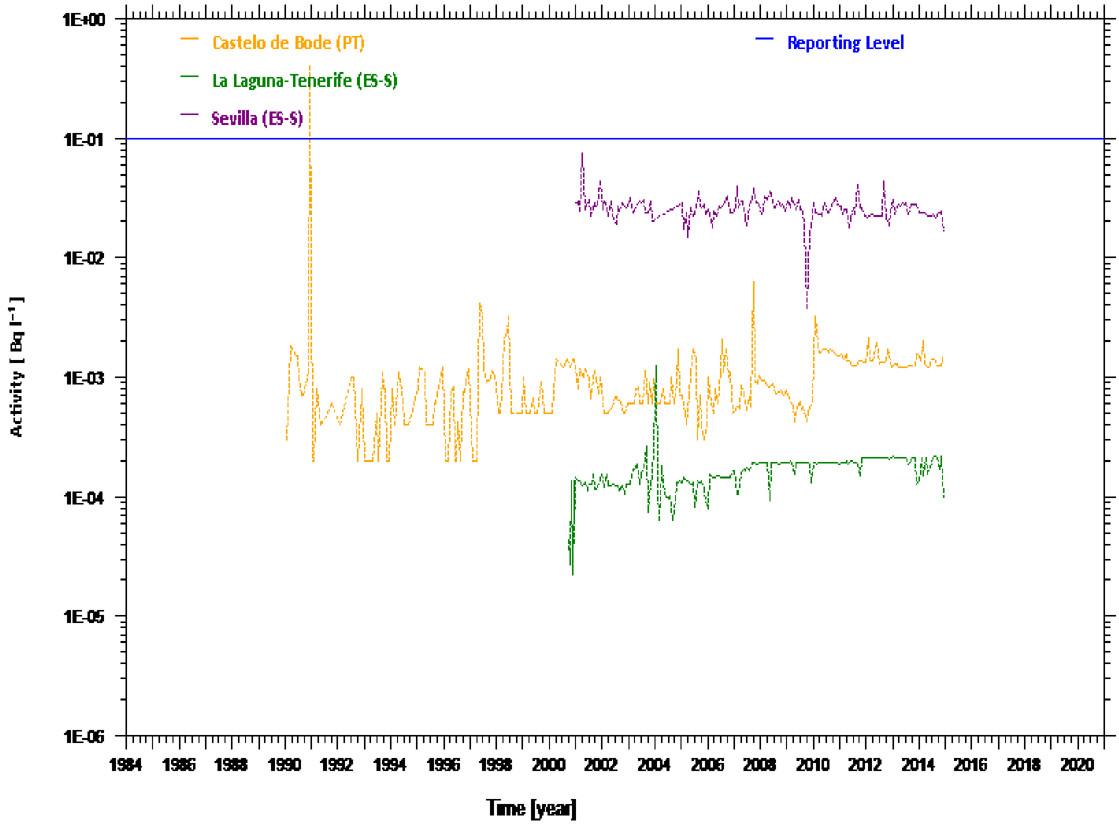


Fig. W44
Activity trends for ^{137}Cs in drinking water (Castelo de Bode, La Laguna-Tenerife and Sevilla)

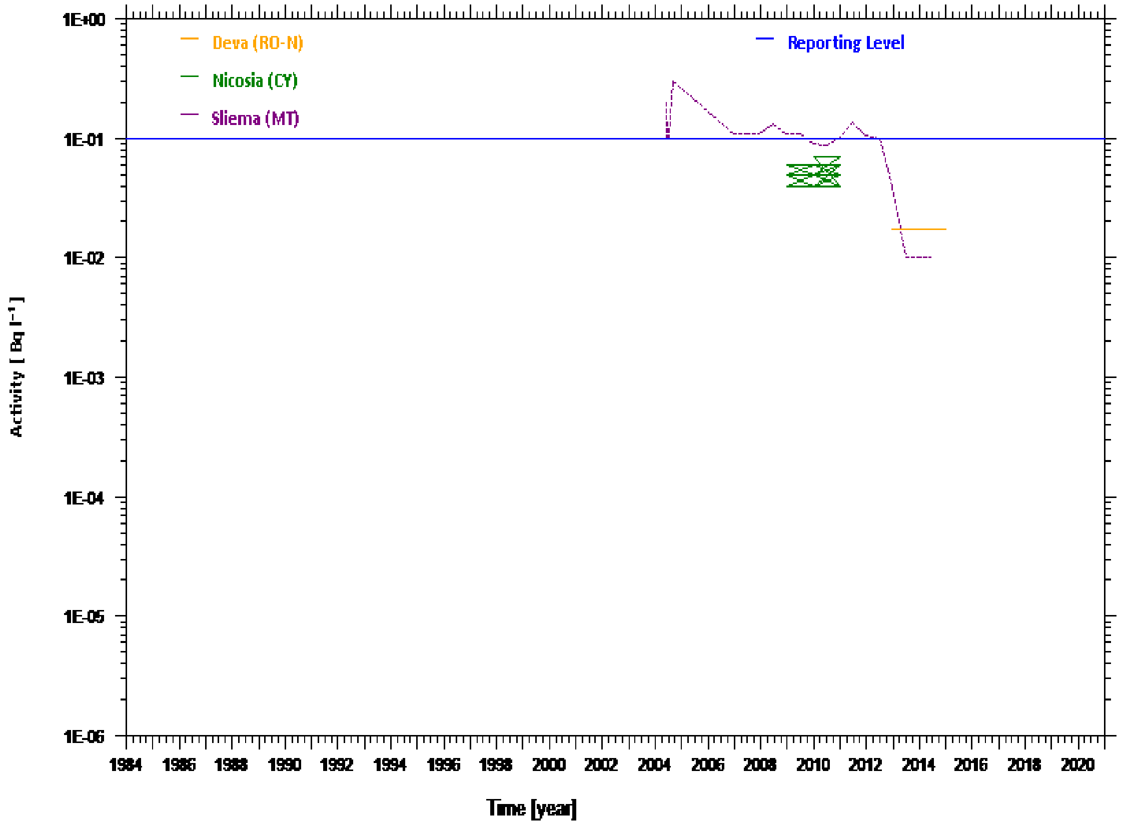


Fig. W45

Activity trends for ^{137}Cs in drinking water (Deva, Nicosia and Sliema)

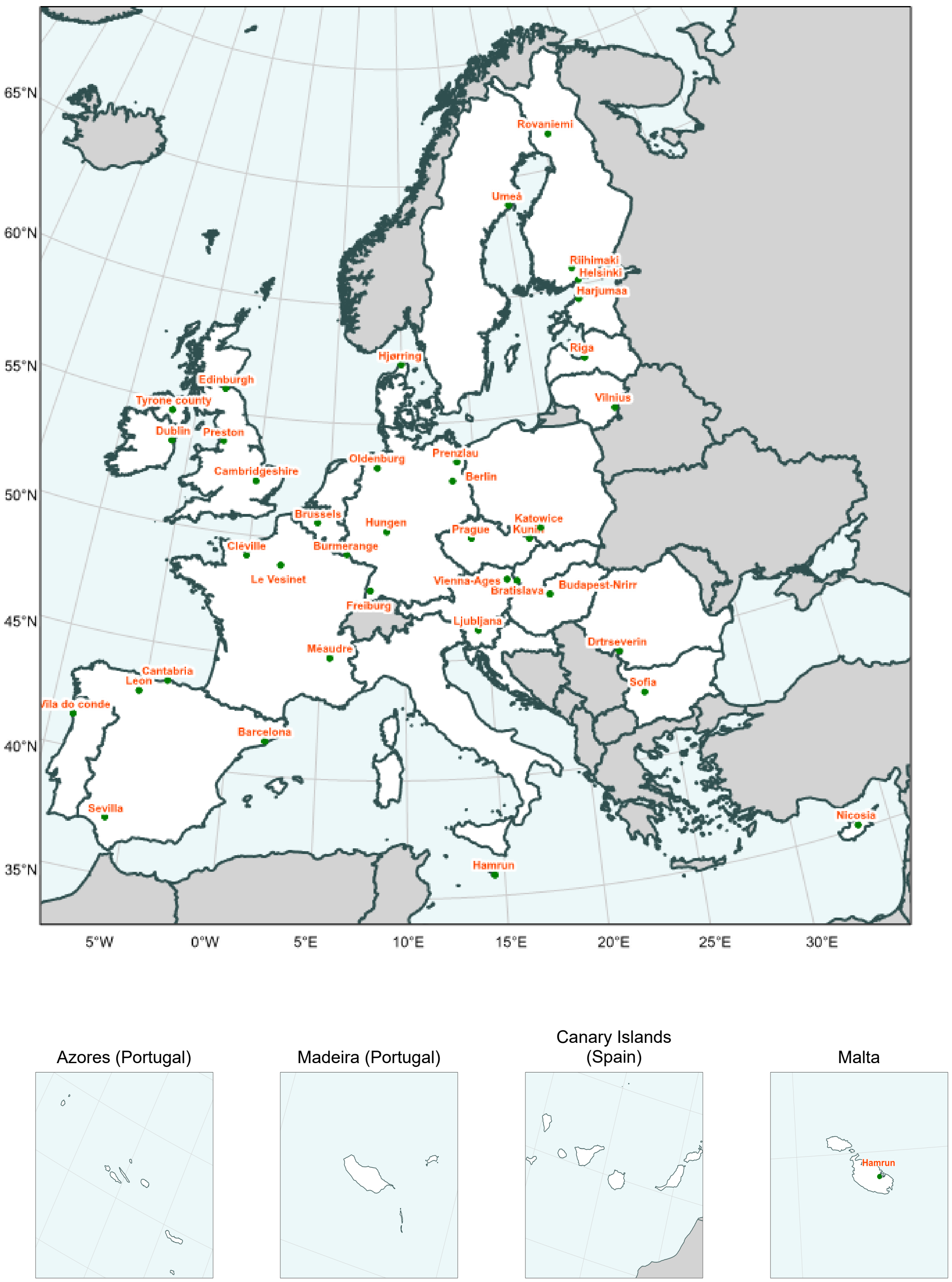


Fig. M7

Sampling locations for ^{90}Sr and ^{137}Cs in milk considered in Figures M8 – M37

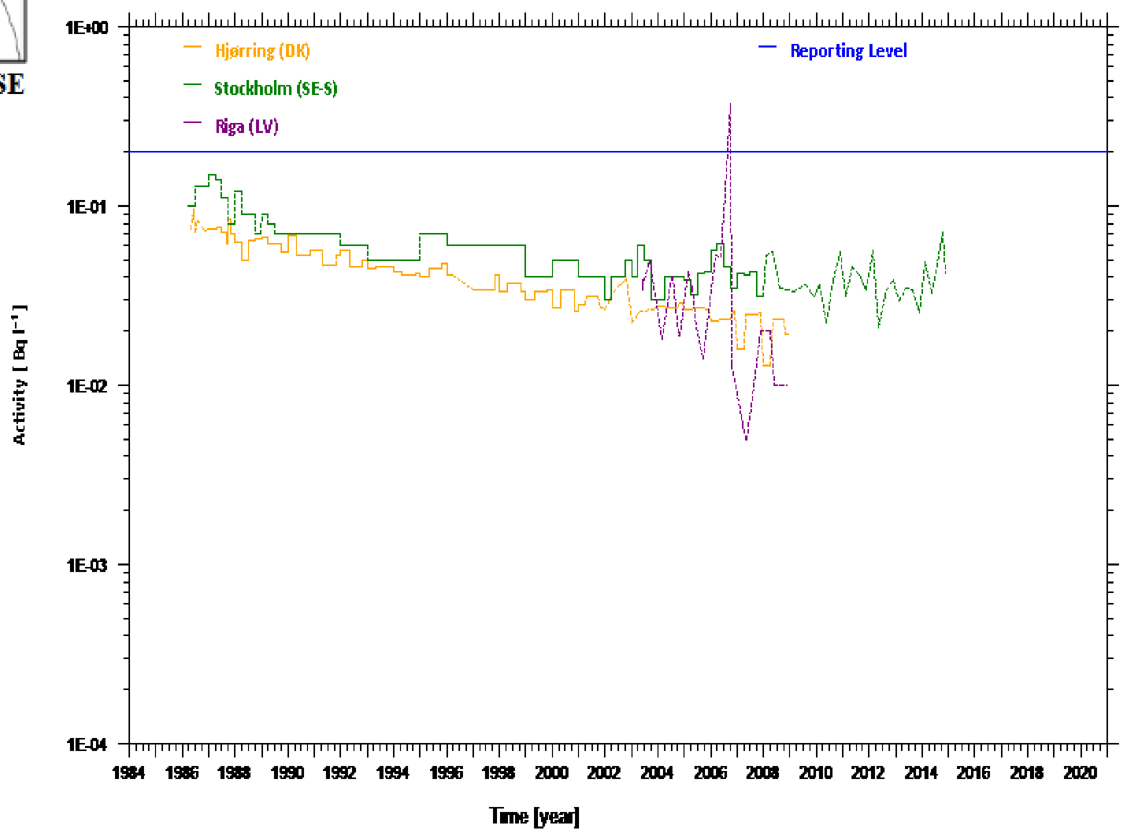


Fig. M8

Activity trends for ^{90}Sr in milk (Hjørring, Stockholm and Riga)

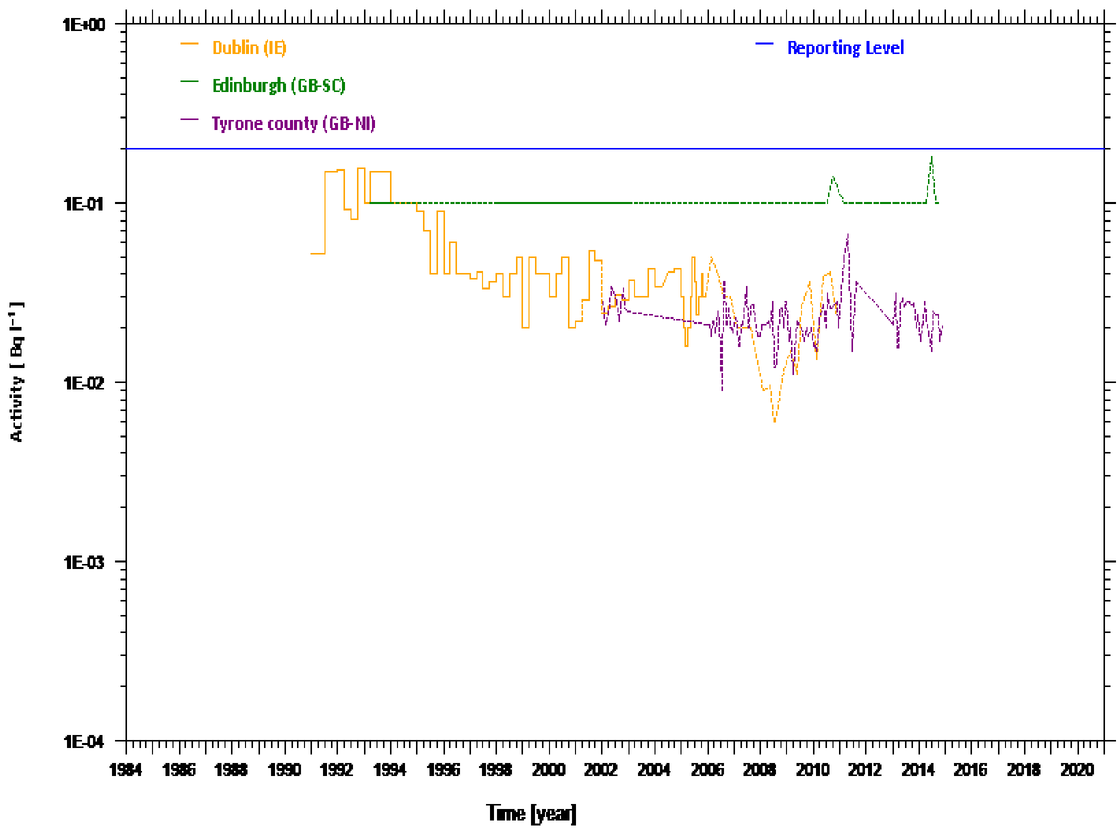


Fig. M9

Activity trends for ^{90}Sr in milk (Dublin, Edinburgh and Tyrone county)

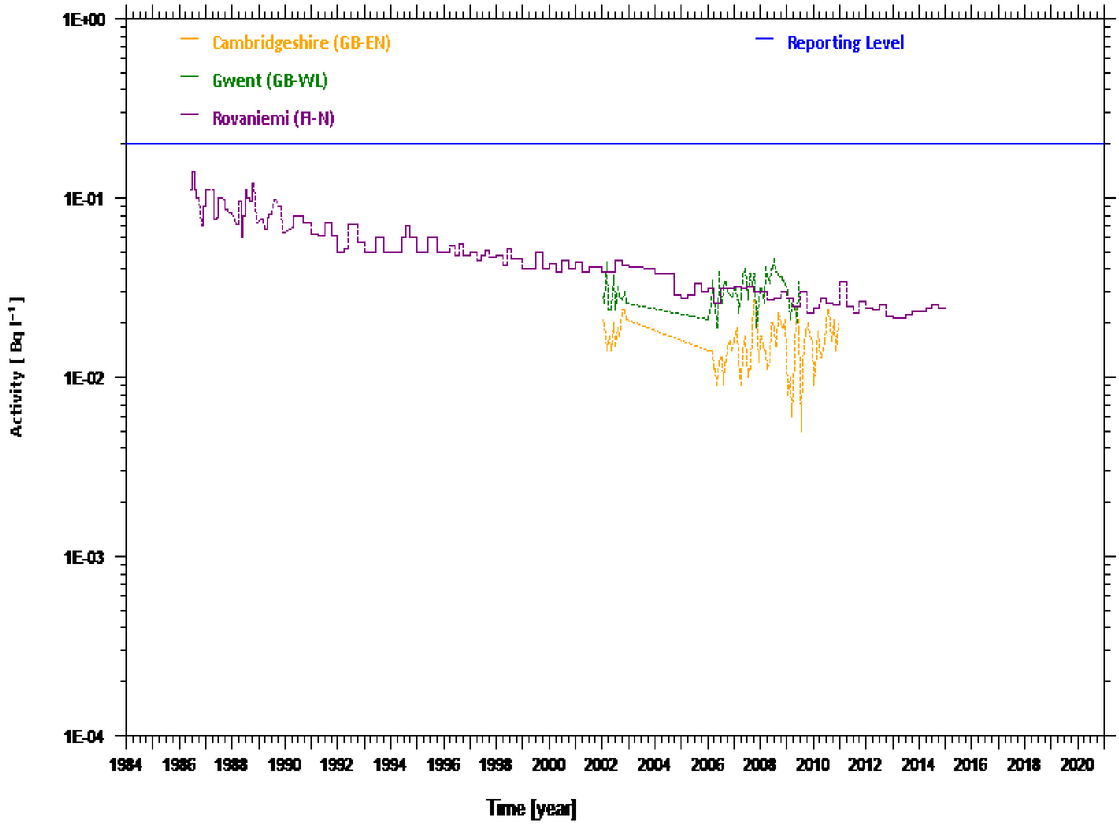


Fig. M10

Activity trends for ^{90}Sr in milk (Cambridgeshire, Gwent and Rovaniemi)

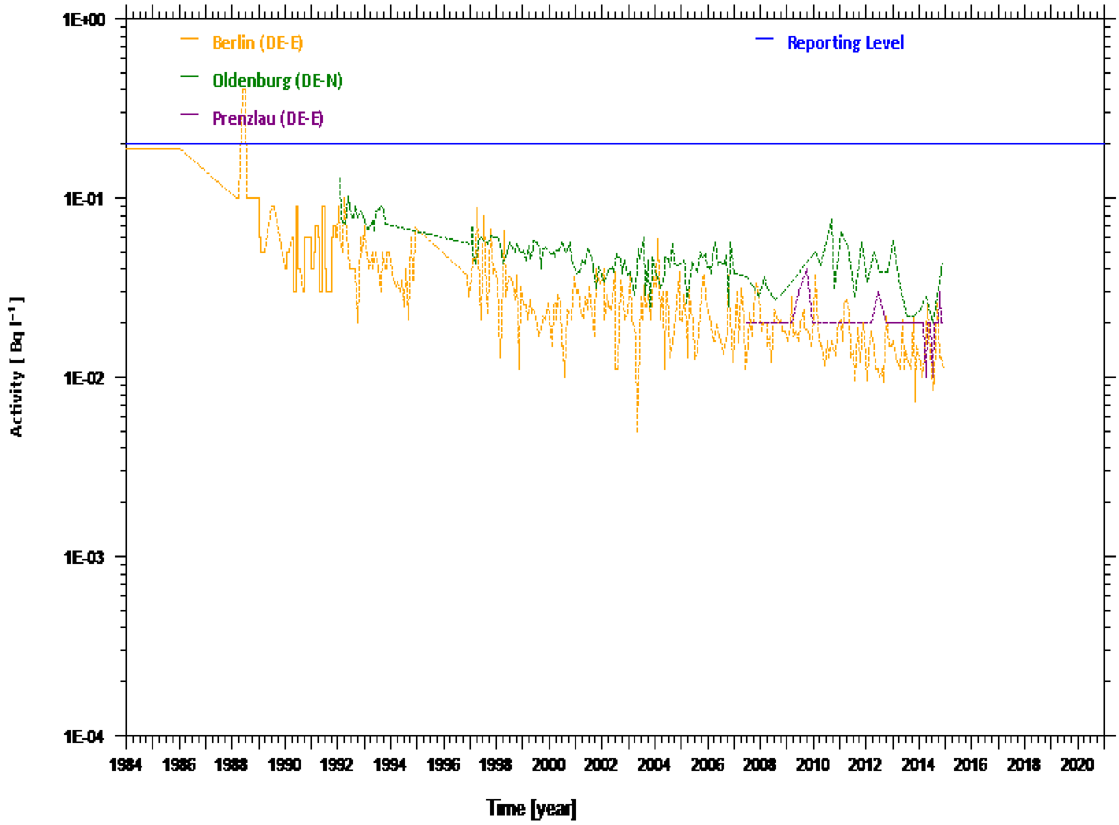


Fig. M11

Activity trends for ^{90}Sr in milk (Berlin, Oldenburg and Prenzlau)

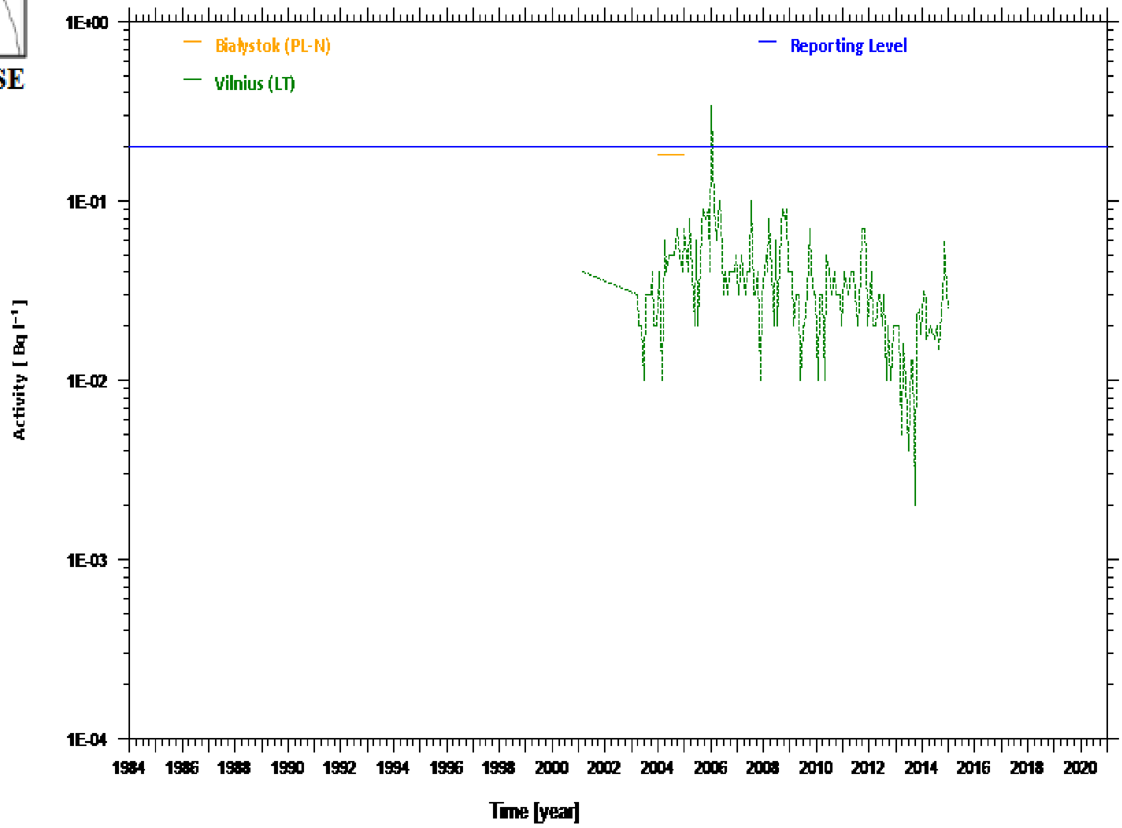


Fig. M12

Activity trends for ^{90}Sr in milk (Białystok and Vilnius)

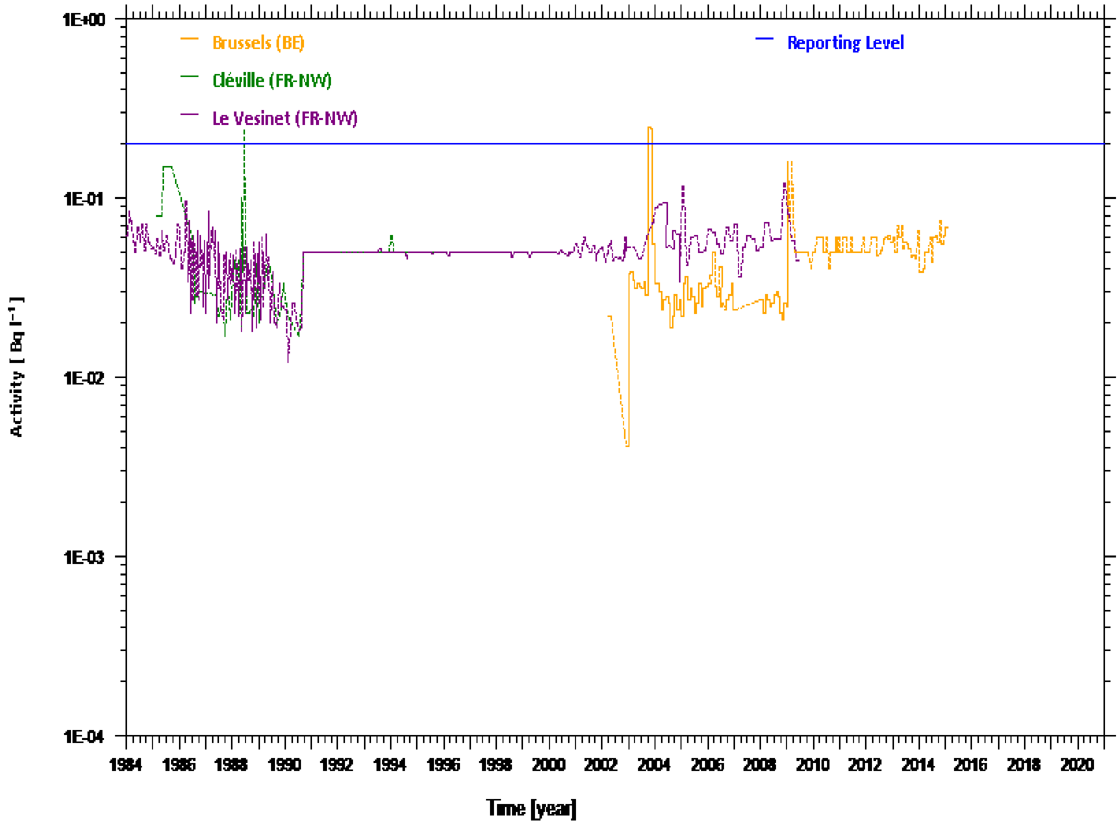


Fig. M13

Activity trends for ^{90}Sr in milk (Brussels, Cléville and Le Vesinet)

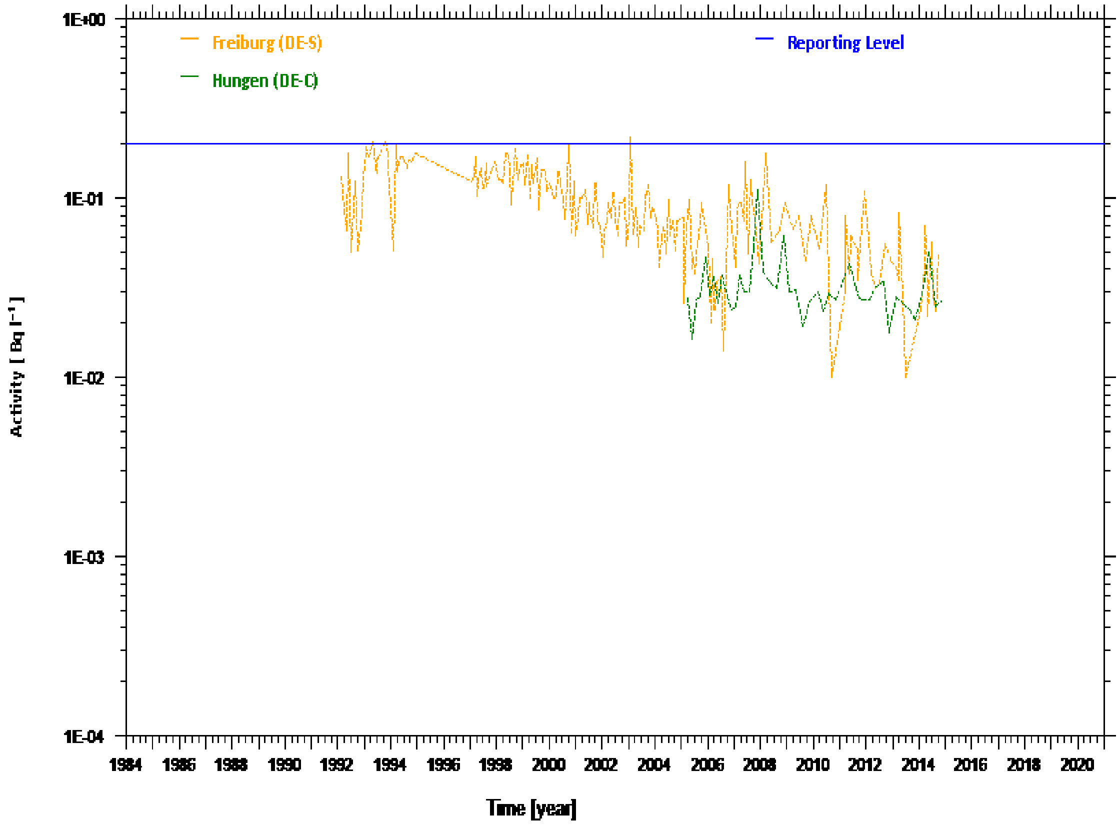


Fig. M14
Activity trends for ^{90}Sr in milk (Freiburg and Hungen)

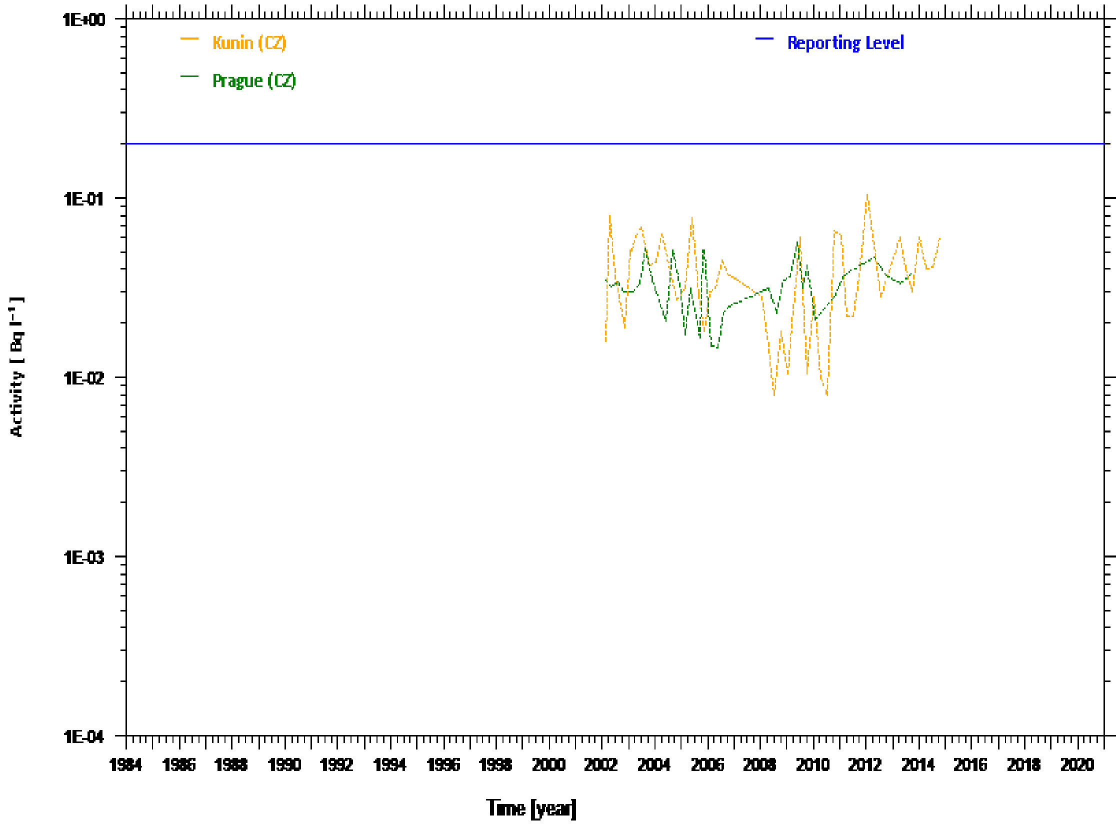


Fig. M15
Activity trends for ^{90}Sr in milk (Kunin and Prague)

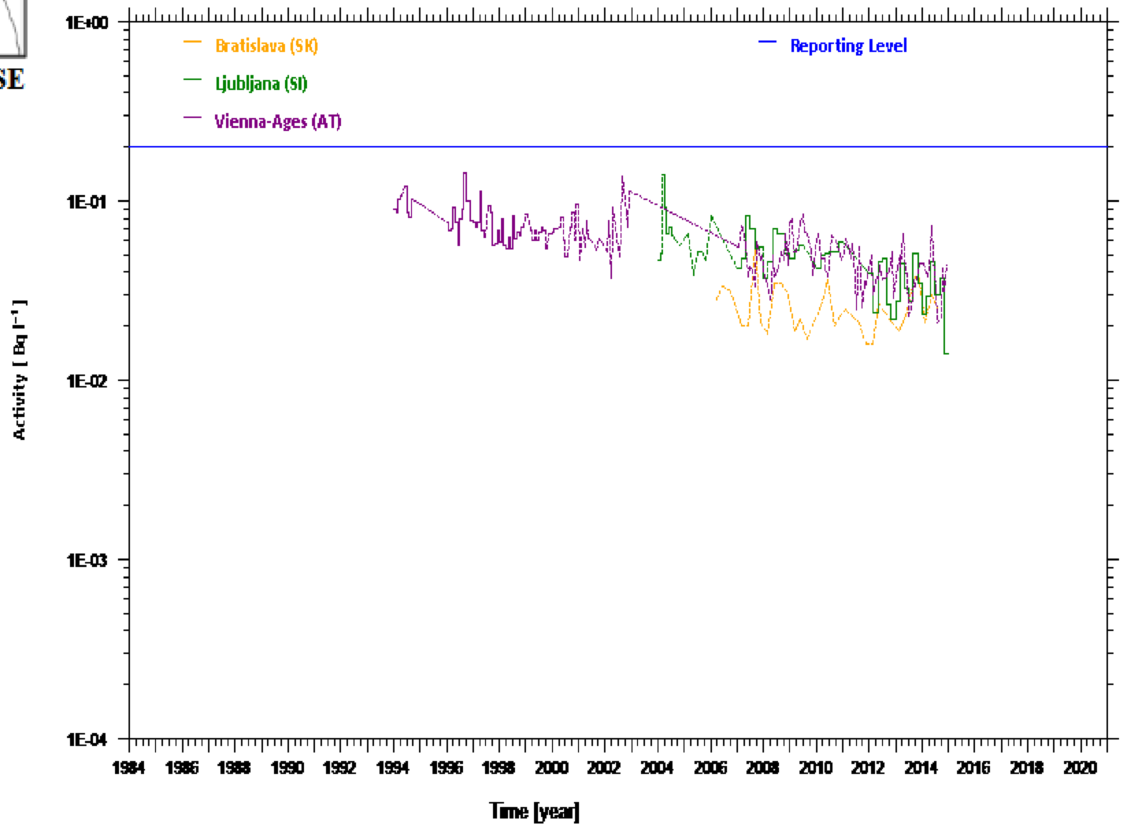


Fig. M16

Activity trends for ^{90}Sr in milk (Bratislava, Ljubljana and Vienna-Ages)

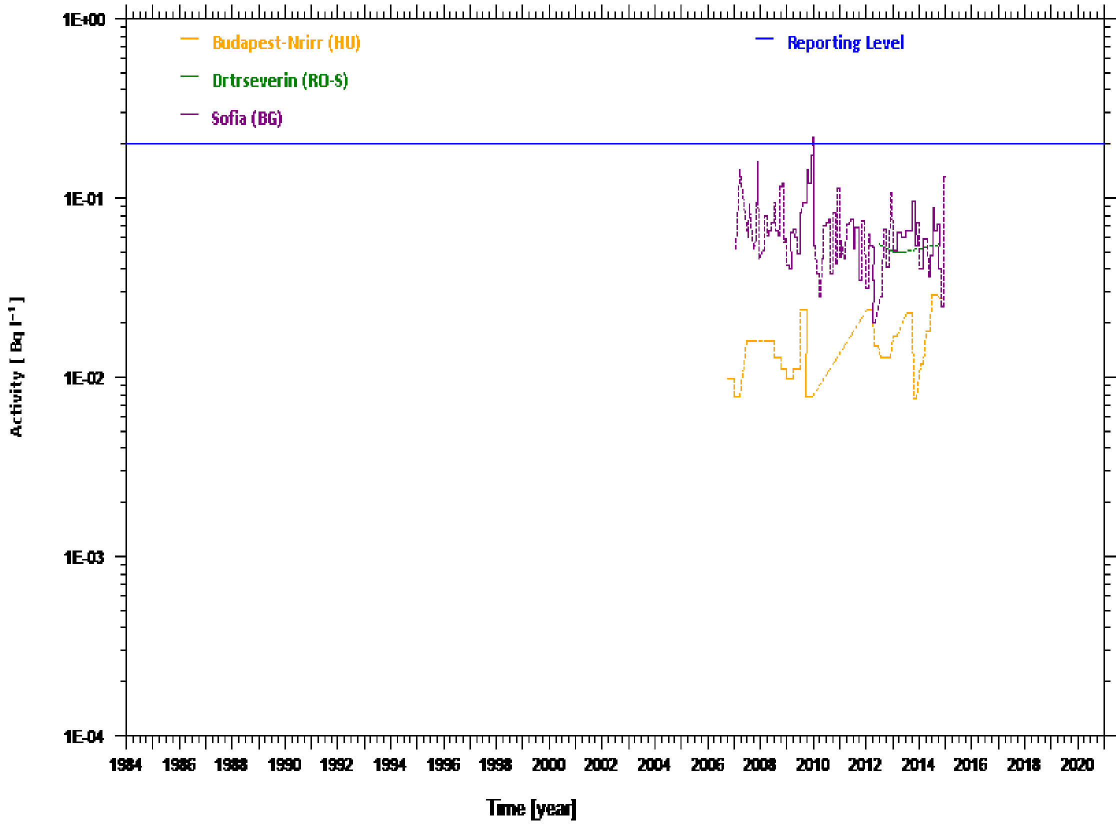


Fig. M17

Activity trends for ^{90}Sr in milk (Budapest-Nrirr, Drtrseverin and Sofia)

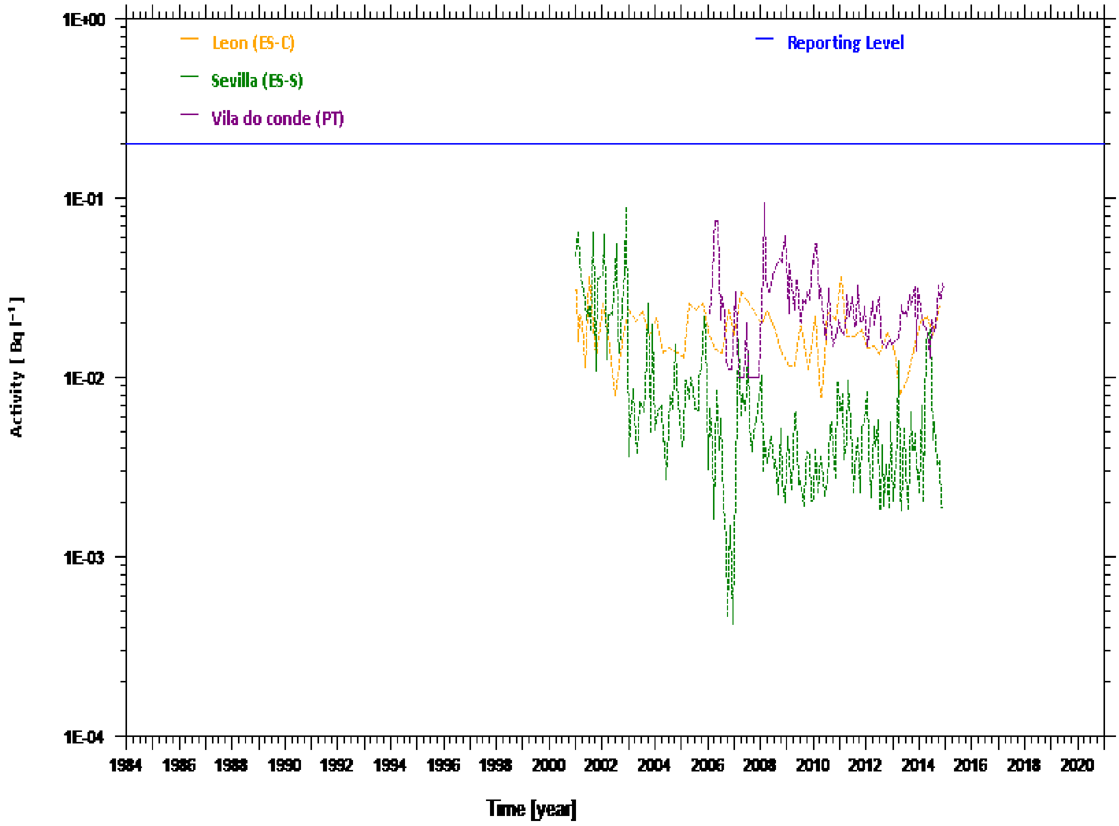


Fig. M18

Activity trends for ^{90}Sr in milk (Leon, Sevilla and Vila do conde)

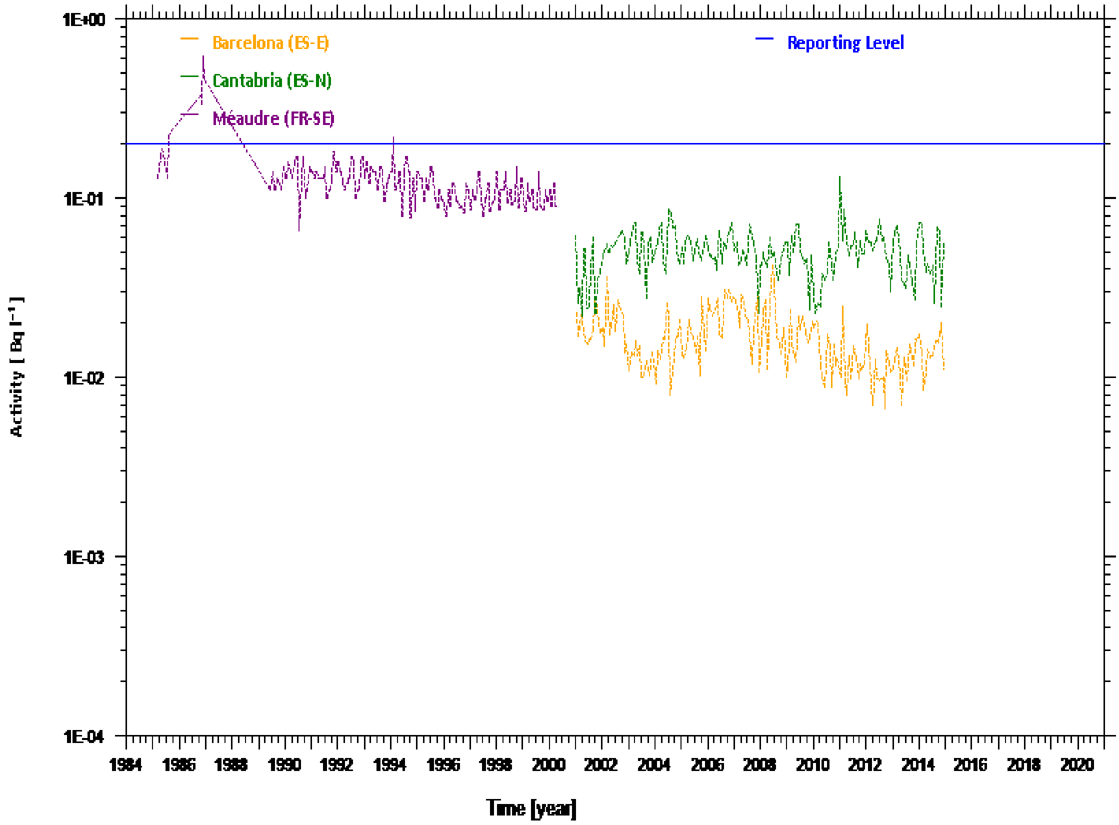


Fig. M19

Activity trends for ^{90}Sr in milk (Barcelona, Cantabria and Méaudre)

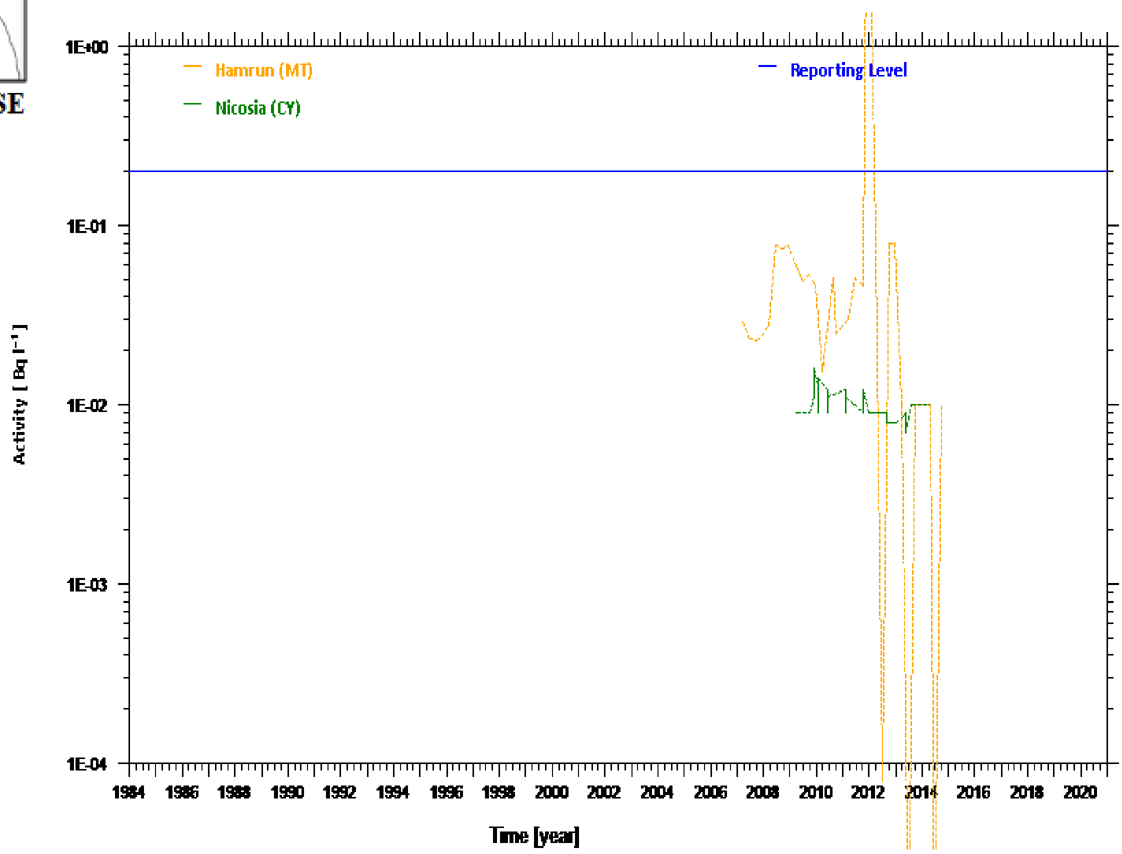


Fig. M20
Activity trends for ^{90}Sr in milk (Hamrun and Nicosia)

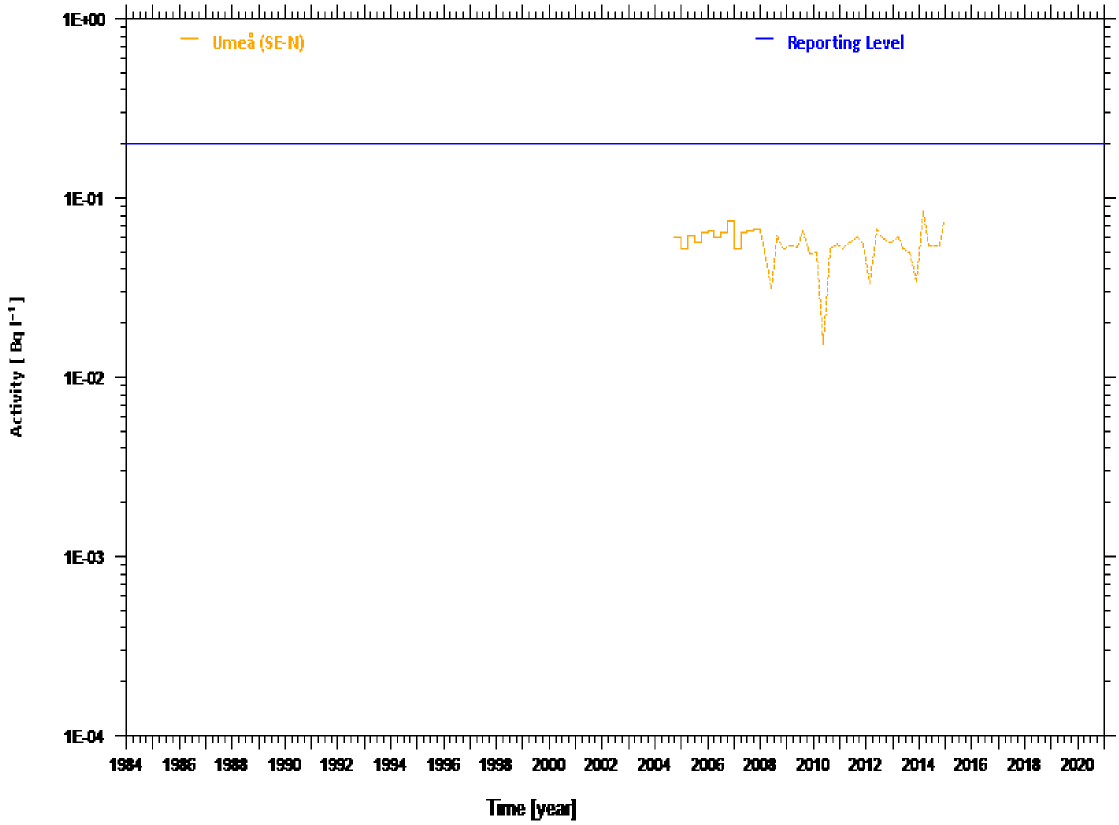


Fig. M21
Activity trends for ^{90}Sr in milk (Umeå)

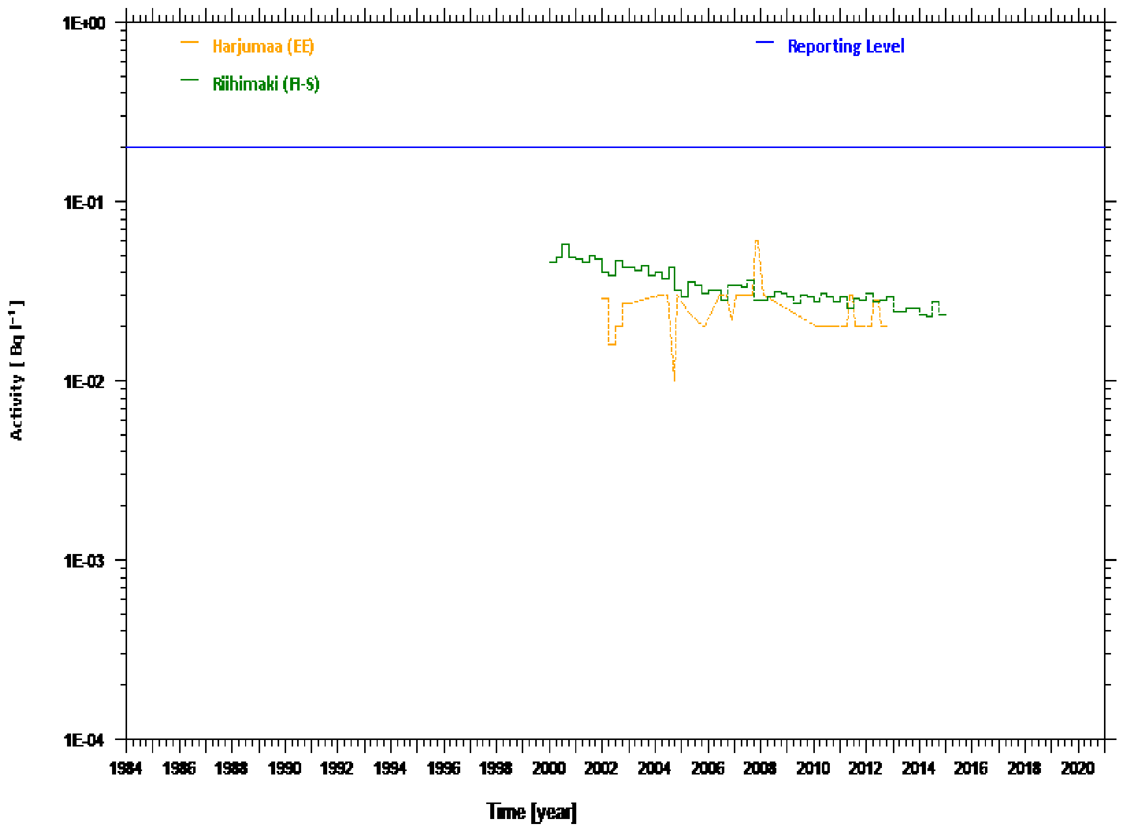


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Fig. M22

Activity trends for ^{90}Sr in milk (Harjumaa and Riihimaki)

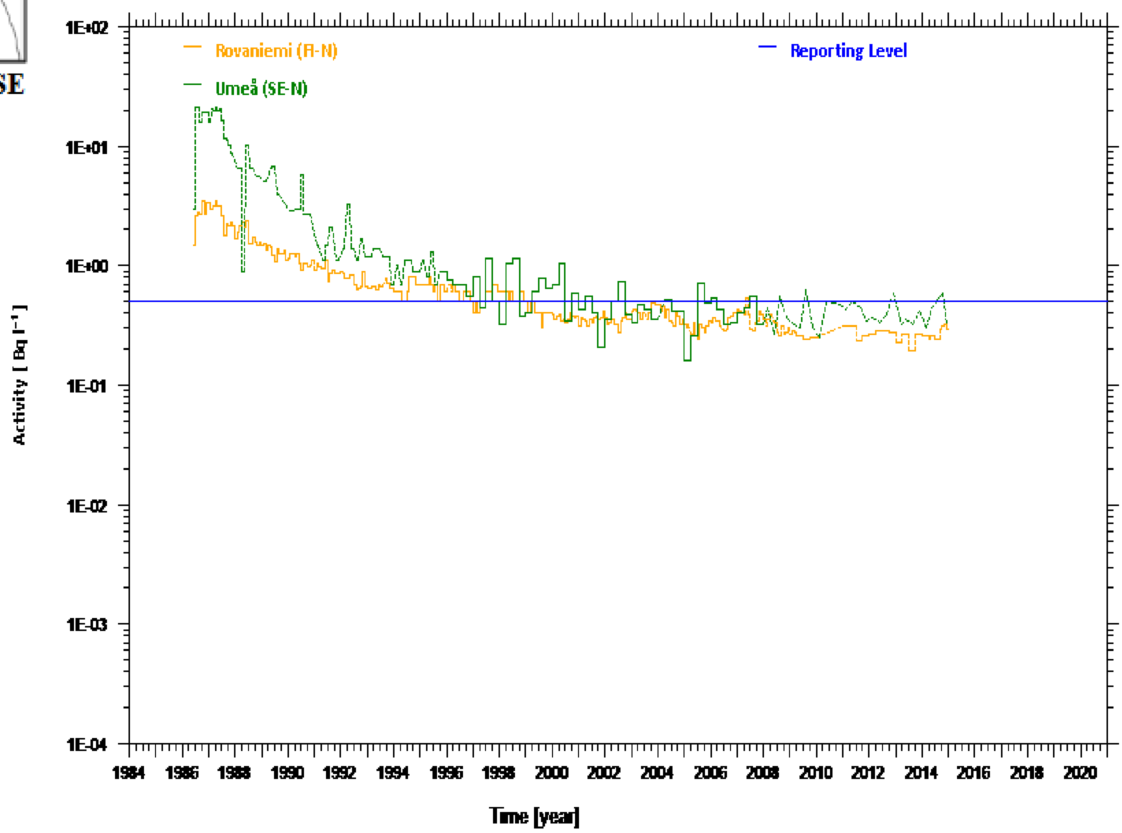


Fig. M23
Activity trends for ^{137}Cs in milk (Rovaniemi and Umeå)

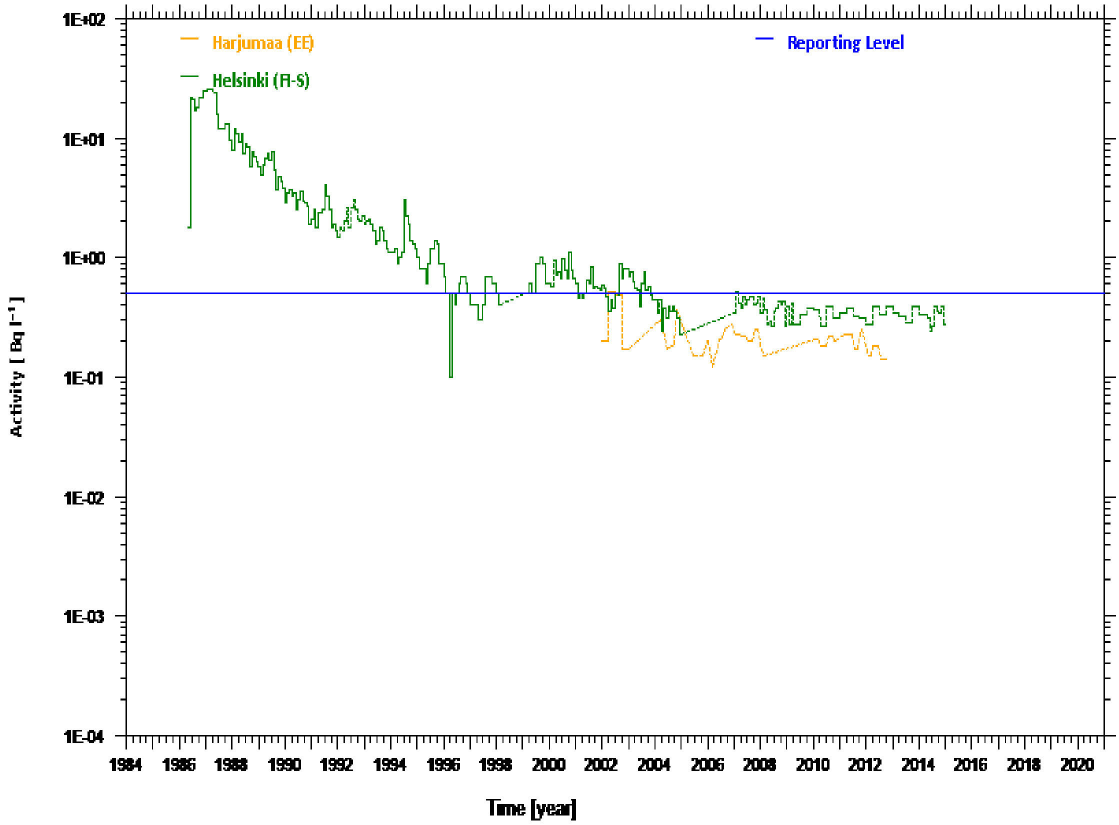


Fig. M24
Activity trends for ^{137}Cs in milk (Harjumaa and Helsinki)

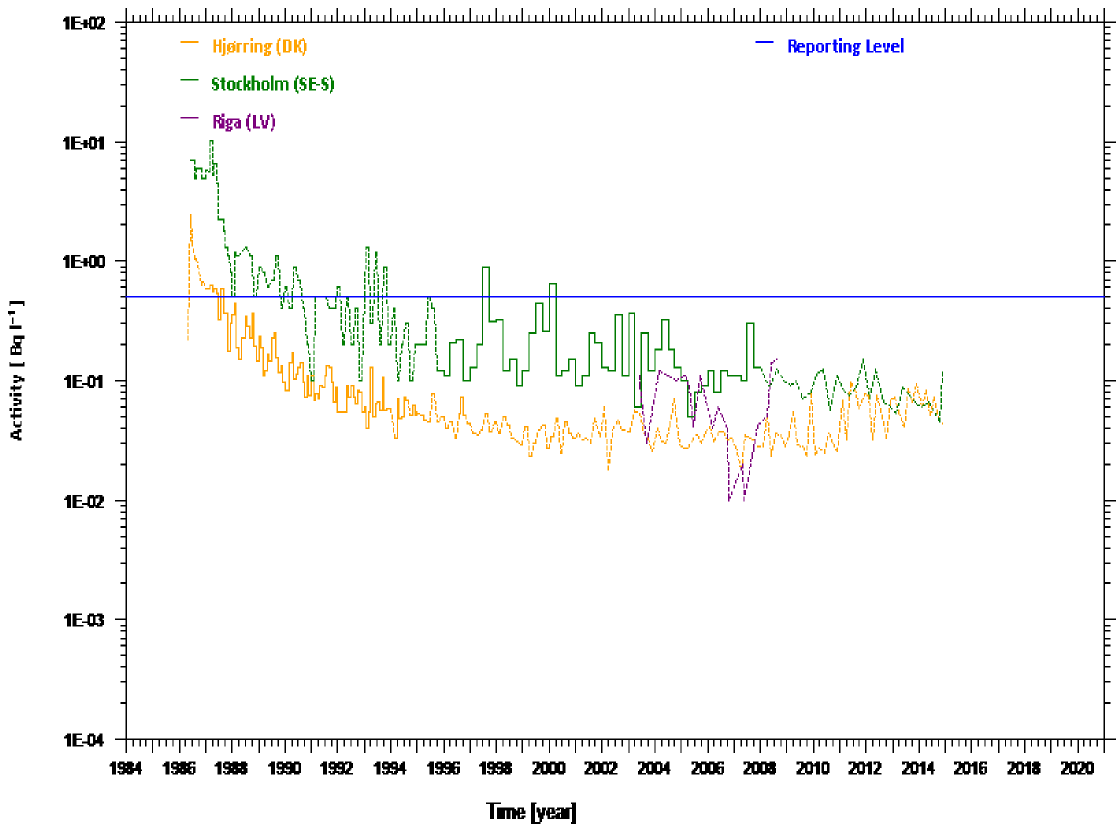


Fig. M25
Activity trends for ^{137}Cs in milk (Hjørring, Stockholm and Riga)

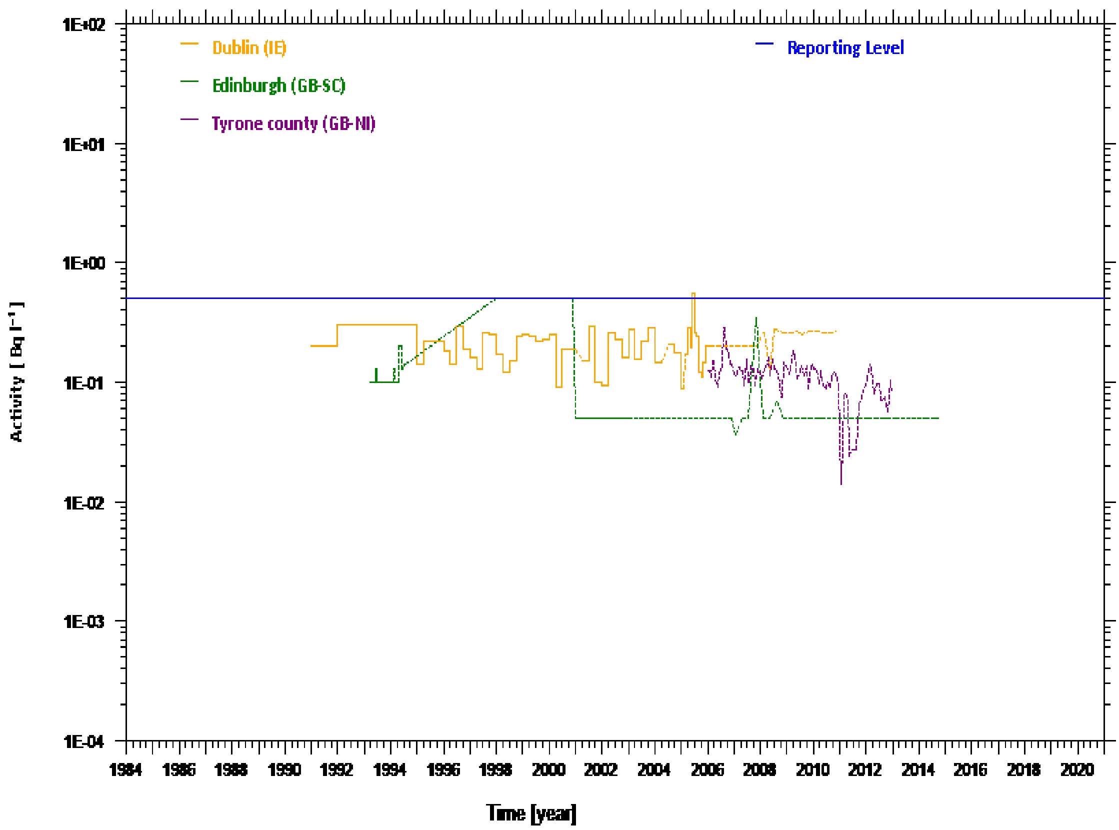


Fig. M26
Activity trends for ^{137}Cs in milk (Dublin, Edinburgh and Tyrone county)

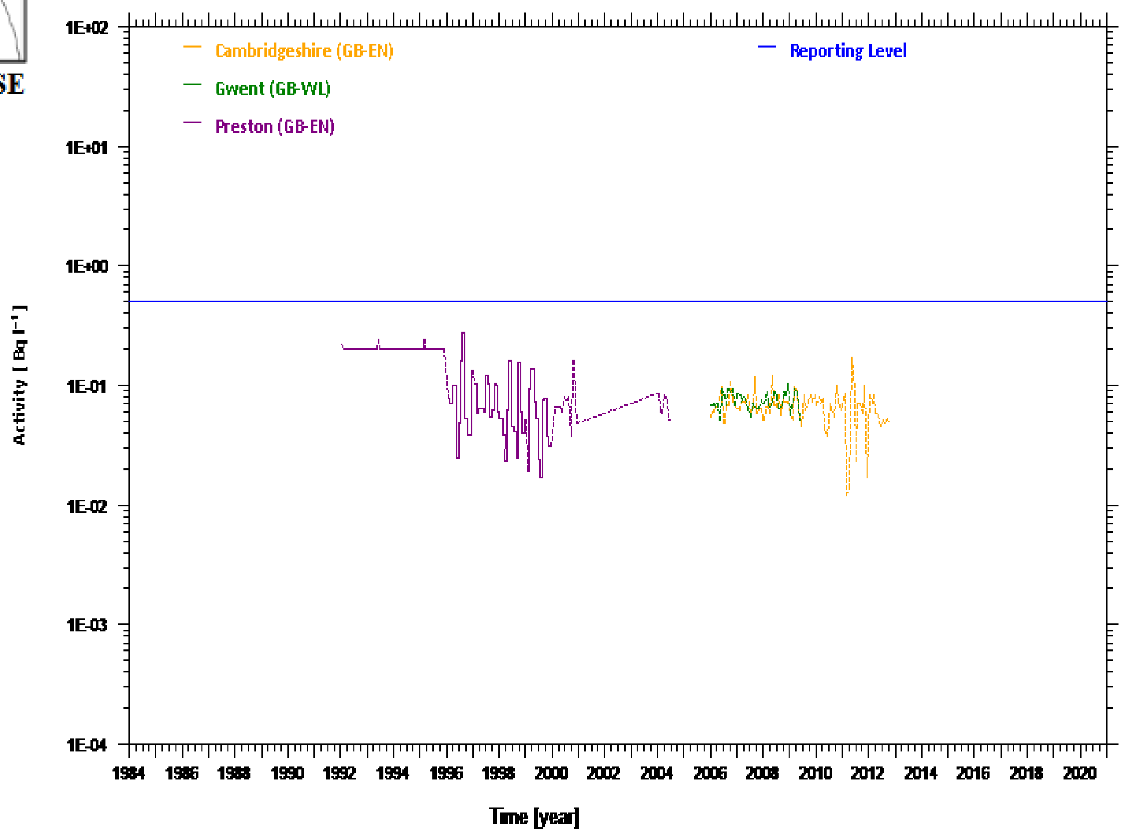


Fig. M27

Activity trends for ^{137}Cs in milk (Cambridgeshire, Gwent and Preston)

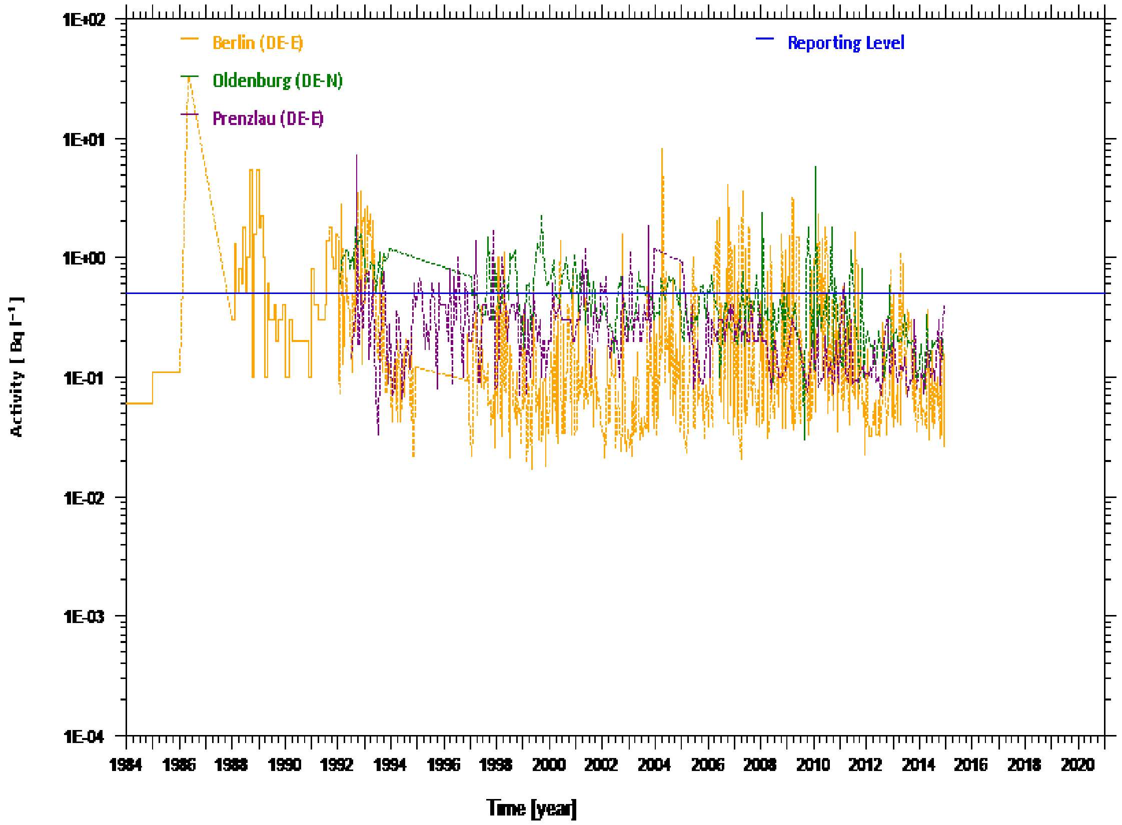
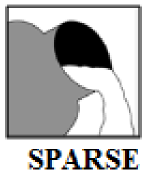


Fig. M28

Activity trends for ^{137}Cs in milk (Berlin, Oldenburg and Prenzlau)



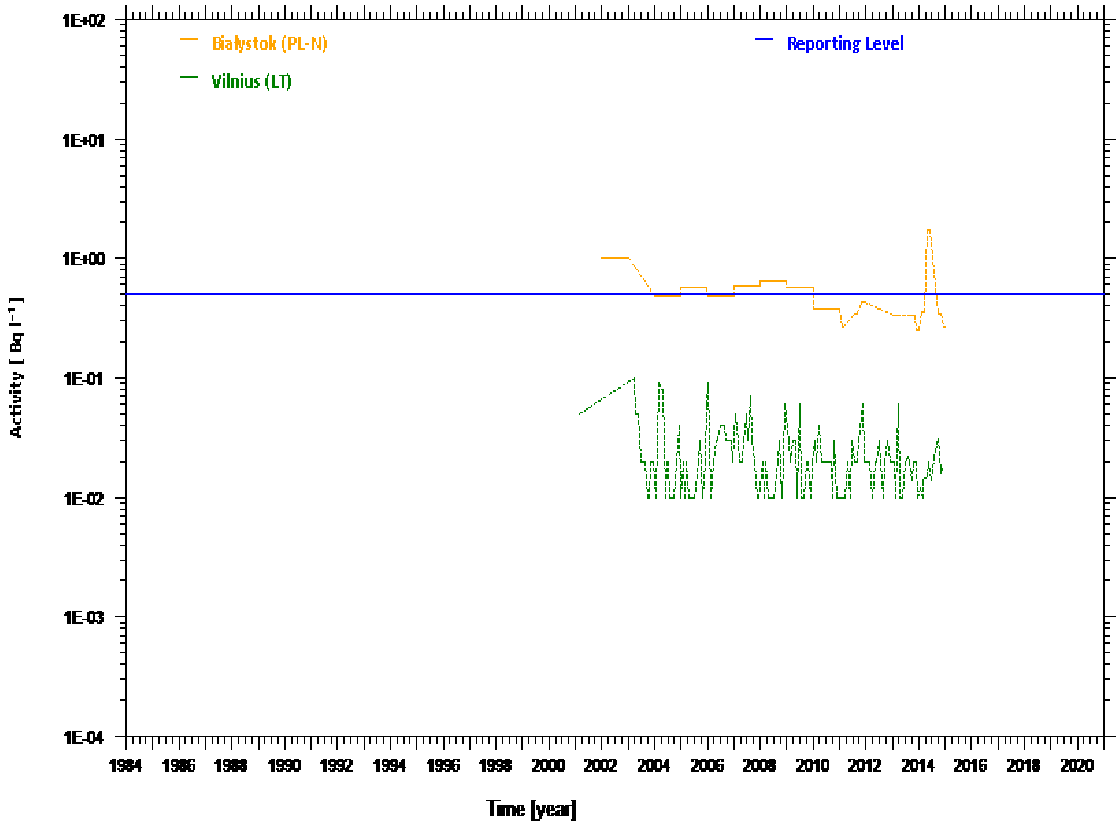


Fig. M29

Activity trends for ^{137}Cs in milk (Białystok and Vilnius)

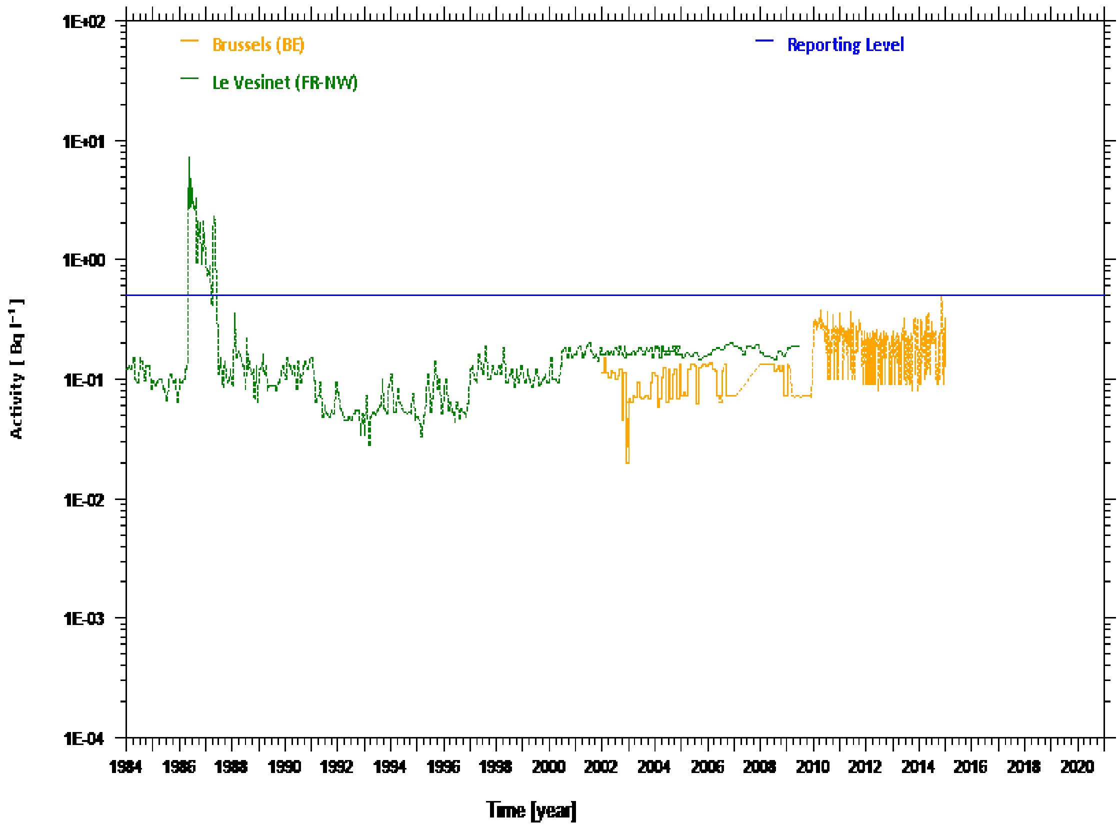


Fig. M30

Activity trends for ^{137}Cs in milk (Brussels and Le Vesinet)

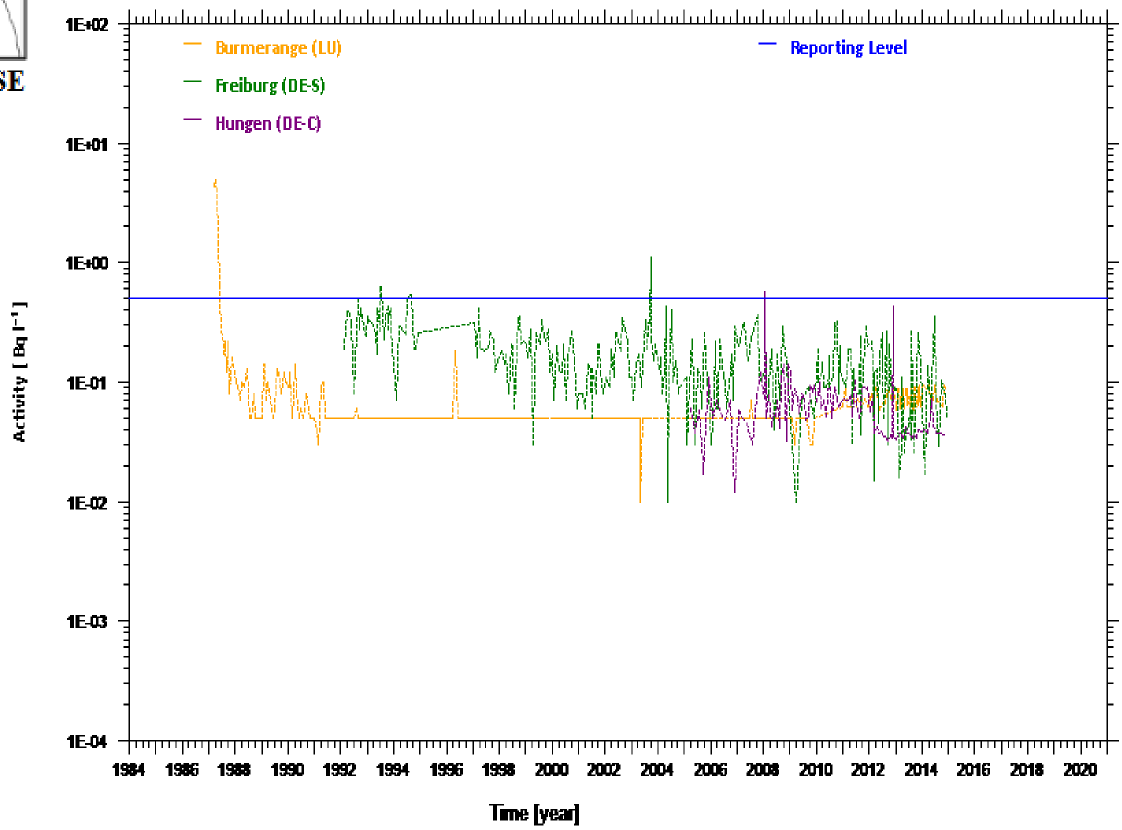


Fig. M31

Activity trends for ^{137}Cs in milk (Burmerange, Freiburg and Hungen)

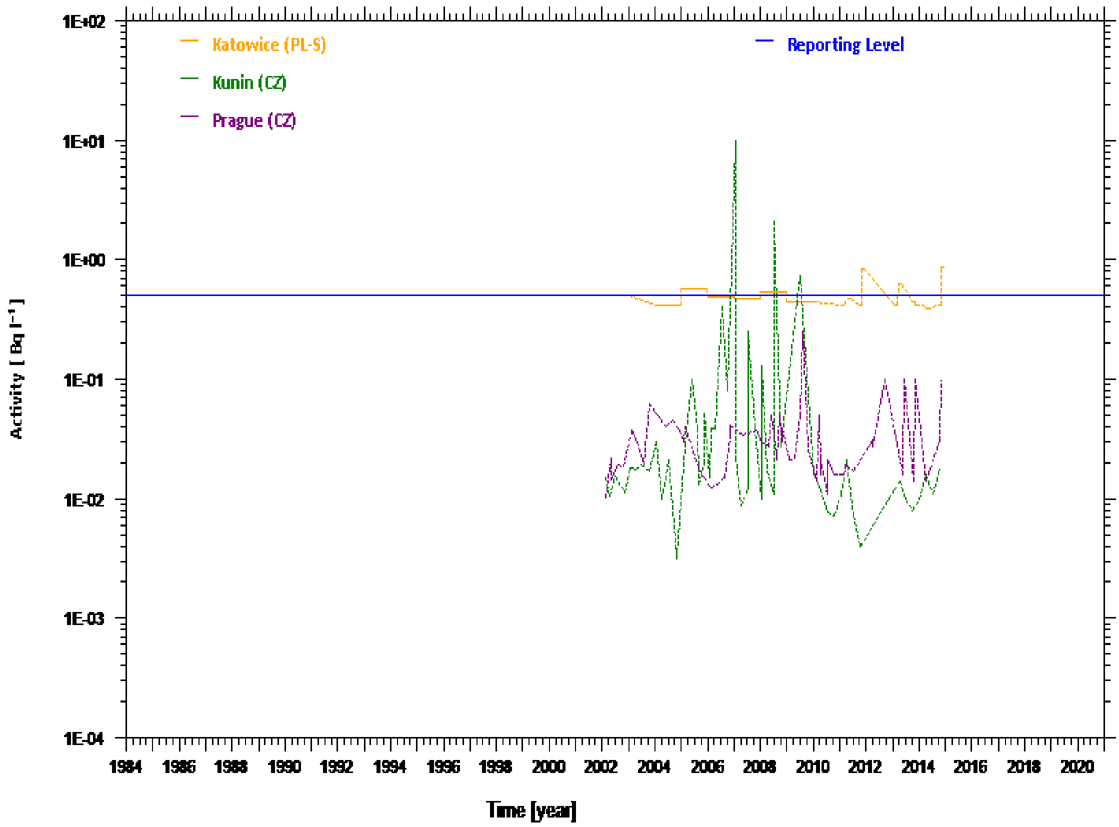


Fig. M32

Activity trends for ^{137}Cs in milk (Katowice, Kunin and Prague)

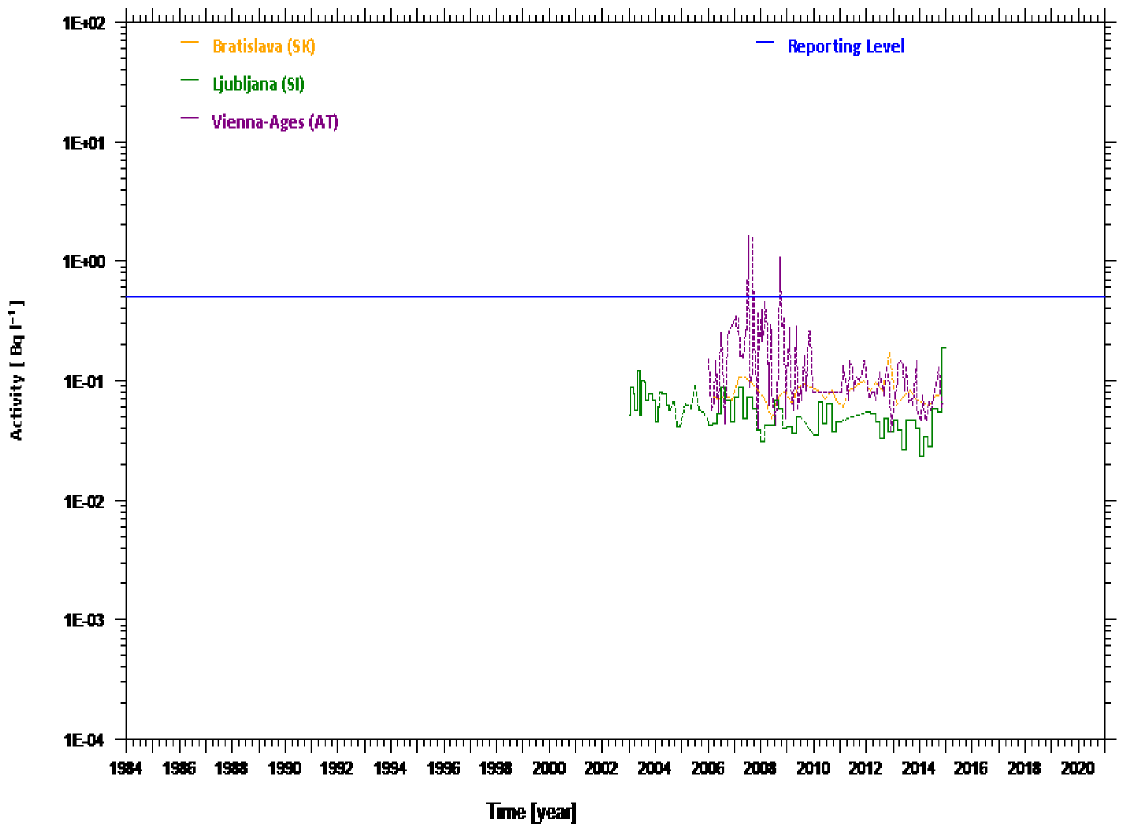


Fig. M33

Activity trends for ^{137}Cs in milk (Bratislava, Ljubljana and Vienna-Ages)

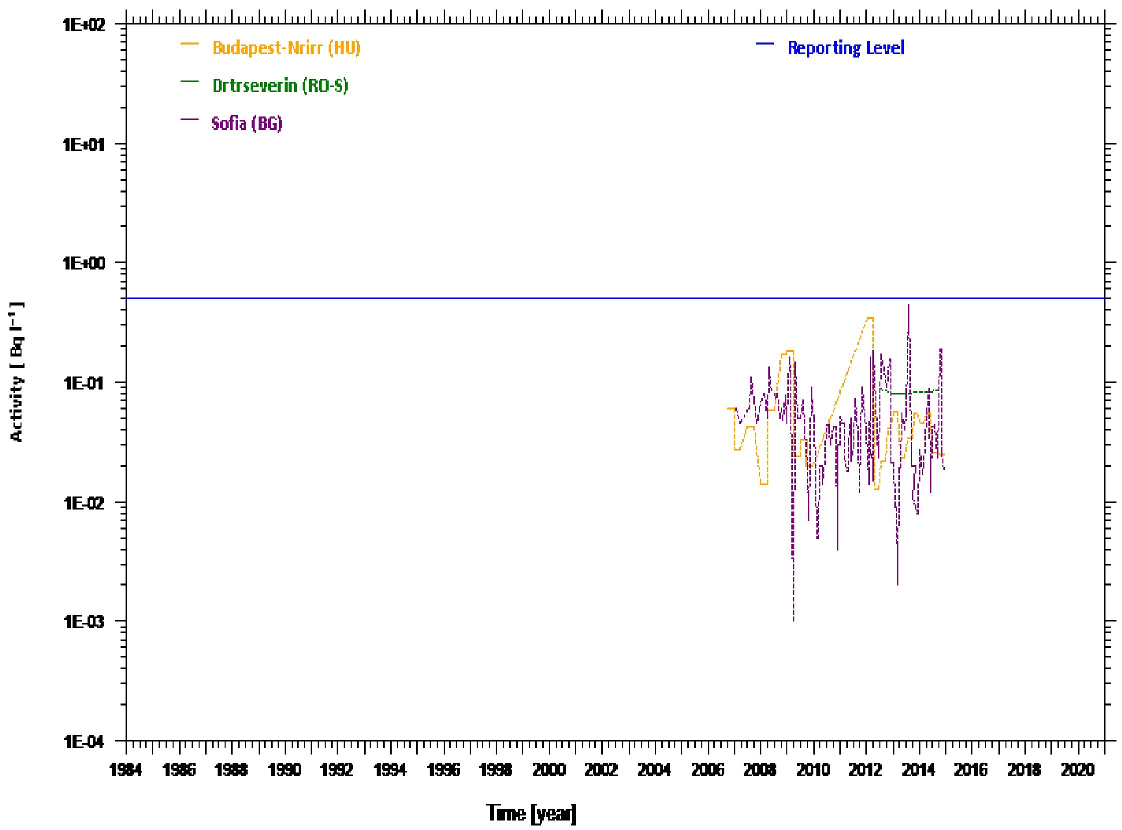


Fig. M34

Activity trends for ^{137}Cs in milk (Budapest-Nrirr, Drtrseverin and Sofia)

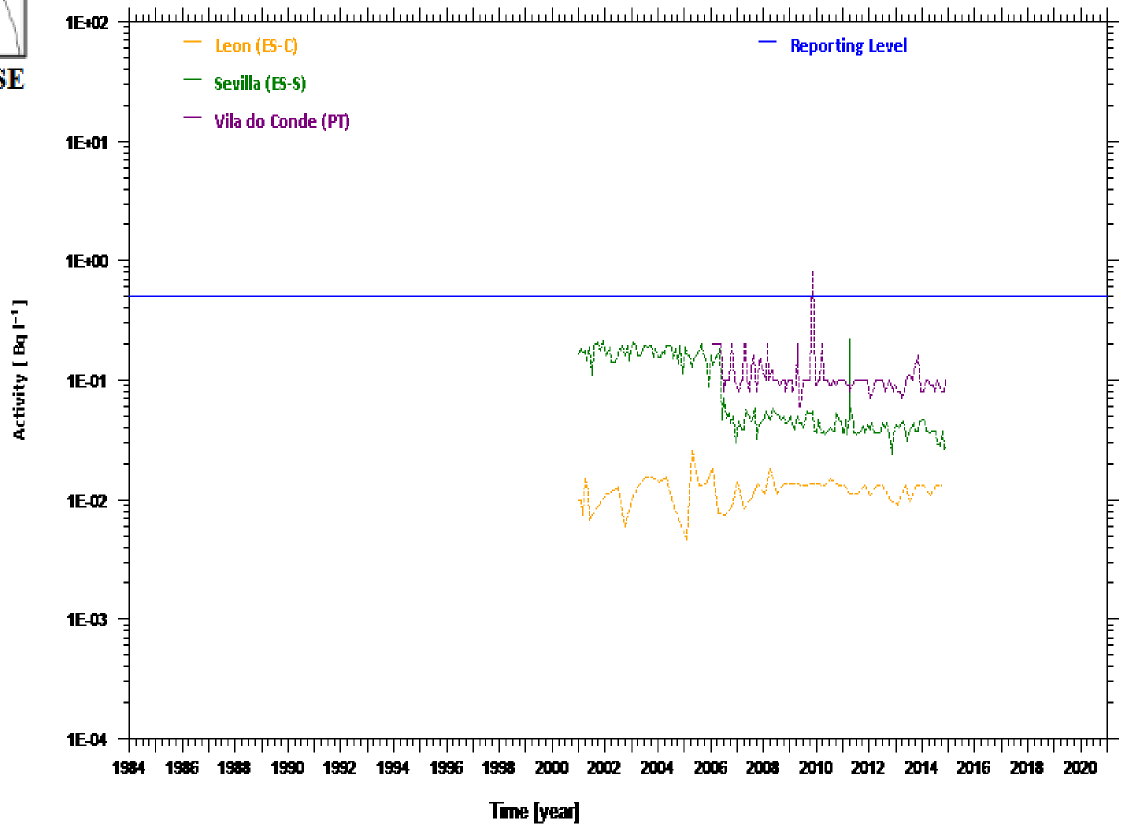


Fig. M35

Activity trends for ^{137}Cs in milk (Leon, Sevilla and Vila do Conde)

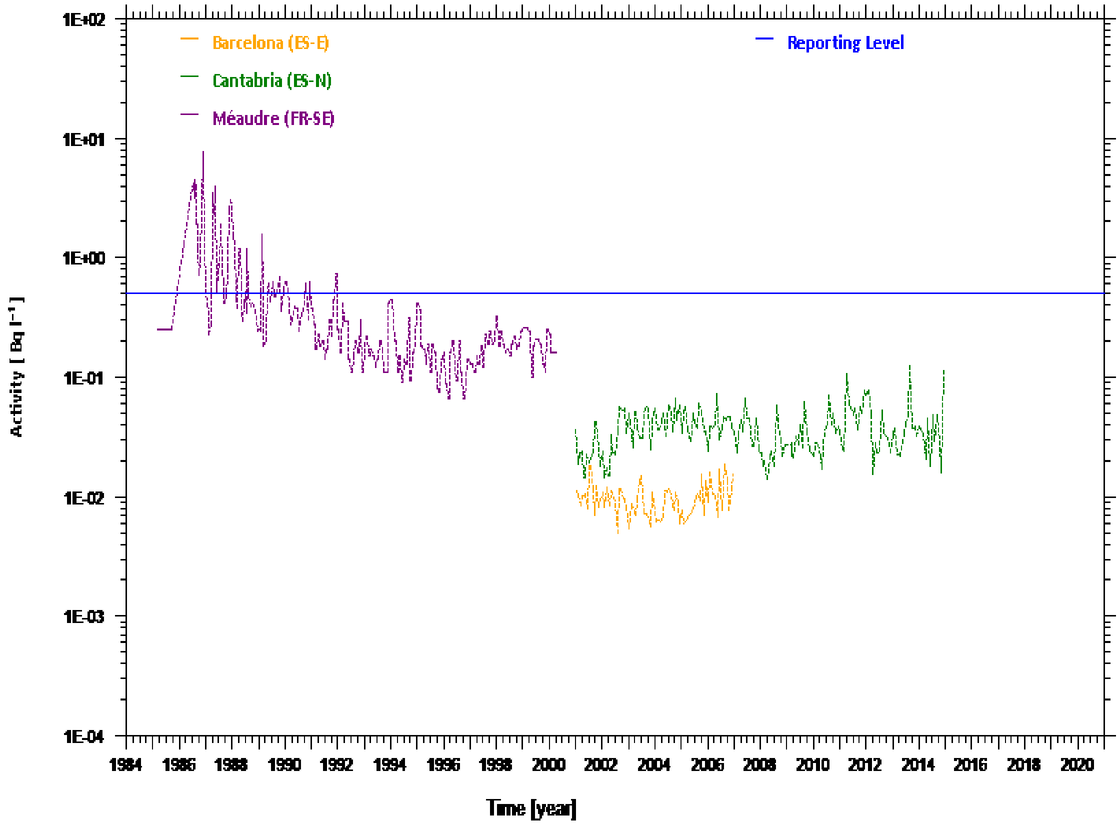


Fig. M36

Activity trends for ^{137}Cs in milk (Barcelona, Cantabria and Méaudre)

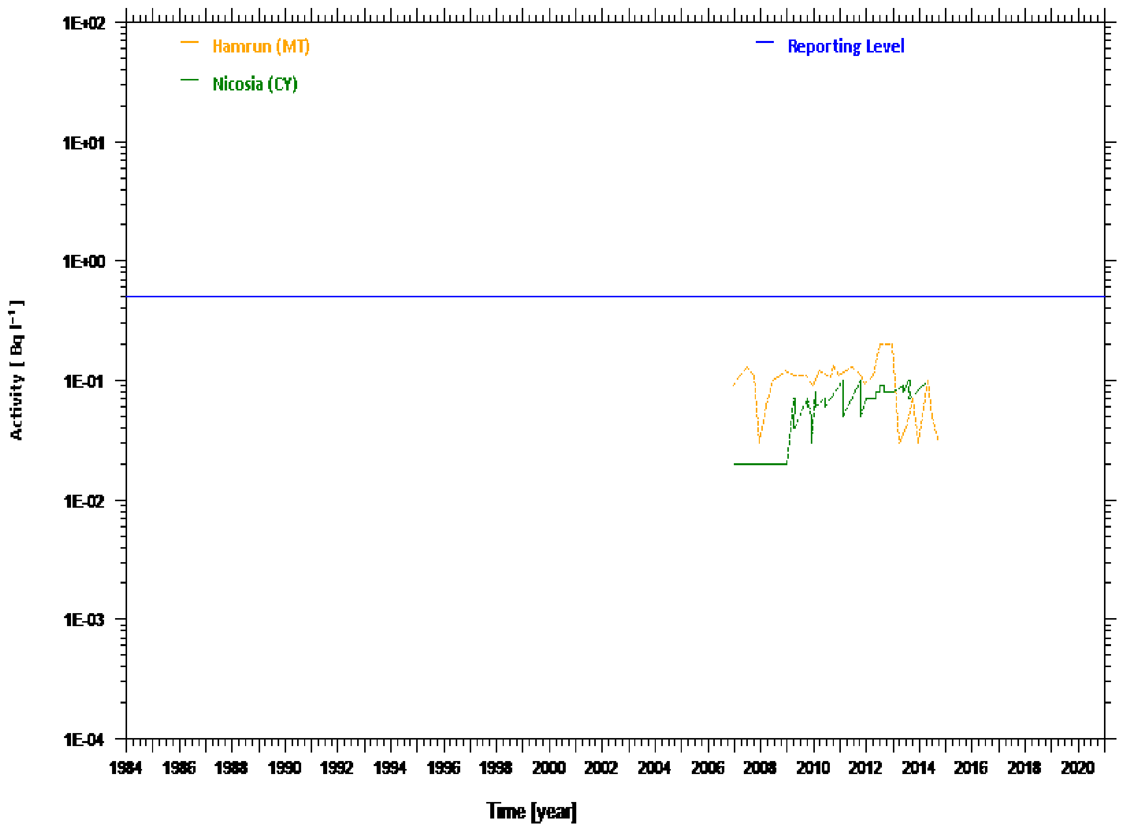


Fig. M37

Activity trends for ^{137}Cs in milk (Hamrun and Nicosia)

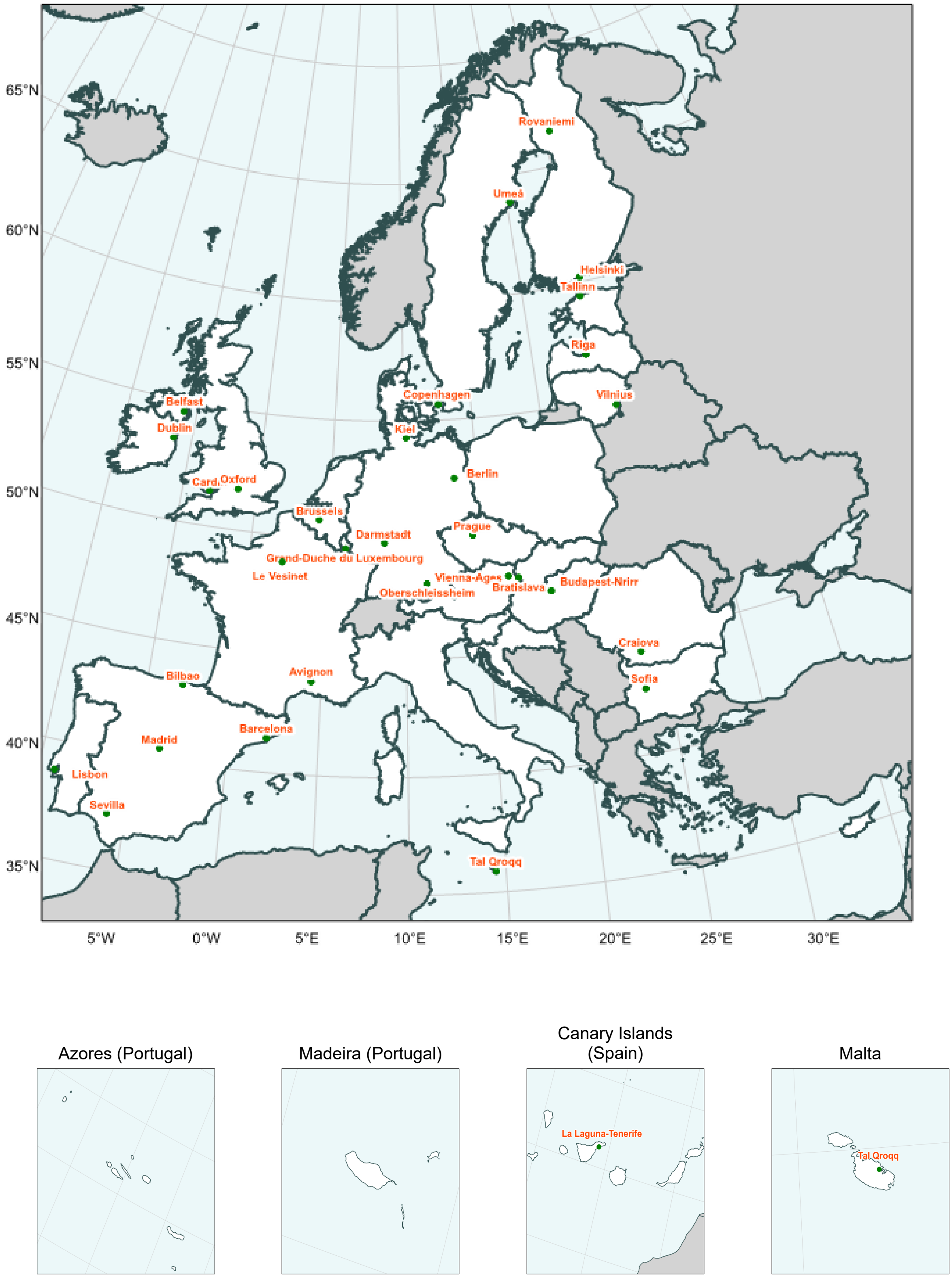


Fig. D7

Sampling locations for ^{90}Sr and ^{137}Cs in mixed diet considered in Figures D8 – D30

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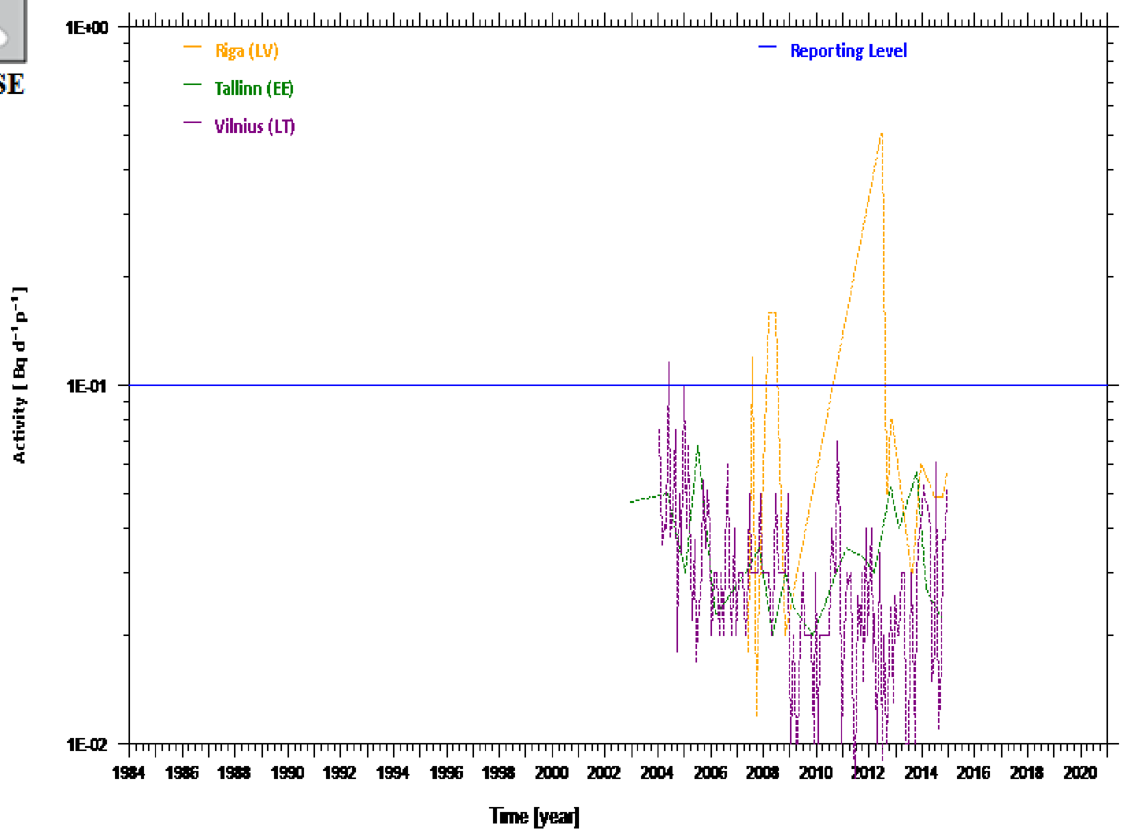

Fig. D8

Activity trends for ^{90}Sr in mixed diet (Riga, Tallinn and Vilnius)

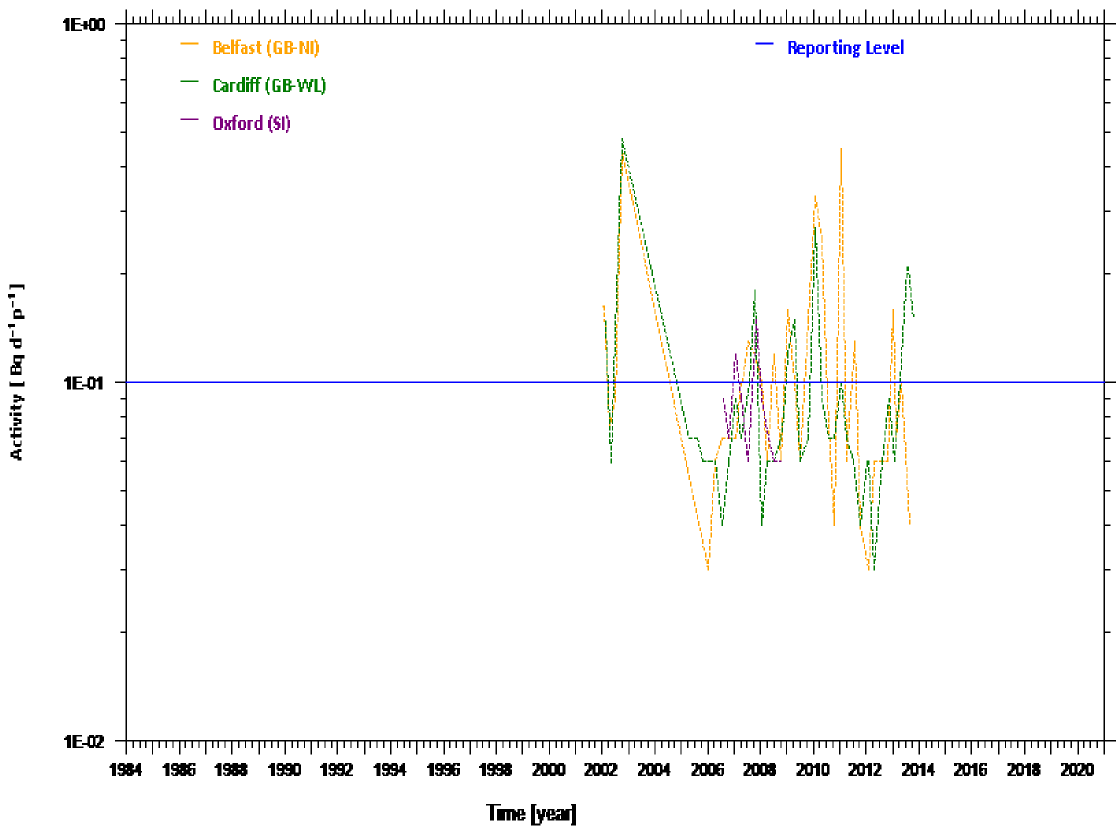

Fig. D9

Activity trends for ^{90}Sr in mixed diet (Belfast, Cardiff and Oxford)

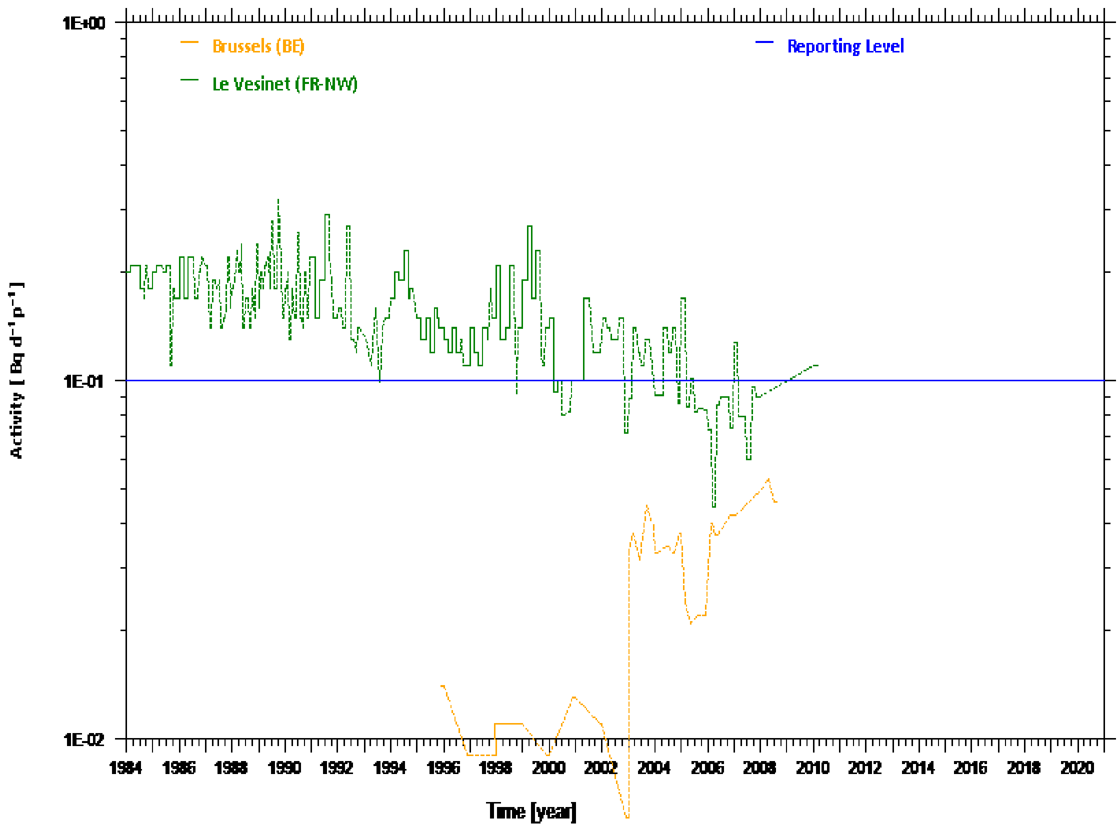

Fig. D10

Activity trends for ^{90}Sr in mixed diet (Brussels and Le Vesinet)

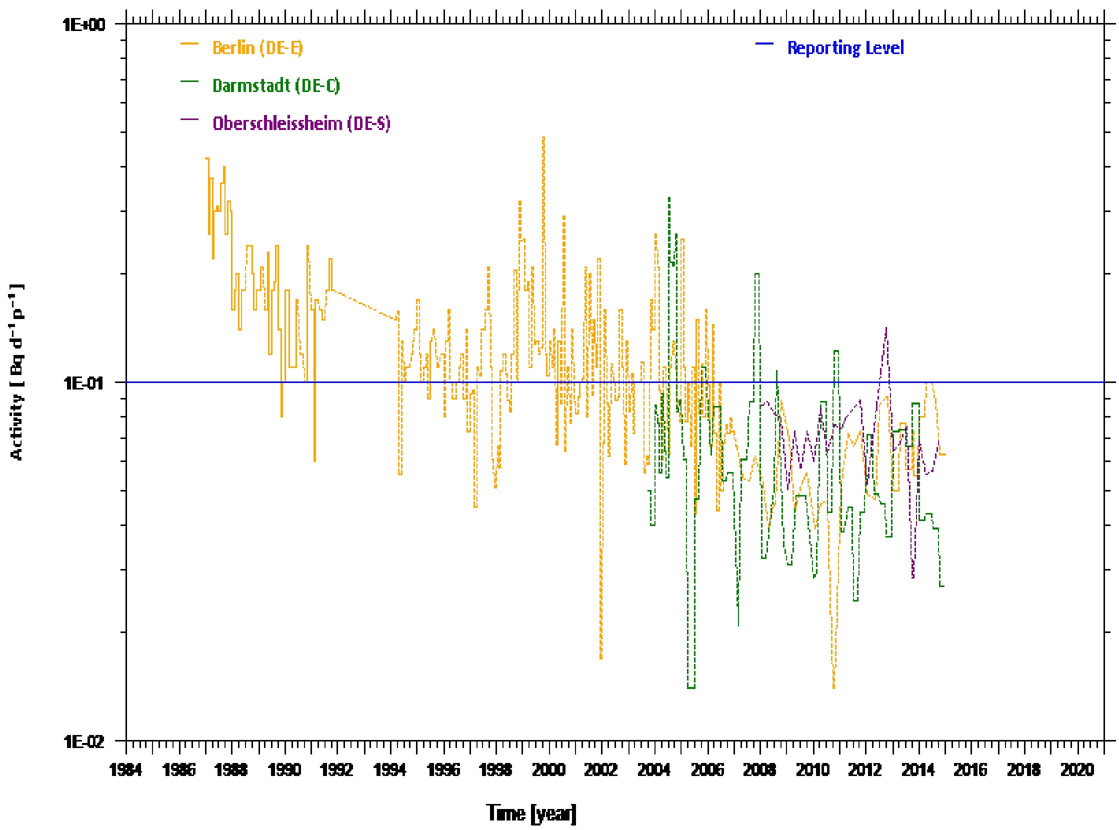

Fig. D11

Activity trends for ^{90}Sr in mixed diet (Berlin, Darmstadt and Oberschleissheim)

SPARSE

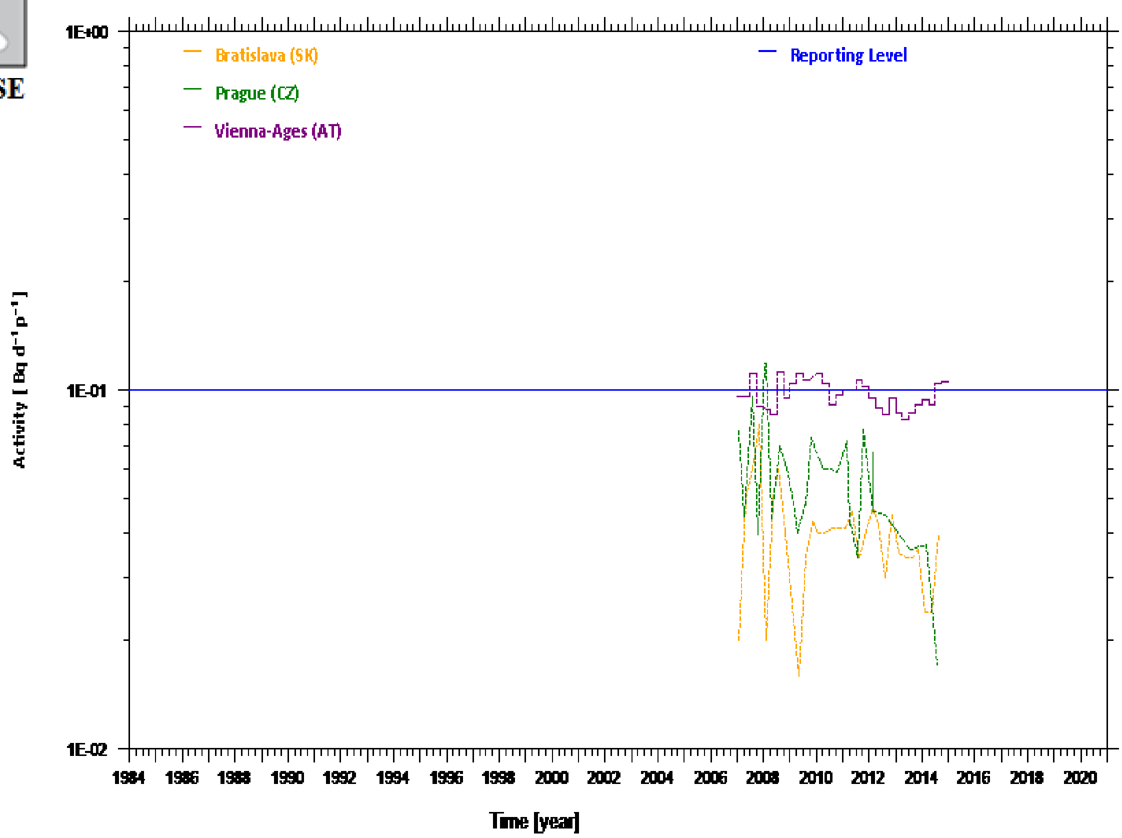

Fig. D12

Activity trends for ^{90}Sr in mixed diet (Bratislava, Prague and Vienna-Ages)

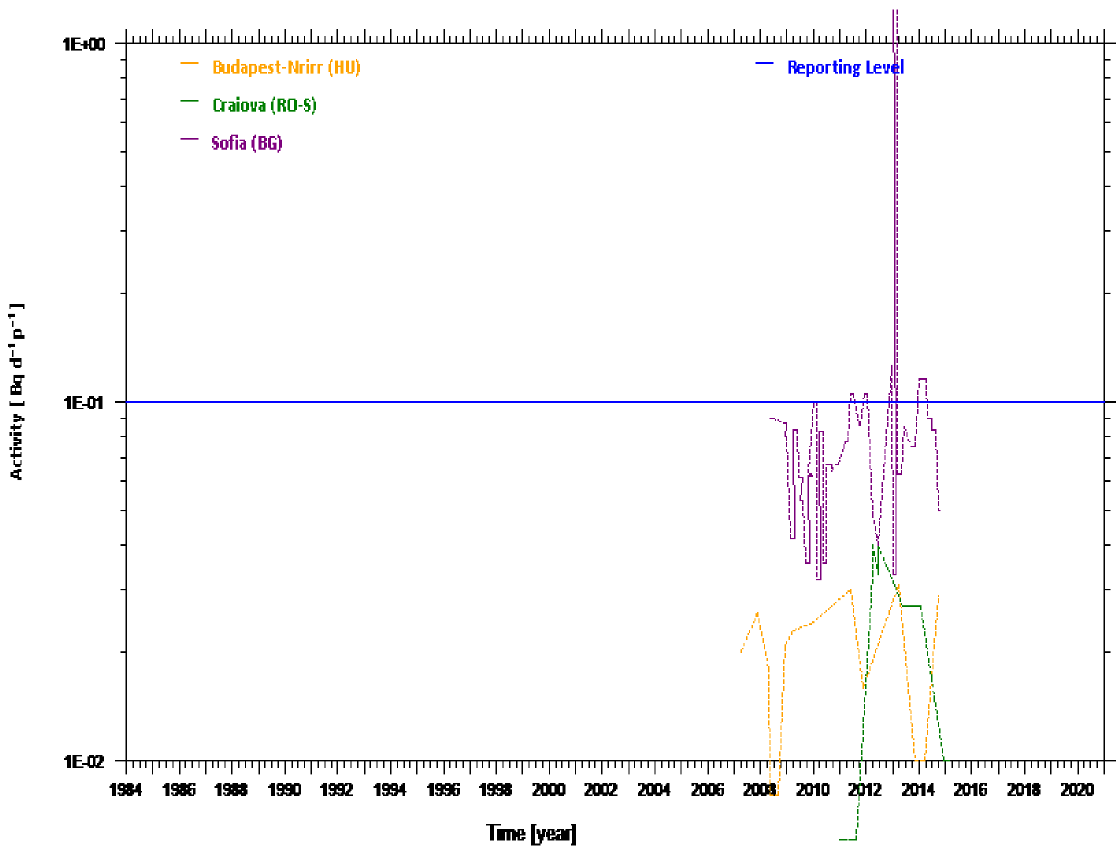

Fig. D13

Activity trends for ^{90}Sr in mixed diet (Budapest-Nrirr, Craiova and Sofia)

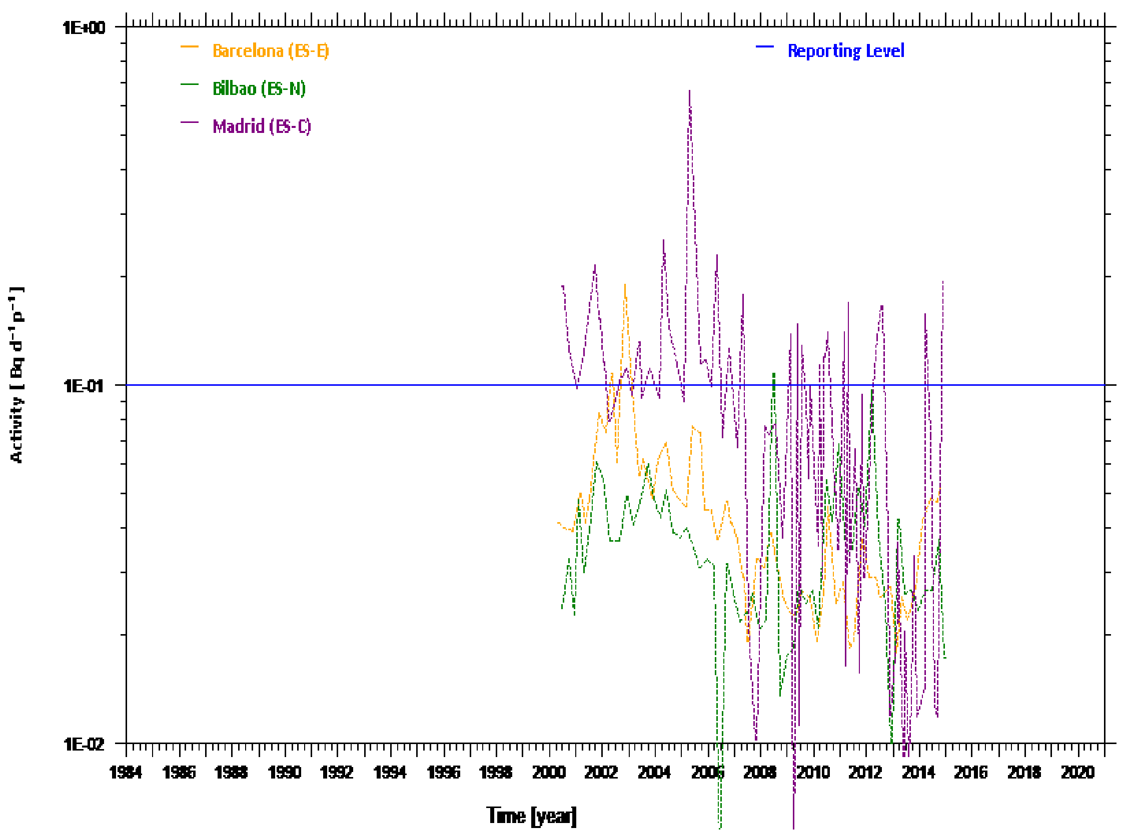

Fig. D14
Activity trends for ^{90}Sr in mixed diet (Barcelona, Bilbao and Madrid)

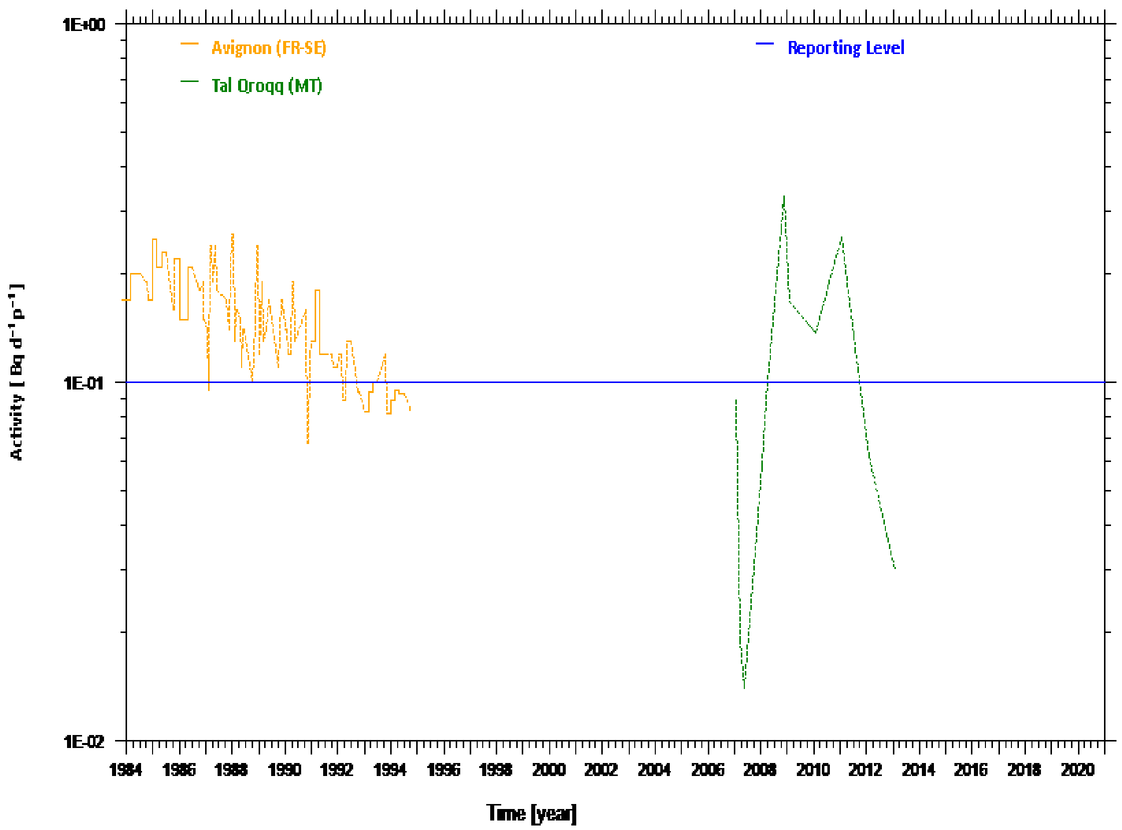

Fig. D15
Activity trends for ^{90}Sr in mixed diet (Avignon and Tal Qroqq)

SPARSE

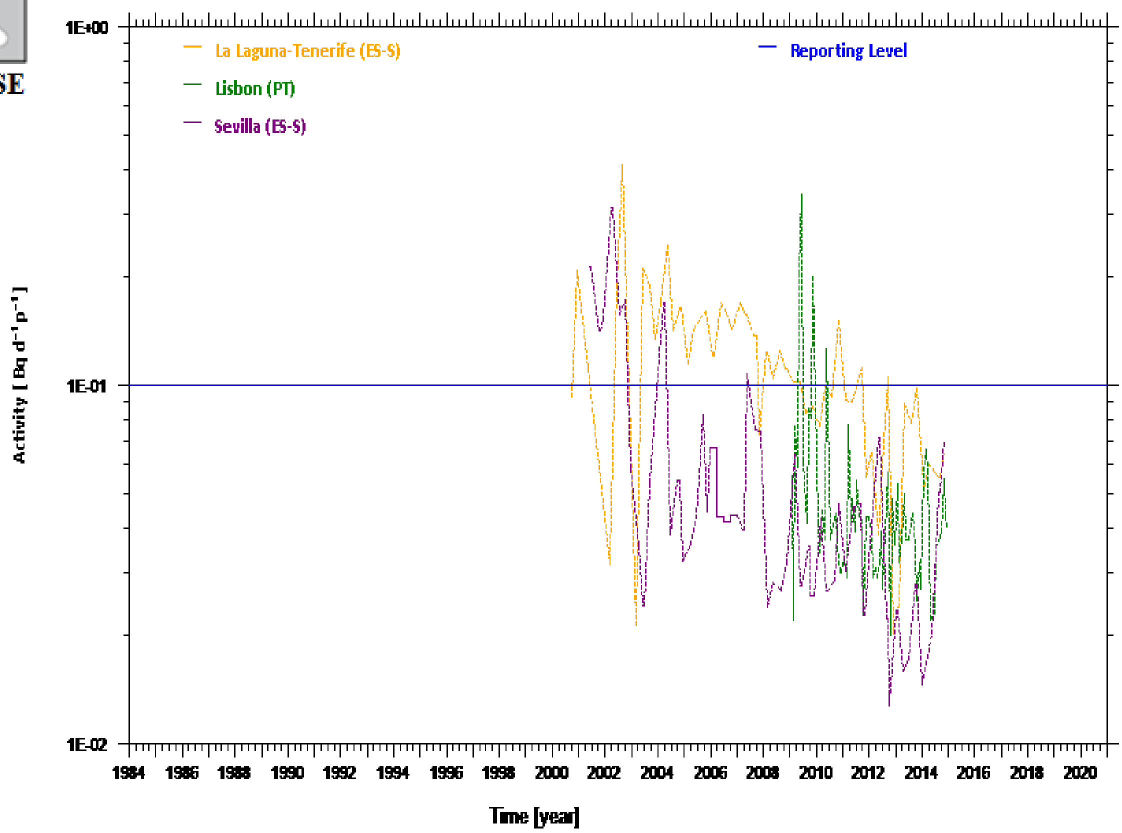

Fig. D16

Activity trends for ^{90}Sr in mixed diet (La Laguna-Tenerife, Lisbon and Sevilla)

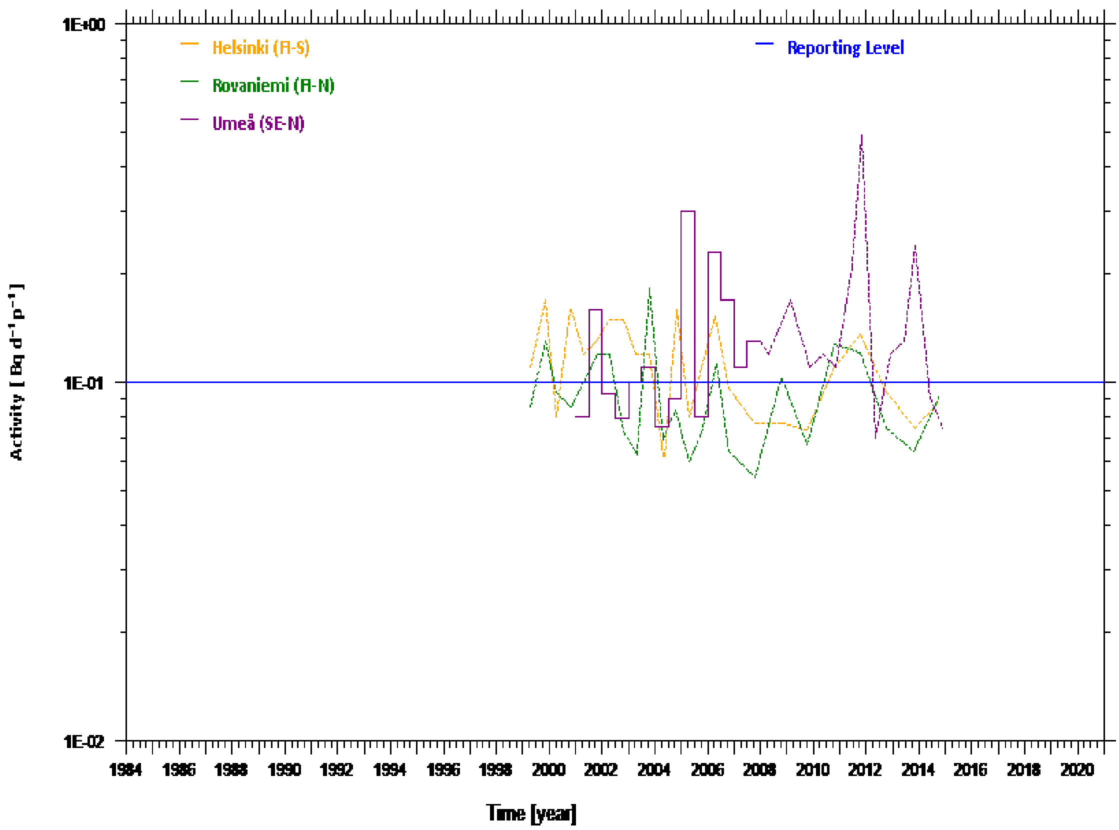

Fig. D17

Activity trends for ^{90}Sr in mixed diet (Helsinki, Rovaniemi and Umeå)

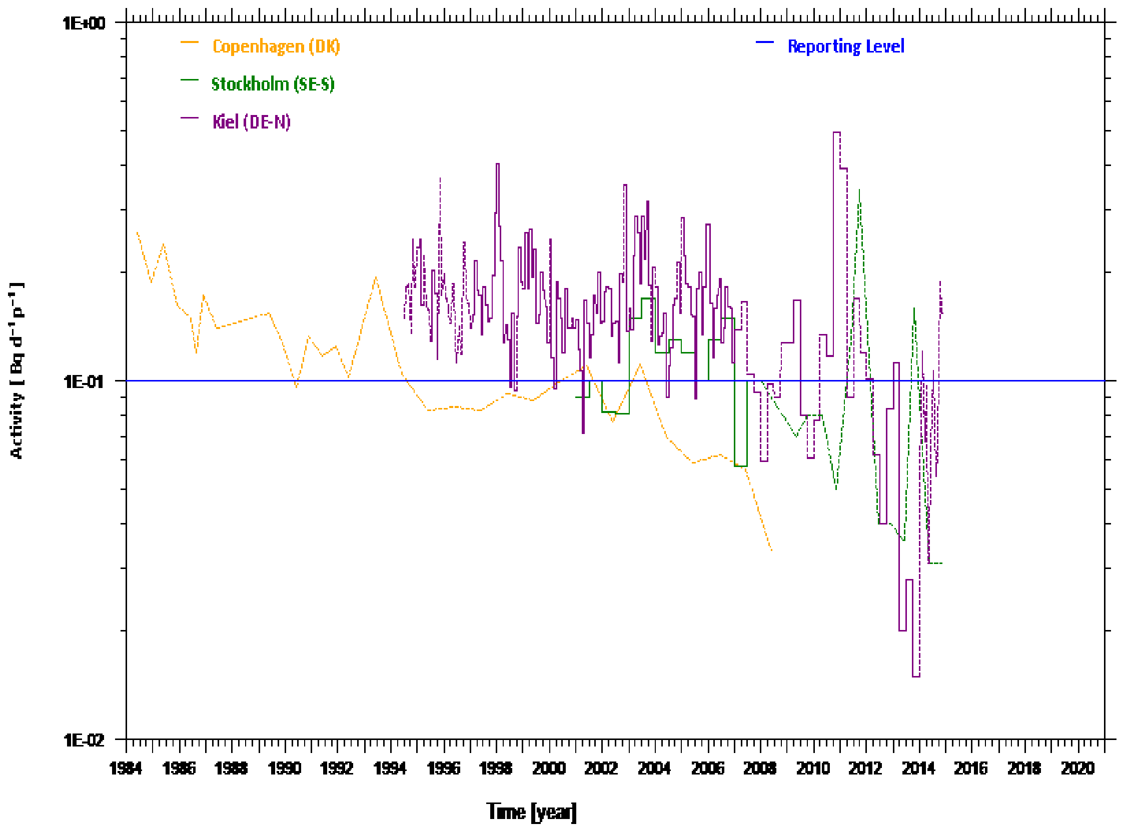

Fig. D18

Activity trends for ^{90}Sr in mixed diet (Copenhagen, Stockholm and Kiel)

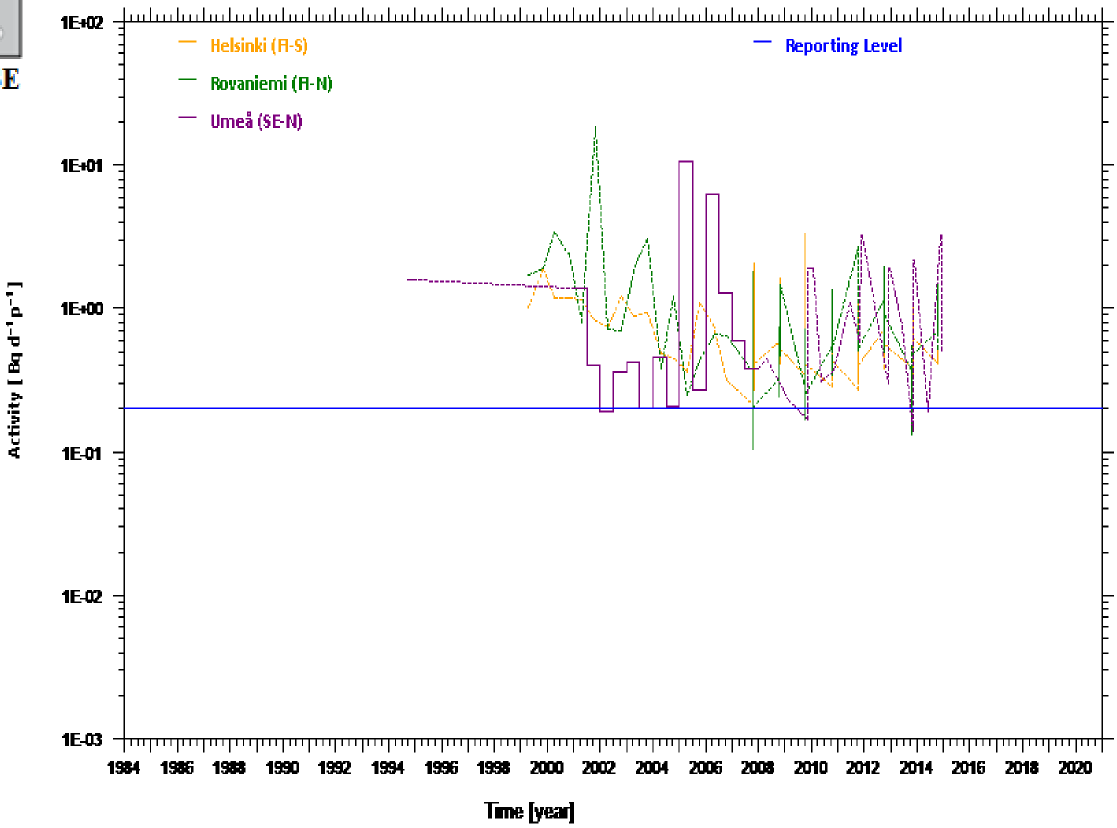

Fig. D19
Activity trends for ^{137}Cs in mixed diet (Helsinki, Rovaniemi and Umeå)

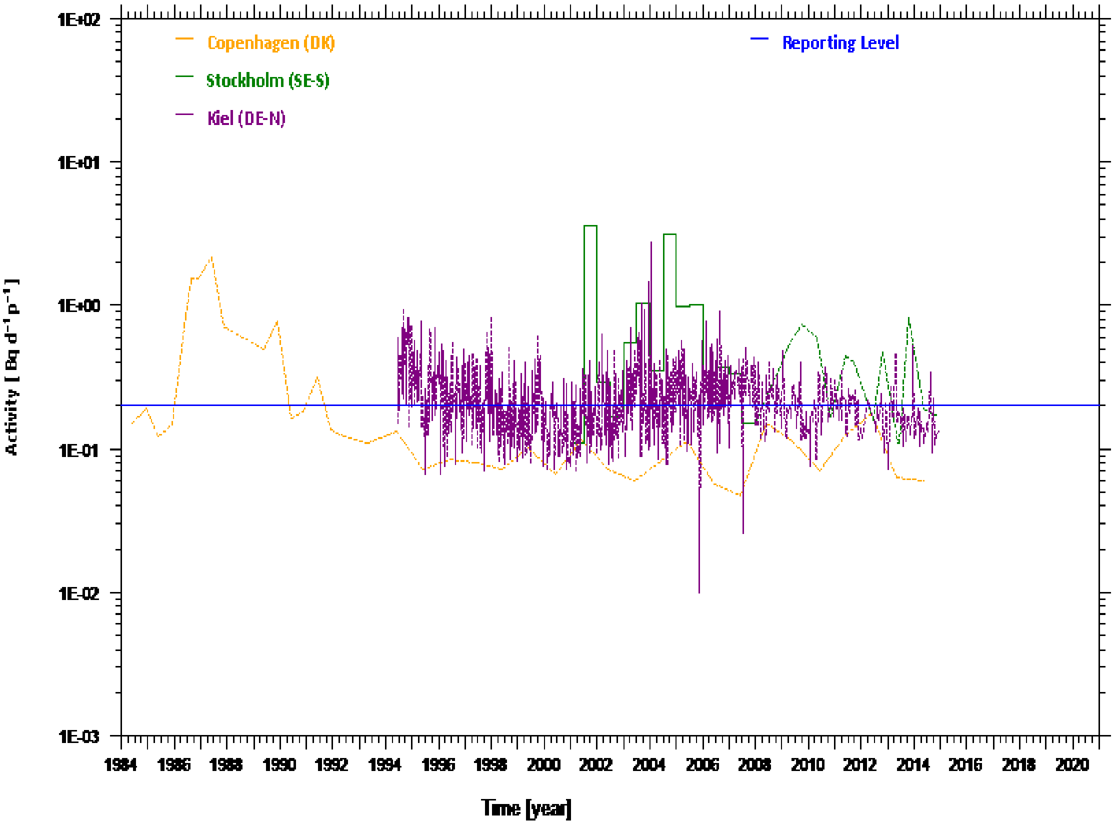

Fig. D20
Activity trends for ^{137}Cs in mixed diet (Copenhagen, Stockholm and Kiel)

SPARSE

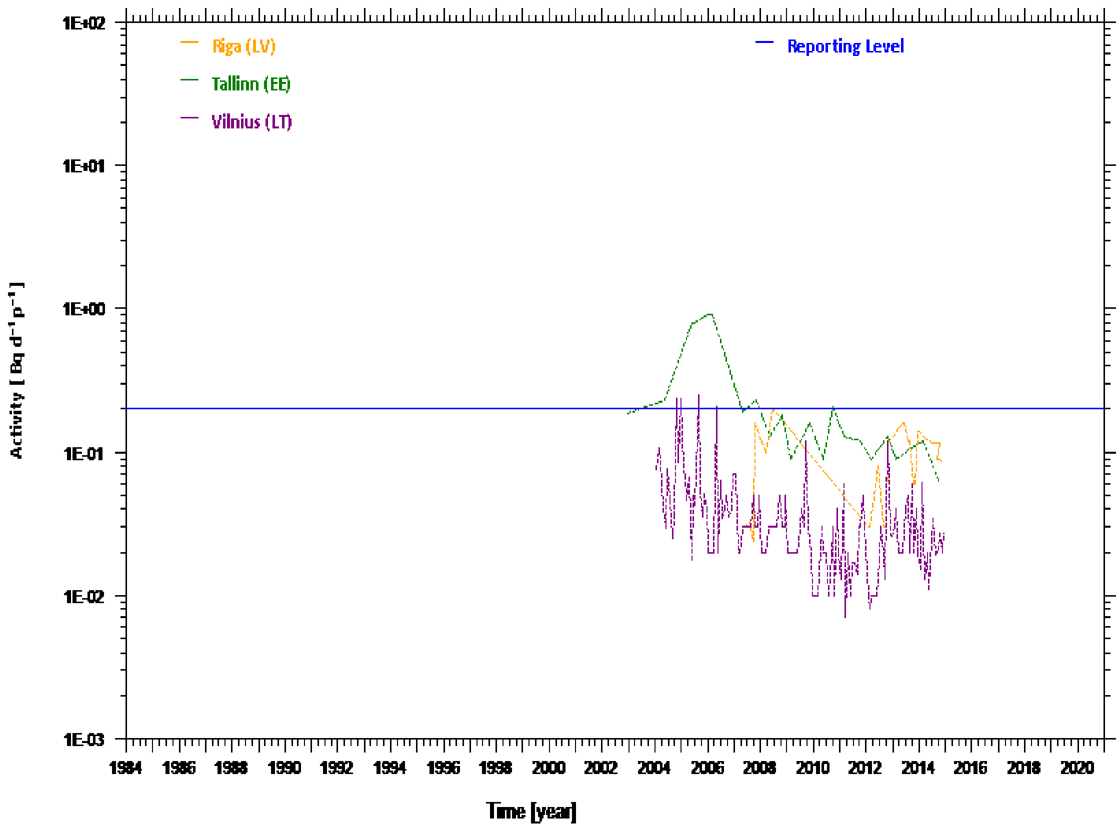

Fig. D21

Activity trends for ^{137}Cs in mixed diet (Riga, Tallinn and Vilnius)

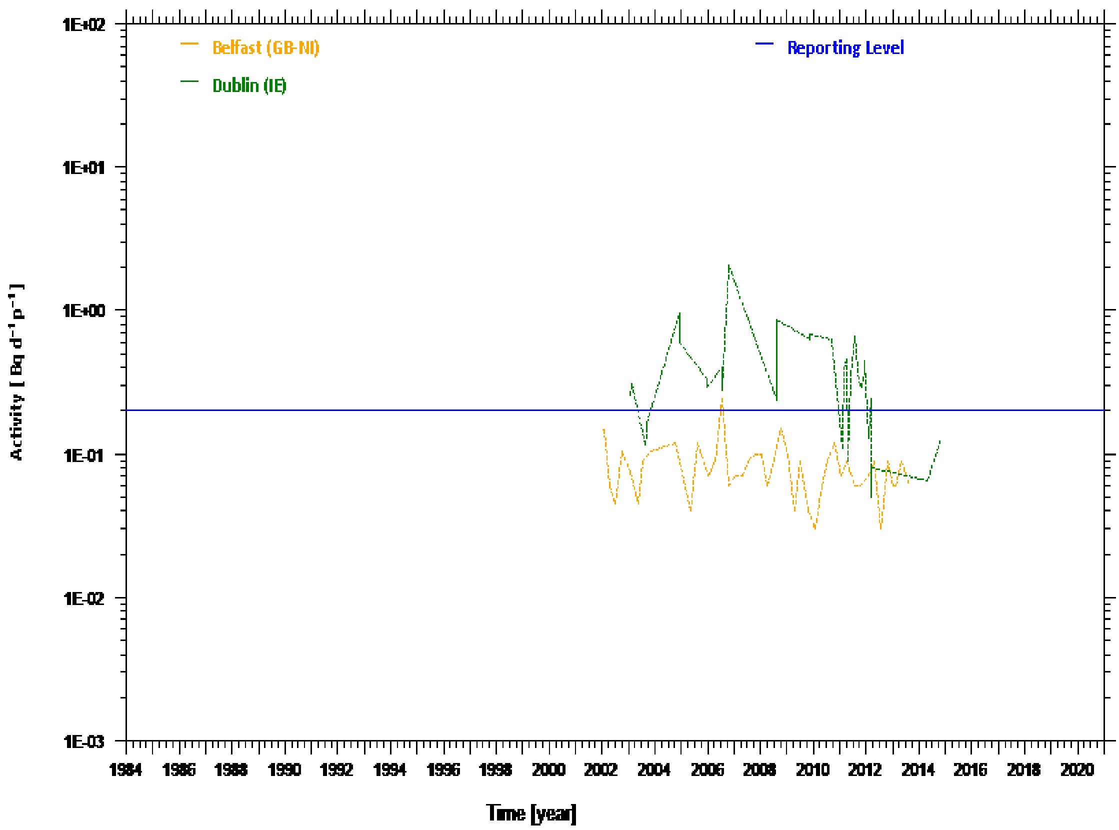

Fig. D22

Activity trends for ^{137}Cs in mixed diet (Belfast and Dublin)

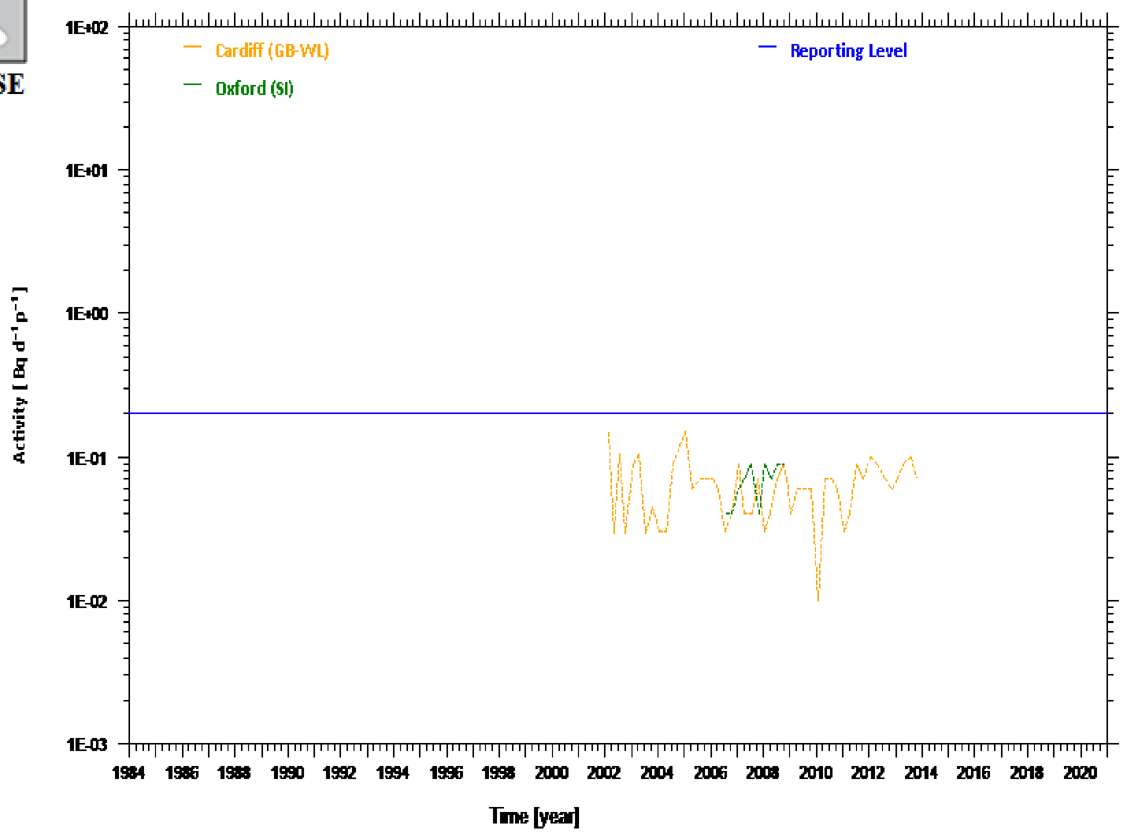

Fig. D23

Activity trends for ^{137}Cs in mixed diet (Cardiff and Oxford)

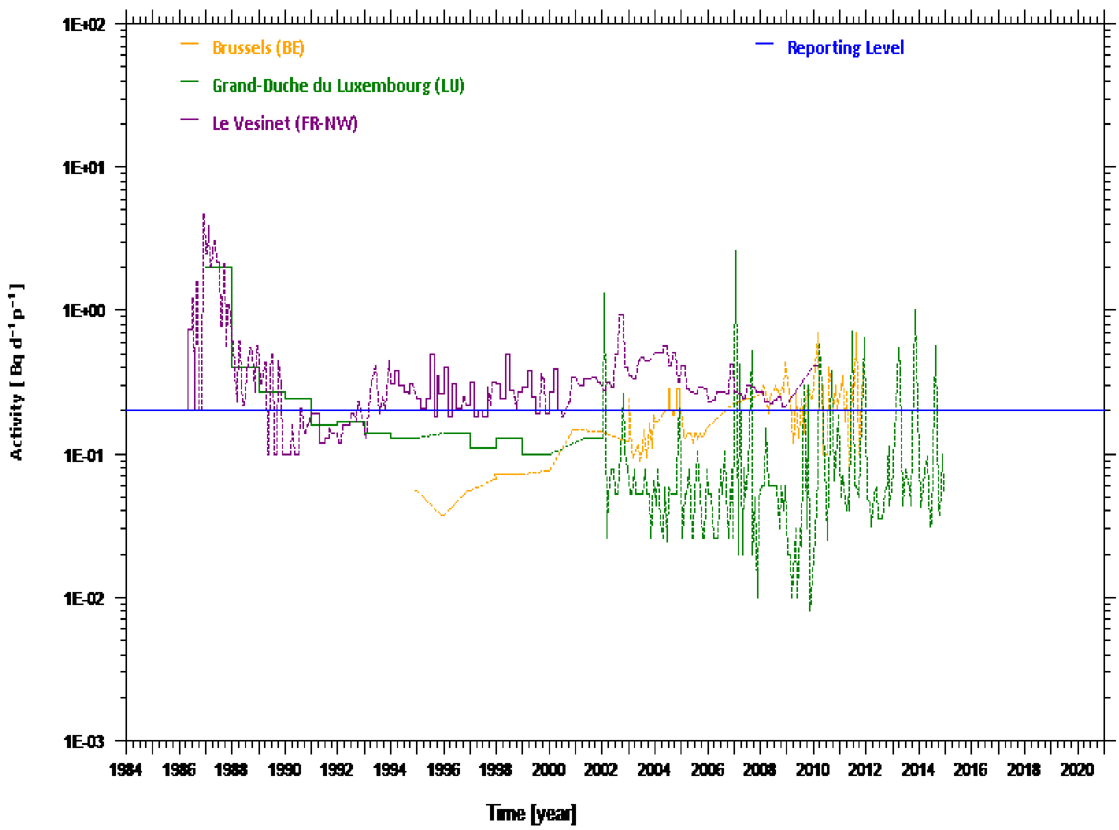

Fig. D24

Activity trends for ^{137}Cs in mixed diet (Brussels, Grand-Duche du Luxembourg and Le Vesinet)

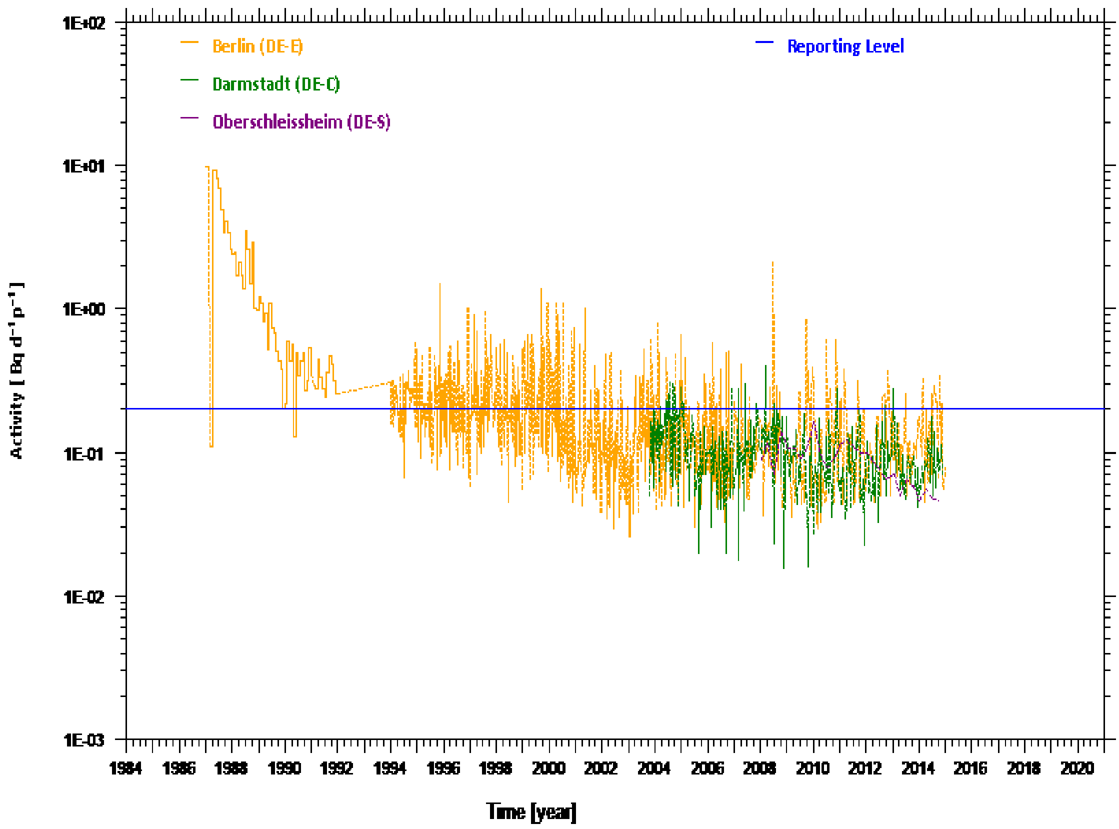

Fig. D25

Activity trends for ^{137}Cs in mixed diet (Berlin, Darmstadt and Oberschleissheim)

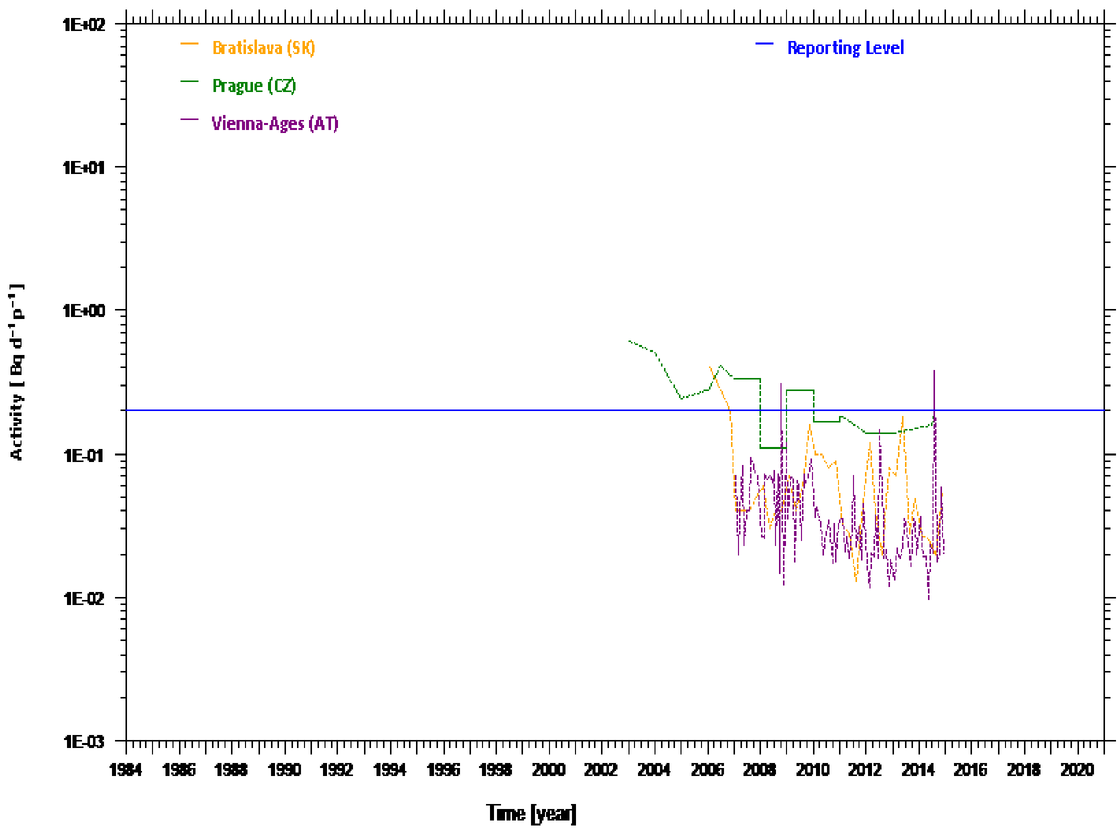

Fig. D26

Activity trends for ^{137}Cs in mixed diet (Bratislava, Prague and Vienna-Ages)

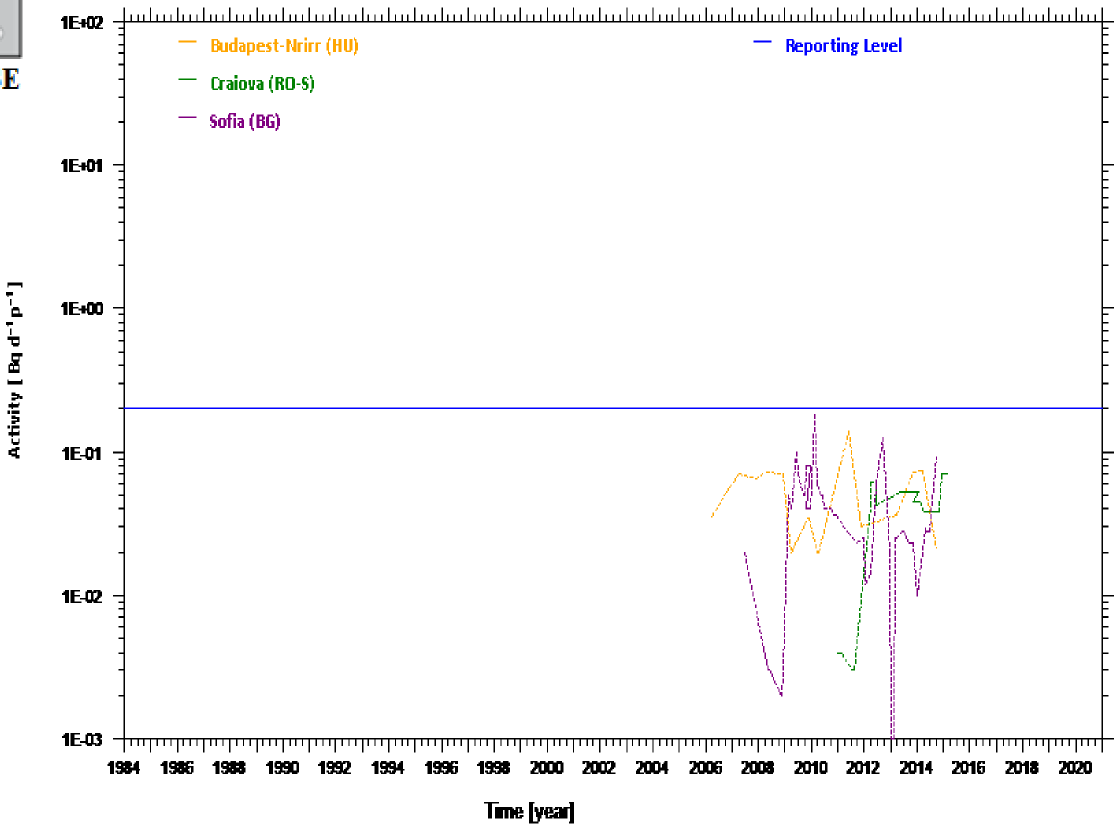

Fig. D27

Activity trends for ^{137}Cs in mixed diet (Budapest-Nrirr, Craiova and Sofia)

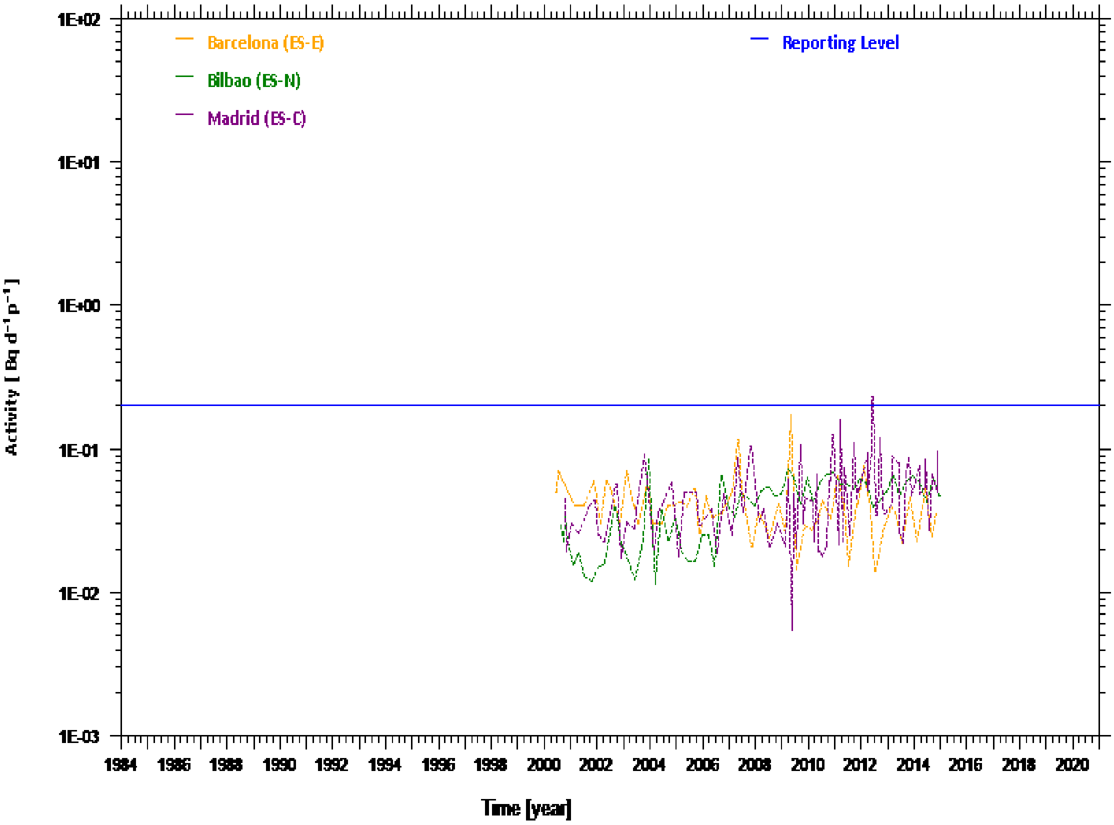

Fig. D28

Activity trends for ^{137}Cs in mixed diet (Barcelona, Bilbao and Madrid)

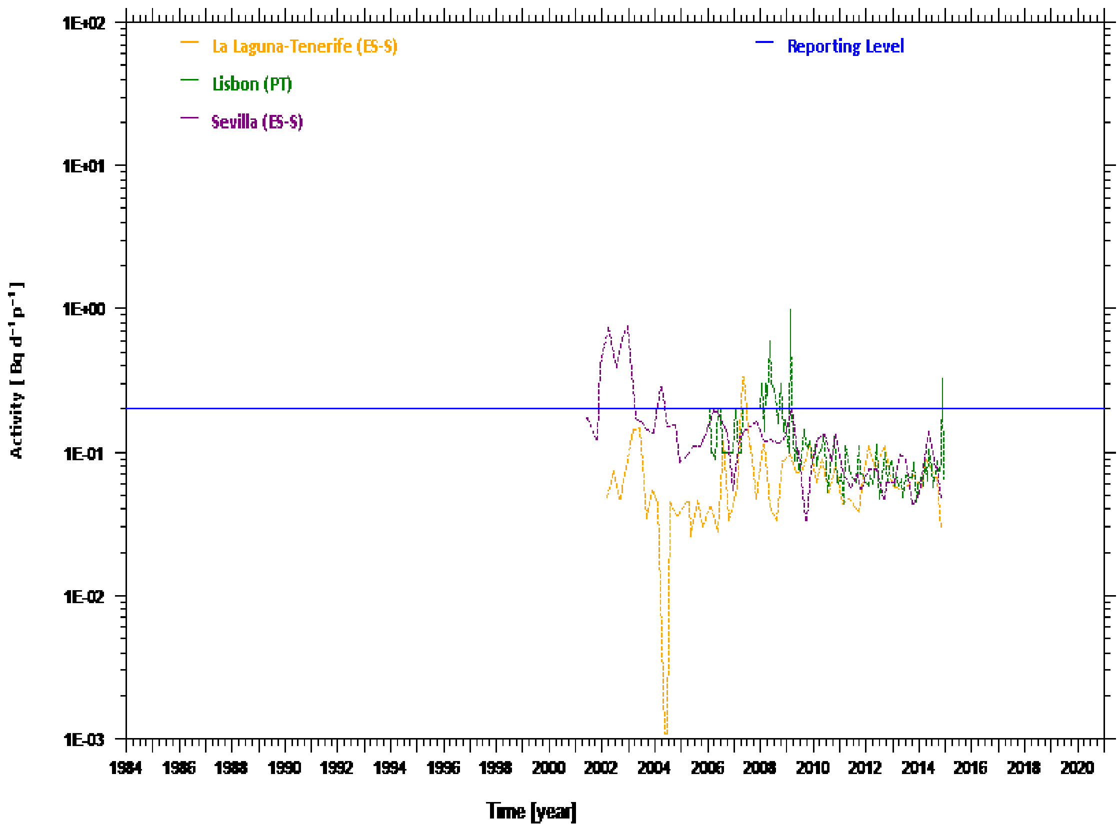

Fig. D29
Activity trends for ^{137}Cs in mixed diet (La Laguna-Tenerife, Lisbon and Sevilla)

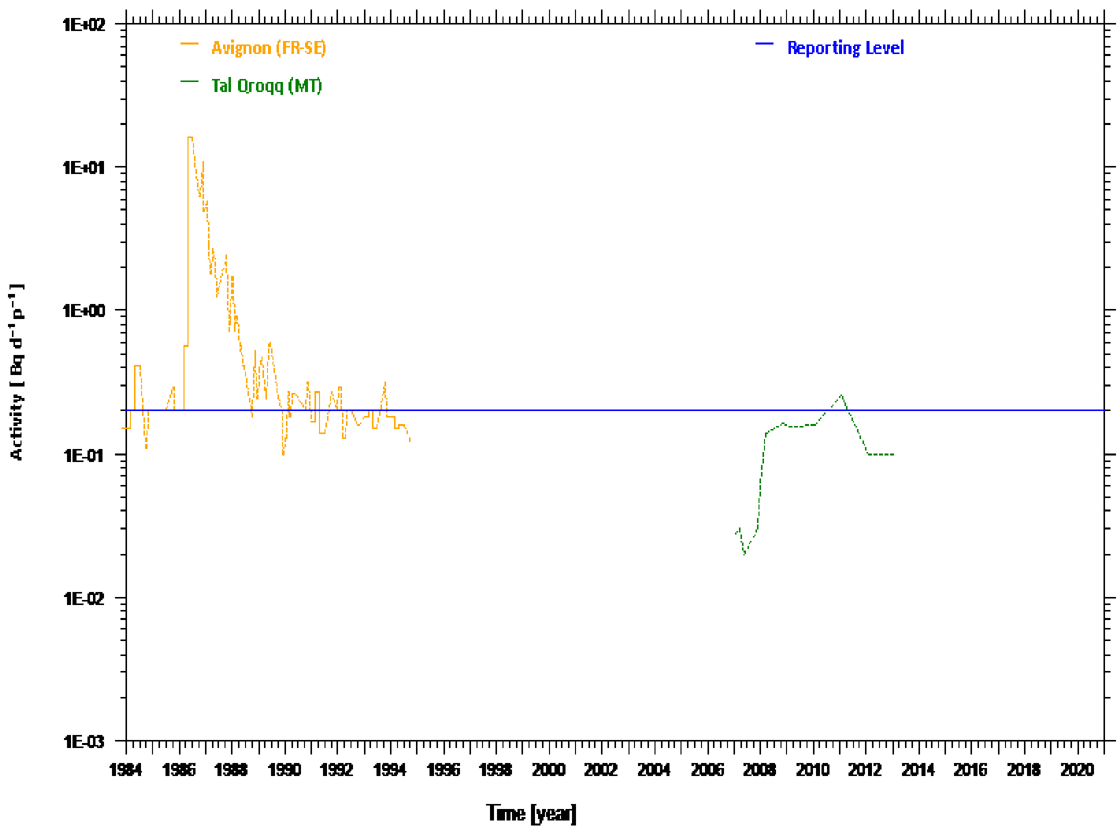

Fig. D30
Activity trends for ^{137}Cs in mixed diet (Avignon and Tal Qroqq)

Appendix A

Origins and contents of Articles 35 and 36

The treaty establishing the European Atomic Energy Community (EURATOM) was signed in Rome on 25 March 1957. Title 2 of the Euratom Treaty sets out provisions for the encouragement of progress in the fields of nuclear energy.

Chapter III of Title 2 deals with Health and Safety matters.

Article 35 states: *"Each Member State shall establish the facilities necessary to carry out continuous monitoring of the levels of radioactivity in the air, water and soil and to ensure compliance with the basic standards. The Community shall have the right of access to such facilities so that it may verify their operation and efficiency"*.

Article 36 states: *"The appropriate authorities shall periodically communicate information on the checks referred to in Article 35 to the Community so that it is kept informed of the level of radioactivity to which the public is exposed"*.

The Commission Recommendations to Article 36 of the Euratom Treaty (2000/473/Euratom)

In addition to articles 35 and 36 of the Euratom Treaty, a Commission Recommendation (2000/473/Euratom) has been published (OJ L191 of 27.7.2000) in view of providing more detailed information on which sample types and radionuclide categories EU Member States should report to the Commission. In addition, more practical information is provided on recommended procedures and the time frame in which this data transfer has to be done.

The Commission Recommendation provides supplementary information on the sampling locations and of the recommended sample types and radionuclide categories on which information should be transmitted. This is summarised in the two tables below.

Sample type	Sampling locations	Additional information requested
Airborne particulates	Vicinity of densely populated areas ensuring adequate geographical coverage	
External ambient gamma dose-rate		
Surface water	Major inland waters at places for which flow rate information is available and, if relevant, from coastal waters	Average flow rate during which the sample was taken
Drinking water	Compliant with the drinking water directive (98/83/EC) Major ground or surface water supplies and for water distribution networks	Annual water volume distributed or produced
Milk	Dairies, sufficiently spread to ensure a representative average	Production rate
Mixed diet	Separate ingredients from market places or local distribution centres	Composition of mixed diet
	Complete meals from large consumption centres (canteens, restaurants,...)	

Media	Measurement category	
	Dense network	**Sparse network**
Airborne particulates	^{137}Cs, gross beta	^{137}Cs, ^{7}Be
Air	Ambient gamma dose rate	Ambient gamma dose rate
Surface water	^{137}Cs, residual beta	^{137}Cs
Drinking water	^{3}H, ^{90}Sr, ^{137}Cs Natural radionuclides as monitored in compliance with Council Directive 98/83/EC	^{3}H, ^{90}Sr, ^{137}Cs Natural radionuclides as monitored in compliance with Council Directive 98/83/EC
Milk	^{90}Sr, ^{137}Cs	^{90}Sr, ^{137}Cs, ^{40}K
Mixed diet	^{90}Sr, ^{137}Cs	^{90}Sr, ^{137}Cs, ^{14}C

Appendix B

Method for calculating the reporting levels

Reporting levels were used in the report with the aim to improve transparency when bringing together measurements as significant values and as constraint values. Uniform constraint levels have been defined on the basis of their significance from the health point of view, irrespective of the detection limits applied by the different laboratories. Although the calculation is based on a reference annual dose, it needs to be emphasized that the reporting levels are only meant to be a tool for transparent reporting and should not be confused with maximum permitted levels of radioactive contamination. The reporting level RL is derived as:

$$RL = \frac{DL}{RF.EDC.CF} \qquad (1)$$

where: DL = annual dose limit, taken to be 1 millisievert [1]
RF = reduction factor of the dose limit, taken to 1000
EDC = effective dose coefficient in Sv/Bq
CF = annual consumption per person

The basic annual dose limit for the public equals 1 millisievert. This limit, decreased by a factor of thousand, i.e. 1 microsievert, can be regarded as having no radiological significance. Using a nominal probability coefficient of stochastic effects for the whole population of 5.10^{-2} per sievert [1], taking only fatal cancers into consideration, this dose represents a radiological risk of 5.10^{-8} per year.

Reporting levels are introduced only for artificial radionuclides (^{3}H, ^{90}Sr and ^{137}Cs). The actual level for natural radionuclides (^{7}Be) is indicated in the sparse network graphs. The values for the effective dose coefficient (values for adults were considered), the annual consumption and the rounded values of the reporting levels obtained by applying equation 1 are given in the table below.

Sample type	Radionuclide category	EDC [2] (Sv/Bq)	Annual consumption	Reporting level (rounded values)
Air	gross ß (based on ^{90}Sr)	2.4 10^{-8}	8030 m^3 [3]	5.10^{-3} Bq m^{-3}
	^{137}Cs	4.6 10^{-9}	8030 m^3 [3]	3.10^{-2} Bq m^{-3}
Surface water	residual ß (based on ^{90}Sr)	2.8 10^{-8}	60 l *	6.10^{-1} Bq l^{-1}
	^{137}Cs	1.3 10^{-8}	60 l *	1.10^{0} Bq l^{-1}
Drinking water	^{3}H	1.8 10^{-11}	600 l [4]	1.10^{+2} Bq l^{-1}
	^{90}Sr	2.8 10^{-8}	600 l [4]	6.10^{-2} Bq l^{-1}
	^{137}Cs	1.3 10^{-8}	600 l [4]	1.10^{-1} Bq l^{-1}
Milk	^{90}Sr	2.8 10^{-8}	200 l [4]	2.10^{-1} Bq l^{-1}
	^{137}Cs	1.3 10^{-8}	200 l [4]	5.10^{-1} Bq l^{-1}
Mixed diet	^{90}Sr	2.8 10^{-8}	365 d	1.10^{-1} Bq d^{-1} p^{-1}
	^{137}Cs	1.3 10^{-8}	365 d	2.10^{-1} Bq d^{-1} p^{-1}

* assumed to 10 % of the annual drinking water consumption

[1] ICRP publication 60 : 1990 Recommendations of the ICRP, Pergamon Press (1991)
[2] Basic Safety Standards (96/29/Euratom, Tables A and B)
[3] ICRP publication 23 : Reference man: Anatomical, Physiological and Metabolic Characteristics, Pergamon Press (1975)
[4] Commission of the European Communities, Post-Chernobyl Action 5, Underlying data for Derived Intervention Levels, EUR 12553 (1990)

Appendix C

Methods for calculating time and geographical averages

Throughout the report average values were calculated as arithmetic averages with the calculating methods described below.

Air [Bq/m^3]

The average concentration A over a period T and within a geographical area G is calculated as follows:

$$\overline{A} = \frac{1}{N_l} \sum_{l=1}^{N_l} \left(\frac{\sum_{i=1}^{N_{ml}} a_{i,l} \Delta t_{i,l}}{\sum_{i=1}^{N_{ml}} \Delta t_{i,l}} \right) \qquad (1)$$

where: $a_{i,l}$ = the value of the i^{-th} measurement with duration $\Delta t_{i,l}$ at location l within G
N_l = the number of locations within G
N_{ml} = number of measurements at location l during T

Surface water [Bq/l]

Only time averages for specific locations over a period T are taken. The following formula is used:

$$\overline{S} = \frac{1}{N_m} \sum_{i=1}^{N_m} s_i \qquad (2)$$

where: s_i = value of the i^{-th} measurement
N_m = number of measurements during T

Drinking water and milk [Bq/l]

The average drinking water concentration W, respectively milk concentration M, over a period of time T and within a geographical area G is calculated as follows:

$$\overline{W} = \frac{1}{N_l} \sum_{l=1}^{N_l} \left(\frac{\sum_{i=1}^{N_{ml}} w_{i,l} \Delta t_{i,l}}{\sum_{i=1}^{N_{ml}} \Delta t_{i,l}} \right) \text{ or } \overline{M} = \frac{1}{N_l} \sum_{l=1}^{N_l} \left(\frac{\sum_{i=1}^{N_{ml}} m_{i,l} \Delta t_{i,l}}{\sum_{i=1}^{N_{ml}} \Delta t_{i,l}} \right) \qquad (3)$$

where $w_{i,l}$ = value of the ith drinking water measurement performed at location l within G
$m_{i,l}$ = value of the i^{-th} milk measurement performed at location l within G
N_l = number of locations within G
N_{ml} = number of measurements at location l during T

Mixed diet [Bq/d.p]

The average mixed diet concentration D over a period of time T and within a geographical area G is calculated as follows:

$$\overline{D} = \frac{1}{N_l} \sum_{l=1}^{N_l} \left(\frac{\sum_{i=1}^{N_{ml}} d_{i,l} \Delta t_{i,l}}{\sum_{i=1}^{N_{ml}} \Delta t_{i,l}} \right) \qquad (4)$$

where: $d_{i,l}$ = the value of the i^{-th} measurement with duration $\Delta t_{i,l}$ at location l within G
N_l = the number of locations within G
N_{ml} = number of measurements at location l during T

Comments

In this report the basic period T is taken to be one month. Quarterly averages were obtained by averaging the corresponding monthly averages. When the available data do not allow the calculation of quarterly averages, semestrial or annual averages are taken.

In most cases data are taken from national reports where, very often, time or space averages are already given. Hence the quantities a, s, w, m and d are sometimes averages themselves, and the calculated averages A, S, W, M and D may only be an approximation of the true average values.

Since the number of measurements per month or region is not always the same, to avoid untoward biases, quarterly and annual regional averages are taken as the mean of the corresponding monthly and quarterly averages respectively. National averages are obtained in the same way starting from the mean of the corresponding monthly regional averages.

Appendix D

Addresses of national competent authorities and main laboratories

Austria

Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft
Abteilung V/7 Strahlenschutz
Radetzkystraße 2
A-1031 Wien
www.bmifuw.at

Bundesministerium für Gesundheit
Abteilung III Strahlenschutz
Radetzkystraße 2
A-1031 Wien
www. bmg.gv.at

Österreichische Agentur für Gesundheit und Ernährungssicherheit
Kompetenzzentrum für Strahlenschutz und Radiochemie
Spargelfeldstraße 191
A-1226 Wien
www.ages.at

Belgium

Federal Agency for Nuclear Control (FANC)
Ravenstein street 36
B - 1000 Brussels
www.fanc.fgov.be

SCK·CEN
Boeretang 200
B - 2400 Mol
www.sckcen.be

IRE
Zoning Industriel
Avenue de l'Espérance
B – 6220 Fleurus
www.ire.eu

Bulgaria

Executive Environment Agency
136, Tsar Boris III blvd
1618 Sofia

National Center of Radiobiology and Radiation Protection
3, Georgi Sofiiski Blvd
1606 Sofia
http://www.ncrrp.org

Croatia

Ministry of the Interior, Civil Protection Directorate
Nehajska 5
HR-10000 Zagreb, CROATIA
https://civilna-zastita.gov.hr/

Institute for Medical Research and Occupational Health
Ksaverska cesta 2, POB 291
HR-10001 Zagreb, CROATIA
https://www.imi.hr/en/

Cyprus

Radiation Inspection and Control Service
Department of Labour Inspection
12, Apellis Street
1493 Nicosia
www.mlsi.gov.cy/dli

State General Laboratory
44, Kimonos Street
1451 Nicosia
www.moh.gov.cy/sgl

Czech Republic

Státní úřad pro jadernou bezpečnost
Senovážné nám. 9
CZ-11000 Praha 1
www.sujb.cz

Státní ústav radiační ochrany
Bartoškova 28
CZ-14000 Praha 4
www.suro.cz

Denmark

Technical University of Denmark
DTU Environment
Radioecology and Tracer Studies Group
Climate and Monitoring
Frederiksborgvej 399, Building 201
4000 Roskilde
www.dtu.dk

Estonia

Environmental Board
Roheline 64
80010 Pärnu
https://keskkonnaamet.ee/en

Finland

Radiation and Nuclear Safety Authority (STUK)

Research and Environmental Surveillance
P.O. Box 14
FIN-00881 Helsinki
www.stuk.fi

France

Autorité de Sûreté Nucléaire (ASN)
15 Rue Louis Lejeune
F - 92120 Montrouge
www.asn.fr

Institut de Radioprotection et de Sûreté Nucléaire
Pôle santé et environnement
Direction de l'environnement
31, rue de l'Ecluse
B.P. 40035
F - 78116 Le Vesinet
www.irsn.fr

Germany

Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz
Referat S II 5
Postfach 120 629
D - 53048 Bonn
www.bmub.bund.de

Deutscher Wetterdienst - Zentrale
Frankfurter Straße 135
D - 63067 Offenbach am Main
www.dwd.de

Bundesamt für Strahlenschutz
Referat PB 3
Ingolstädter Landstraße 1
D - 85764 Oberschleißheim
www.bfs.de

Greece

Greek Atomic Energy Commission
PO Box 60092
GR - 15341 Aghia Paraskevi, Attiki
http://en.eeae.gr

Environmental Radioactivity Laboratory
Institute of Nuclear Technology - Radiation Protection
NCSR "Demokritos"
GR - 15310 Aghia Paraskevi, Attiki
www.ipta.demokritos.gr

Hungary

Ministry of Health (EüM)
Frédéric Joliot-Curie National Research Institute for Radiobiology and Radiohygiene (OSSKI)
Anna u. 5.
H-1221 Budapest
www.osski.hu/index_en.php

Public Health and Medical Officer Service (ÁNTSZ)
Gyáli út 2-6
H-1097 Budapest
www.antsz.hu

Ministry of Agriculture
National Food Chain Safety Office, Food Chain Safety Laboratory Directoratw
Radiological Reference Laboratory
Fogoly utca 13-15
H-1182 Budapest
https://www.nebih.gov.hu/en

Ministry of Environment and Water (KvVM):
"Dél-dunántúli Környezetvédelmi, Természetvédelmi és Vízügyi Felügyelőség"
(DDKTVF)
Papnövelde u. 13
H-7621 Pécs
www.ddkvf.hu

Hungarian Atomic Energy Authority
Fényes Adolf utca 4
H-1036 Budapest
www.oah.hu

Nuclear Power Plant Paks
H-7031 Paks, P.O.B.: 71
http://www.atomeromu.hu/hu/Lapok/default.aspx

Ireland

Environment Protection Agency
Johnstown Castle Estate
Wexford, Y35 W821
Ireland
www.epa.ie

Italy

ISIN - National Inspectorate for Nuclear Safety and Radiation Protection
Via Capitan Bavastro 116
I - 00154 Roma
https://www.isinucleare.it

Latvia

Latvian Environment, Geology and Meteorology Agency
Maskavas 165,
Riga, LV-1019
www.lvgma.gov.lv

Food and Veterinary Service
Peldu 30
Riga, LV-1050

www.pvd.gov.lv

National Diagnostic Centre
Lejupes 3
Riga, LV-1076
www.ndc.gov.lv

Lithuania

Environmental Protection Agency
Environment Research Department
Radiology Division
Juozapaviciaus 9
LT- 09311, Vilnius
www.gamta.lt

Radiation Protection Center
Division of Radiological Investigations
Kalvariju 153
LT-08352, Vilnius
www.rsc.lt

National Food and Veterinary Risk Assessment Institute (former National Food and Veterinary Laboratory)
Radiology section
J.Kairiukscio 10
LT-08409 Vilnius
www.nmvrvi.lt

Luxembourg

Direction de la Santé
Division de la Radioprotection
Villa Louvigny
Allée Marconi
L - 2120 Luxembourg
www.sante.lu

Malta

Radiation Protection Commission
Unit F22
Mosta Technopark
Mosta
MST 3000
www.gov.mt

the Netherlands

WFSR - Wageningen University and Research
Landelijk Meetnet Radioactiviteit in Voedsel
PO Box 230
NL - 6700 AE Wageningen
www.wur.nl

Autoriteit Nucleaire Veiligheid en Stralingsbescherming
Koningskade 5
Postbus 16001
2500 BA Den Haag
www.autoriteitnvs.nl

RIVM - National Institute for Health and the Environment
Centrum Veiligheid
Postbus 1
NL - 3720 BA Bilthoven
www.rivm.nl

Poland

Central Laboratory for Radiological Protection
7, Konwaliowa Str.
03-194 Warsaw
www.clor.waw.pl

National Atomic Energy Agency
17, Bonifraterska
00-220 Warsaw
www.paa.gov.pl

Portugal

Instituto Superior Técnico
Campus Tecnológico e Nuclear
Laboratório de Proteção e Segurança Radiológica
Estrada Nacional 10 (km 139.7)
2695-066 Bobadela LRS
www.itn.pt

Romania

National Reference Laboratory Directorate
National Environmental Protection Agency
294, Splaiul Independentei Street
Sector 6
Bucharest
www.anpm.ro

Slovak Republic

Public Health Authority of the Slovak republic
Trnavska 52,
P.O.BOX 45
826 45 Bratislava
www.uvzsr.sk

Regional Public Health Authority based in Košice
Ipeľská 1
040 11 Košice
www.ruvzke.sk

Regional Public Health Authority based in Banská Bystrica
Cesta k nemocnici 1
975 56 Banská Bystrica
www.vzbb.sk

Slovenia

Uprava Republike Slovenije za jedrsko varnost
(Slovenian Nuclear Safety Administration)
Litostrojska cesta 54
SI-1000 Ljubljana
www.ursjv.gov.si

Uprava Republike Slovenije za varstvo pred sevanji
(Slovenian Radiation Protection Administration)
Ajdovščina 4
SI-1000 Ljubljana
www.uvps.gov.si

Institut Jožef Stefan (Jožef Stefan Institute)
Jamova cesta 39
SI-1000 Ljubljana
www.ijs.si

Zavod za varstvo pri delu (Institute of Occupational Safety)
Pot k izviru 6
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Alfonso XII, 3
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www.cedex.es

Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)
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Swedish Defense Research Agency
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Swedish Radiation Safety Authority
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Scottish Environment Protection Agency (SEPA)
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www.daera-ni.gov.uk/northern-ireland-environment-agency

The Veterinary Laboratories Agency
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The Centre for Environment, Fisheries and Aquaculture Science (CEFAS)
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Appendix E

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APPENDIX F

The REM Data bank

After the accident at Chernobyl, a task Force was created by the relevant Directorates of the European Commission (EC) to re-examine all aspects of nuclear safety. The necessity of interpreting a large number of data on environmental radioactivity led to the creation of the REM (Radioactivity Environmental Monitoring) data bank at the Joint Research Centre, Ispra in Italy for holding data on the contamination resulting from the Chernobyl accident.

At a meeting with Member State representatives for the purposes of Articles 35 and 36 of the Euratom Treaty (Luxembourg, October 1987), it was decided to take advantage of the informatic structure of the REM data bank to streamline the various formats adopted in the EU for reporting routine environmental measurements and to prepare the EC report concerning these data in a more systematic way.

The information in REM largely concerns radioactivity levels in Europe of air, deposition, water, milk, meat, crops and vegetables from 1.1.1984 and is continuously being updated. Each data record contains information describing the sample measurement (value, nuclide, etc.), the sample type, location and date of sampling and source of the data.

The REM Data bank contains more than 5,000,000 data records as of October 2022.

For further information please contact:
JRC-REMDBSUPPORT@EC.EUROPA.EU

Appendix G

List of Figures and Tables

Introduction

Dense network results (2012-2014)

Sparse network results (1984-2014)

Glossary

ABSORBED DOSE	The amount of energy imparted by the ionising radiation to unit mass of absorbing material. It is expressed in gray, Gy. (1 Gy = 1 Joule per kilogram).
ACTIVITY	The amount of a radionuclide at a given time. It expresses the rate at which radioactive transformations occur. The unit of measurement is the becquerel, Bq. (1 Bq = one transformation per second).
ALPHA PARTICLE	A particle, consisting of two protons and two neutrons, which is emitted from the nucleus of certain radionuclides.
ATOM	The smallest portion of an element that can combine chemically with other atoms.
BECQUEREL	see Activity.
BETA PARTICLE	High energy electron which is emitted from the nucleus of certain radionuclides.
CONSTRAINT VALUE	Activity value known to be less than a certain value.
COSMIC RAYS	High energy ionising radiation from outer space.
DOSE	The term used either for individual absorbed dose or effective dose.
DOSE LIMIT	Recommended by the ICRP and authorised by regulatory authorities to apply to occupational and public exposure.
EFFECTIVE DOSE	Weighted sum of the equivalent doses to the various organs or tissues. The weighing factors are derived from the risk of stochastic effect to the individual tissue or organ. The unit of measurement is the sievert, Sv.
ENVIRONMENTAL MONITORING	The application of automatic or mobile equipment to measure the activity in the environment of a release of radioactivity. The parameters usually include the activity of air, ground deposition, river water, drinking water and milk.
EQUIVALENT DOSE	The quantity obtained by multiplying the absorbed dose by a factor to take into account the relative harmfulness of the various types of ionising radiations. The unit is the sievert, Sv. One sievert produces the same biological effect irrespective of the type of radiation.
GAMMA RAY	A quantity of ionising electromagnetic radiation which is emitted by certain radionuclides.
GRAY	See Absorbed Dose.
GROSS BETA	The total measured beta activity in a sample. Depending on the measurement methodology it may exclude tritium and/or radon.
HALF-LIFE	The time taken for the activity of a radionuclide to lose half of its value by decay. Also referred to as "physical half-life".
ICRP	The International Commission on Radiological Protection is a non-governmental scientific organisation which publishes recommendations on radiation protection.
IONISING RADIATION	Radiation which has sufficient energy to produce ionisation in matter; includes alpha particles, beta particles, gamma rays, X-rays and neutrons (neutrons cause ionisation indirectly).
ISOTOPE	Nuclides of the same element but with different number of neutrons.
NATURAL BACKGROUND	The radiation field due to naturally occurring radioactivity. It includes radiation arising from the presence of long-lived radionuclides and their daughters in the earth's crust, atmosphere and cosmic radiation.
NEUTRON	An elementary particle with no electric charge which combines with protons to form an atomic nucleus.
PROTON	An elementary particle with positive electric charge. The amount of protons in an atomic nucleus determines the chemical element.
RADIOACTIVE CONTAMINATION	The undesirable presence of unsealed radioactive materials on surfaces, in air or in water.
RADIOACTIVE DECAY	The decay of a radionuclide by the spontaneous transformation of the nuclides, at a rate represented by the half-life. The rate is expressed as the activity in becquerel, Bq, indicating the number of transformations per second.
RADIONUCLIDE	A species of atom characterised by the number of protons and neutrons (and sometimes by the energy state of the nucleus), and which emits ionising radiation. It is described by the element and the total amount of protons and neutrons (eg caesium-137).
RADON	A naturally occurring radioactive element and the heaviest noble gas. Radon-222 and Radon-220 (also called thoron) are the most important isotopes.
REPORTING LEVEL	Value below which average Activity levels are not quoted exactly in this Monitoring Report.
RESIDUAL BETA	Gross beta activity minus potassium-40 (^{40}K), which is the major natural beta emitting component in surface water.
SIEVERT	See equivalent Dose and Effective Dose.

European Commission

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Quarterly average values of radioactivity levels in airborne particulates, surface water, drinking water, milk and mixed diet are reported for the twenty-eight countries of the European Union (sparse and dense network) for the years 2012-2014.

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