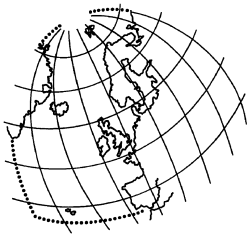
Monitoring and Assessment Series

Comprehensive Atmospheric Monitoring Programme:

Pollutant depositions and air quality around the North Sea and the North-East Atlantic in 2006



OSPAR Commission
2008

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention") was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. It has been ratified by Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, Netherlands, Norway, Portugal, Sweden, Switzerland and the United Kingdom and approved by the European Community and Spain.

La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998. La Convention a été ratifiée par l'Allemagne, la Belgique, le Danemark, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède et la Suisse et approuvée par la Communauté européenne et l'Espagne.

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Comprehensive Atmospheric Monitoring Programme:

Pollutant depositions and air quality around the North Sea and the North-East Atlantic in 2006

OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic

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Executive Summary

This report presents the results of monitoring undertaken by OSPAR Contracting Parties for the Comprehensive Atmospheric Monitoring Programme (CAMP) during 2006. Under the CAMP, OSPAR Contracting Parties are committed to monitoring, on a mandatory basis, the concentrations of a range of heavy metals, organic compounds and nutrients in precipitation and air, and their depositions. The CAMP also encourages OSPAR Contracting Parties to monitor, on a voluntary basis, additional compounds (such as certain persistent organic pollutants). The report gives detailed information on observed atmospheric inputs of selected contaminants to the OSPAR maritime area and its regions during 2006.

Overall, reporting in 2006 has remained at a reasonably high level, with over 80% achievement of the mandatory monitoring of contaminants. Reporting on concentrations of lindane and mercury remained, however, patchy (approximately 50% compliance). Reporting of data on mandatory airborne pollutants was less complete and that of voluntary airborne components patchy with about 50% coverage. As in previous years, some Contracting Parties provided extensive reporting of components not required by CAMP. The quality of data reported for 2006 has shown some improvement although questions over some data remained.

In general, the data for 2006, when compared with previous years, showed that although concentrations of heavy metals in air and precipitation were decreasing, concentrations of nitrogen components remained consistent with levels in previous years. Seasonal patterns of nitrogen were much as would be expected, with an ammonium peak in the late spring, and a nitrate peak during the winter. The dominant role of ammonium in coastal locations was evident in its 2:1 ratio to nitrate concentrations in the late spring period, when marine productivity would be high, and the approximate equal concentrations during the winter nitrate maximum.

Deposition of lindane continued to show a relatively consistent decline across most monitoring stations. Yet concentrations were not reducing markedly and a spring peak could be observed. This may indicate either continued use from stockpiles or transboundary transport from regions outside the North-East Atlantic. Seven years after the final phase out of lindane in Europe, these observations demonstrate the benefit of monitoring beyond timeframes of managerial action.

Récapitulatif

Le présent rapport comporte les résultats de la surveillance continue effectuée par les Parties contractantes OSPAR, en 2006, dans le cadre du Programme exhaustif de surveillance continue de l'atmosphère (CAMP). Les Parties contractantes OSPAR sont tenues de surveiller obligatoirement les teneurs de toute une gamme de métaux lourds, de composés organiques et de nutriments dans les précipitations et l'atmosphère, ainsi que leurs retombées, ceci dans le cadre du CAMP. Celui-ci encourage également les Parties contractantes OSPAR à surveiller de manière facultative des composés supplémentaires (tels que les polluants organiques persistants). Le rapport fournit des informations détaillées sur les apports atmosphériques de contaminants sélectionnés à la zone maritime OSPAR et à ses régions relevés en 2006.

Dans l'ensemble, la notification se maintient à un niveau élevé raisonnable en 2006 - la surveillance obligatoire des contaminants ayant dépassé 80%. La notification des concentrations de lindane et de mercure reste cependant inégale (environ 50%). La notification des données sur les polluants aéroportés obligatoires est moins complète et celle sur les composants aéroportés est inégale, sa couverture représentant environ 50%. De même que les années précédentes, certaines Parties contractantes ont notifié de manière extensive des composés qui ne sont pas requis par le CAMP. La qualité des données notifiées pour 2006 est meilleure mais des questions subsistent pour certaines données.

Dans l'ensemble, les données pour 2006 révèlent que les concentrations de métaux lourds dans l'air et les précipitations ont baissé par rapport aux années précédentes mais que celles des composés d'azote restent inchangées. Les tendances saisonnières de l'azote sont prévisibles, l'ammonium présentant un maximum vers la fin du printemps et le nitrate en hiver. Il est évident, selon le rapport ammonium nitrate de 2:1 dans les concentrations que l'ammonium a un rôle prédominant dans les sites côtiers vers la fin du printemps lorsque la productivité marine est élevée et des concentrations approximativement égales pendant les mois d'hiver lorsque le nitrate est à son maximum.

Les retombées de lindane accusent encore un déclin relativement constant dans la plupart des stations de surveillance. Les concentrations ne diminuent cependant pas de manière notable et on relève un maximum au printemps. Ceci peut indiquer soit un usage continu des réserves soit un transport transfrontière à partir des régions situées en dehors de l'Atlantique du Nord-est. Sept ans après le retrait final du lindane en Europe, ces observations montrent les avantages que présente la surveillance réalisée au-delà du calendrier des mesures de gestion.

Pollutant depositions and air quality around the North Sea and the North-East Atlantic in 2006

1. Introduction

This report collates and describes the observations from coastal monitoring stations across the OSPAR region (see Figure 1.1) under the Comprehensive Atmospheric Monitoring Programme (CAMP), this forming one element within the wider Joint Assessment and Monitoring Programme of OSPAR. The CAMP aims to assess, as accurately as appropriate, the atmospheric input of the selected contaminants to the maritime area and regions thereof (Figure 1.1) on an annual basis through monitoring the concentrations of selected contaminants in precipitation and air, and determining their deposition. The monitoring regime employed is set out in the CAMP Principles (OSPAR reference number: 2001-7), describing the relevant substances, sampling approach, locations and frequency, and assessment methodologies.

Figure 1.1: OSPAR maritime area and regions. I: Arctic waters, II: Greater North Sea, III: Celtic Seas, IV: Bay of Biscay, V: Wider Atlantic

The components of interest to the CAMP are divided into two groups, for measurement on a mandatory basis and for measurement on a voluntary basis. These are listed in Table 1.1.

Table 1.1: Components to be measured under the CAMP

	Mandatory	**Voluntary**
Precipitation	As, Cd, Cr, Cu, Pb, Hg, Ni, Zn, γ-HCH, NH_4^+, NO_3^-	PCB 28,52,101,118,138,153,180 PAHs: Phenanthrene, anthracene, flouranthene, pyrene, benzo(*a*)anthracene, chrysene, benzo(*a*)pyrene, benzo(*ghi*)perylene, indeno(*1,2,3-cd*)pyrene
Airborne	NO_2, HNO_3, NH_3, NH_4^{+a}, NO_3^{-a}	As, Cd, Cr, Cu, Pb, Hg, Ni, Zn, γ-HCH, PCB 28,52,101,118,138,153,180, PAHs: Phenanthrene, anthracene, flouranthene, pyrene, benzo(*a*)anthracene, chrysene, benzo(*a*)pyrene, benzo(*ghi*)perylene, indeno(*1,2,3-cd*)pyrene, NO

[a]) total ammonium (NH_3 + NH_4^+) and total nitrate (HNO_3 +NO_3^-) is an alternative

The CAMP Principles call for each Contracting Party bordering the OSPAR maritime area (excluding the EU) to operate at least one monitoring station on the coast and/or offshore as part of the CAMP. Where Parties border more than one region (see Figure 1.1) at least one station should be operating in each. These stations should be so-called background stations, i.e. not directly influenced by local emission sources. The stations should be located not more than 10 km from the coastline.

The data assembled by monitoring stations are reported by Contracting Parties to the Norwegian Institute for Air Research (NILU) on a yearly basis, using a reporting format and according to the time schedule set out in the CAMP Principles. Based on the data received, NILU prepares a CAMP data report on an annual basis for OSPAR to examine.

The present CAMP data report “Pollutant depositions and air quality around the North Sea and the North-East Atlantic in 2006” gives in chapter 2 an overview of reported data and the implementation of the CAMP Principles in 2006. The geographical coverage, the contaminants from the Mandatory and Voluntary lists which have been monitored, and the timeliness of data submission are presented. In chapter 3, an overview is given of the 2006 annual average values of the components subject to mandatory monitoring for the North-East Atlantic. Estimates of depositions calculated using “Method 3a” as laid down in the CAMP Principles is intended for chapter 4. These estimates await the receipt of further observation data. Chapter 5 summarises the report’s observations on the reported CAMP data for 2006. The data submitted by Contracting Parties are appended to this report (Appendix 1).

2. The OSPAR CAMP Monitoring Programme in 2006

2.1 Geographical coverage

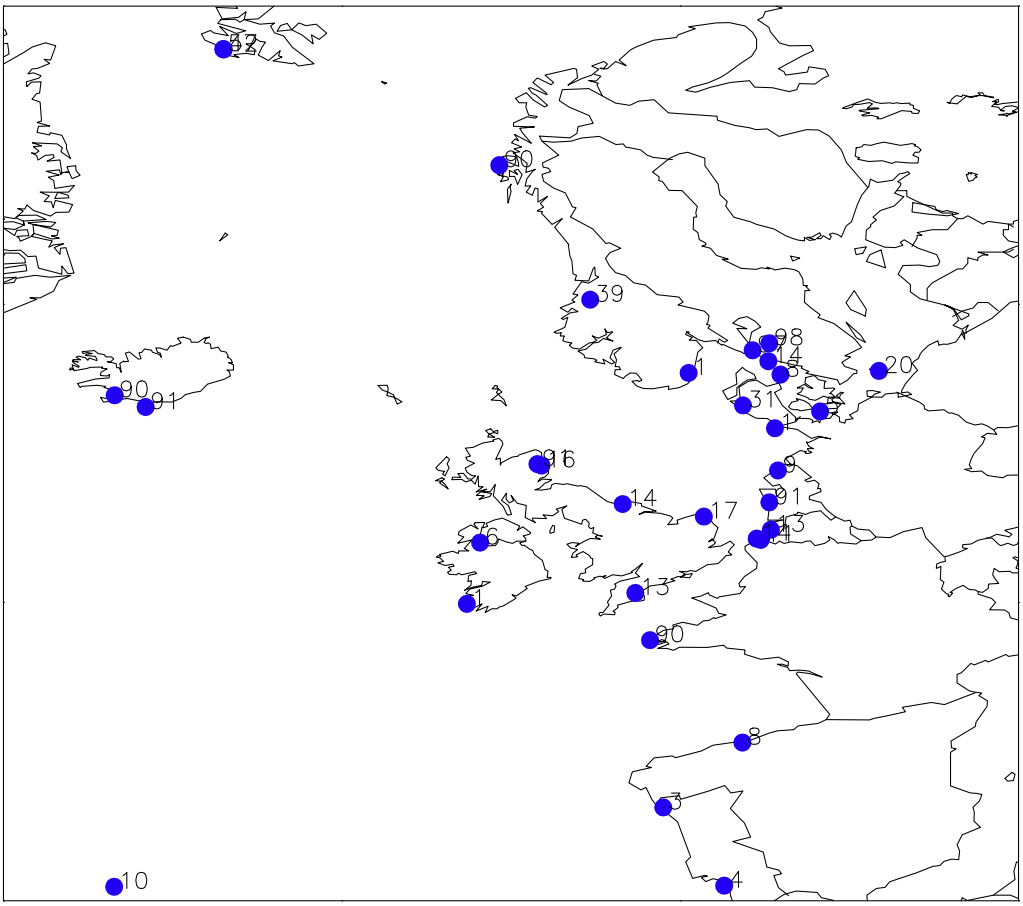

Figure 2.1: Monitoring sites reporting to OSPAR in 2006.

The reporting network during 2006 did not change, although there were minor changes in which components were observed at each station. Despite the mandatory label applied to the first column of components in table 1.1, not all stations did report data for all components., as commented in section 2.2. Table 2.1 details the locations of monitoring stations, and indicates the broad nature of monitoring undertaken: observation of the deposition of pollutants in precipitation (p), and/or monitoring of ambient air quality (a).

Table 2.1: Stations reporting to OSPAR in 2006.

Country	Station number	Station name	OSPAR Region	Lat.	Long.	Elev. (m)	Distance to sea (km)	Precip.(p) airborne(a)
Iceland	IS0090R	Irafoss	I	64°08' N	21°54' W	52	1	p
	IS0091R	Storhofdi	I	63°24' N	20°17' W	118	0.5	pa
Norway	NO0057R	Ny-Ålesund	I	78°55' N	11°55' E	8	0.3	p
	NO0042R	Zepellinfjell	I	78°54' N	11°53' E	474	2	a
	NO0039R	Kårvatn	I	62°47' N	8°53' E	210	70	pa
	NO0001R	Birkenes	II	58°23' N	8°15' E	190	20	pa
Belgium	BE0011R	Moerkerke	II	51°15' N	3°21' E	10	12	a
	BE0013R	Houtem	II	51°01' N	2°35' E	0	9	a
	BE0014R	Koksijde	II	51°7' N	2°30' E	7	1.5	pa
Netherlands	NL0009R	Kollumerwaard	II	53°20' N	6°17' E	1	7.5	pa
	NL0091R	De Zilk	II	52°18' N	4°31' E	4	2.5	pa
Germany	DE0001R	Westerland	II	54°56' N	8°19' E	12	0.09	pa
Denmark	DK0005R	Keldsnor	II	54°44' N	10°44' E	10		p
	DK0008R	Anholt	II	56°43' N	11°31' E	40	~0.5	pa
	DK0020R	Pedersker	II	55°01' N	14°57' E	5		p
	DK0031R	Ulborg	II	56°17' N	8°26' E	40	20	pa
Sweden	SE0014R	Råö	II	57°24' N	11°55' E	10	0.1	pa
	SE0097R	Gårdsjön	II	58°03' N	12°01' E	113	12	p
United Kingdom	GB0013R	Yarner Wood	II	50°36' N	3°43 W	119	16.9	pa
	GB0014R	High Muffles	II	54°20' N	0°48' W	267	20.8	pa
	GB0016R	Glen Saugh	II					pa
	GB0091R	Banchory	II	57°05' N	2°32' W	120	23.6	pa
	GB0017R	Heigham Holmes	II	52°43' N	1°37' E	0	4.4	pa
	GB0006R	Lough Navar	III	54°26' N	7°54 W	130	18.8	pa
Ireland	IE0001R	Valentia Island	III	51°56' N	10°15' W	9	0	p
France	FR0090R	Porspoder	II/IV	48°30' N	4°46' W	30	0.5	p
Spain	ES0008R	Niembro	IV	43°26'N	4°51' W	115	~0.5	pa
Portugal	PT0003R	Viana do Castelo	IV	41°42' N	8°48' W	16	4	p
	PT0004R	Monte Velho	IV	38°05' N	8°48' W	43	1.5	p
	PT0010R	Angra do Heroismo	V	38°40' N	27°13' W	74	1	p

2.2 Completion of the observation programmes

The Comprehensive Atmospheric Monitoring Programme (CAMP) can provide ground truth data on atmospheric pollution of OSPAR waters in a coordinated and geographically appropriate manner. Full observance of the Mandatory components to be monitored, for both precipitation and airborne contaminants, was made by Germany, Netherlands, Norway and Sweden. In addition, Belgium and Portugal also undertook the mandatory programme for components in precipitation, and Denmark and Spain implemented the Mandatory programme for airborne contaminants. The least reported contaminants are mercury (6 reporting Parties, unchanged since 2003) and lindane (6 reporting, unchanged since 2003). Two Contracting Parties, France and Ireland, chose not to report any mandatory air components. From the combined numbers of Contracting Parties and of pollutants, the percentage fulfilment of the mandatory contaminant monitoring can be determined, based on the assumption that full completion of the programme would be represented by delivery of 12 monthly averages which pass quality control criteria for each of the listed components. The Mandatory programme for components in precipitation, for example, contains 11 substances and that for airborne concentrations contains at least 3 substances, so that 14 x 12 month averages successfully meeting

quality control criteria would be needed to achieve 100% delivery. After rising from 78% in 2003, to 83% in both 2004 and 2005, observance was little changed at 82% in 2006.

Table 2.2: Mandatory monitoring of contaminants in precipitation for 2006.
Dots indicate reported observations

	As	**Cd**	**Cr**	**Cu**	**Pb**	**Hg**	**Ni**	**Zn**	**γ-HCH**	**NH_4**	**NO_3**
Belgium	•	•	•	•	•	•	•	•	•	•	•
Denmark	•	•	•	•	•		•	•		•	•
France		•	•	•	•		•	•		•	•
Germany	•	•	•	•	•	•	•	•	•	•	•
Iceland	•	•	•	•	•		•	•	•	•	•
Ireland	•	•	•	•	•	•	•	•		•	•
Netherlands	•	•	•	•	•	•	•	•	•	•	•
Norway	•	•	•	•	•	•	•	•	•	•	•
Portugal	•	•	•	•	•	•	•	•	•	•	•
Spain	•	•	•	•	•		•	•		•	•
Sweden	•	•	•	•	•	•	•	•	•	•	•
United Kingdom	•	•	•	•	•	•	•	•		•	•

Table 2.3: Mandatory monitoring of contaminants in air for 2006.
Dots indicate reported observations

	NO2	NO3	NHx
Belgium	•		
Denmark	•	•	•
France			
Germany	•	•	•
Iceland		•	
Ireland			
Netherlands	•	•	•
Norway	•	•	•
Portugal			
Spain	•	•	•
Sweden	•	•	•
United Kingdom*			

** United Kingdom delivered after report completion*

Fulfilment of the CAMP programme expressed as a percentage calculated as explained previously is shown in table 2.4 There is an optional approach to monitoring airborne nitrogen compounds, and the estimates assume the minimum approach, i.e. combined NH_3+NH_4 sampling is sufficient, as is combined NO_3+HNO_3. Where monitoring is of separate compounds, the full complement must then be reported to achieve 100%. One weakness is that values below detection limits are accredited as passing quality control criteria. CAMP procedures assign an assumed value of 50% of the detection limit in such cases. Percentage fulfilment would fall markedly in some cases if such values were rejected. The table also gives the number of additional compounds being reported, i.e. compounds additional to either the Mandatory or the Voluntary lists. Non-observation of mercury and lindane accounts for much of fulfilment shortfall for mandatory precipitation. Also, some countries do not implement the mandatory airborne programme, or the voluntary precipitation programme. Lack of data for occasional months accounts for remaining deficits, e.g. sample contamination, or from suspended monitoring during improvement work, e.g. Germany.

Table 2.4: Percentage completion of the CAMP programme.

	Precipitation		Airborne		
	Mandatory	*Voluntary*	*Mandatory*	*Voluntary*	*no. Extra*
Belgium	100,0	0,0	33,3	34,3	*9*
Denmark	81,8	0,0	88,9	48,6	*4*
France	75,0	0,0	0,0	0,0	*0*
Germany	93,1	91,7	100,0	23,1	*19*
Iceland	90,2	40,1	25,0	59,0	*41*
Ireland	90,9	0,0	0,0	0,0	*0*
Netherlands	97,7	0,0	80,0	24,7	*0*
Norway	94,7	36,5	100,0	87,1	*74*
Portugal	56,8	0,0	0,0	0,0	*0*
Spain	81,8	0,0	100,0	50,6	*9*
Sweden	100,0	0,0	100,0	58,3	*2*
United Kingdom	90,9	0,0	100,0	88,1	0
mean	*87,7*	*14,0*	*60,6*	*39,5*	*13*

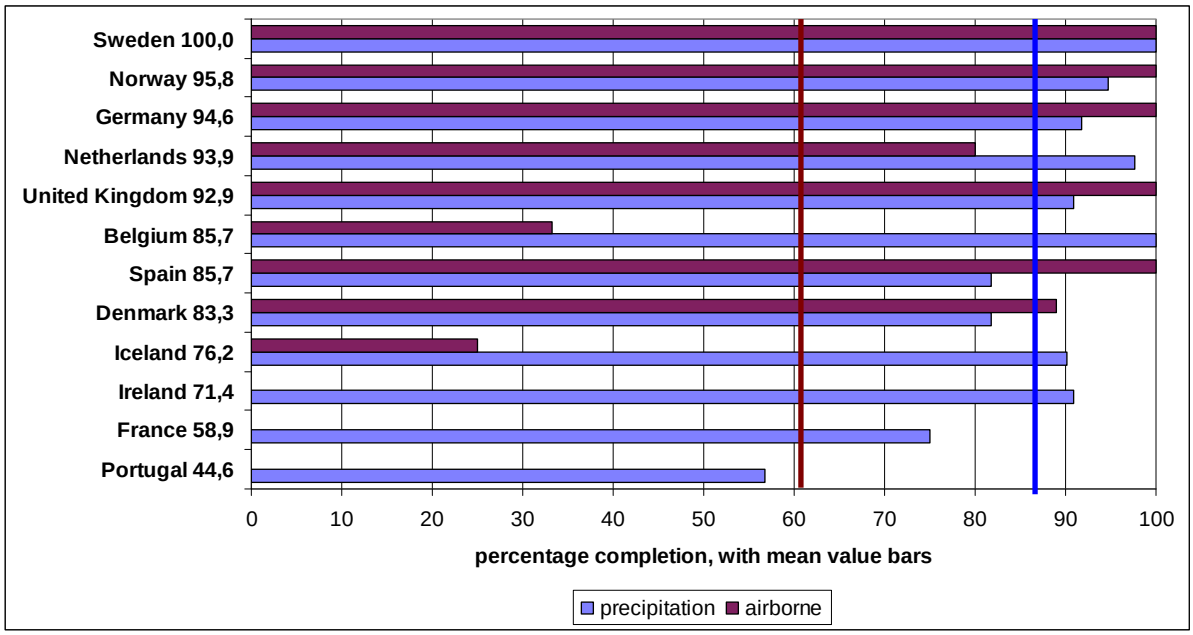

Figure 2.2: Graphical representation of completion of the Mandatory Programme.
Number accompanying country is overall percentage completion (100=12 months x 14 values)

2.3 Timeliness of reporting

Whilst the reporting of data for observations for the year 2006 does not appear to deviate greatly from the time schedule of the CAMP Principles (see Table 2.5), there was notable consequence of the particular mix of late reporting Countries for review of data at INPUT. Data for the southern North Sea was rather incomplete at that stage. Eight of twelve Contracting Parties reported according to schedule with a further one partially reporting according to schedule. A further one reported in time for data validation, and an eleventh reported before INPUT, but too late for inclusion in the draft report. The final country reported on the last day of INPUT. Table 2.6 gives an overview of the actual receipt of national observation reports.

Table 2.5: Timetable for data reporting according to the CAMP Principles

30th June	Call for metadata and data issued from NILU (regarding new data and metadata), with instructions and reference to supporting software (e.g. where to find tools on the NILU website).
30th September	Participants submit data and metadata via email or on diskette, in specified formats.
31st October	NILU returns data and metadata via email or on diskette in the form of a 'validation report' to data originators for verification and signing off by the data originators within two weeks of reception.

Table 2.6: Timeline of reporting of 2006 observations

Contracting Party	Data delivered
June 30 -Deadline for data request issue by NILU	
Denmark	√
France	√
Germany[a]	√
Iceland	√
Ireland	√
Netherlands[a]	√a
Norway	√
Spain	√
Sweden	√
September 30 - Deadline for receipt of data	
Belgium	√
October 31 - Deadline for issue of Validation Reports by NILU	
NILU	√
Netherlands[a]	√
January 4, 2008 - Reporting to INPUT by NILU	
United Kingdom	√
January 2008 – INPUT, Stockholm	
Portugal	√
Germany[a]	√
March 2008 – Draft Report delivery to OSPAR for ASMO	

a *partial reporting*

2.4 Reporting of additional components

Parties report a wider range of components than is covered by CAMP. This data is managed and stored by the Data Manager in the same way as for the regular data. Table 2.7 lists all components reported by Contracting Parties during 2006 (excluding major ions submitted for quality control, and components of no clear relevance to CAMP), this time divided by precipitation and airborne components. These are colour-coded to indicate their status as mandatory components (green), voluntary components (blue) or additional components (red), and are listed with the country code of Parties concerned.

In the main body of this report description is of observations of the Mandatory components alone. These are both tabulated and shown as maps. In the Appendices all observations from each country are listed, covering the Mandatory components, the Voluntary components, and additional components. Excluded are only the major ions which are reported solely to provide the potential for quality control, and compounds which are a part of other international programmes but which may be expected to lie outside the core interest of OSPAR, e.g. sulphates, ozone, PM measurements.

Precipitation Components

	aldrin	BE,DE		gamma_HCH	BE,DE,IS, NL,NO,SE		PCB_138	DE,IS, NO
	alpha_HCH	BE, DE,IS, NO		HCB	DE,IS, NO		PCB_153	DE,IS, NO
	aluminium	IE,IS,		heptachlor	BE,DE		PCB_156	IS
	ammonium	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		inden_123cd_pyrene	DE		PCB_180	DE,IS, NO
	anthracene	DE		iron	DE,IS,		phenanthrene	DE
	arsenic	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		lead	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		pp_DDD	BE, DE,IS
	benz_a_anthracene	DE		manganese	DE,IE,IS,SE		pp_DDE	BE, DE,IS
	benzo_a_pyrene	DE		mercury	BE,DE,DK,FR,IE,IS,NL,NO,SE		pp_DDT	BE, DE,IS
	benzo_ghi_perylene	DE		nickel	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		sum_DDT	
	beta_HCH	IS		nitrate	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		pyrene	DE
	cadmium	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		op_DDT	DE,IS		trans_CD	IS
	chromium	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		PCB_28	DE,IS, NO		trans_NO	IS
	cis_CD	IS		PCB_31	IS		txph_26	IS
	cobalt	NO		PCB_52	DE,IS, NO		txph_50	IS
	copper	BE,DE,DK,ES,FR,IE,IS,NL,NO,SE		PCB_101	DE,IS, NO		txph_62	IS
	dieldrin	BE, DE,IS		PCB_105	IS		vanadium	IE, NO, SE
	endrin	BE,DE		PCB_118	DE,IS, NO		zinc	BE,DE,ES,FR,IE, IS,NL,NO,SE
	fluoranthene	DE						

Mandatory ***Voluntary*** ***Additional***

Airborne Components

	acenaphthene	ES,NO		fluorene	ES,NO		PCB_114	NO
	acenaphthylene	ES,NO		gamma_HCH	IS,NO,SE		PCB_118	IS,NO,SE
	alpha_HCH	IS,NO		HCB	IS,NO		PCB_122	NO
	aluminium	DK,IS		inden_123cd_pyrene	ES,NO,SE		PCB_123	NO
	ammonia	DK,ES,NL,NO		iron	DE,DK,IS		PCB_128	NO
	ammonium	NL,NO		lead	BE,DE,DK,ES,IS,NL,NO		PCB_138	IS,NO,SE
	sum ammonia & ammonium	DE,DK,ES,NO,SE		manganese	DE,DK,IS		PCB_141	NO
	anthanthrene	NO		mercury	BE,IS,NO,SE		PCB_149	NO
	anthracene	ES,NO,SE		N1methylnaphtalene	NO		PCB_153	IS,NO,SE
	arsenic	DE,DK,ES,IS,NL,NO		N1methylphenanthrene	NO		PCB_156	IS,NO
	benz_a_anthracene	ES,NO,SE		N2methylanthracene	NO		PCB_157	NO
	benzo_a_fluoranthene	NO		N2methylnaphtalene	NO		PCB_167	NO
	benzo_a_fluorene	NO		N2methylphenanthrene	NO		PCB_170	NO
	benzo_a_pyrene	ES,NO,SE		N3methylphenanthrene	NO		PCB_180	IS,NO,SE
	benzo_b_fluorene	NO		N9methylphenanthrene	NO		PCB_183	NO
	benzo_bjk_fluoranthenes	ES,NO		naphtalene	ES,NO		PCB_187	NO
	benzo_e_pyrene	NO		nickel	BE,DE,DK,IS,NL,NO		PCB_189	NO
	benzo_ghi_fluoranthene	NO		nitrate	IS,NL,NO		PCB_194	NO
	benzo_ghi_perylene	ES,NO,SE		nitric_acid			PCB_206	NO
	beta_HCH	IS		sum nitric acid & nitrate	DE,DK,ES,NO,SE		PCB_209	NO
	biphenyl	NO		nitrogen_dioxide	BE,DE,DK,ES,NL,NO,SE		sum_PCB	NO
	cadmium	BE,DE,ES,IS,NL,NO		nitrogen_monoxide	BE,ES,NL		perylene	NO
	chromium	DK,ES,IS,NO		op_DDD	NO		phenanthrene	ES,NO,SE
	chrysene	ES,UK		op_DDE	NO		pp_DDD	IS,NO
	cis_CD	IS,NO		op_DDT	IS,NO		pp_DDE	IS,NO
	cis_NO	NO		PCB_18	NO		pp_DDT	IS,NO
	copper	BE,DE,DK,ES,IS,NO		PCB_28	IS,NO,SE		sum_DDT	NO
	coronene	NO		PCB_31	IS		pyrene	ES,NO,SE
	cyclopenta_cd_pyrene	NO		PCB_33	NO		retene	NO
	dibenzo_ac_ah_anthracenes	ES,NO		PCB_37	NO		selenium	DK
	dibenzo_ae_pyrene	NO		PCB_47	NO		trans_CD	IS,NO
	dibenzo_ah_pyrene	NO		PCB_52	IS,NO,SE		trans_NO	IS,NO
	dibenzo_ai_pyrene	NO		PCB_66	NO		txph_26	IS
	dibenzofuran	NO		PCB_74	NO		txph_50	IS
	dibenzothiophene	NO		PCB_99	NO		txph_62	IS
	dieldrin	IS		PCB_101	IS,NO,SE		vanadium	DE,IS
	fluoranthene	ES		PCB_105	IS,NO		zinc	BE,DE,DK,IS,NL,NO

Table 2.7: All components for which at least one month's data was reported in 2006

3. Observed pollutant depositions at monitoring stations in 2006

This section describes air pollutant status at coastal stations around the North-East Atlantic in 2006. The annual average concentrations of contaminants subject to mandatory monitoring are listed and mapped, and deposition rates tabulated. Full sea deposition estimates from observations are supplied in section 4. Heavy metal concentrations and depositions in precipitation are presented in Tables 3.1-2, illustrated in Figures 3.1-3.7. Data for mercury is in Table 3.3 and Figure 3.8, and lindane in Table 3.4 and Figure 3.9. Nitrogen concentrations and depositions in precipitation are in Table 3.5, and are mapped in Figures 3.10-11. Colour coding highlights the two highest concentration/depositions, and the lowest concentration/deposition per pollutant.

3.1 Heavy metals (except mercury)

Some patterns are observable. Low pollutant levels at GB0006 are not unexpected on the western coast of Northern Ireland. Extremes on Iceland likely are a reflection of localised geothermal activity in an otherwise remote location. High values on the Iberian peninsula are less easily explained. Consistent and high cadmium concentrations at Portuguese sites suggests an artefact. High observations at the Spanish site ES0008 might indicate a general but unexplained issue affecting all samples. High Irish values are an artefact of detection limits; actual values are expected to be much lower.

Table 3.1: Reported mean concentrations of heavy metals in precipitation (µg/l).

2006		arsenic µg/l	cadmium µg/l	chromium µg/l	copper µg/l	lead µg/l	nickel µg/l	zinc µg/l	precipitation mm
Belgium	*BE0014R*	0,27	0,04	0,27	2,70	1,65	0,58	10,41	*753*
Denmark	*DK0008R*	0,19	0,03	0,30	0,83		9,02		*522*
	DK0020R		0,06	0,41	1,31		10,69		*529*
	DK0031R		0,02	0,21	0,53		5,65		*1058*
France	*FR0090R*		0,05	0,06	0,66	0,21	0,31	2,52	*918*
Germany	*DE0001R*	0,11	0,03	0,10	0,86	0,86	0,34	6,40	*726*
Iceland	*IS0090R*	0,12	0,01	0,19	2,62	0,44	0,74	4,18	*949*
	IS0091R	0,06	0,01	0,26	1,86	0,35	0,97	8,08	*2313*
Ireland	*IE0001R*	0,50	0,05	0,50	1,44	0,50	0,50	8,04	*1757*
Netherlands	*NL0009R*	0,30	0,06	0,40	1,63	1,61	0,36	6,70	*788*
	NL0091R	0,08	0,05	0,26	1,01	1,94	0,27	4,22	*951*
Norway	*NO0001R*	0,20	0,03	0,15	0,51	0,88	0,20	3,37	*1816*
Portugal	*PT0003R*				1,46	1,35	1,30	39,46	*1344*
	PT0004R		0,42		1,23	2,30	0,98	16,23	*903*
	PT0010R		0,42		1,83	0,65	1,19	38,96	*1200*
Spain	*ES0008R*	0,19	0,07	85,49	14,71	3,00	28,18	82,05	*863*
Sweden	*SE0097R*	0,05	0,03	0,14	0,80	0,65	0,21	5,00	*1377*
United Kingdom	*GB0006R*	0,22	0,01	0,11	0,41	0,23	0,13	1,58	*1368*
	GB0013R	0,10	0,02	0,08	0,38	0,53	0,30	3,21	*1079*
	GB0017R	0,14	0,03	0,13	1,94	1,05	0,43	6,16	*556*
	GB0091R	0,14	0,02	0,11	0,58	1,08	0,30	4,47	*645*

highest concentrations second highest concentrations lowest concentrations

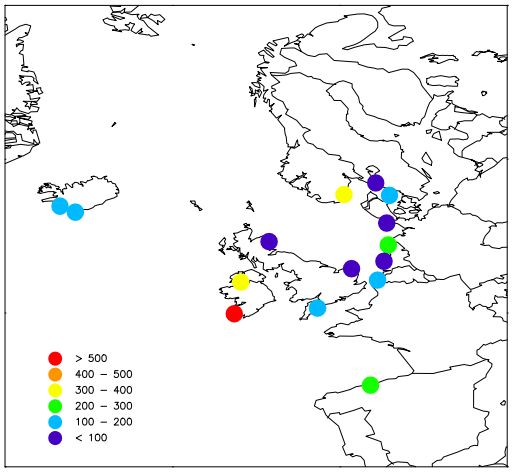

Figure 3.1: As depositions 2006, µg/m2 p.a.

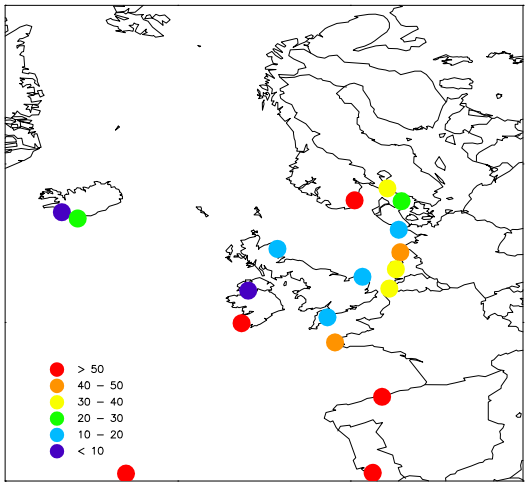

Figure 3.2: Cd depositions 2006, µg/m2 p.a.

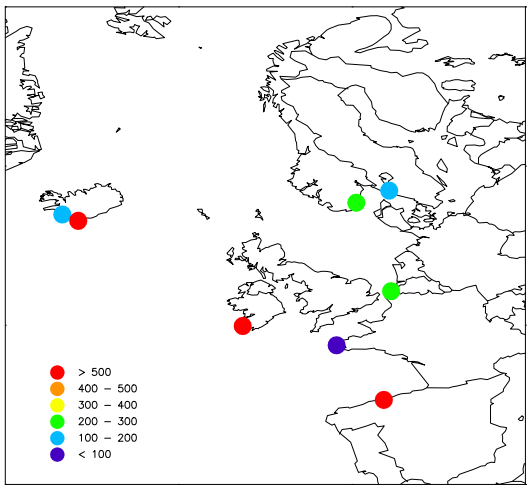

Figure 3.3: Cr depositions 2006, µg/m2 p.a.

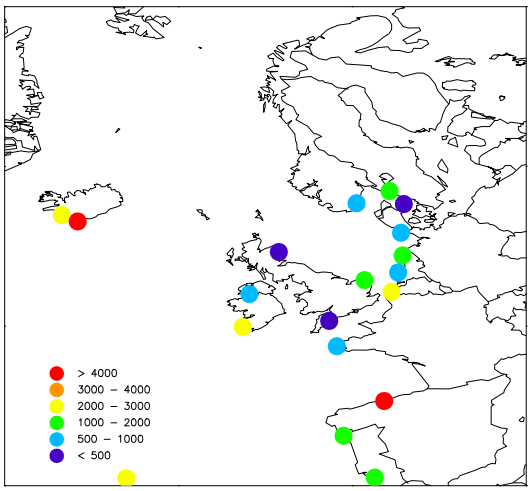

Figure 3.4: Cu depositions 2006, µg/m2 p.a

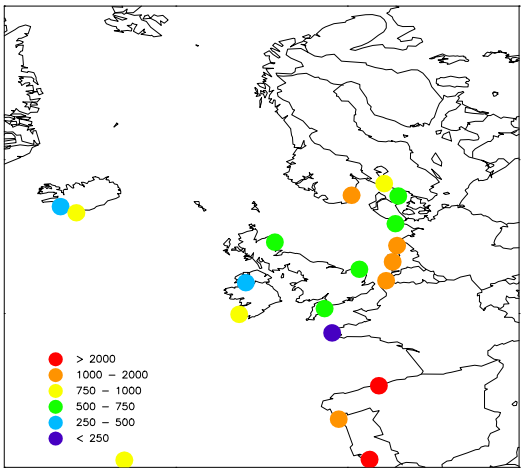

Figure 3.5: Pb depositions 2006, µg/m2 p.a.

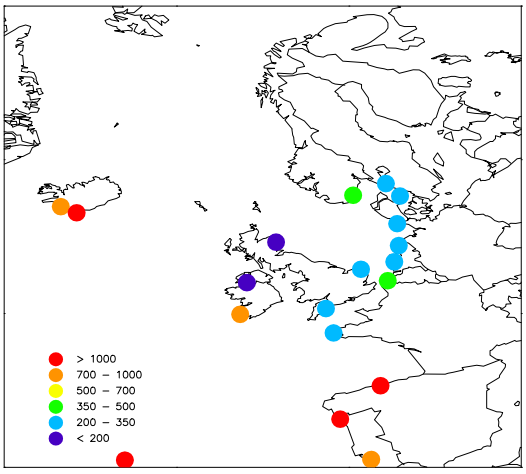

Figure 3.6: Ni depositions 2006, µg/m2 p.a.

NOTE: Figures display observed depositions. Refer to table 3.2 for no. of months data at each site

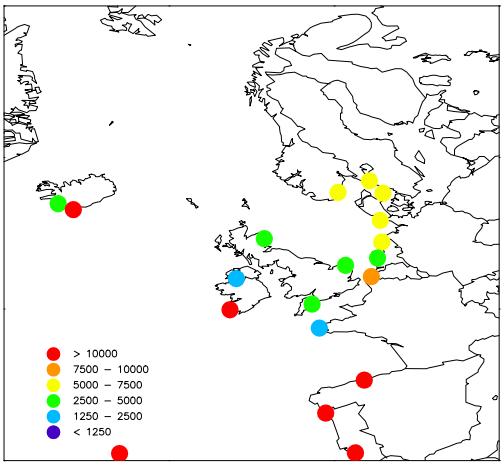

Figure 3.7: Zn depositions 2006, µg/m2 p.a.

2006		arsenic µg/m^2	cadmium µg/m^2	chromium µg/m^2	copper µg/m^2	lead µg/m^2	nickel µg/m^2	zinc µg/m^2	*precipitation mm*
Belgium	*BE0014R*	200	30	202	2035	1249	434	7860	*753,13(12)*
Denmark	*DK0008R*	138	22	221	618		6706		*743*
	DK0020R		32[a]	219[a]	695[a]	893	5661[a]	8554	*529*
	DK0031R		21	223	560		5971[a]		*1058*
France	*FR0090R*		44	57	605	192	279	2315	*918*
Germany	*DE0001R*	78[a]	20[a]	73[a]	621[a]	622[a]	244[a]	4642[a]	*726*
Iceland	*IS0090R*	116	10	181	2497	420	702	3976	*949*
	IS0091R	137	20	597	4328	820	2243	18654	*2313*
Ireland	*IE0001R*	877	88	877	2532	877	877	14105	*1757*
Netherlands	*NL0009R*	227	48	315	1281	1271	280	5274	*788*
	NL0091R	73	45	247	965	1848	260	4009	*951*
Norway	*NO0001R*	354	53	272	931	1600	355	6117	*1816*
Portugal	*PT0003R*				1968[a]	1808[a]	1751[a]	53048[a]	*1344*
	PT0004R		384[b]		1114[b]	2077[b]	888[b]	14659[b]	*903*
	PT0010R		510[d]		2187[d]	773[d]	1423[d]	46682[d]	*1200*
Spain	*ES0008R*	168	57	73714	12690	2594	24309	70768	*863*
Sweden	*SE0097R*	74	39	191	1096	890	292	6875	*1377*
United Kingdom	*GB0006R*	295[a]	8[a]	144[a]	558[a]	311[a]	175[a]	2159[a]	*1368*
	GB0013R	109	18	85	414	567	328	3462	*1079*
	GB0017R	77[c]	15[c]	75[c]	1077[c]	584[c]	240[c]	3426[c]	*556*
	GB0091R	92	15	69	372	694	190	2883	*645*

all 12 monthly samples except a=11months, b=10months, c=8months, d=6months

highest depositions | second highest depositions | lowest depositions

Table 3.2: Reported mean annual depositions of heavy metals in precipitation (mg/m2/a). precipitation amounts are given in mm. No. months represented according to the key.

3.2 Mercury

The broad comparison in observed concentrations and depositions around the southern North Sea, from Norway around the coast to the United Kingdom, provides some reassurance as to the quality of these measurements. The basis, if there is any, for the slight division into two groups – Netherlands, Norway and Belgium, and Sweden, Germany and the UK, is not immediately apparent. Much higher reported concentrations for western Ireland would appear to reflect high detection limits; true concentrations and depositions are expected to be much lower. This latter difficulty, together with the absence of any observations by Parties outside the North Sea basin, precludes identification of levels elsewhere across the OSPAR area.

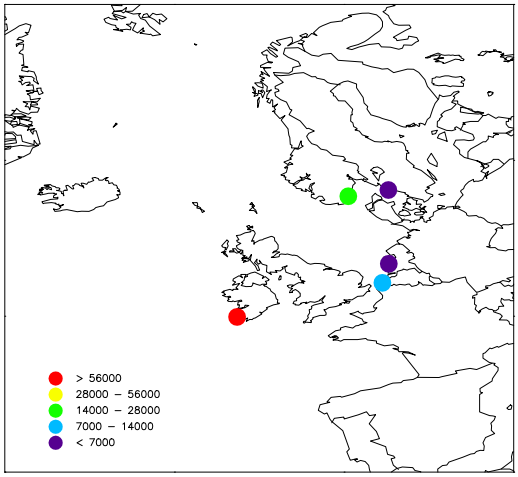

Figure 3.8: Mercury depositions 2006, ng/m2 p.a.

Table 3.3: Reported depositions of mercury in precipitation (ng/m2), 2006, together with associated concentrations (ng/l). Ranked by deposition quantity.

2006		conc *ng/l*	prec *mm*	dep *ng/m²*
Ireland	*IE0001R*	50,00	1757	87714
Norway	*NO0001R*	8,08	1839	14858
Belgium	*BE0014R*	11,97	1046	12587
Netherlands	*NL0091R*	9,61	719	6874
Sweden	*SE0014R*	10,04	601	6029
Germany	*DE0001R*	8,58	700	6006
United	*GB0013R*[a]	3,48	831	2894
Kingdom	*GB0091R*	3,78	712	2696
Denmark		•		
France		•		
Iceland		•		
Portugal		•		
Spain		•		

a: ten months of observations

• *no data reported*

3.3 Lindane

There is a spatial pattern increasing towards the southern North Sea. Icelandic observations are very low in accordance with no local use and restricted distant transport. Values from Norway, Sweden and Germany are broadly comparable. The observed depositions on the Dutch and Belgian coasts remain elevated in 2006, despite methodological improvements which afford improved confidence in these observations. The decrease in depositions from 2004-6 across the region is reasonably consistent although, as the number of months of available data varies slightly for each year at each station for various quality control and operational reasons, the percentage decreases shown can only be indicative. At first glance only Norway shows no change in depositions. Without further information and detailed analysis it is not possible to fully explain this, although the particular high rainfall geography of the southern Norwegian coast can well be expected to play a role. Where longer records of lindane deposition in precipitation exist, such as at DE0001, a clear decrease can be seen since 1996.

Table 3.4: Reported annual concentrations of γ-HCH in precipitation (precipitation-weighted: (ng/l) and deposition (ng/m2)) in decreasing order of deposition quantity, together with percentage change in reported deposition quantity since 2004.

		concentration *ng/l*	precipitation *mm*	2006 deposition *ng/m²*	2005 deposition *ng/m²*	2004 *deposition ng/m²*	% *change 2004-6*
Netherlands	*NL0091R*	3,38	850,7	**3240**	*5008*	*4861*	**-33,3**
Belgium	*BE0014R*	2,13	1097,25	**2462**	*4369*	*3083*	**-20,1**
Norway	*NO0001R*	0,47	1157,77	**850**	*833*	*845*	**0,6**
Germany	*DE0001R*	1,03	584,20	**682**	*798*	*943*	**-27,7**
Sweden	*SE0014R wet+dry*			**157**	*197*	*299*	**-47,5**
Iceland	*IS0091R*	0,04	643,00	**31**	*26*	*39*	**-20,5**
Denmark							
France							
Ireland							
Portugal							
Spain							
United Kingdom							

● *no data reported*

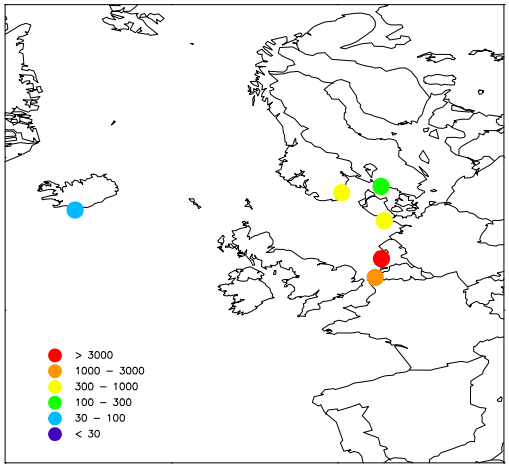

Figure 3.9: Lindane depositions 2006 ng//m²

3.4 Overview of coastal depositions of toxic substances

Of the Mandatory substances, the metals excluding mercury have been reported by all countries. The depositions of these components in precipitation around the coasts of the OSPAR area can be summarised in terms of their highest and lowest values. In figure 3.10 this has been done. The red indicates in which countries the highest depositions have been observed, the yellow indicates the second highest depositions, and the blue indicates the lowest depositions in precipitation. The numbers indicate the number of pollutants for which the category applies; there being seven metal components in the Mandatory list, each colour is shown on seven occasions.

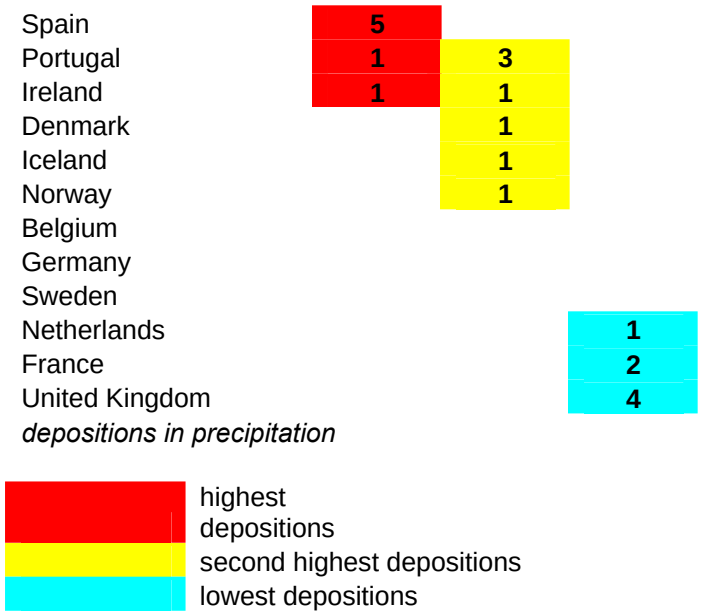

Figure 3.10: Ranking between countries of quantities of metals reported as deposited in precipitation. Numbers refer to the number of components to which the category applies.

The list is not surprising in many ways, considering the basic geography of the OSPAR area. The western extremes receive less metal deposition than the southern North Sea. What is more curious are the very high values in Spain and Ireland. At least a part of this picture is dictated by data quality, with some very high detection limits, and maybe other sampling and analysis problems. However, there is insufficient information to be categorical.

3.5 Nitrogen

Table 3.5: Mean annual nitrogen concentrations (mg/l) and depositions (mg/m2) nitrogen, 2006

2006		nitrate concentrations mg/l	ammonium concentrations mg/l	precip mm	nitrate depositions mg/m²	ammonium depositions mg/m²
Belgium	BE0014R	0,35	0,60	760	259,00	447,13
Germany	DE0001R	2,08	0,63	744	1548,90	471,90
Denmark	DK0005R	0,65	0,94	471	305,52	444,76
	DK0008R	0,42	0,28	687	291,18	190,54
	DK0020R	0,64	0,68	505	322,30	345,08
France	FR0090R	0,09	0,05	918	344,62	58,87
Iceland	IS0090R	0,09	0,38	880	82,28	331,93
	IS0091R	0,71	1,16	2475	1772,46	2887,50
Ireland	IE0001R	0,07	0,14	1757	129,07	243,38
Netherlands	NL0009R	0,40	0,77	594	235,26	458,58
	NL0091R	0,33	0,43	893	297,74	383,80
Norway	NO0001R	0,42	0,34	1838	775,46	624,08
	NO0039R	0,08	0,14	1218	93,06	167,43
	NO0057R	0,08	0,18	338	27,44	61,07
Portugal	PT0003R	0,07		1344	92,30	
	PT0004R	0,10	0,11	903	92,63	96,60
	PT0010R	0,03	0,09	1200	35,68	108,64
Spain	ES0008R	0,81	0,41	373	301,80	153,17
Sweden	SE0014R	0,44	0,53	752	328,07	394,89
United Kingdom	GB0006R	0,09	0,17	1376	124,36	237,10
	GB0013R	0,29	0,42	1068	304,24	445,04
	GB0014R	0,41	0,53	886	358,43	465,85
	GB0016R	0,53	0,68	702	373,46	479,23

highest second highest lowest

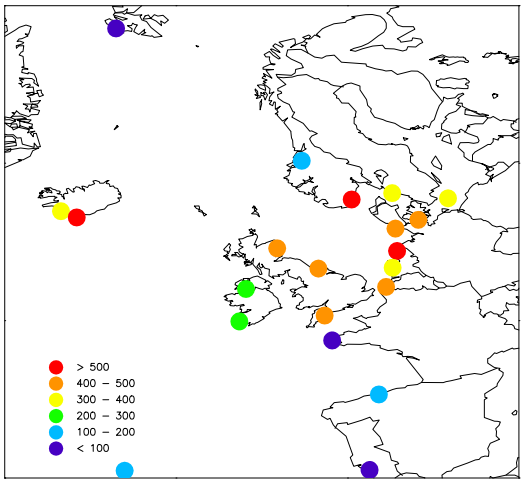

Figure 3.11: NH_4 depositions, mg N /m2 p.a.

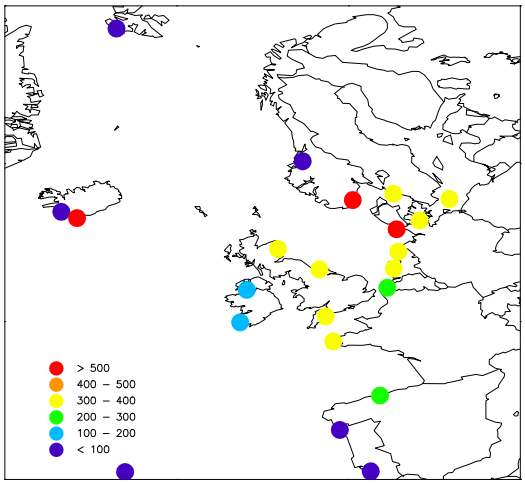

Figure 3.12: NO_3 depositions, mg N /m2 p.a.

4. Estimated total North Sea depositions and temporal patterns

4.1 Total North Sea depositions

OSPAR has endorsed the estimation of pollutant loadings to the North Sea on the basis of known relationships with the observed pollutant depositions at CAMP monitoring stations. This approach, known as 'Method 3a', applies transfer coefficients to observed pollutant concentrations to estimate total wet plus dry basin deposition*. Physical and chemical factors behind atmospheric transfer are inherent in the estimated transfer functions derived from modelling than being explicitly described. Combining estimates derived from several stations around the sea provides balance against overweighting from any single measurement.

The approach is suited to estimating total loadings and to estimating change, rather than providing detailed spatial descriptions, and is described in *Calculation of atmospheric inputs of contaminants to the North Sea 1987-92*, Oslo and Paris Commission (1994), Assessment and Monitoring Series, OSPAR publication 1994/25. In this section absolute estimates are given of deposition in 2006 of nitrogen and of the metal components on the mandatory list for precipitation (table 4.1), together with the proportional change since 2000 (figure 4.1).

Restricted year on year changes in nitrogen deposition are seen, although totals appear to have declined by around 20% since 2000. For metals, the picture is less clear. For some (e.g. arsenic, copper, lead) there appears a steady decline, whilst for others there is considerable year on year variability.

Table 4.1: Estimated total annual depositions to the North Sea basin in 2006, derived from measurements ('Method 3a'). Metals as tones per year, nitrogen as ktonnes per year.

	As	Cd	Cr	Cu	Ni	Pb	Zn	NO3	NH4	tot N
2006	39	8	47	235	82	300	1266	111	143	253
	tonnes/year							*1000 tonnes/year*		

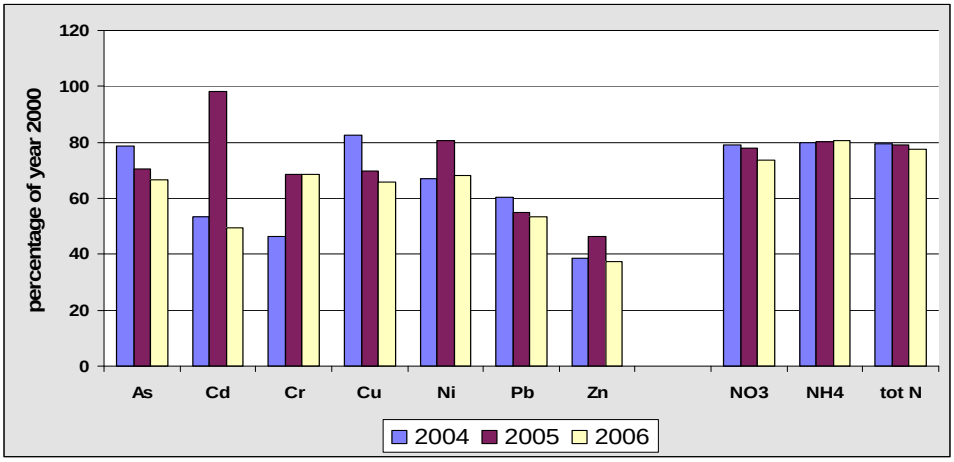

Figure 4.1: Estimated deposition change from 2000-2006, derived from observation('Method 3a')

* 'Method 3a' combines dry and wet deposition for metals. Nitrogen uses wet deposition alone.

4.2 Seasonality in nitrogen deposition

Nitrogen has been selected here for displaying temporal trends. To provide information at the regional scale observations have been averaged across all stations found in the OSPAR Region. Separate North Sea and Atlantic seasonal curves will be presented at INPUT using late data.

Ammonium showed a late spring peak in depositions. For nitrate the peak is weaker, and occurs during the winter. It is to be noted that ammonium depositions in rainfall exceeded nitrate depositions by a ratio of approximately 2:1 during the spring peak. During winter months there was little consistent difference in concentrations.

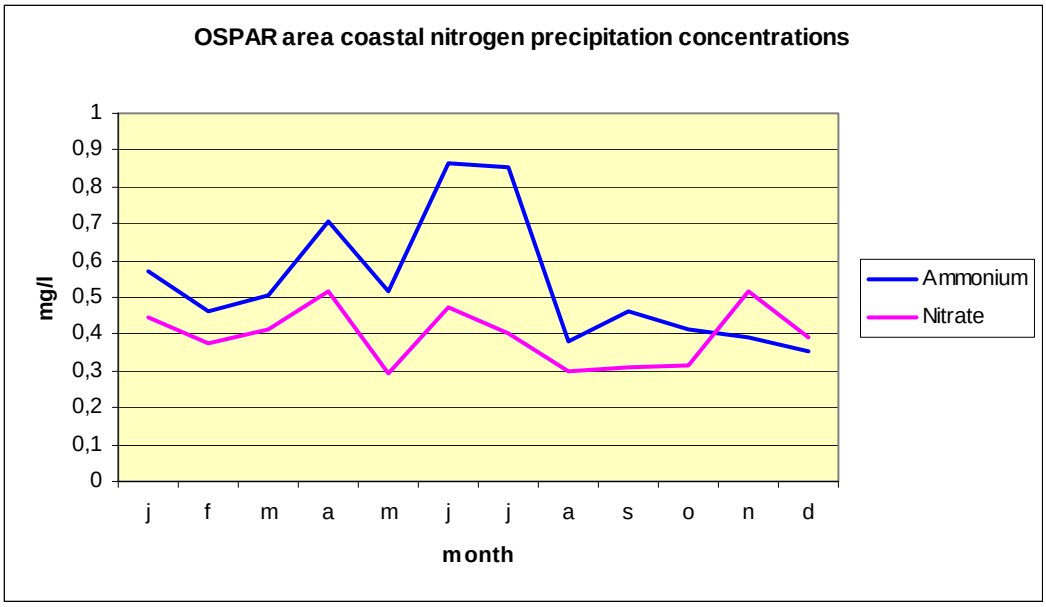

Figure 4.2: Seasonal pattern in precipitation nitrogen to the North Sea and NE Atlantic coasts in 2006

5. Final observations

Reporting of CAMP data for 2006 was more delayed than is usual. One third of sites which had reported 2005 observations had not reported 2006 observations by the 1st January 2007. Two Parties (UK, Portugal) reported no data until January, and one Party reported remaining voluntary and additional POP data in February (Germany). Several Parties do not report any data within the Voluntary Programme for components in Precipitation, or from the Mandatory Programme for airborne components. Mercury and Lindane, both on the Mandatory list for components in Precipitation, are reported by 8 and 7 of the 12 Parties, respectively.

Depositions of lindane appear to be showing a relatively consistent decline across most monitoring stations. That this decline is continuing seven years after final phase out of lindane in Europe is a demonstration of the benefit in maintaining monitoring programmes beyond timeframes of managerial action.

The seasonal patterns of nitrogen are much as would be expected, with an ammonium peak in the late spring, and a nitrate peak during the winter. The dominant role of ammonium in coastal locations is revealed in its 2:1 ratio to nitrate concentrations in the late spring period, when marine productivity would be high, and the approximate equal concentrations during the winter nitrate maximum. Since 2000, nitrogen depositions appear to have declined by as much as 20%, although year on year little change is observed. Changes are least for ammonium. Amongst metal components, the picture is less clear. Some components appear to show steady decline (e.g. arsenic, copper, lead), whilst others show considerable interannual variability.

As in previous years, some countries provided extensive reporting of components not required by CAMP (as mandatory or voluntary component). Some countries reported more non-CAMP than CAMP components. At the same time, some Mandatory list components remain unmonitored by some Parties.

Appendix A

Reported monthly observations of mandatory, voluntary, and additionally reported components

(Major ions used solely for quality assurance are not listed)

Belgium
Denmark
France
Germany
Iceland
Ireland
Netherlands
Norway
Portugal
Spain
Sweden
United Kingdom

BELGIUM

BELGIUM

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	BE0014R	mg/l	0,59	0,81	1,01	1,24	0,55	0,61	1,57	0,42	0,64	0,56	0,37	0,34
nitrate	BE0014R	mg/l	0,42	0,51	0,36	0,69	0,31	0,47	1,03	0,32	0,26	0,22	0,23	0,18
precipitation *nitrogen*	BE0014R	mm	35,10	50,00	31,50	29,40	128,10	58,90	23,90	134,10	50,50	62,00	78,00	78,30
arsenic	BE0014R	µg/l	0,27	0,27	0,27	0,26	0,26	0,27	0,27	0,27	0,27	0,27	0,27	0,27
cadmium	BE0014R	µg/l	0,05	0,05	0,06	0,14	0,04	0,04	0,07	0,03	0,04	0,03	0,03	0,03
chomium	BE0014R	µg/l	0,27	0,30	0,27	0,26	0,26	0,27	0,27	0,27	0,27	0,27	0,27	0,27
copper	BE0014R	µg/l	2,89	1,93	2,15	4,17	1,68	2,96	7,14	2,19	4,80	3,29	2,95	1,50
lead	BE0014R	µg/l	1,60	0,86	1,33	4,62	1,37	1,46	2,09	0,92	0,89	6,15	1,00	0,57
mercury	BE0014R	ng/l	13,20	18,34	19,90	12,91	17,37	16,94	28,41	12,78	9,85	5,65	6,13	4,12
nickel	BE0014R	µg/l	1,02	1,32	0,27	2,76	0,33	0,27	0,76	0,41	0,50	0,51	0,39	0,27
zinc	BE0014R	µg/l	29,02	9,69	7,48	14,29	11,31	8,29	20,92	6,80	12,50	15,95	7,38	5,26
precipitation *metals ex. Hg*	BE0014R	mm	25,00	55,61	33,17	30,72	115,54	60,40	25,69	135,22	52,78	63,40	77,51	78,09
precipitation *mercury*	BE0014R	mm	10,50	89,99	5,10	34,56	129,51	48,69	56,59	201,82	97,74	111,24	128,38	131,64
g-HCH	BE0014R	ng/l	1,00	1,00	1,00	7,00	2,00	1,00	1,00	1,00	2,00	4,00	1,00	1,00
precipitation *g-HCH*	BE0014R	mm	46,56	76,32	22,72	122,08	154,88	69,60	39,68	198,08	34,72	124,96	93,92	153,44
									Percentage completion of mandatory programme					**100,0**

Voluntary
2006

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*
Percentage completion of voluntary programme	**0,0**

additional non-CAMP components
2006

aldrin	BE0014R	ng/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
alpha_HCH	BE0014R	ng/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
dieldrin	BE0014R	ng/l	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
endrin	BE0014R	ng/l	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50	1,50
heptachlor	BE0014R	ng/l	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
pp_DDD	BE0014R	ng/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
pp_DDE	BE0014R	ng/l	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
pp_DDT	BE0014R	ng/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
precipitation	BE0014R	mm	10,50	37,62	5,10	12,69	65,98	18,76	19,78	97,82	28,91	46,26	33,24	55,45
									number of additional components reported					**8**

BELGIUM

Airborne components

2006

Mandatory	**station**	**units**	january	february	march	april	may	june	july	august	september	october	november	december
NO2	BE0011R	µg/m³	8,83	7,30	5,78	4,87	5,78	4,87	4,87	3,35	6,09	6,09	6,09	6,70
	BE0013R	µg/m³	7,61	6,39	5,17	4,57	5,17	4,57	4,57	3,35	4,57	5,17	4,87	5,78
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3			*not reported*											
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**33,3**

Voluntary 2006														
NO	BE0011R	µg/m³	1,40	2,80	2,33	1,40	0,93	0,93	0,47	0,93	1,40	2,33	2,80	4,67
	BE0013R	µg/m³	0,93	1,87	1,87	0,93	0,93	0,93	0,47	0,93	0,93	1,40	2,33	3,27
arsenic			*not reported*											
cadmium	BE0014R	ng/m³	0,56	0,19	0,24	0,09	0,09	0,07	0,55	0,02	0,41	0,32	0,24	0,20
chomium			*not reported*											
copper	BE0014R	ng/m³	7,10	4,66	4,80	11,16	5,38	4,37	7,45	4,23	9,13	9,42	7,86	6,23
lead	BE0014R	ng/m³	22,25	14,27	16,40	10,64	19,98	9,93	12,77	4,44	15,43	13,66	12,37	8,51
mercury	BE0014R	ng/m³	2,02	2,48	2,04	1,95	2,01	1,70	1,87	1,63	2,00	2,22	2,22	2,00
nickel	BE0014R	ng/m³	2,25	3,70	3,20	4,84	8,25	9,18	9,67	2,75	7,08	36,07	2,55	2,46
zinc	BE0014R	ng/m³	50,08	29,57	40,82	33,74	55,33	34,58	39,60	7,70	54,68	43,08	24,53	27,21
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**26,9**

DENMARK

DENMARK

Components in Precipitation
2006

Mandatory	station	units	month											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	DK0005R	mg/l	0,74	0,60	0,80	1,56	0,67	1,87	1,83	0,86	1,20	0,87	0,37	0,78
	DK0008R		0,45	0,36	0,47	0,77	0,43	0,28	0,58	0,12	0,19	0,24	0,23	0,20
	DK0020R		0,51	0,58	0,83	1,99	0,57	1,96	1,17	0,33	0,92	0,77	0,38	0,55
nitrate	DK0005R	mg/l	1,09	0,81	0,55	0,98	0,50	0,89	0,94	0,41	1,11	0,58	0,50	0,68
	DK0008R		0,73	0,56	0,57	0,68	0,49	0,40	0,57	0,23	0,62	0,48	0,49	0,38
	DK0020R		0,89	0,82	1,70	1,28	0,40	0,94	0,79	0,35	0,51	0,36	0,49	0,82
precipitation *nitrogen*	DK0005R	mm	14,43	29,68	42,90	31,72	41,33	20,42	35,34	110,30	19,53	47,00	46,02	32,58
	DK0008R		20,81	57,12	39,45	28,34	34,13	32,54	38,40	216,75	20,01	64,47	68,77	66,24
	DK0020R		12,22	38,80	44,38	23,06	49,18	12,17	11,99	125,02	55,35	58,97	61,02	13,16
arsenic	DK0008R	µg/l	0,36	0,37	0,31	0,32	0,16	0,41	0,21	0,11	0,24	0,14	0,09	0,16
	DK0020R													
	DK0031R													
cadmium	DK0008R	µg/l	0,10	0,05	0,04	0,02	0,03	0,05	0,04	0,01	0,03	0,02	0,02	0,05
	DK0020R													
	DK0031R													
chomium	DK0008R	µg/l	0,56	0,33	0,32	0,34	0,29	0,41	0,53	0,17	0,76	0,28	0,25	0,34
	DK0020R													
	DK0031R													
copper	DK0008R	µg/l	2,10	1,38	1,19	0,86	0,74	1,64	1,30	0,43	1,31	0,74	0,69	0,70
	DK0020R													
	DK0031R													
lead	DK0008R	µg/l	*not yet received*											
	DK0020R													
	DK0031R													
mercury			*not yet received*											
nickel	DK0008R	µg/l	26,82	10,38	10,28	6,44	24,15	10,72	8,44	2,84	15,27	10,41	9,87	12,04
	DK0020R													
	DK0031R													
zinc	DK0008R	µg/l	*not yet received*											
	DK0020R													
	DK0031R													
precipitation *metals ex. Hg*	DK0005R	mm	*not yet received*											
	DK0008R		16,91	48,89	43,95	34,84	34,13	34,58	43,92	231,50	22,92	70,19	82,60	78,77
g-HCH			*not yet received*											

Percentage completion of mandatory programme **63,6**

Voluntary
2006

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*

Percentage completion of voluntary programme **0,0**

DENMARK

Airborne components

2006

Mandatory	station	units	month											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2	DK0008R	µg/m^3					0,57	1,23	1,46	0,99	1,38	1,75	2,12	1,47
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3	DK0005R	µg/m^3	1,42	1,44	1,01	1,42	0,99	0,97	0,87	0,74	1,42	1,24	0,95	0,80
	DK0008R	µg/m^3	1,00	0,90	0,66	1,17	0,74	0,82	0,80	0,53	1,23	0,88	0,82	0,59
	DK0031R	µg/m^3	1,40	0,94	0,78	0,80	1,46	0,75	0,71	0,46	1,01	0,77	0,56	0,41
NH3	DK0005R	µg/m^3	0,04	0,06	0,20	0,52	0,80	0,58	1,07	0,68	0,67	0,60	0,28	0,33
	DK0008R	µg/m^3	0,01	0,03	0,04	0,15	0,30	0,27	0,45	0,16	0,29	0,11	0,10	0,06
	DK0031R	µg/m^3	0,11	0,11	0,27	0,31	2,09	0,64	0,99	0,79	0,77	0,29	5,70	0,08
NH3+NH4	DK0005R	µg/m^3	2,23	1,96	1,54	1,96	1,48	1,38	1,36	1,14	2,12	1,64	1,12	1,11
	DK0008R	µg/m^3	1,55	1,28	0,91	1,51	1,13	1,08	1,12	0,64	1,82	1,13	0,91	0,70
	DK0031R	µg/m^3	2,31	1,72	1,24	0,99	1,88	1,24	1,29	0,76	1,70	1,15	0,63	0,49
NH4			*not reported*											
													Percentage completion of mandatory programme	**88,9**

Voluntary

2006

NO			*not reported*											
arsenic	DK0005R	ng/m^3	1,25	0,48	0,61	0,29	0,42	0,26	0,28	0,23	1,75	0,59	0,17	0,13
	DK0008R	ng/m^3	1,25	0,56	0,34	0,37	0,38	0,38	0,29	0,30	0,96	0,39	0,21	0,17
	DK0031R	ng/m^3	1,09	0,41	0,40	0,24	0,57	0,39	0,49	0,43	1,36	0,35	0,19	0,07
cadmium			*not reported*											
chromium	DK0005R	ng/m^3	0,65	-0,10	-0,30	0,15	0,58	0,67	0,70	0,32	1,23	0,88	0,28	0,24
	DK0008R	ng/m^3	0,61	0,19	-0,49	0,11	0,23	0,36	1,00	0,05	0,71	0,18	-0,06	0,22
	DK0031R	ng/m^3	0,61	0,39	-0,19	0,08	0,63	0,45	0,58	0,18	0,92	-0,01	-0,02	0,09
copper	DK0005R	ng/m^3	3,93	1,66	1,36	1,15	1,39	1,22	1,41	1,03	3,80	2,85	1,70	0,94
	DK0008R	ng/m^3	1,91	1,08	1,01	0,77	0,98	1,18	1,52	0,76	2,78	1,23	1,00	0,45
	DK0031R	ng/m^3	2,11	0,89	0,97	0,51	1,42	1,33	1,54	1,06	3,38	1,12	0,70	0,42
lead	DK0005R	ng/m^3	14,66	5,55	6,17	3,54	4,76	2,46	3,09	2,04	12,09	6,66	3,00	2,26
	DK0008R	ng/m^3	11,37	5,93	3,20	2,53	3,40	2,65	2,53	1,88	8,03	6,71	2,54	1,66
	DK0031R	ng/m^3	10,08	4,93	3,47	2,16	4,60	3,64	3,68	3,66	11,00	3,22	2,23	1,36
mercury			*not reported*											
nickel	DK0005R	ng/m^3	2,23	2,98	2,15	3,43	3,22	3,37	3,37	1,27	3,78	1,79	0,80	0,66
	DK0008R	ng/m^3	1,95	2,26	2,45	2,72	2,01	2,32	2,52	1,27	2,33	0,92	0,94	0,60
	DK0031R	ng/m^3	1,64	1,35	1,48	1,46	1,59	1,96	2,42	1,04	2,19	0,64	0,44	0,37
zinc	DK0005R	ng/m^3	33,33	15,11	15,48	10,31	14,34	8,54	9,15	7,28	25,36	20,37	10,65	6,63
	DK0008R	ng/m^3	24,34	14,18	11,53	8,28	9,98	7,75	6,73	6,27	17,38	17,01	7,18	2,42
	DK0031R	ng/m^3	25,31	12,97	12,88	8,02	14,16	12,40	13,13	10,19	25,11	10,84	6,05	2,66
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
													Percentage completion of voluntary programme	**48,6**

additional non-CAMP components

2006

aluminium	DK0005R	ng/m^3	50,26	26,73	65,66	59,12	157,57	77,84	139,85	49,43	188,42	62,86	2,21	-7,45
	DK0008R	ng/m^3	34,96	15,52	45,19	48,55	129,36	72,89	130,49	32,63	164,02	15,17	2,99	6,17
iron	DK0005R	ng/m3	84,47	54,55	68,02	63,78	151,40	97,11	140,21	60,01	243,66	119,05	65,09	33,16
	DK0008R	ng/m^3	47,94	34,05	51,85	44,27	117,71	81,15	121,29	39,79	156,28	40,02	38,45	16,91
	DK0031R	ng/m^3	58,38	38,74	50,16	44,34	235,79	114,87	179,72	50,40	252,24	39,16	28,25	12,98
manganese	DK0005R	ng/m3	3,02	1,95	2,55	2,08	4,79	3,45	4,86	2,25	7,58	3,56	1,90	1,15
	DK0008R	ng/m^3	2,21	1,81	2,42	1,76	4,19	3,26	4,02	1,80	5,74	1,59	1,33	0,79
	DK0031R	ng/m^3	2,43	1,54	2,52	1,54	7,38	3,58	5,27	2,02	7,84	1,52	1,05	0,49
selenium	DK0005R	ng/m^3	0,76	0,42	0,35	0,46	0,51	0,53	0,60	0,38	0,98	0,76	0,39	0,28
	DK0008R	ng/m^3	0,62	0,30	0,22	0,36	0,39	0,45	0,55	0,36	0,85	0,43	0,35	0,29
													number of additional components reported	**4**

FRANCE

FRANCE

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	FR0090R	mg/l	0,08	0,05	0,04	0,06	0,02	0,14	0,06	0,04	0,18	0,08	0,07	0,02
nitrate	FR0090R	mg/l	0,58	0,26	0,23	0,25	0,10	0,68	0,99	0,23	1,16	0,39	0,44	0,23
precipitation *nitrogen*	FR0090R	mm	47,70	204,30	8,20	85,10	37,40	51,10	17,00	63,80	20,90	119,10	187,20	76,60
arsenic			*not reported*											
cadmium	FR0090R	µg/l	0,02	0,03	0,02	0,02	0,03	0,03	0,15	0,07	0,13	0,05	0,07	0,05
chomium	FR0090R	µg/l	0,07	0,05	0,08	0,10	0,11	0,17	0,27	0,09	0,06	0,03	0,02	0,03
copper	FR0090R	µg/l	1,35	0,51	0,41	0,95	1,05	1,15	1,35	0,76	0,70	0,35	0,55	0,31
lead	FR0090R	µg/l	0,23	0,27	0,31	0,38	0,42	0,23	0,27	0,23	0,15	0,08	0,15	0,05
mercury			*not reported*											
nickel	FR0090R	µg/l	0,59	0,11	0,16	0,33	0,43	0,42	0,97	0,48	0,30	0,40	0,24	0,21
zinc	FR0090R	µg/l	2,80	2,32	3,30	4,90	4,20	7,30	2,20	2,20	2,00	1,50	1,30	1,20
precipitation *all metals*	FR0090R	mm	47,70	204,30	8,20	85,10	37,40	51,10	17,00	63,80	20,90	119,10	187,20	76,60
g-HCH			*not reported*											

Percentage completion of mandatory programme **75,0**

Voluntary
2006

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*

Percentage completion of voluntary programme **0,0**

FRANCE

Airborne components

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2			*not reported*											
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3			*not reported*											
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**0,00**

Voluntary														
NO			*not reported*											
arsenic			*not reported*											
cadmium			*not reported*											
chomium			*not reported*											
copper			*not reported*											
lead			*not reported*											
mercury			*not reported*											
nickel			*not reported*											
zinc			*not reported*											
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**0,00**

GERMANY

GERMANY

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	DE0001R	mg/l	0,93	0,95	1,06	1,30	0,83		1,34	0,32	0,72	0,53	0,38	0,53
nitrate	DE0001R	mg/l	3,17	3,00	1,76	3,59	2,27		3,08	0,90	2,13	2,00	2,25	2,14
precipitation *nitrogen*	DE0001R	mm	18,7	31	26,9	37,2	72,4		35	142,6	67,4	84,2	124,6	103,6
arsenic	DE0001R	µg/l	0,20	0,12	0,13	0,14	0,09		0,13	0,04	0,10	0,11	0,16	0,10
cadmium	DE0001R	µg/l	0,06	0,03	0,03	0,03	0,03		0,05	0,01	0,02	0,03	0,04	0,03
chomium	DE0001R	µg/l	0,11	0,09	0,06	0,06	0,19		0,25	0,08	0,11	0,14	0,12	0,12
copper	DE0001R	µg/l	1,67	1,11	0,78	1,24	0,75		1,73	0,54	1,10	1,10	0,80	0,51
lead	DE0001R	µg/l	1,93	0,93	0,54	1,16	0,84		1,26	0,31	0,81	1,10	1,26	0,61
mercury	DE0001R	ng/l	10,72	8,33	7,69	10,44	12,52	43,10	15,40	7,27	9,62	9,61	7,13	4,51
nickel	DE0001R	µg/l	0,56	0,37	0,27	0,53	0,32		0,49	0,16	0,35	0,38	0,41	0,32
zinc	DE0001R	µg/l	9,81	5,89	5,99	8,01	5,51		9,46	2,26	6,60	7,66	8,11	7,48
precipitation *metals ex. Hg*	DE0001R	mm	18,1	26,4	24,0	35,7	75,7		33,8	139,5	59,3	81,4	123,6	108,4
precipitation *Hg*	DE0001R	mm	21,2	28,5	29,4	33,6	64,3	0,4	33,8	142,9	40,5	91,7	125,3	88,7
g-HCH	DE0001R	ng/l	1,03	0,64	1,08	1,72	1,91		1,87	0,52	1,14	1,05	0,84	0,91
precipitation *g-HCH*	DE0001R	mm	20,12	30,95	34,70	32,49	68,08		35,15	135,46	47,30	95,05	104,78	116,27
									Percentage completion of mandatory programme					**93,1**

Voluntary														
2006														
PCB_28	DE0001R	ng/l	0,12	0,07	0,07	0,05	0,03		0,05	0,04	0,05	0,02	0,02	0,03
PCB_52	DE0001R	ng/l	0,06	0,03	0,03	0,10	0,01		0,03	0,02	0,02	0,01	0,01	0,01
PCB_101	DE0001R	ng/l	0,13	0,09	0,08	0,10	0,02		0,08	0,02	0,05	0,03	0,02	0,02
PCB_118	DE0001R	ng/l	0,07	0,04	0,03	0,02	0,02		0,06	0,01	0,02	0,01	0,01	0,01
PCB_138	DE0001R	ng/l	0,23	0,13	0,13	0,10	0,15		0,13	0,03	0,09	0,03	0,03	0,03
PCB_153	DE0001R	ng/l	0,21	0,12	0,10	0,12	0,11		0,10	0,02	0,07	0,04	0,03	0,03
PCB_180	DE0001R	ng/l	0,09	0,04	0,05	0,07	0,06		0,08	0,01	0,04	0,01	0,01	0,01
anthracene	DE0001R	ng/l	1,55	0,46	1,15	0,34	0,16		0,63	0,18	0,70	0,44	0,96	0,19
benzo(a)anthracene	DE0001R	ng/l	9,24	1,10	5,12	2,72	0,49		1,08	0,09	0,47	0,66	4,09	1,22
benzo(a)pyrene	DE0001R	ng/l	8,68	2,45	4,78	3,85	0,95		2,10	0,38	1,60	1,34	5,05	1,17
benzo(ghi)perylene	DE0001R	ng/l	12,90	1,88	5,54	3,53	0,84		1,51	0,13	1,01	0,71	5,69	1,40
chrysene+triphenalyne	DE0001R	ng/l	29,52	4,93	13,82	8,70	2,67		5,35	0,74	3,46	3,44	17,31	4,02
flouranthene	DE0001R	ng/l	61,29	13,63	32,92	15,72	11,33		15,38	2,82	7,33	7,49	25,15	8,85
indeno(123cd)pyrene	DE0001R	ng/l	15,14	2,20	6,27	3,34	0,49		0,94	0,27	0,70	0,79	5,09	1,32
phenanthrene	DE0001R	ng/l	50,96	15,34	29,37	12,25	7,20		9,67	7,28	5,46	6,18	14,36	9,08
pyrene	DE0001R	ng/l	36,50	6,55	21,23	9,46	6,52		8,53	1,09	3,35	4,73	17,73	5,28
precipitation *organics*	DE0001R	mm	20,12	30,95	34,70	32,49	68,08		35,15	135,46	47,30	95,05	104,78	116,27
									Percentage completion of voluntary programme					**91,7**

additional non-CAMP components														
2006														
iron	DE0001R	µg/l	13,16	10,48	16,51	28,72	12,73		45,20	5,70	12,65	15,20	8,38	6,68
manganese	DE0001R	µg/l	1,22	0,86	1,08	2,34	1,23		3,97	0,51	1,17	1,54	0,96	0,65
precipitation *metals*	DE0001R	mm	18,10	26,30	33,40	33,00	69,10		33,80	139,60	59,40	81,40	123,50	108,50
aldrin	DE0001R	ng/l	0,03	0,02	0,02	0,03	0,01		0,00	0,00	0,00	0,00	0,00	0,00
alpha_HCH	DE0001R	ng/l	0,37	0,24	0,19	0,28	0,35		0,19	0,16	0,18	0,18	0,24	0,22
benzo(b,j,k)flouranthene	DE0001R	ng/l	46,49	8,47	20,80	11,76	2,97		7,64	0,86	4,29	3,86	22,75	5,70
dibenzo_ah_anthracene	DE0001R	ng/l	3,67	0,46	1,89	1,01	0,21		0,41	0,12	0,30	0,15	0,88	0,12
dieldrin	DE0001R	ng/l	0,16	0,12	0,12	0,18	0,13		0,04	0,03	0,06	0,10	0,12	0,13
endrin	DE0001R	ng/l	0,07	0,05	0,04	0,06	0,04		0,01	0,00	0,02	0,01	0,02	0,02
HCB	DE0001R	ng/l	0,03	0,04	0,02	0,07	0,01		0,02	0,05	0,02	0,01	0,02	0,01
heptachlor	DE0001R	ng/l	0,04	0,03	0,02	0,09	0,05		0,00	0,00	0,00	0,01	0,00	0,01
op_DDD	DE0001R	ng/l	0,02	0,02	0,01	0,02	0,01		0,02	0,00	0,01	0,02	0,00	0,01
pp_DDD	DE0001R	ng/l	0,02	0,02	0,01	0,05	0,01		0,02	0,00	0,01	0,01	0,01	0,01
op_DDE	DE0001R	ng/l	0,04	0,03	0,02	0,02	0,01		0,02	0,00	0,00	0,00	0,00	0,00
pp_DDE	DE0001R	ng/l	0,05	0,04	0,02	0,08	0,01		0,04	0,00	0,01	0,01	0,01	0,01
op_DDT	DE0001R	ng/l	0,05	0,04	0,02	0,04	0,02		0,01	0,00	0,01	0,00	0,00	0,00
pp_DDT	DE0001R	ng/l	0,06	0,04	0,07	0,11	0,04		0,04	0,01	0,01	0,01	0,01	0,01
precipitation *organics*	DE0001R	mm	20,12	30,95	34,70	32,49	68,08		35,15	135,46	47,30	95,05	104,78	116,27
									number of additional components reported					**16**

GERMANY

Airborne components

2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2	DE0001R	µg/m^3	4,72	3,65	2,25	1,53	1,42	1,21	1,28	1,22	2,02	3,34	4,81	1,97
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3	DE0001R	µg/m^3	1,29	1,20	0,95	1,21	0,95	0,85	0,86	0,66	1,89	1,20	0,80	0,59
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4	DE0001R	µg/m^3	2,46	2,04	1,96	2,06	3,00	2,20	3,01	2,14	4,06	2,08	0,98	0,74
											Percentage completion of mandatory programme			**100,0**

Voluntary

2006

NO			*not reported*											
arsenic	DE0001R	ng/m^3	1,32	0,45	0,71	0,39	0,38	0,12	0,37	0,27	0,76	0,27	0,31	0,20
cadmium	DE0001R	ng/m^3	0,29	0,12	0,18	0,08	0,13	0,02	0,09	0,05	0,13	0,06	0,09	0,08
chomium			*not reported*											
copper	DE0001R	ng/m^3	3,08	1,40	1,95	0,94	1,20	0,40	2,33	2,18	3,20	3,90	1,95	1,36
lead	DE0001R	ng/m^3	10,22	3,71	5,71	2,91	3,66	0,69	2,76	1,98	6,15	5,33	3,70	2,93
mercury			*not reported*											
nickel	DE0001R	ng/m3	2,18	1,47	1,58	2,01	1,66	0,86	2,27	0,87	1,52	1,07	1,25	1,19
zinc	DE0001R	ng/m^3	28,90	16,90	21,70	8,68	12,88	4,30	9,08	6,03	14,92	14,70	9,50	9,22
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
											Percentage completion of voluntary programme			**23,1**

additional non-CAMP components

iron	DE0001R	ng/m^3	68,35	48,48	66,03	42,32	102,05	31,90	141,08	63,10	142,82	96,73	46,95	46,88
manganese	DE0001R	ng/m^3	3,09	1,84	2,46	1,33	2,30	1,00	4,06	1,77	4,51	2,69	1,78	1,56
vanadium	DE0001R	ng/m3	4,45	3,48	3,33	5,74	4,30	2,50	5,40	1,93	3,62	3,35	2,15	2,64
											number of additional components reported			**3**

ICELAND

ICELAND

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	IS0090R	mg/l	0,25	0,46	0,26	0,39	0,88	1,58	0,50	0,10	0,13	0,08	0,19	0,39
	IS0091R	mg/l	0,06	0,89	16,01	0,11	0,14	0,31	0,21	0,66	0,03	0,97	0,03	0,39
nitrate	IS0090R	mg/l	0,11	0,06	0,16	0,12	0,25	0,20	0,15	0,14	0,07	0,03	0,03	0,06
	IS0091R	mg/l	0,22	0,08	0,16	0,05	0,08	0,32	0,08	0,07	0,05	0,29	3,84	1,71
precipitation *nitrogen*	IS0090R	mm	116,40	63,30	49,40	35,90	10,80	79,30	74,30	55,00	71,60	153,10	94,40	76,70
	IS0091R	mm	254,30	166,40	131,00	166,00	233,50	226,40	214,30	133,80	241,60	212,60	297,00	198,50
arsenic	IS0090R	µg/l	0,05	0,05	0,06	0,11	0,10	0,07	0,10	0,06	0,04	0,05	0,47	0,32
	IS0091R	µg/l	0,10	0,09	0,04	0,03	0,05	0,06	0,04	0,11	0,06	0,08	0,03	0,04
cadmium	IS0090R	µg/l	0,01	0,01	0,01	0,01	0,01	0,02	0,02	0,01	0,01	0,01	0,01	0,01
	IS0091R	µg/l	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
chomium	IS0090R	µg/l	0,12	0,26	0,29	0,37	0,47	0,09	0,29	0,12	0,13	0,05	0,16	0,21
	IS0091R	µg/l	0,29	0,15	0,37	2,07	0,32	0,14	0,09	0,12	0,15	0,20	0,14	0,13
copper	IS0090R	µg/l	1,99	2,90	2,95	3,86	3,93	2,19	1,73	2,44	2,49	1,94	1,76	3,79
	IS0091R	µg/l	0,50	0,96	1,09	1,50	14,79	1,13	0,69	1,39	0,51	0,48	0,78	0,70
lead	IS0090R	µg/l	0,29	0,22	0,23	0,41	0,54	0,54	0,27	0,22	0,27	1,34	0,24	0,33
	IS0091R	µg/l	0,20	0,18	0,30	0,44	1,05	0,74	0,33	0,24	0,24	0,28	0,18	0,18
mercury			*not reported*											
nickel	IS0090R	µg/l	0,76	1,72	0,59	0,61	0,80	0,33	0,53	0,45	0,24	1,00	0,73	0,50
	IS0091R	µg/l	0,78	1,18	1,78	1,49	0,79	0,34	1,03	0,93	1,45	1,56	0,52	0,30
zinc	IS0090R	µg/l	1,16	4,08	5,07	8,16	9,63	4,23	5,12	4,93	4,72	3,70	4,31	2,02
	IS0091R	µg/l	10,58	9,73	11,50	10,04	9,62	7,52	12,83	9,66	3,89	5,47	5,38	8,61
precipitation *metals*	IS0090R	mm	128,40	98,20	58,40	63,80	29,40	56,90	91,80	54,00	74,80	128,30	82,70	81,80
precipitation *metals*	IS0091R	mm	184,06	113,57	61,82	101,15	175,57	218,35	236,43	194,91	320,70	243,76	287,32	175,26
g-HCH	IS0091R	ng/l		0,04	0,03	0,06	0,04	0,07	0,05	0,03	0,04	0,04	0,03	0,03
precipitation *g-HCH*	IS0091R	mm	87,00	43,00	27,00	51,00	68,00	69,00	49,00	32,50	114,00	71,00	78,00	64,00
											Percentage completion of mandatory programme			**90,2**

Voluntary														
2006														
PCB_28	IS0091R	ng/l		0,041	0,085	0,038	0,006	0,014	0,010	0,016	0,004	0,007	0,006	0,008
PCB_52	IS0091R	ng/l		0,013	0,033	0,014	0,003	0,008	0,004	0,006	0,002	0,002	0,002	0,003
PCB_101	IS0091R	ng/l		0,059	0,073	0,030	0,008	0,006	0,007	0,006	0,002	0,005	0,014	0,015
PCB_118	IS0091R	ng/l		0,016	0,056	0,026	0,006	0,005	0,003	0,010	0,004	0,004	0,005	0,011
PCB_138	IS0091R	ng/l		0,030	0,066	0,024	0,010	0,009	0,017	0,018	0,005	0,007	0,033	0,038
PCB_153	IS0091R	ng/l		0,019	0,062	0,023	0,010	0,010	0,013	0,013	0,004	0,005	0,020	0,025
PCB_180	IS0091R	ng/l		0,015	0,024	0,011	0,008	0,008	0,007	0,006	0,003	0,002	0,010	0,011
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene+triphenalyne			*not reported*											
flouranthene			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
precipitation *voluntary organics*	IS0091R	mm	87,00	43,00	27,00	51,00	68,00	69,00	49,00	32,50	114,00	71,00	78,00	64,00
											Percentage completion of voluntary programme			**40,1**

additional non-CAMP components														
2006														
aluminium	IS0090R	µg/l	51,26	253,09	297,57	295,11	487,77	154,73	69,25	105,54	234,16	123,06	127,66	184,37
	IS0091R	µg/l	57,86	90,28	324,50	437,37	218,87	52,38	12,50	19,42	77,08	101,07	136,17	114,57
iron	IS0090R	µg/l	47,04	217,19	274,61	308,82	442,70	157,66	62,47	106,50	257,73	113,56	115,16	148,05
	IS0091R	µg/l	72,93	115,56	420,93	561,12	269,66	62,36	14,82	20,88	83,11	124,45	140,47	131,12
manganese	IS0091R	µg/l	1,32	2,25	7,08	10,36	4,99	1,73	0,56	0,96	1,74	2,25	2,89	2,68
vanadium	IS0090R	µg/l	1,25	1,19	0,84	1,51	1,53	0,84	0,65	0,79	1,06	0,47	3,58	2,61
	IS0091R	µg/l	0,32	0,52	1,67	1,88	1,04	0,50	0,14	0,15	0,37	0,62	0,64	0,55
precipitation *metals*	IS0090R	mm	128,40	98,20	58,40	63,80	29,40	56,90	91,80	54,00	74,80	128,30	82,70	81,80
precipitation *metals*	IS0091R	mm	184,06	113,57	61,82	101,15	175,57	218,35	236,43	194,91	320,70	243,76	287,32	175,26
PCB_31	IS0091R	ng/l		0,027	0,059	0,027	0,006	0,015	0,008	0,012	0,003	0,006	0,005	0,007
PCB_105	IS0091R	ng/l		0,013	0,034	0,015	0,005	0,004	0,004	0,006	0,002	0,002	0,010	0,008
PCB_156	IS0091R	ng/l		0,006	0,007	0,004	0,003	0,003	0,002	0,003	0,001	0,001	0,003	0,004
HCB	IS0091R	ng/l		0,010	0,023	0,018	0,011	0,007	0,006	0,007	0,006	0,007	0,011	0,009
alpha_HCH	IS0091R	ng/l		0,088	0,059	0,129	0,080	0,084	0,089	0,088	0,057	0,083	0,073	0,071
beta_HCH	IS0091R	ng/l		0,007	0,011	0,006	0,004	0,004	0,004	0,006	0,002	0,002	0,002	0,003
cis_CD	IS0091R	ng/l		0,002	0,004	0,002	0,002	0,002	0,002	0,003	0,001	0,003	0,002	0,003
dieldrin	IS0091R	ng/l		0,029	0,025	0,047	0,019	0,017	0,029	0,023	0,019	0,028	0,042	0,032
op_DDT	IS0091R	ng/l		0,034	0,022	0,009	0,009	0,008	0,011	0,013	0,003	0,002	0,009	0,008
pp_DDD	IS0091R	ng/l		0,005	0,007	0,004	0,003	0,003	0,004	0,006	0,002	0,002	0,002	0,003
pp_DDE	IS0091R	ng/l		0,005	0,007	0,004	0,003	0,003	0,004	0,006	0,002	0,002	0,002	0,003
pp_DDT	IS0091R	ng/l		0,005	0,013	0,024	0,011	0,003	0,004	0,006	0,003	0,006	0,004	0,006
trans_CD	IS0091R	ng/l		0,002	0,004	0,002	0,002	0,001	0,002	0,003	0,001	0,001	0,002	0,001
trans_NO	IS0091R	ng/l		0,002	0,004	0,002	0,002	0,005	0,002	0,003	0,001	0,001	0,002	0,003
txph-26	IS0091R	ng/l		0,005	0,007	0,004	0,003	0,003	0,003	0,003	0,001	0,003	0,004	0,006
txph-50	IS0091R	ng/l		0,005	0,007	0,004	0,003	0,003	0,007	0,008	0,005	0,006	0,009	0,010
txph-62	IS0091R	ng/l		0,005	0,007	0,004	0,003	0,003	0,002	0,003	0,001	0,001	0,003	0,001
precipitation *voluntary organics*	IS0091R	mm	87,00	43,00	27,00	51,00	68,00	69,00	49,00	32,50	114,00	71,00	78,00	64,00
precipitation_amount_off	IS0090R	mm	140,60	82,00	52,10	73,90	34,50	58,00	37,50	43,80	63,80	106,20	86,10	96,30
precipitation_amount_off	IS0091R	mm	211,80	132,10	58,90	97,30	98,40	144,90	126,30	68,10	192,10	194,70	195,20	195,70
precipitation_amount_off	IS0091R	mm	226,00	123,00	59,00	97,00	98,00	145,00	127,00	67,00	193,00	145,00	188,00	195,00
											number of additional components reported			**24**

ICELAND

Airborne components

2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2			*not reported*											
HNO3			*not reported*											
NO3	IS0091R	µg/m^3	0,04	0,04	0,04	0,03	0,15	0,08	0,05	0,04	0,04	0,03	0,02	0,04
HNO3+NO3			*not reported*											
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**25,00**

Voluntary

2006

NO			*not reported*											
arsenic	IS0091R	ng/m^3	0,29	0,27	0,21	0,15	0,20	0,15	0,11	0,10	0,15	0,17	0,26	0,21
cadmium	IS0091R	ng/m^3	0,32	0,03	0,03	0,02	0,05	0,05	0,08	0,03	0,05	0,01	0,03	0,23
chomium	IS0091R	ng/m^3	77,37	13,48	4,36	2,37	8,79	17,42	9,71	6,11	12,40	9,06	8,30	5,36
copper	IS0091R	ng/m^3	12,85	1,47	1,89	1,02	1,44	0,75	0,56	0,67	0,86	2,42	2,19	2,18
lead	IS0091R	ng/m^3	13,94	0,37	0,76	0,36	0,89	1,38	2,06	0,18	1,02	0,23	0,60	7,08
mercury	IS0091R	ng/m^3	2,29	2,56	2,36	1,31	1,64	1,23	0,92	0,65	0,91	2,17	0,97	0,75
nickel	IS0091R	ng/m^3	225,94	7,14	2,73	1,37	4,67	8,95	5,36	3,76	6,81	5,12	4,89	2,89
zinc	IS0091R	ng/m^3	43,61	4,34	6,33	3,11	5,70	3,98	4,17	2,63	4,52	3,44	5,44	15,99
PCB_28	IS0091R	pg/m^3		3,79	2,16	3,05	4,87	4,06	3,90	4,92	3,96	2,29	1,58	1,75
PCB_52	IS0091R	pg/m^3		4,16	2,15	2,32	3,26	2,64	2,81	2,68	2,27	1,40	1,16	1,40
PCB_101	IS0091R	pg/m^3		2,84	1,36	1,30	2,02	2,11	1,48	1,54	1,19	0,58	0,44	0,51
PCB_118	IS0091R	pg/m^3		0,93	0,24	0,21	0,25	0,28	0,23	0,15	0,20	0,10	0,10	0,10
PCB_138	IS0091R	pg/m^3		0,71	0,22	0,19	0,21	0,33	0,31	0,35	0,36	0,16	0,17	0,20
PCB_153	IS0091R	pg/m^3		0,74	0,26	0,29	0,25	0,42	0,47	0,49	0,46	0,26	0,25	0,27
PCB_180	IS0091R	pg/m^3		0,11	0,10	0,10	0,09	0,10	0,10	0,10	0,20	0,10	0,16	0,21
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH	IS0091R	pg/m^3		2,337	1,784	2,559	3,121	3,031	2,57	2,784	3,55	3,239	3,014	2,497
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**58,97**

additional non-CAMP components

2006

aluminium	IS0091R	ng/m^3	314,51	667,93	831,92	572,04	616,38	83,86	79,49	229,86	285,10	1044,08	1066,24	81,62
iron	IS0091R	ng/m^3	775,75	1236,25	1325,53	903,71	1017,59	181,50	144,50	372,70	441,54	1500,91	1842,01	105,74
manganese	IS0091R	ng/m^3	29,46	20,82	22,88	15,36	18,45	3,18	2,42	5,94	7,15	24,58	33,01	2,12
vanadium	IS0091R	ng/m^3	2,83	5,74	6,05	2,97	3,75	1,25	1,09	1,46	2,06	5,90	6,88	1,53
PCB_31	IS0091R	pg/m^3		1,72	1,41	1,94	3,91	4,40	3,57	3,83	3,04	1,70	1,07	1,28
PCB_105	IS0091R	pg/m^3		0,06	0,05	0,05	0,08	0,05	0,05	0,05	0,05	0,05	0,06	0,05
PCB_156	IS0091R	pg/m^3		0,11	0,10	0,10	0,09	0,10	0,05	0,05	0,05	0,05	0,06	0,05
HCB	IS0091R	pg/m^3		5,30	5,53	6,18	3,90	2,64	1,99	2,93	2,73	4,18	6,80	7,00
alpha_HCH	IS0091R	pg/m^3		3,33	4,32	4,73	3,63	3,18	2,37	2,73	3,81	4,89	5,88	3,85
beta_HCH	IS0091R	pg/m^3		0,28	0,14	0,14	0,19	0,20	0,24	0,25	0,26	0,20	0,15	0,15
cis_CD	IS0091R	pg/m^3		0,46	0,35	0,41	0,44	0,38	0,65	0,66	0,63	0,58	0,55	0,61
dieldrin	IS0091R	pg/m^3		0,60	0,52	0,64	0,61	0,53	0,54	1,29	0,86	0,88	0,70	0,80
op_DDT	IS0091R	pg/m^3		0,11	0,10	0,10	0,09	0,10	0,10	0,10	0,17	0,10	0,10	0,10
pp_DDD	IS0091R	pg/m^3		0,11	0,10	0,10	0,09	0,10	0,10	0,10	0,22	0,10	0,10	0,10
pp_DDE	IS0091R	pg/m^3		0,11	0,10	0,10	0,15	0,10	0,10	0,10	0,10	0,10	0,21	0,26
pp_DDT	IS0091R	pg/m^3		0,13	0,10	0,10	0,09	0,10	0,10	0,10	0,10	0,10	0,10	0,10
trans_CD	IS0091R	pg/m^3		0,23	0,21	0,10	0,09	0,10	0,15	0,10	0,10	0,10	0,16	0,21
trans_NO	IS0091R	pg/m^3		0,34	0,32	0,43	0,40	0,34	0,40	0,39	0,38	0,36	0,36	0,33
txph_26	IS0091R	pg/m^3		0,20	0,05	0,05	0,05	0,15	0,20	0,20	0,17	0,09	0,06	0,10
txph_50	IS0091R	pg/m^3		0,06	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,06	0,05
txph_62	IS0091R	pg/m^3		0,06	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,06	0,05
									number of additional components reported					**21**

IRELAND

IRELAND

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	IE0001R	mg/l	0,08	0,06	0,27	0,13	0,09	2,12	0,07	0,09	0,03	0,04	0,06	0,07
nitrate	IE0001R	mg/l	0,10	0,03	0,07	0,12	0,10	0,16	0,06	0,05	0,05	0,10	0,07	0,04
precipitation *nitrogen*	IE0001R	mm	145,00	87,00	149,00	79,00	201,00	48,00	102,00	53,00	264,00	171,00	233,00	225,00
arsenic	IE0001R	µg/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
cadmium	IE0001R	µg/l	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05	0,05
chomium	IE0001R	µg/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
copper	IE0001R	µg/l	3,10	3,70	0,50	2,40	0,50	4,50	4,10	0,50	1,60	0,50	0,50	0,50
lead	IE0001R	µg/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
mercury	IE0001R	ng/l	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00	50,00
nickel	IE0001R	µg/l	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50	0,50
zinc	IE0001R	µg/l	18,20	12,00	10,70	0,50	4,80	16,30	7,90	0,50	4,70	6,50	11,40	5,40
precipitation *all metals*	IE0001R	mm	145,00	87,00	149,00	79,00	201,00	48,00	102,00	53,00	264,00	171,00	233,00	225,00
g-HCH			*not reported*											
									Percentage completion of mandatory programme					**90,9**

Voluntary 2006	
PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*
Percentage completion of voluntary programme	**0,0**

additional non-CAMP components 2006														
aluminium	IE0001R	µg/l	25,00	19,10	17,40	38,70	25,00	72,90	25,00	23,60	21,50	16,90	22,90	15,90
manganese	IE0001R	µg/l	4,20	9,40	4,10	6,90	3,50	13,60	3,40	7,30	2,50	3,20	4,20	2,30
vanadium	IE0001R	µg/l	0,50	0,50	0,50	0,50	0,50	2,20	0,50	0,50	0,50	0,50	0,50	0,50
number of additional components reported														**3**

IRELAND

Airborne components

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2			*not reported*											
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3			*not reported*											
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**0,00**
Voluntary														
NO			*not reported*											
arsenic			*not reported*											
cadmium			*not reported*											
chomium			*not reported*											
copper			*not reported*											
lead			*not reported*											
mercury			*not reported*											
nickel			*not reported*											
zinc			*not reported*											
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**0,00**

NETHERLANDS

NETHERLANDS

Components in Precipitation

Mandatory		**station**	**units**	**month**											
				january	february	march	april	may	june	july	august	september	october	november	december
ammonium		NL0009R	mg/l	0,79	0,88	1,03	1,45	1,26		1,67	0,59	0,48	0,57	0,51	0,49
		NL0091R		0,86	0,40	0,49	1,02	0,43	1,17	0,52	0,32	0,35	0,35	0,29	0,29
nitrate		NL0009R	mg/l	0,55	0,45	0,41	0,62	0,45		0,78	0,32	0,31	0,37	0,33	0,31
		NL0091R		0,75	0,41	0,36	0,63	0,29	0,70	0,47	0,25	0,33	0,26	0,25	0,26
precipitation	*nitrogen*	NL0009R	mm	18,75	23,30	48,79	45,13	57,79	44,12	44,19	181,27	56,41	89,95	83,00	62,19
		NL0091R		14,35	52,40	66,66	45,96	84,27	37,93	39,11	184,34	88,48	106,30	114,11	90,51
arsenic		NL0009R	µg/l	0,17	0,31	0,29	0,98	0,69	0,59	0,37	0,11	0,27	0,28	0,08	0,15
		NL0091R		0,08	0,08	0,08	0,09	0,08	0,09	0,08	0,08	0,08	0,08	0,08	0,08
cadmium		NL0009R	µg/l	0,08	0,08	0,06	0,10	0,09	0,15	0,08	0,05	0,06	0,04	0,03	0,05
		NL0091R		0,07	0,05	0,03	0,04	0,04	0,06	0,02	0,04	0,04	0,03	0,06	0,05
chomium		NL0009R	µg/l	0,26	0,50	0,38	0,77	0,62	0,34	0,53	0,32	0,48	0,29	0,28	0,45
		NL0091R		0,26	0,26	0,26	0,26	0,26	0,29	0,36	0,26	0,26	0,26	0,26	0,26
copper		NL0009R	µg/l	1,94	2,03	1,41	1,95	3,73	6,49	1,74	0,76	1,18	0,98	0,56	1,14
		NL0091R		1,39	2,07	2,15	1,32	0,74	1,58	1,29	0,49	0,81	0,91	0,83	0,85
lead		NL0009R	µg/l	1,53	1,84	1,97	4,08	3,61	2,74	2,27	0,91	1,69	1,17	0,55	0,95
		NL0091R		2,90	2,12	1,20	1,95	1,65	2,72	1,80	1,83	1,69	1,90	2,39	1,60
mercury		NL0091R	ng/l	8,59	7,26	8,89	12,25	14,55	16,77	29,28	8,00	14,55	7,56	4,70	5,49
nickel		NL0009R	µg/l	0,39	0,39	0,29	0,87	0,64	0,55	0,60	0,23	0,38	0,23	0,21	0,24
		NL0091R		0,60	0,23	0,21	0,44	0,22	0,46	0,21	0,21	0,24	0,21	0,25	0,52
zinc		NL0009R	µg/l	8,33	8,63	5,95	12,36	11,84	13,72	8,01	3,19	5,78	6,50	3,77	6,65
		NL0091R		6,94	3,07	4,83	6,99	2,13	8,03	4,35	2,61	2,69	2,98	4,71	6,03
precipitation	*metals exc. Hg*	NL0009R	mm	18,75	23,30	48,79	45,13	57,79	44,12	44,19	181,27	56,41	89,95	83,00	62,19
		NL0091R		14,35	52,40	66,66	45,96	84,27	37,93	39,11	184,34	88,48	106,30	114,11	90,51
	Hg	NL0091R		10,50	49,20	50,70	48,50	74,20	29,90	29,50	148,60	17,50	76,00	90,30	93,80
g-HCH		NL0091R	ng/l			3,00	5,00		3,00	6,00	2,00	5,00	2,00	4,00	6,00
precipitation	*g-HCH*		mm	50,00	39,70	74,00	39,60	59,70	40,50	23,00	158,50	43,20	143,40	238,00	52,60

Percentage completion of mandatory programme **97,7**

Voluntary

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*

Percentage completion of voluntary programme **0,0**

NETHERLANDS

Airborne components

2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2	NL0009R	µg/m^3	5,62	3,44	2,66	2,31	2,31	1,63	1,80	1,58	3,99	3,87	4,25	3,42
	NL0091R	µg/m^3	9,93	6,42	6,15	5,41	5,62	3,54	5,23	3,49	7,11	6,74	6,28	6,15
HNO3			*not reported*											
NO3	NL0009R	µg/m^3	4,55	3,73	3,01	3,76	2,83	2,63	2,77	2,11	5,04	4,14	2,33	2,65
	NL0091R	µg/m^3	3,63	2,67	2,20	2,30	2,10	2,13	1,84	0,99	2,55	2,59	1,58	2,04
HNO3+NO3			*not reported*											
NH3	NL0091R	µg/m^3	0,66	0,67	1,58	0,56	1,83	1,77	3,00	1,19	5,04	2,14	0,90	0,49
NH4	NL0009R	µg/m^3	2,44	1,87	1,54	1,46	1,47	1,46	1,73	1,14	2,24	1,92	1,00	1,21
	NL0091R	µg/m^3	1,79	1,50	1,12	0,99	1,18	1,21	1,52	0,66	1,26	1,57	0,75	1,13
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**80,0**

Voluntary

2006

NO	NL0009R	µg/m^3	1,38	0,40	0,25	0,35	0,27	0,26	0,26	0,22	0,67	1,08	0,67	0,17
	NL0091R	µg/m^3	6,00	1,86	1,18	0,76	0,93	0,54	0,63	0,73	1,65	3,75	1,65	3,70
arsenic	NL0009R	ng/m^3		0,58	0,41	0,33	0,40	0,32	0,44	0,29	1,05	0,86	0,45	0,29
cadmium	NL0009R	ng/m^3		0,17	0,11	0,18	0,13	0,11	0,10	0,08	0,22	0,22	0,16	0,11
chomium			*not reported*											
copper			*not reported*		5,00	5,00	3,00	4,00	5,00	4,00	5,00	7,00	5,00	5,00
lead	NL0009R	ng/m^3		6,06	4,81	5,45	5,00	3,52	4,33	3,46	9,43	7,87	5,56	5,02
mercury			*not reported*											
nickel	NL0009R	ng/m^3		1,55	1,32	1,87	1,75	2,02	2,37	1,58	1,67	1,42	1,24	0,94
zinc	NL0009R	ng/m^3		20,94	17,02	21,01	18,26	18,28	16,48	14,08	25,05	31,99	17,36	17,23
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**24,7**

NORWAY

NORWAY

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	NO0001R	mg/l	0,53	0,71	0,15	0,54	0,51	0,46	0,40	0,15	0,42	0,13	0,27	0,18
	NO0039R		0,15	0,17	0,08	0,16	0,19	0,14	0,31	0,14	0,08	0,12	0,11	0,12
	NO0057R		0,06	0,54	0,21	0,17	0,84	0,07	0,30	0,07	0,10	0,01	0,06	0,10
nitrate	NO0001R	mg/l	0,69	0,71	0,38	0,53	0,42	0,63	0,36	0,19	0,56	0,29	0,43	0,23
	NO0039R		0,17	0,06	0,05	0,16	0,07	0,14	0,15	0,04	0,06	0,10	0,03	0,06
	NO0057R		0,06	0,06	0,02	0,16	0,60	0,23	0,08	0,10	0,10	0,02	0,05	0,04
precipitation *nitrogen*	NO0001R	mm	167,00	187,50	70,80	107,30	121,60	38,80	48,80	216,00	125,70	242,40	259,30	253,10
	NO0039R		35,80	198,90	101,30	36,70	93,60	48,50	97,90	40,10	193,20	102,20	128,20	141,60
	NO0057R		106,80	33,80	50,90	11,30	12,60	10,00	17,90	15,70	16,20	24,60	24,40	14,00
arsenic	NO0001R	µg/l	0,29	0,19	0,09	0,20	0,11	0,15	0,16					
cadmium	NO0001R	µg/l	0,06	0,04	0,02	0,11	0,02	0,02	0,02	0,01	0,03	0,02	0,02	0,01
chomium	NO0001R	µg/l	0,11	0,20	0,29	0,31	0,13	0,10	0,23	0,12	0,24	0,10	0,11	0,10
copper	NO0001R	µg/l	0,83	0,58	0,80	0,59	0,57	0,71	0,67	0,24	0,59	0,53	0,48	0,31
lead	NO0001R	µg/l	2,07	1,46	0,71	1,34	0,63	0,83	0,46	0,31	0,89	0,41	0,82	0,56
mercury	NO0001R	ng/l	7,02	8,65	6,34	10,45	12,66	13,81	6,30	9,25	6,78	7,68	8,27	5,03
nickel	NO0001R	µg/l	0,33	0,17	0,18	0,37	0,33	0,10	0,18	0,11	0,21	0,11	0,24	0,12
zinc	NO0001R	µg/l	7,29	6,31	4,01	4,51	2,74	3,32	3,16	1,55	3,04	1,77	2,96	1,54
precipitation *metals ex. Hg*	NO0001R	mm	180,49	179,08	69,54	104,85	98,60	37,86	48,63	237,22	143,79	172,99	280,92	262,39
precipitation *mercury*	NO0001R	mm	167,00	187,50	70,70	107,30	122,40	38,80	48,70	216,00	125,70	242,50	259,30	252,90
g-HCH	NO0001R	ng/l	0,29	0,23			0,93	0,53	0,52	0,58	0,56	0,40	0,55	0,34
precipitation *organics*	NO0001R	mm	165,90	189,30	74,90	93,80	111,90	43,60	48,80	221,20	135,40	206,80	286,30	216,90
											Percentage completion of mandatory programme			**94,70**

Voluntary
2006

PCB_28	NO0001R	ng/l	0,01	0,01			0,04	0,02	0,02	0,07	0,01	0,01	0,02	0,01
PCB_52	NO0001R	ng/l	0,02	0,01			0,06	0,04	0,02	0,09	0,01	0,01	0,02	0,02
PCB_101	NO0001R	ng/l	0,02	0,02			0,07	0,04	0,02	0,05	0,01	0,01	0,03	0,01
PCB_118	NO0001R	ng/l	0,01	0,01			0,04	0,02	0,02	0,03	0,01	0,01	0,02	0,02
PCB_138	NO0001R	ng/l	0,02	0,02			0,05	0,03	0,02	0,02	0,01	0,01	0,03	0,02
PCB_153	NO0001R	ng/l	0,03	0,03			0,07	0,04	0,03	0,03	0,01	0,01	0,05	0,04
PCB_180	NO0001R	ng/l	0,02	0,02			0,03	0,02	0,01	0,01	0,00	0,00	0,02	0,01
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene+triphenalyne			*not reported*											
flouranthene			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
precipitation *organics*	NO0001R	mm	165,90	189,30	74,90	93,80	111,90	43,60	48,80	221,20	135,40	206,80	286,30	216,90
											Percentage completion of voluntary programme			**36,46**

additional non-CAMP components
2006

cobalt	NO0001R	µg/l	0,02	0,01	0,01	0,03	0,01	0,04	0,03	0,01	0,03	0,01	0,02	0,01
vanadium	NO0001R	µg/l	0,85	0,79	0,67	0,94	0,80	1,12	0,87	0,35	0,56	0,56	1,04	0,84
precipitation *metals*	NO0001R	mm	180,49	179,08	69,54	104,85	98,60	37,86	48,63	237,22	143,79	172,99	280,92	262,39
HCB	NO0001R	ng/l	0,04	0,06	-9999,99	-9999,99	0,30	0,31	0,44	0,30	0,15	0,12	0,04	0,04
a-HCH	NO0001R	ng/l	0,11	0,10	-9999,99	-9999,99	0,25	0,23	0,23	0,31	0,23	0,23	0,22	0,20
precipitation *organics*	NO0001R	mm	0,11	0,10	-9999,99	-9999,99	0,25	0,23	0,23	0,31	0,23	0,23	0,22	0,20
											number of additional components reported			**4**

NORWAY

Airborne components

2006

Mandatory	station	units	month											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2	NO0001R	µg/m^3	1,03	0,69	0,41	0,33	0,33	0,39	0,47	0,29	0,51	0,41	0,51	0,29
	NO0039R	µg/m^3	0,30	0,23	0,18	0,14	0,18	0,18	0,37	0,34	0,23	0,34	0,25	0,18
HNO3	NO0001R	µg/m^3	0,12	0,06	0,07	0,04	0,16	0,27	0,15	0,10	0,09	0,04	0,02	0,01
	NO0042R	µg/m^3	0,01	0,02	0,02	0,03	0,04	0,09	0,03	0,08	0,02	0,09	0,01	0,01
NO3	NO0001R	µg/m^3	0,35	0,24	0,13	0,17	0,32	0,49	0,36	0,60	0,54	0,15	0,18	0,11
	NO0039R	µg/m^3	0,06	0,03	0,08	0,12	0,24	0,16	0,20	0,13	0,14	0,08	0,04	0,02
	NO0042R	µg/m^3	0,02	0,05	0,05	0,10	0,13	0,17	0,07	0,11	0,09	0,13	0,04	0,02
HNO3+NO3	NO0001R	µg/m^3	0,47	0,30	0,20	0,21	0,48	0,76	0,51	0,70	0,63	0,19	0,20	0,12
	NO0039R	µg/m^3	0,10	0,05	0,12	0,15	0,34	0,19	0,30	0,16	0,15	0,09	0,05	0,03
	NO0042R	µg/m^3	0,03	0,07	0,07	0,13	0,17	0,25	0,11	0,18	0,11	0,22	0,05	0,03
NH3	NO0001R	µg/m^3	0,27	0,30	0,17	0,31	0,59	0,83	0,91	0,53	0,66	0,31	0,28	0,21
	NO0039R	µg/m^3	0,36	0,33	0,50	0,51	0,81	0,87	1,28	1,31	1,20	0,62	0,57	0,58
	NO0042R	µg/m^3	0,27	0,24	0,27	0,15	0,31	0,65	0,53	0,65	0,48	0,51	0,35	0,30
NH4 PM_1	NO0001R	µg/m^3						0,32						
PM_{10}		µg/m^3						0,38						
PM_{25}		µg/m^3						0,40						
	NO0039R	µg/m^3	0,09	0,08	0,18	0,11	0,34	0,04	0,26	0,09	0,21	0,07	0,02	0,02
	NO0042R	µg/m^3	0,01	0,01	0,07	0,03	0,13	0,04	0,02	0,01	0,01	0,08	0,02	0,03
NH3+NH4	NO0001R	µg/m^3	0,86	0,59	0,38	0,49	1,10	1,24	1,34	0,61	1,48	0,52	0,38	0,28
	NO0039R	µg/m^3	0,45	0,40	0,68	0,62	1,15	0,91	1,58	1,40	1,41	0,68	0,59	0,60
	NO0042R	µg/m^3	0,28	0,25	0,33	0,19	0,43	0,69	0,56	0,67	0,49	0,58	0,36	0,33

Percentage completion of mandatory programme **100,0**

Voluntary

2006

NO			*not reported*											
arsenic	NO0001R	ng/m^3	0,49	0,29	0,22	0,23	0,31	0,26	0,27	0,30	0,72	0,33	0,14	0,11
	NO0042R	ng/m3	0,03	0,12	0,19	0,07	0,07	0,01	0,01	0,00	0,01	0,02	0,01	0,04
cadmium	NO0001R	ng/m3	0,11	0,10	0,06	0,07	0,09	0,03	0,04	0,04	0,11	0,05	0,03	0,03
chomium	No0001R	ng/m3	2,23	3,15	0,90	0,59	0,55	1,12	1,37	0,80	1,31	0,77	0,65	0,19
copper	NO0001R	ng/m3	3,82	3,36	0,80	0,89	0,80	2,30	1,05	0,83	2,55	1,00	0,76	0,60
lead	NO0001R	ng/m3	4,37	2,74	1,32	1,25	1,93	1,61	1,64	1,22	4,53	1,45	1,04	0,86
mercury	NO0042R	ng/m^3				1,59	1,45	1,58	1,59	1,66	1,67	1,63	1,63	1,67
nickel	NO0001R	ng/m3	1,08	1,44	0,75	0,67	0,51	0,73	1,19	0,58	0,87	0,36	0,37	0,39
zinc	NO0001R	ng/m3	11,81	9,78	7,00	5,20	5,43	3,98	3,48	3,39	9,17	4,64	2,66	2,20
PCB_28	NO0001R	pg/m^3	1,69	1,71	1,56	1,42	0,87	1,41	1,96	1,58	2,86	2,02	1,66	0,87
	NO0042R	pg/m^3	2,26	2,19	2,18	3,43	6,18	3,10	3,87	2,69	3,12	2,12	2,53	2,88
PCB_52	NO0001R	pg/m^3	1,30	1,44	1,32	1,25	0,73	1,26	1,91	1,36	2,90	2,11	1,83	0,95
	NO0042R	pg/m^3	1,07	1,15	1,11	1,49	2,58	0,96	1,10	0,87	0,97	0,92	1,13	1,63
PCB_101	NO0001R	pg/m^3	0,74	0,81	0,67	0,73	0,41	1,01	1,32	0,88	1,91	1,29	1,24	0,66
	NO0042R	pg/m^3	0,43	0,45	0,44	0,54	1,12	0,35	0,29	0,29	0,32	0,42	0,49	0,96
PCB_118	NO0001R	pg/m^3	0,25	0,24	0,23	0,25	0,28	0,39	0,47	0,35	0,72	0,37	0,92	0,49
	NO0042R	pg/m^3	0,15	0,15	0,25	0,33	0,75	0,20	0,09	0,09	0,22	0,19	0,30	0,63
PCB_138	NO0001R	pg/m^3	0,30	0,31	0,23	0,25	0,38	0,62	0,69	0,56	1,07	0,51	1,27	0,60
	NO0042R	pg/m^3	0,14	0,13	0,23	0,30	0,69	0,30	0,10	0,11	0,21	0,19	0,41	0,73
PCB_153	NO0001R	pg/m^3	0,44	0,50	0,36	0,41	0,92	1,12	1,21	0,99	2,07	0,94	2,58	1,21
	NO0042R	pg/m^3	0,24	0,20	0,54	0,73	1,15	0,61	0,20	0,20	0,43	0,36	0,72	1,39
PCB_180	NO0001R	pg/m^3	0,15	0,15	0,10	0,10	0,16	0,38	0,35	0,58	0,61	0,20	0,40	0,16
	NO0042R	pg/m^3	0,05	0,04	0,09	0,11	0,20	0,35	0,07	0,05	0,08	0,08	0,19	0,31
anthracene	NO0042R	pg/m^3	0,00	0,01	0,01	0,00	0,01	0,00	0,00	0,01	0,00	0,00	0,00	0,00
benzo(a)anthracene	NO0042R	pg/m^3	0,00	0,01	0,00	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,01	0,02
benzo(a)pyrene	NO0042R	pg/m^3	0,00	0,01	0,00	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,01
benzo(ghi)perylene	NO0042R	pg/m^3	0,00	0,01	0,01	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,01	0,01
chrysene	NO0042R	pg/m^3												
chrysene+triphenalyen	NO0042R	pg/m^3												
flouranthene	NO0001R	pg/m^3												
g-HCH	NO0001R	pg/m^3	3,64	3,79	3,50	3,66	3,86	7,44	13,10	8,64	17,68	10,58	8,86	3,08
	NO0042R	pg/m^3	1,38	1,62	1,89	2,16	3,91	1,41	1,31	1,48	1,67	2,43	2,15	2,02
indeno(123cd)pyrene	NO0042R	pg/m^3	0,00	0,02	0,01	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,01	0,01
phenanthrene	NO0042R	pg/m^3	0,11	0,23	0,10	0,05	0,07	0,04	0,05	0,03	0,03	0,04	0,08	0,09
pyrene	NO0042R	pg/m3	0,02	0,06	0,03	0,01	0,07	0,01	0,01	0,01	0,01	0,01	0,01	0,02

Percentage completion of voluntary programme **87,1**

additional non-CAMP components

2006														
PCB_18	NO0042G	pg/m^3	3,81	3,90	3,61	5,69	10,04	5,09	6,33	3,82	4,90	3,57	4,28	4,96
PCB_31	NO0042G	pg/m^3	2,13	2,10	2,05	3,22	5,76	2,94	3,65	2,44	2,93	2,01	2,37	2,72
PCB_33	NO0042G	pg/m^3	1,56	1,51	1,52	2,31	4,24	2,23	2,79	1,88	2,20	1,51	1,74	1,98
PCB_37	NO0042G	pg/m^3	0,20	0,18	0,18	0,24	0,45	0,23	0,30	0,23	0,25	0,21	0,21	0,25
PCB_47	NO0042G	pg/m^3	0,65	0,53	0,52	0,69	1,15	0,44	0,50	0,35	0,45	0,41	0,48	0,59
PCB_66	NO0042G	pg/m^3	0,25	0,26	0,29	0,37	0,78	0,22	0,21	0,19	0,26	0,28	0,30	0,39
PCB_74	NO0042G	pg/m^3	0,16	0,17	0,19	0,27	0,54	0,14	0,14	0,12	0,19	0,17	0,20	0,32
PCB_99	NO0042G	pg/m^3	0,17	0,18	0,25	0,33	0,65	0,17	0,10	0,11	0,22	0,20	0,27	0,56
PCB_105	NO0042G	pg/m^3	0,04	0,05	0,06	0,09	0,26	0,05	0,02	0,02	0,06	0,06	0,08	0,13
PCB_114	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,02	0,01	0,01	0,01	0,01	0,01	0,01	0,02
PCB_122	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
PCB_123	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,02	0,01	0,01	0,01	0,01	0,01	0,01	0,01
PCB_128	NO0042G	pg/m^3	0,02	0,02	0,03	0,04	0,11	0,04	0,01	0,02	0,03	0,03	0,06	0,07
PCB_141	NO0042G	pg/m^3	0,03	0,03	0,03	0,04	0,10	0,02	0,02	0,02	0,02	0,03	0,03	0,07
PCB_149	NO0042G	pg/m^3	0,22	0,21	0,20	0,26	0,56	0,16	0,12	0,16	0,17	0,23	0,25	0,72
PCB_156	NO0042G	pg/m^3	0,01	0,01	0,02	0,02	0,06	0,04	0,01	0,01	0,02	0,01	0,03	0,04
PCB_157	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,02	0,01	0,01	0,01	0,01	0,01	0,01	0,01
PCB_167	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,03	0,02	0,01	0,01	0,01	0,01	0,02	0,03
PCB_170	NO0042G	pg/m^3	0,02	0,01	0,02	0,02	0,07	0,09	0,02	0,01	0,02	0,02	0,06	0,07
PCB_183	NO0042G	pg/m^3	0,02	0,02	0,03	0,04	0,06	0,04	0,01	0,01	0,02	0,02	0,04	0,09
PCB_187	NO0042G	pg/m^3	0,05	0,04	0,04	0,06	0,12	0,07	0,03	0,04	0,07	0,05	0,11	0,30
PCB_189	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
PCB_194	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,04	0,01	0,01	0,01	0,01	0,02	0,02
PCB_206	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
PCB_209	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
sum_PCB	NO0042G	pg/m^3	22,08	22,04	22,48	33,07	61,50	27,71	31,68	21,88	27,19	21,48	26,07	34,47
acenaphthene	NO0042G	pg/m^3	0,01	0,02	0,04	0,00	0,00	0,00	0,01	0,01	0,00	0,01	0,01	0,02
acenaphthylene	NO0042G	pg/m^3	0,00	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,01
alpha_HCH	NO0042G	pg/m^3	7,31	8,85	8,71	8,52	12,05	9,61	9,64	12,34	14,63	17,13	10,48	9,04
anthanthrene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
benzo_a_fluoranthene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
benzo_a_fluorene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,01
benzo_b_fluorene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,01
benzo_bjk_fluoranthenes	NO0042G	pg/m^3	0,01	0,05	0,02	0,00	0,05	0,00	0,00	0,00	0,00	0,00	0,02	0,04
benzo_e_pyrene	NO0042G	pg/m^3	0,00	0,02	0,01	0,00	0,02	0,00	0,00	0,00	0,00	0,00	0,01	0,01
benzo_ghi_fluoranthene	NO0042G	pg/m^3	0,00	0,01	0,01	0,00	0,01	0,00	0,00	0,00	0,00	0,00	0,01	0,02
biphenyl	NO0042G	pg/m^3	0,85	33,08	17,55	0,21	0,06	0,02	0,02	0,02	0,07	0,14	0,46	0,87
cis_CD	NO0042G	pg/m^3	0,74	0,61	0,54	0,60	0,61	0,49	0,60	0,62	0,51	0,58	0,59	0,82
trans_CD	NO0042G	pg/m^3	0,40	0,39	0,29	0,26	0,22	0,10	0,09	0,11	0,10	0,15	0,25	0,36
coronene	NO0042G	pg/m^3	0,00	0,01	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,03
cyclopenta_cd_pyrene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,01	0,01
dibenzo_ac_ah_anthracenes	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,01	0,02
dibenzo_ae_pyrene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,02
dibenzo_ah_pyrene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,03
dibenzo_ai_pyrene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,03
dibenzofuran	NO0042G	pg/m^3	1,03	6,01	8,30	0,44	0,24	0,07	0,04	0,04	0,12	0,21	0,70	1,20
dibenzothiophene	NO0042G	pg/m^3	0,02	0,03	0,02	0,01	0,00	0,01	0,01	0,00	0,00	0,01	0,02	0,03
op_DDD	NO0042G	pg/m^3	0,03	0,03	0,02	0,03	0,06	0,02	0,01	0,02	0,01	0,02	0,03	0,24
pp_DDD	NO0042G	pg/m^3	0,04	0,03	0,04	0,02	0,09	0,04	0,02	0,06	0,05	0,10	0,07	0,57
op_DDE	NO0042G	pg/m^3	0,13	0,13	0,12	0,09	0,13	0,02	0,02	0,02	0,02	0,04	0,10	0,25
pp_DDE	NO0042G	pg/m^3	1,09	0,73	1,15	1,39	1,90	0,91	0,16	0,33	0,79	0,66	1,47	5,14
op_DDT	NO0042G	pg/m^3	0,23	0,22	0,18	0,21	0,35	0,06	0,06	0,07	0,08	0,14	0,21	0,82
pp_DDT	NO0042G	pg/m^3	0,13	0,10	0,09	0,09	0,29	0,05	0,03	0,04	0,06	0,10	0,14	0,33
sum_DDT	NO0042G	pg/m^3	1,66	1,22	1,61	1,83	2,83	0,80	0,30	0,53	1,00	1,07	2,01	7,36
fluorene	NO0042R	pg/m^3	0,43	1,79	1,96	0,08	0,03	0,03	0,03	0,02	0,03	0,06	0,31	0,63
HCB	NO0042G	pg/m^3	62,24	55,85	60,76	67,81	72,49	70,88	72,56	72,50	71,51	74,48	66,61	58,97
HCB	NO0001R	pg/m^3	6,02	8,25	7,05	8,51	9,34	16,71	24,94	24,97	14,27	16,68	9,95	7,64
alpha_HCH	NO0042G	pg/m^3	7,31	8,85	8,71	8,52	12,05	9,61	9,64	12,34	14,63	17,13	10,48	9,04
N1methylnaphtalene	NO0042G	pg/m^3	0,24	6,39	2,15	0,03	0,03	0,02	0,01	0,01	0,01	0,04	0,08	0,22
N1methylphenanthrene	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,00	0,00	0,01	0,01	0,01
N2methylanthracene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
N2methylnaphtalene	NO0042G	pg/m^3	0,30	6,27	2,68	0,05	0,04	0,03	0,02	0,03	0,02	0,05	0,11	0,27
N2methylphenanthrene	NO0042G	pg/m^3	0,02	0,02	0,01	0,01	0,01	0,01	0,02	0,01	0,01	0,01	0,01	0,02
N3methylphenanthrene	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,00	0,01	0,01	0,02
N9methylphenanthrene	NO0042G	pg/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,00	0,01	0,01	0,01
naphtalene	NO0042G	pg/m^3	0,88	25,33	6,87	0,12	0,10	0,08	0,06	0,08	0,08	0,11	0,39	0,83
cis_NO	NO0042G	pg/m^3	0,06	0,04	0,03	0,03	0,06	0,09	0,07	0,12	0,10	0,07	0,07	0,35
trans_NO	NO0042G	pg/m^3	0,60	0,57	0,46	0,54	0,59	0,44	0,40	0,44	0,46	0,51	0,55	1,70
perylene	NO0042G	pg/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
retene	NO0042G	pg/m^3	0,01	0,00	0,00	0,00	0,01	0,01	0,01	0,00	0,00	0,01	0,00	0,01
									number of additional components reported					**69**

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PORTUGAL

PORTUGAL

Components in Precipitation

Mandatory	station	units	month										
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	PT0003R	mg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
nitrate	PT0003R	mg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
precipitation *nitrogen*	PT0003R	mm	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
arsenic			*not yet received*											
cadmium	PT0003R	µg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
chromium			*not yet received*											
copper	PT0003R	µg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
lead	PT0003R	µg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
mercury			*not yet received*											
nickel	PT0003R	µg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
zinc	PT0003R	µg/l	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											
precipitation *all metals*	PT0003R	mm	*not yet received*											
	PT0004R		*not yet received*											
	PT0010R		*not yet received*											

Percentage completion of mandatory programme **0,0**

Voluntary

PCB_28	*not yet received*
PCB_52	*not yet received*
PCB_101	*not yet received*
PCB_118	*not yet received*
PCB_138	*not yet received*
PCB_153	*not yet received*
PCB_180	*not yet received*
anthracene	*not yet received*
benzo(a)anthracene	*not yet received*
benzo(a)pyrene	*not yet received*
benzo(ghi)perylene	*not yet received*
chrysene+triphenalyne	*not yet received*
flouranthene	*not yet received*
indeno(123cd)pyrene	*not yet received*
phenanthrene	*not yet received*
pyrene	*not yet received*

Percentage completion of voluntary programme **0,0**

PORTUGAL

Airborne components

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2			*not reported*											
HNO3			*not reported*											
NO3			*not reported*											
HNO3+NO3			*not reported*											
NH3			*not reported*											
NH4			*not reported*											
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**0,00**
Voluntary														
NO			*not reported*											
arsenic			*not reported*											
cadmium			*not reported*											
chomium			*not reported*											
copper			*not reported*											
lead			*not reported*											
mercury			*not reported*											
nickel			*not reported*											
zinc			*not reported*											
PCB_28			*not reported*											
PCB_52			*not reported*											
PCB_101			*not reported*											
PCB_118			*not reported*											
PCB_138			*not reported*											
PCB_153			*not reported*											
PCB_180			*not reported*											
anthracene			*not reported*											
benzo(a)anthracene			*not reported*											
benzo(a)pyrene			*not reported*											
benzo(ghi)perylene			*not reported*											
chrysene			*not reported*											
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene			*not reported*											
phenanthrene			*not reported*											
pyrene			*not reported*											
									Percentage completion of voluntary programme					**0,00**

SPAIN

SPAIN

Components in Precipitation

2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	ES0008R	mg/l	0,71	0,27	0,30	0,52	0,81	1,40	1,46	0,58	0,20	0,13	0,22	0,14
nitrate	ES0008R	mg/l	0,71	0,78	0,50	1,83	2,27	2,44	1,19	0,87	0,71	0,33	0,43	0,76
precipitation *nitrogen*	ES0008R	mm	21,40	42,20	14,60	54,40	16,20	8,60	20,40	16,00	41,40	75,60	15,00	39,80
arsenic	ES0008R	µg/l	0,77	0,14	0,15	0,20	0,30	0,32	0,11	0,07	0,36	0,04	0,09	0,15
cadmium	ES0008R	µg/l	0,07	0,14	0,05	0,07	0,08	0,18	0,05	0,06	0,08	0,03	0,04	0,02
chomium	ES0008R	µg/l	166,27	9,94	131,14	150,55	21,78	87,96	153,64	187,82	84,66	51,42	44,86	64,10
copper	ES0008R	µg/l	13,42	34,83	17,82	10,49	13,87	20,19	7,45	11,69	13,07	8,68	14,02	10,79
lead	ES0008R	µg/l	3,57	6,11	4,82	2,61	2,09	10,44	1,73	1,65	6,28	0,75	0,84	1,06
mercury		ng/l	*not reported*											
nickel	ES0008R	µg/l	25,07	16,64	27,14	31,33	17,62	33,65	32,43	36,92	20,50	7,20	17,29	77,62
zinc	ES0008R	µg/l	149,17	73,58	102,73	50,18	49,64	176,23	68,28	90,43	54,57	184,35	31,92	45,06
precipitation *metals*	ES0008R	mm	54,22	98,13	39,17	112,62	25,73	36,23	58,87	27,26	70,28	102,85	140,06	97,13
g-HCH			*not reported*											
									Percentage completion of mandatory programme					**81,8**

Voluntary

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*
Percentage completion of voluntary programme	**0,0**

SPAIN

Airborne components

2006

Mandatory		**station**	**units**	**month**											
				january	february	march	april	may	june	july	august	september	october	november	december
NO2		ES0008R	µg/m^3	2,57	2,61	2,13	1,59	1,75	1,53	1,62	1,66	1,81	2,29	2,54	1,95
HNO3				*not reported*											
NO3		ES0008R	µg/m^3	0,46	0,77	0,53	0,56	0,41	0,45	0,32	0,37	0,35	0,37	0,46	0,36
HNO3+NO3		ES0008R	µg/m^3	0,58	1,24	0,70	0,81	0,68	0,79	0,79	0,57	0,72	0,62	0,75	0,58
NH3		ES0008R	µg/m^3	0,62	0,99	1,33	1,41	2,38	2,53	1,93	0,96	0,95	1,22	0,96	0,43
NH4				*not reported*											
NH3+NH4		ES0008R	µg/m^3	1,11	2,22	1,70	2,51	2,50	3,32	2,79	1,41	2,00	1,64	1,66	1,20
														Percentage completion of mandatory programme	**100,0**

Voluntary															
2006															
NO		ES0008R	µg/m^3	0,31	0,23	0,21	0,26	0,24	0,28	0,37	0,42	0,37	0,38	0,30	0,39
arsenic	*aersol*			*short january campaign reported**											
cadmium	*aersol*			*short january campaign reported**											
	PM_{10}	ES0008R	ng/m3	0,16	0,25	0,11	0,14	0,16	0,05	0,07	0,03	0,08	0,15	0,09	0,06
chomium	*aersol*			*short january campaign reported**											
copper	*aersol*			*short january campaign reported**											
	PM_{10}	ES0008R	ng/m3	17,38	20,41	16,82	31,38	36,39	32,92	21,64	25,38	24,28	25,04	40,42	14,55
lead	PM_{10}	ES0008R	ng/m^3	3,76	10,43	7,89	18,72	6,84	4,26	2,75	4,00	5,53	8,29	6,35	3,16
mercury				*not reported*											
nickel				*not reported*											
zinc				*not reported*											
PCB_28				*not reported*											
PCB_52				*not reported*											
PCB_101				*not reported*											
PCB_118				*not reported*											
PCB_138				*not reported*											
PCB_153				*not reported*											
PCB_180				*not reported*											
anthracene		ES0008R	ng/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
benzo(a)anthracene		ES0008R	ng/m^3	0,02	0,02	0,02	0,02	0,04	0,02	0,02	0,02	0,04	0,03	0,04	0,03
benzo(a)pyrene		ES0008R	ng/m^3	0,02	0,02	0,02	0,02	0,06	0,02	0,03	0,03	0,07	0,04	0,08	0,03
benzo(ghi)perylene		ES0008R	ng/m^3	0,02	0,02	0,03	0,03	0,07	0,03	0,03	0,04	0,05	0,04	0,07	0,04
chrysene		ES0008R	ng/m^3	0,02	0,02	0,02	0,02	0,04	0,02	0,02	0,03	0,04	0,03	0,06	0,03
flouranthene		ES0008R	ng/m^3	0,02	0,02	0,03	0,02	0,04	0,02	0,02	0,03	0,05	0,03	0,06	0,03
g-HCH				*not reported*											
indeno(123cd)pyrene		ES0008R	ng/m^3	0,03	0,03	0,03	0,03	0,05	0,03	0,03	0,04	0,05	0,04	0,07	0,04
phenanthrene		ES0008R	ng/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,02	0,01
pyrene		ES0008R	ng/m^3	0,01	0,01	0,02	0,01	0,02	0,01	0,01	0,02	0,03	0,02	0,04	0,02
														Percentage completion of voluntary programme	**50,0**

* insufficient for calculation of monthly average

additional non-CAMP components															
acenaphthene	ES0008R	ng/m^3	0,06	0,08	0,07	0,06	0,06	0,06	0,06	0,06	0,06	0,06	0,06	0,06
acenaphtylene	ES0008R	ng/m^3	0,02	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03
benzo(b)fluoranthene	ES0008R	ng/m^3	0,01	0,01	0,01	0,02	0,05	0,02	0,03	0,04	0,06	0,04	0,08	0,04
benzo(j)fluoranthene	ES0008R	ng/m^3	0,02	0,03	0,04	0,03	0,03	0,02	0,02	0,02	0,02	0,02	0,03	0,02
benzo(k)fluoranthene	ES0008R	ng/m^3	0,02	0,02	0,02	0,02	0,05	0,01	0,01	0,03	0,05	0,03	0,08	0,03
dibenzo(ah)anthracene	ES0008R	ng/m^3	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,04	0,03
fluorantene	ES0008R	ng/m^3	0,02	0,02	0,03	0,02	0,04	0,02	0,02	0,03	0,05	0,03	0,06	0,03
fluorene	ES0008R	ng/m^3	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
naphtalene	ES0008R	ng/m^3	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01

SWEDEN

SWEDEN

Components in Precipitation
2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	SE0014R	mg/l	0,90	0,32	0,27	1,15	0,47	0,53	2,83	0,26	0,58	0,25	0,33	0,34
nitrate	SE0014R	mg/l	0,97	0,50	0,37	0,90	0,41	0,40	0,18	0,25	0,59	0,33	0,50	0,44
precipitation *nitrogen*	SE0014R	mm	20,20	41,80	20,30	45,40	23,60	28,40	39,20	116,70	46,20	138,50	122,50	108,90
arsenic	SE0097R	µg/l	0,11	0,03	0,03	0,12	0,03	0,12	0,03	0,03	0,03	0,12	0,03	0,03
cadmium	SE0097R	µg/l	0,07	0,06	0,04	0,06	0,04	0,05	0,02	0,02	0,03	0,02	0,01	0,01
chomium	SE0097R	µg/l	0,09	0,20	0,23	0,30	0,20	0,36	0,26	0,08	0,23	0,08	0,05	0,05
copper	SE0097R	µg/l	0,36	0,90	2,32	0,78	1,28	3,50	0,63	1,02	1,17	0,91	0,39	0,33
lead	SE0097R	µg/l	1,11	1,30	0,79	0,91	0,53	0,90	0,49	0,63	0,51	0,63	0,55	0,46
mercury	SE0014R	ng/l	14,00	12,50	12,50	20,20	16,30	14,30	16,60	8,10	9,80	6,10	5,50	6,80
nickel	SE0097R	µg/l	0,21	0,31	0,38	0,27	0,31	0,70	0,07	0,14	0,47	0,16	0,16	0,16
zinc	SE0097R	µg/l	4,59	9,32	8,97	5,37	8,27	16,15	6,44	3,89	10,14	4,15	2,30	2,16
precipitation *all metals*	SE0097R	mm	81,00	40,00	53,00	136,00	92,00	10,00	122,00	129,00	95,00	196,00	200,00	223,00
precipitation *Hg*	SE0014R	mm	16,00	20,10	23,20	43,50	40,40	28,80	34,70	101,20	39,20	110,60	86,30	56,70
g-HCH*	SE0014R	ng/m^2/day	0,03	0,06	0,04	0,17	0,53	0,37	0,52	0,86	0,61	0,95	0,33	0,53
											Percentage completion of mandatory programme			**100,0**

** measuement is of combined wet plus dry deposition*

Voluntary
2006

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*
Percentage completion of voluntary programme	**0,0**

additional non-CAMP components
2006

manganese	SE0097R	µg/l	0,80	0,80	1,30	1,60	3,40	10,90	1,80	1,40	3,60	1,10	0,70	0,60
vanadium	SE0097R	µg/l	0,88	0,66	1,15	1,29	0,70	0,86	0,41	0,39	0,67	0,61	0,70	0,65
precipitation *metals*	SE0097R	mm	81,00	40,00	53,00	136,00	92,00	10,00	122,00	129,00	95,00	196,00	200,00	223,00
											number of additional components reported			**2**

SWEDEN

Airborne components

2006

Mandatory		**station**	**units**	**month**											
				january	february	march	april	may	june	july	august	september	october	november	december
NO2		SE0014R	µg/m^3	2,85	1,99	1,69	1,81	1,16	1,80	1,24	0,92	1,20	1,39	2,30	1,68
HNO3				*not reported*											
NO3				*not reported*											
HNO3+NO3		SE0014R	µg/m^3	0,69	0,51	0,47	0,89	0,55	0,77	0,72	0,34	0,91	0,66	0,76	0,54
NH3				*not reported*											
NH4				*not reported*											
NH3+NH4		SE0014R	µg/m^3	1,08	0,96	0,74	1,07	1,12	1,02	1,27	0,60	1,55	0,87	0,66	0,51
												Percentage completion of mandatory programme			**100,0**
Voluntary															
2006															
NO				*not reported*											
arsenic				*not reported*											
cadmium				*not reported*											
chomium				*not reported*											
copper				*not reported*											
lead				*not reported*											
mercury	*air*	SE0014R	ng/m^3	12,94	24,94	14,51	8,82	12,44	8,96	7,38	7,19	7,23	7,63	7,44	5,11
	air+aerosol	SE0014R	ng/m3	1,40	1,88	1,70	1,66	1,65	1,58	1,56	1,48	1,75	1,55	1,56	1,46
nickel				*not reported*											
zinc				*not reported*											
PCB_28		SE0014R	pg/m3	2,00	1,70	1,65	2,00	2,23	2,05	3,25	2,95	3,20	2,67	2,60	1,64
PCB_52		SE0014R	pg/m3	1,55	1,55	1,65	2,00	2,31	4,21	5,00	4,25	3,20	2,73	2,60	1,75
PCB_101		SE0014R	pg/m3	1,10	1,15	1,15	1,35	2,27	3,58	5,10	6,25	3,05	2,47	2,10	1,45
PCB_118		SE0014R	pg/m3	0,38	0,37	0,42	0,43	0,58	0,95	1,30	1,80	0,85	0,72	0,52	0,37
PCB_138		SE0014R	pg/m3	0,80	0,89	0,84	0,81	1,62	2,49	3,55	5,20	2,15	1,57	1,20	0,88
PCB_153		SE0014R	pg/m3	0,88	0,97	0,85	0,90	1,78	2,89	4,15	6,20	2,55	1,87	1,45	1,00
PCB_180		SE0014R	pg/m3	0,43	0,41	0,36	0,27	0,56	0,86	1,20	2,10	0,74	0,54	0,36	0,23
anthracene		SE0014R	pg/m3	0,14	0,06	0,04	0,01	0,01	0,00	0,00	0,01	0,00	0,02	0,01	0,02
benzo(a)anthracene		SE0014R	pg/m3	0,42	0,16	0,12	0,02	0,01	0,01	0,01	0,02	0,02	0,08	0,05	0,03
benzo(a)pyrene		SE0014R	pg/m3	0,35	0,17	0,15	0,02	0,01	0,01	0,01	0,01	0,02	0,05	0,05	0,04
benzo(ghi)perylene		SE0014R	pg/m3	0,43	0,18	0,14	0,03	0,02	0,01	0,01	0,01	0,03	0,05	0,06	0,04
chrysene				*not reported*											
flouranthene				*not reported*											
g-HCH		SE0014R	pg/m3	2,48	2,50	2,16	3,93	6,03	6,80	10,74	9,39	7,67	7,10	5,10	3,84
indeno(123cd)pyrene		SE0014R	pg/m3	0,50	0,22	0,18	0,04	0,02	0,01	0,01	0,01	0,03	0,06	0,08	0,05
phenanthrene		SE0014R	pg/m3	4,90	3,45	2,15	1,02	0,74	0,45	0,41	0,69	0,50	0,89	1,16	1,16
pyrene		SE0014R	pg/m3	1,70	0,78	0,67	0,19	0,12	0,06	0,06	0,08	0,11	0,21	0,28	0,26
												Percentage completion of voluntary programme			**58,3**

UNITED KINGDOM

United Kingdom

Components in Precipitation

2006

Mandatory	station	units	month											
			january	february	march	april	may	june	july	august	september	october	november	december
ammonium	GB0006R	mg/l	0.10	0.08	0.21	0.26	0.24	0.61	0.61	0.09	0.03	0.24	0.14	0.10
	GB0013R	mg/l	1.75	0.29	0.48	0.67	0.24	0.93	0.75	0.25	0.28	0.49	0.21	0.25
	GB0014R	mg/l	0.68	0.56	0.70	0.84	0.67	0.54		0.28	0.41	0.37	0.48	0.56
	GB0016R	mg/l	0.59	0.44	1.01	0.66	0.41	0.77		0.79	1.23	0.64	0.61	0.34
nitrate	GB0006R	mg/l	0.06	0.05	0.13	0.05	0.16	0.07	0.17	0.11	0.08	0.13	0.05	0.04
	GB0013R	mg/l	0.62	0.25	0.37	0.72	0.21	0.77	0.69	0.26	0.27	0.30	0.15	0.15
	GB0014R	mg/l	0.79	0.58	0.56	0.38	0.47	0.47		0.19	0.39	0.28	0.32	0.31
	GB0016R	mg/l	0.74	0.38	0.92	0.42	0.45	0.29		0.50	0.58	0.85	0.33	0.26
precipitation *nitrogen*	GB0006R	mm	63.80	76.60	150.30	73.10	147.70	19.30	63.20	126.00	103.30	151.50	150.90	303.60
	GB0013R	mm	41.00	97.10	120.30	17.40	122.20	40.70	32.70	19.00	66.50	152.40	136.70	282.30
	GB0014R	mm	79.66	46.30	129.50	23.40	127.80	17.20	0.00	179.80	60.80	89.70	69.00	83.10
	GB0016R	mm	9.10	49.90	124.60	19.90	66.30	107.10	0.00	69.30	40.20	90.00	17.60	57.70
arsenic	GB0006R	µg/l	0.22	0.20	0.14	0.15	0.51	0.21	0.30	0.17	0.10	0.36	0.11	
	GB0013R	µg/l	0.20	0.11	0.07	0.08	0.08	0.21	0.19	0.10	0.09	0.10	0.07	0.11
	GB0017R	µg/l	0.26	0.13	0.19		0.18			0.09		0.18	0.12	0.16
	GB0091R	µg/l	0.16	0.22	0.21	0.14	0.10	0.10	0.11	0.10	0.12	0.16	0.08	0.11
cadmium	GB0006R	µg/l	0.01	0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.00	0.01	0.00	
	GB0013R	µg/l	0.04	0.03	0.01	0.01	0.02	0.03	0.03	0.01	0.01	0.02	0.02	0.01
	GB0017R	µg/l	0.05	0.02	0.04		0.03			0.02		0.04	0.02	0.03
	GB0091R	µg/l	0.02	0.04	0.04	0.01	0.02	0.02	0.02	0.01	0.01	0.03	0.01	0.01
chomium	GB0006R	µg/l	0.07	0.16	0.13	0.06	0.17	0.10	0.21	0.28	0.02	0.02	0.02	
	GB0013R	µg/l	0.13	0.07	0.06	0.05	0.07	0.20	0.18	0.08	0.14	0.05	0.02	0.09
	GB0017R	µg/l	0.22	0.08	0.20		0.20			0.13		0.06	0.09	0.06
	GB0091R	µg/l	0.12	0.35	0.09	0.16	0.21	0.19	0.06	0.06	0.08	0.07	0.06	0.11
copper	GB0006R	µg/l	0.14	0.16	0.19	0.21	0.53	0.25	1.97	0.86	0.15	0.56	0.07	
	GB0013R	µg/l	0.68	0.41	0.23	0.43	0.53	0.75	0.75	0.48	0.41	0.57	0.18	0.12
	GB0017R	µg/l	1.70	0.71	1.10		6.80			0.67		1.23	0.59	0.87
	GB0091R	µg/l	0.55	1.54	0.58	0.30	0.57	0.85	0.62	0.26	0.46	0.68	0.21	0.21
lead	GB0006R	µg/l	0.07	0.16	0.22	0.22	0.71	0.15	0.65	0.18	0.03	0.22	0.03	
	GB0013R	µg/l	1.51	0.81	0.46	0.28	0.42	1.27	0.86	0.28	0.25	0.87	0.26	0.29
	GB0017R	µg/l	1.70	1.10	1.50		1.38			0.83		0.94	0.71	0.81
	GB0091R	µg/l	0.89	5.40	1.30	0.31	2.23	0.28	0.56	0.27	0.26	1.07	0.37	0.25
mercury	GB0013R	µg/l			3.45	7.50	2.45	7.90	9.00	8.80	4.75	3.75	0.68	3.65
	GB0091R	µg/l	4.00	4.00	4.10	2.05	6.00	3.55	7.12	3.55	3.10	1.71	3.75	4.65
nickel	GB0006R	µg/l	0.44	0.07	0.14	0.51	0.10	0.11	0.14	0.19	0.05	0.04	0.01	
	GB0013R	µg/l	0.59	0.26	0.26	0.46	0.67	0.37	0.37	0.36	0.33	0.22	0.16	0.17
	GB0017R	µg/l	0.78	0.31	1.09		0.48			0.25		0.41	0.28	0.35
	GB0091R	µg/l	0.58	0.79	0.36	0.35	0.26	0.23	0.29	0.41	0.09	0.21	0.18	0.08
zinc	GB0006R	µg/l	1.30	1.10	1.30	1.20	1.53	1.36	2.72	4.70	0.50	2.19	0.50	
	GB0013R	µg/l	7.08	2.90	2.26	2.80	4.99	5.11	4.99	3.03	6.54	3.42	1.57	1.17
	GB0017R	µg/l	13.00	4.40	6.50		9.36			4.19		10.50	3.70	5.18
	GB0091R	µg/l	6.71	4.84	5.86	2.70	10.01	6.54	4.62	2.18	3.25	4.39	1.47	1.94
precipitation *metals ex. Hg*	GB0006R	mm	64.20	104.80	153.20	91.80	154.20	55.70	82.00	134.00	121.90	132.20	274.80	
	GB0013R	mm	18.00	79.10	116.10	47.30	120.10	56.10	44.80	31.40	79.70	155.20	142.50	189.10
	GB0017R	mm	4.80	39.70	51.60	0.00	76.40	14.70	0.00	138.40	131.30	37.20	35.50	26.40
	GB0091R	mm	22.00	35.80	108.20	25.60	70.80	35.30	53.10	41.50	39.60	121.90	68.40	22.90
precipitation *metals Hg*	GB0013R	mm	41.90	33.40	202.40	24.40	102.30	69.30	31.70	2.70	28.70	20.90	191.60	82.10
	GB0091R	mm	41.40	19.20	71.60	79.60	37.80	54.20	71.10	57.50	47.60	104.80	58.90	68.90
g-HCH			*not reported*											

Percentage completion of mandatory programme **90.9**

Voluntary

PCB_28	*not reported*
PCB_52	*not reported*
PCB_101	*not reported*
PCB_118	*not reported*
PCB_138	*not reported*
PCB_153	*not reported*
PCB_180	*not reported*
anthracene	*not reported*
benzo(a)anthracene	*not reported*
benzo(a)pyrene	*not reported*
benzo(ghi)perylene	*not reported*
chrysene+triphenalyne	*not reported*
flouranthene	*not reported*
indeno(123cd)pyrene	*not reported*
phenanthrene	*not reported*
pyrene	*not reported*

Percentage completion of voluntary programme **0.0**

UNITED KINGDOM

Airborne components

2006

Mandatory	**station**	**units**	**month**											
			january	february	march	april	may	june	july	august	september	october	november	december
NO2	GB0014R		3.00	2.63	1.67	7.76	1.31	4.91	74.51	0.51	1.15	23.99	4.61	4.86
HNO3	GB0006R		0.09	0.05	0.06	0.02	0.05	0.06	0.09	0.02	0.05	0.08	0.01	0.04
	GB0013R		0.30	0.21	0.16	0.11	0.14	0.26	0.46	0.10	0.16	0.14	0.07	0.11
	GB0014R		0.26	0.19	0.20	0.11	0.18	0.20	0.33	0.09	0.05	0.16	0.14	0.19
	GB0016R		0.15	0.07	0.17	0.07	0.09	0.14	0.43		0.18	0.16	0.06	0.04
NO3	GB0006R		0.53	0.33	0.26	0.06	0.24	0.17	0.18	0.02	0.15	0.32	0.05	0.28
	GB0013R		0.70	0.73	0.57	0.39	0.41	0.50	0.49	0.21	0.37	0.43	0.20	0.35
	GB0014R		0.62	0.53	0.58	0.35	0.58	0.50	0.50	0.23	0.50	0.50	0.36	0.31
	GB0016R		0.36	0.15	0.37	0.12	0.30	0.23	0.15		0.41	0.25	0.11	0.08
HNO3+NO3			*not reported*											
NH3	GB0006R		0.63	0.77	0.44	0.21	0.36	0.75	0.58	0.24	0.57	0.48	0.16	0.43
	GB0013R		0.31	0.19	0.49	0.50	0.41	0.73	0.73	0.58	0.46	0.26	0.18	0.14
	GB0014R		0.26	0.30	0.43	0.63	0.90	0.94	1.32	0.52	0.67	0.41	0.35	0.30
	GB0016R		0.22	0.17	0.18	0.25	0.37	0.58	0.60	0.31	0.35	0.22	0.16	0.17
NH4	GB0006R		0.85	0.73	0.47	0.13	0.49	0.39	0.37	0.15	0.31	0.64	0.10	0.51
	GB0013R		1.68	1.40	1.04	0.73	0.70	0.87	0.87	0.33	0.55	0.78	0.28	0.68
	GB0014R		0.26	0.30	0.43	0.63	0.90	0.94	1.32	0.52	0.67	0.41	0.35	0.30
	GB0016R		0.56	0.23	0.67	0.25	0.52	0.55	0.57		1.02	0.54	0.16	0.17
NH3+NH4			*not reported*											
									Percentage completion of mandatory programme					**100.0**

Voluntary														
NO	GB0014R		*not yet received*											
arsenic	GB0013R		0.88	1.13	0.45	0.38	0.35	1.47	0.57	0.26	0.31	0.59	0.56	0.38
	GB0017R		1.16	0.81	0.54	0.34	0.13	0.18	0.55	0.36	0.81	0.69	1.34	0.50
	GB0091R		0.26	0.35	0.21	0.15	0.35	0.86	0.31	0.23	0.35	0.36	0.12	0.08
cadmium	GB0013R		0.18	0.14	0.08	0.06	0.07	0.23	0.14	0.02	0.04	0.08	0.06	0.07
	GB0017R		0.36	0.17	0.16	0.06	0.03	0.04	0.12	0.09	0.19	0.15	0.30	0.09
	GB0091R		0.08	0.05	0.06	0.04	0.17	0.18	0.06	0.04	0.07	0.06	0.04	0.01
chomium	GB0013R		0.56	0.07	0.22	0.15	0.06	0.06	0.42	0.37	0.40	0.52	0.61	0.51
	GB0017R		0.76	0.08	1.16	0.28	0.31	0.95	0.91	0.48	1.17	0.71	0.38	1.20
	GB0091R		0.06	0.27	0.34	0.05	0.14	0.11	0.61	0.53	0.52	0.80	0.33	0.57
copper	GB0013R		2.25	1.04	0.78	0.49	0.84	4.56	1.75	0.15	0.46	1.45	1.05	0.39
	GB0017R		2.20	1.33	1.18	0.35	0.25	0.39	1.18	0.57	2.36	1.82	3.49	1.16
	GB0091R		0.85	0.46	0.08	0.02	1.19	2.95	0.36	0.12	0.53	0.81	0.89	0.03
lead	GB0013R		7.38	7.39	4.21	3.20	3.11	12.86	6.42	1.21	1.72	3.99	4.24	2.99
	GB0017R		14.42	9.58	5.92	3.51	1.55	2.18	4.57	3.58	9.00	6.88	18.81	8.94
	GB0091R		3.39	2.19	2.35	1.30	3.48	8.99	2.70	1.07	2.77	3.03	1.95	0.76
mercury	GB0013R		1.35	1.31	1.67	1.80	1.79	1.31	1.27	1.23	2.05	1.83	1.53	
	GB0017R		1.00	1.71	2.19		2.14			1.78	2.22	1.70	2.05	
	GB0091R		1.22	0.89	0.64	1.83	1.84	1.51	1.53	1.56	1.43	1.35	1.48	1.33
nickel	GB0013R		2.50	0.93	0.97	0.98	1.81	3.66	2.89	0.34	1.44	1.31	0.55	0.64
	GB0017R		2.73	1.70	1.82	1.43	0.64	1.98	5.15	1.27	3.03	1.46	1.07	1.06
	GB0091R		0.83	0.35	0.48	0.16	0.98	3.33	0.73	0.29	0.45	0.38	0.08	0.14
zinc	GB0013R		11.52	11.65	5.13	4.72	4.86	26.58	17.24	1.49	4.47	7.53	5.63	4.04
	GB0017R		26.79	12.28	17.67	4.42	1.54	4.70	7.81	2.45	15.99	14.14	21.96	3.82
	GB0091R		1.48	1.44	3.05	1.20	9.58	20.10	4.46	1.49	3.70	4.41	1.65	1.42
PCB_28	GB0014R				2.01		7.84			9.13				4.85
PCB_52	GB0014R				1.33		4.03			2.91				0.10
PCB_101	GB0014R				1.00		2.07			1.37				1.19
PCB_118	GB0014R				0.26		0.56			0.35				0.30
PCB_138	GB0014R				0.38		0.68			0.62				0.46
PCB_153	GB0014R				0.47		0.89			0.76				0.60
PCB_180	GB0014R				0.11		0.16			0.21				0.16
anthracene	GB0014R				0.26		0.07			0.05				0.71
benzo(a)anthracene	GB0014R				0.12		0.02			0.01				0.05
benzo(a)pyrene	GB0014R				0.08		0.02			0.01				0.04
benzo(ghi)perylene	GB0014R				0.10		0.03			0.01				0.06
chrysene	GB0014R				0.24		0.05			0.03				0.11
flouranthene			*not reported*											
g-HCH			*not reported*											
indeno(123cd)pyrene	GB0014R				0.13		0.02			0.01				0.05
phenanthrene	GB0014R				12.00		2.00			3.10				22.00
pyrene	GB0014R				0.55		0.22			0.44				0.43
									Percentage completion of voluntary programme					**88.1**

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ABSTRACT

Report of the observations of airborne pollutants around the OSPAR coastlines, 2006. Displays the estimated deposition of nutrient, heavy metal and organic pollutants around the coast, together with estimates of the total load to the North Sea of pollutants from the atmosphere. There is indication of decline in pollutant loads.

NORWEGIAN TITLE

Pollutant deposits and air quality around the North Sea and the North East Atlantic in 2006

KEYWORDS Marine atmospheric pollution		

ABSTRACT

** Classification* *A* *Unclassified (can be ordered from NILU)*
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