



OSPAR
COMMISSION

Annual OSPAR report on dumping of wastes
or other matter at sea in 2012

OSPAR Convention

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 Union and Spain.

Convention OSPAR

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 l'Union européenne et l'Espagne.

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Table 1 Overview of number of permits issued, tonnes licensed and tonnes dumped in 2012

Contracting Party	Number of permits issued for waste category				Number of operations regulated by other means	Tonnes licensed (dry weight)	Tonnes dumped (dry weight)	Notes
	Dredged material	Inert material	Fish waste	Others				
Belgium	6					28 570 000	40 979 603	(1)
	1					66,2 million m ³ /5 years*		
	1					7 million m ³ /year **		
Denmark	94						6 958 621	(1)
France	32						25 466 967	
Germany	18				33	28 927 000	28 927 000	(1)
Iceland	4					1 283 440	467 027	(1)
Ireland	4					4 968 000	1 613 161	(1) (2) (3)
Netherlands	10				numerous	25 000 000	25 779 469	(1) (2) (3)
Norway	27					519 055	519 055	(1)
		2				98 350		
Portugal	24					3 647 671	3 953 951	
			1			306 280		
Spain	24					2 558 468	2 558 467	
Sweden	12					56 785	66 185	(1)
United Kingdom	66					28 879 587	14 103 597	(1) (2)
			1			2 000		(3)

Table 2 Specific reporting on dumping operations of dredged material exceeding national action levels for sea disposal within 2011 within 2011

OSPAR Deposit Site Code	Contaminants of concern			Tonnes dumped (dry weight)	Reasons for allowing disposal	Notes
	Type	Upper action level (mg/kg)	Average concentration in the material (mg/kg)			
France						
F/8508	Cu	90	216	619 000	no possibility of treatment?	
F/3315, F/03317, F/03316, F/03313	Hg	0,8	1,29	2 712 000	no possibility of treatment?	
Germany						
103	HCB	5,5	5,67	51 000		(1)
109	HCB	5,5	5,67	1 196 000		(1)
Ireland						
IR6	TBT	0,5	0,26	13 408	Only one sample exceeding upper action level, with sum of DBT and TBT = 0.66 mg kg-1. Average concentration of material well below action level.	
IR6	Zn	410	170	13 408	Only one sample exceeding upper action level, with Zn = 470 mg kg-1. Average concentration of material well below action level.	
Norway						
1219.0086	Pb			0		(1)

Table 3a Dredging operation, deposit sites and dumping amounts

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
Belgium												
B/1	x				Pas van het zand			x		x	1 785 354	
B/1	x				CDNB Zeebrugge			x		x	1 200 677	
B/1	x				Scheur Oost			x		x	993 575	
B/1	x				Scheur West			x		x	820 155	
B/1	x				Voorhaven	x				x	723 601	
B/3	x				Pas van het zand			x		x	833 487	
B/3	x				CDNB Zeebrugge			x		x	264 221	
B/3	x				Voorhaven	x				x	422 598	
B/3	x				Scheur Oost			x		x	448 963	
B/3	x				Scheur West			x		x	251 735	
B/6	x				Haven & voorhaven	x				x	1 823 581	
B/6	x				CDNB Zeebrugge			x		x	936 584	
B/6	x				Vaargeul Blankenberge			x		x	10 430	
B/6	x				Spuikom Blankenberge	x				x	12 953	
B/6	x				Vlotdok Blankenberge	x				x	8 823	
B/6	x				Oude Viissershaven	x				x	13 905	
B/9	x				Ingangsgedul Oostende			x		x	0	
B/9	x				Montgomery	x				x	3 949	
B/9	x				Haven Oostende	x				x	280 814	
B/9	x				RYCO Oostende	x		x		x	5 863	
B/99	x				Toegangsgedul Nieuwpoort			x		x	64 624	
B/99	x				Vaar- & havengeul Nieuwpoort			x		x	15 158	
B/99	x				Nieuwe Jachthaven			x		x	7 768	
B/99	x				Oude vlotkom	x				x	10 912	
B/99	x				Novus Portus	x				x	22 775	
B/SN51	x				Drempel van Hansweert		x			x	863 708	
B/SN51	x				Overloop van Valkenisse		x			x	937 736	
B/SN51	x				Drempel van Valkenisse		x			x	64 856	
B/HP1	x				Drempel van Borsssele		x			x	143 974	
B/HP1	x				Drempel van Vlissingen		x			x	258 790	
B/RVB	x				Drempel van Valkenisse		x			x	55 238	
B/RVB	x				Overloop Hansweert		x			x	30 880	
B/SN11	x				Drempel van Borsssele		x			x	1 871 386	
B/SN11	x				Drempel van Vlissingen		x			x	619 186	
B/SN11	x				Pas van Terneuzen		x			x	467 556	
B/SH61	x				Bocht van Bath		x			x	548 106	
B/SH61	x				Drempel van Valkenisse		x			x	815 320	
B/SH61	x				Drempel van Zandvliet		x			x	6 934	
B/SH41	x				Gat van Ossenissee		x			x	1 353 194	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
B/SH41	x				Bocht van Bath		x			x	116 234	
B/SH41	x				Drempel van Hansweert		x			x	3 418 656	
B/SH41	x				Overloop van Valkenisse		x			x	371 538	
B/SH41	x				Drempel van Valkenisse		x			x	171 076	
B/SH41	x				Overloop Hansweert		x			x	1 426 666	
B/SN31	x				Gat van Ossenis		x			x	953 250	
B/SN31	x				Drempel van Hansweert		x			x	145 540	
B/SN31	x				Overloop van Valkenisse		x			x	348 558	
B/SN31	x				Drempel van Borssele		x			x	481 142	
B/SN31	x				Pas van Terneuzen		x			x	824 176	
B/SN31	x				Put van Terneuzen		x			x	369 606	
B/SH51	x				Bocht van Bath		x			x	238 260	
B/SH51	x				Drempel van Hansweert		x			x	93 966	
B/SH51	x				Overloop van Valkenisse		x			x	981 706	
B/SH51	x				Drempel van Valkenisse		x			x	822 702	
B/WALS	x				Bocht van Bath		x			x	923 362	
B/WALS	x				Drempel van Hansweert		x			x	109 136	
B/WALS	x				Overloop van Valkenisse		x			x	565 118	
B/SOD	x				Drempel van Frederik		x			x	161 246	
B/SOD	x				Drempel van Zandvliet		x			x	1 241 024	
B/SOD	x				Drempel van Krankeloo		x			x	323 988	
B/SOD	x				Drempel van De Parel		x			x	398 590	
B/SOD	x				Drempel van Lillo		x			x	486 416	
B/SOD	x				Noordzeeterminal		x			x	144 574	
B/OWL	x				Drempel van Frederik		x			x	1 126 750	
B/OWL	x				Drempel van Zandvliet		x			x	32 508	
B/OWL	x				Toegangsgemaal Zandvliet/Berendrechtsluis		x			x	600 994	
B/OWL	x				Drempel van Lillo		x			x	166 974	
B/OWL	x				Deurganckdok		x			x	1 000 160	
B/OWL	x				Toegang Boudewijn/Van Cauwelaertsluis		x			x	122 612	
B/OWL	x				Toegangsgemaal Kallosluis		x			x	323 404	
B/PVM	x				Drempel van Frederik		x			x	1 113 222	
B/PVM	x				Drempel van Zandvliet		x			x	49 672	
B/PVM	x				Toegangsgemaal Zandvliet/Berendrechtsluis		x			x	587 368	
B/PVM	x				Drempel van Krankeloo		x			x	1 540	
B/PVM	x				Drempel van Lillo		x			x	194 268	
B/PVM	x				Deurganckdok		x			x	1 045 820	
B/PVM	x				Toegang Boudewijn/Van Cauwelaertsluis		x			x	121 392	
B/PVM	x				Toegangsgemaal Kallosluis		x			x	377 020	
Total											40 979 603	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
Denmark												
DK K_002_01	x				Sydlig Roskilde Fjord						0	
DK K_005_01	x				Kattegat < 20m						3 947	
DK K_013_01	x				Åbne del, Øresundstragten						0	
DK K_024_01	x				Isefjord, Kattegat						0	
DK K_032_01	x				Kattegat < 20m						3 678	
DK K_111_01	x				Lister Grund						18 918	
DK K_119_01	x				Vesterhavet 1 sm						4 109 977	
DK K_119_02	x				Vesterhavet 1 sm						398 928	
DK K_119_03	x				Vesterhavet 1 sm						207 805	
DK K_121_01	x				Grådyb, tidevandsområde						89 845	
DK K_121_02	x				Grådyb, tidevandsområde						328 622	
DK K_132_01	x				Ringkøbing Fjord						0	
DK K_132_02	x				Ringkøbing Fjord						0	
DK K_132_03	x				Ringkøbing Fjord						13 171	
DK K_132_04	x				Ringkøbing Fjord						0	
DK K_132_05	x				Ringkøbing Fjord						7 092	
DK K_132_06	x				Ringkøbing Fjord						0	
DK K_133_01	x				Vesterhavet 1 sm						3 722	
DK K_134_01	x				Vesterhavet 12 sm						11 956	
DK K_138_01	x				Hevring Bugt						0	
DK K_139_01	x				Anholt						4600	
DK K_141_01	x				Ebeltoft Vig						0	
DK K_141_02	x				Ebeltoft Vig						0	
DK K_143_01	x				Århus Bugt Syd, Samsø og Djursland Syd						0	
DK K_143_02	x				Århus Bugt Syd, Samsø og Djursland Syd						0	
DK K_143_03	x				Århus Bugt Syd, Samsø og Djursland Syd						0	
DK K_143_04	x				Århus Bugt Syd, Samsø og Djursland Syd						0	
DK K_147_01	x				Århus Bugt, Kalø og Begtrup Vig						0	
DK K_150_01	x				12 sømil Djursland Ø						2 619	
DK K_150_02	x				12 sømil Djursland Ø						84 444	
DK K_155_01	x				Kattegat						0	
DK K_155_02	x				Kattegat						0	
DK K_155_03	x				Kattegat						15 197	
DK K_155_04	x				Kattegat						0	
DK K_155_05	x				Kattegat						0	
DK K_155_06	x				Kattegat						14 377	
DK K_155_07	x				Kattegat						3 222	
DK K_155_08	x				Kattegat						0	
DK K_155_09	x				Kattegat						0	
DK K_155_10	x				Kattegat						5937	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
DK K_155_11	x				Kattegat						40 784	
DK K_155_12	x				Kattegat						14 488	
DK K_156_01	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_02	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						10132	
DK K_156_03	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						1 639	
DK K_156_04	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_05	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						44477	
DK K_156_06	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_07	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_08	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						3 850	
DK K_156_09	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						1 945	
DK K_156_10	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						216 231	
DK K_156_11	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_12	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						7937	
DK K_156_13	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_14	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_15	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						16497	
DK K_156_16	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						0	
DK K_156_17	x				Nissum, Thisted, Kås, Løgstør, Nibe, Langerak						89295	
DK K_157_01	x				Lovns, Skive, Riisgårde, Bjørnholm Bugt						18218	
DK K_161_01	x				Vesterhavet 12 sm						104296	
DK K_162_01	x				Skagerrak 12 sm						1060775	
DK K_163_01	x				Nordlige Kattegat 12 sm						0	
DK K_163_02	x				Nordlige Kattegat 12 sm						0	
DK K_163_03	x				Nordlige Kattegat 12 sm						0	
DK K_163_04	x				Nordlige Kattegat 12 sm						0	
Total											6 958 621	
France												
F/05901	x					x				x	709 886	
F/05902	x					x				x	287 793	
F/05904	x					x				x	295 586	
F/06201	x					x				x	167 391	
F/06202	x					x				x	225 871	
F/07601	x					x	x			x	5 834 000	
F/07602	x					x	x			x	1 809 517	
F/07603	x					x				x	285 995	
F/07605	x					x				x	18 685	
F/07606	x					x				x	28 668	
F/07606exp	x					x				x	2 193 000	
F/01410(nord) & F/01411 (sud)	x					x				x	264 250	
F/01405	x					x				x	40 960	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
F/01406	x					x				x	37 850	
F/05004	x					x				x	8 799	
F/05601	x					x			x	x	4 303	
F/05604	x					x				x	711 282	
F/05605	x					x				x	530	
F/05606	x					x				x	70	
F/04412	x					x	x			x	10 350	
F/04401	x					x	x			x	2 883 310	
F/04413	x					x	x			x	328 441	
F/01701a	x					x				x	288 720	
F/03331	x					x				x	9 200	
F/03319	x					x				x	570 000	
F/03307 F/03319 F/03318 F/03317 F/03305	x					x	x			x	71 000	
F/03315 F/03317 F/03316 F/03313	x					x	x			x	2 712 000	
F/03318 F/03317 F/03311 F/03307	x					x	x			x	2 753 000	
F/03301 F/03302 F/03303 F/03305 F/03306 F/03307 F/03311	x					x	x			x	2 141 000	
F/08503	x					x				x	43 484	
F/08506	x					x				x	16 342	
F/08507	x					x				x	1 341	
F/08508	x					x				x	19 878	
F/08509	x					x				x	2 178	
F/08511	x					x				x	2 586	
F/06401	x					x				x	18 849	
F/06401 F/06402	x					x				x	185 017	
	x					x				x	157 909	
F/06404	x					x				x	8 844	
F/01701a	x					x				x	126 273	
F/01706	x					x				x	67 064	
F/01707	x					x				x	57 073	
F/01710	x					x				x	47 213	
F/01715	x					x				x	21 458	
Total											25 466 967	
Germany												
10	x				Dagebuell harbour	x				x	9 000	
12	x				Husum harbour	x				x	48 000	
13	x				Harbour and outer harbour of Buesum	x				x	75 000	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
21	x				Wangerooge harbour	x				x	7 000	
22	x				Spiekeroog harbour	x				x	3 000	
25	x				Baltrum harbour	x				x	1 000	
30	x				Norderney harbour	x				x	4 000	
32	x				Norddeich harbour	x				x	2 000	
36	x				Borkum, Minitrain harbour and approach channel of Borkum island	x				x	1 000	
40	x				Harbour basin of river Eider flood gate system	x				x	40 000	
45	x				Approach channel of Juist harbour	x				x	1 000	
54	x				Friedrichskoog harbour	x				x	47 000	
56	x				Niedersachsenbrücke Wilhelmshaven (seaward mooring berth)	x		x		x	78 000	
56	x				Wilhelmshaven harbour	x				x	37 000	
58	x				Langeoog harbour, Bengersiel harbour and approach channel to Bengersiel harbour	x				x	13 000	
60	x				Ems estuaray, navigation channel km 90,0-105,0; Borkum harbour		x			x	167 000	
63	x				Ems estuaray, navigation channel km 40,7-74,6		x			x	2 035 000	
65	x				Ems estuaray, navigation channel km 31-53		x			x	2 556 000	
70	x				Jade bay / navigation channel km 6,0-15,0; Neuer Vorhafen WHV	x		x		x	331 000	
71	x				Jade bay / navigation channel km 6,0-16			x		x	781 000	
72	x				Jade bay / navigation channel km 6,0-15,0			x		x	625 000	
74	x				Jade bay / navigation channel km 35-54,0			x		x	1 669 000	
75	x				Jade bay / navigation channel km 41,0-54,0			x		x	3 640 000	
78	x				Jade bay / navigation channel Neuer Vorhafen WHV	x		x		x	491 000	
79	x				Lock of Bremerhaven harbour	x				x	17 000	
79	x				Bremerhaven harbour "Kaiserhafen"	x				x	27 000	
80	x				Weser estuary / navigation channel km 78,0-91		x			x	231 000	
82	x				Weser estuary / navigation channel km 70,4-78,0; km 91 - 110		x			x	567 000	
84	x				Weser estuary / navigation channel km 70,4-78,0; km 91 - 130		x			x	721 000	
85	x				Weser estuary / navigation channel km 55,0-58		x			x	125 000	
86	x				Weser estuary / navigation channel km 55,0-58		x			x	301 000	
86	x				Weser estuary / navigation channel km 55,0-58		x			x	1 193 000	
87	x				Weser estuary / navigation channel km 70,4-78,0		x			x	1 170 000	
88	x				Elbe estuary / navigation channel; km 638-717		x			x	2 000	
94	x				Elbe estuary / navigation channel; km 698,5-748,0		x			x	2 849 000	
96	x				Elbe estuary / navigation channel; km 717,0-739,0		x			x	624 000	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
101	x				outer part of the lock to the "Nord-Ostsee-Kanal" (Kiel-Canal);	x	x			x	1 764 000	
103	x				Elbe estuary / navigation channel; km 638-650		x			x	373 000	
105	x				Elbe estuary / navigation channel; km 638-650		x			x	21 000	
105	x				Elbe estuary / navigation channel; km 660-675		x			x	87 000	
109	x				Elbe estuary / navigation channel; km 638-650		x			x	1 796 000	
116	x				Elbe estuary / navigation channel; km 698,5-709,0		x			x	197 000	
117	x				Elbe estuary / navigation channel; km 709,0-717,0		x			x	207 000	
118	x				Elbe estuary / navigation channel; km 717,0-726,0		x			x	503 000	
119	x				Cuxhaven harbour	x	x			x	651 000	
121	x				inner part of "Kiel-Canal"	x				x	1 314 000	
122	x				Elbe estuary / navigation channel; km 698-739		x			x	624 000	
123	x				Elbe estuary / navigation channel; km 698-748		x			x	879 000	
127	x				Wyk harbour (Island "Foehr")	x				x	6 000	
130	x				Hoernum harbour (Island "Sylt")	x				x	1 000	
131	x				Pellworm harbour and adjacent tideway	x		x		x	16 000	
Total											28 927 000	
Iceland												
IS 54	x					x			x		45 811	
IS 59	x					x			x		115 568	
IS 64b	x					x				x	210 864	
IS 64c	x					x				x	75 289	
IS 64e	x					x				x	19 496	
Total											467 027	
Ireland												
IR6	x				Dublin Port		x			x	1 582 805	
IR55	x				Magheraroarty			x		x	10 351	
IR17	x				Naval Base, Cork Hbr	x					427	
IR17	x				Whitegate, Cork Hbr		x			x	19 578	
Total											1 613 161	
Netherlands												
NL-6 Scheveningen											0	(1)
NL-7 IJmuiden	x					x				x	1 223 789	
NL-8 Rotterdam	x					x			x	x	9 587 226	
NL-10 Eastern Scheldt	x					x	x			x	32 145	
NL-11 Western Scheldt	x					x	x			x	12 760 465	
NL-13 Waddensea West	N.A.					x	x	x		x	612 000	(2)
NL-14 Waddensea East	N.A.					x	x	x		x	1 499 922	(2)
NL-15 Ems-Dollard	x					x				x	63 922	(2)

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
NL-16 Slijkgat											0	(4)
Total											25 779 469	
Norway												(1)
0105.0128	x					x			x		5 250	
0105.0128	x					x				x	3 000	
0135.0020	x					x			x		550	
0706.0131	x							x		x	1 925	
1001.0423	x							x	x		130	
1001.0439		x									350	Only dumping
1018.0062	x					x			x		400	
1219.0086	x					x			x		10 000	
1243.0089	x							x	x		450	
1243.0091	x					x			x		400	
1419.0018	x					x			x		100	
1601.0364		x						x	x		98 000	
1622.0023	x							x	x		500	
1703.0112	x					x				x	4 000	
1714.0120	x					x				x	10 000	
1725.0040	x					x			x		50 000	
1815.0030	x							x	x		10 000	
1902.0272	x					x			x		30 000	
1902.0285	x							x	x		50 500	
1931.0103	x							x		x	200 000	
1938.0049	x					x			x		22 000	
1938.0050	x					x			x		13 500	
1941.0044	x					x			x		8 000	
Total											519 055	
Portugal												
PT/SET/01	x				Sado river	x	x			x	9 000	Class 3
PT/SIN/01	x				Atlantic sea	x				x	33 000	Class 2
PT/SET/02	x				Sado river/ Atlantic sea					x	36 000	Class 1
PT/QUA/01	x				Barra da marina		x			x	62 000	Class 1
PT/FAR/01	x				esteiro de acesso a estaleiro		x			x	10 000	Class 2
PT/VCT/01	x				Lima river	x				x	52 000	Class 1
PT/AZO/01			x								306 280	
PT/AZO/02	x				Pombas riverside	x			x		13 910	Class 1
PT/AZO/03	x				Atlantic sea	x			x		232 000	Class 1
PT/AZO/04									x		51 200	Class 1
PT/POR/01	x				Atlantic sea	x				x	15 534	Class 1
PT/POR/01	x				Atlantic sea	x				x	91 939	Class 2

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
PT/POR/01	x				Atlantic sea	x				x	8 190	Class 3
PT/AVR/01	x				Aveiro lagoon	x				x	304 592	Class 1
PT/FFZ/01	x				Mondego river		x			x	417 600	Class 2
PT/FFZ/01	x				Mondego river		x			x	500 400	Class 1
PT/FFZ/02	x				Mondego river		x			x	361 723	Class 1
PT/LX/01	x				Tagus river		x			x	905 763	Class 1 & 2
PT/LX/02	x				Tagus river		x			x	478 374	Class 1 & 2
PT/LX/03	x				Tagus river		x			x	59 823	Class 1 & 2
PT/LX/04	x				Tagus river		x			x	4 622	Class 3
Total											3 953 951	
Spain												
E2/D	x				BERMEO	x				x	1 500,00	
E2/C	x				ONDARROA	x				x	1 600	
E3/F	x				SANTOÑA BARRA	x				x	40 812	
E3/B	x				SANTOÑA CANAL	x				x	3 500	
E3/B	x				COLINDRES	x				x	17 362	
E3/C	x				SUANCES	x				x	25 585	
E3/E	x				COMILLAS	x				x	14 315	
E3/G	x				S. V. BARQUERA	x				x	25 137	
E/5	x				AVILÉS	x			x	x	758 703	
E5/G	x				VIAVÉLEZ	x				x	1 800	
E5/I	x				LUARCA	x				x	8 330	
E5/E	x				PUERTO DE VEGA	x				x	630	
E/5B	x				SAN ESTEBAN DE PRAVIA	x				x	55 350	
E/4C	x				CANDÁS	x				x	4 640	
E/4B	x				LLANÉS	x				x	12 914	
E4/D	x				LASTRES	x				x	9 054	
E/8	x				VILLAGARCIA	x				x	1 990	
E/8	x				MARIN-PONTEVEDRA	x			x		58 326	
E/8	x				MARIN-PONTEVEDRA	x			x		8 750	
E/10D	x				CARTAYA	x				x	70 008	
E/12	x				CÁDIZ	x				x	1 318 767	
E/12	x				LA RAMP (Cadiz)	x				x	10 500	
E/12	x				PUERTO DE STA. MARÍA	x				x	35 000	
E12/B	x				CHIPIONA	x				x	73 894	
Total											2 558 467	
Sweden												
SWE/2	x				by Hällsö and Grebbestad inner estuary	x				x	475	(1)
SWE/4	x				By the northern port of Lysekil	x				x	1 275	(2)
SWE/5	x				Koljöfjorden	x				x	575	(3)

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
SWE/7	x				Holmen Grå	x				x	2 060	(4)
SWE/10	x				By the port of Gothenburg	x				x	2 500	(5)
SWE/11	x				by the port of Gothenburg	x				x	3 550	(6)
SWE/29	x				Ösöfjorden	x				x	280	(7)
SWE/30	x				Hake Fjord	x				x	720	(8)
SWE/31	x				Hake fjord	x				x	3 000	(9)
SWE/32	x				by the port of Varberg	x				x	51 750	(10)
Total											66 185	
United Kingdom												
CR019	x				Cromarty Firth	x	x		x		32 707	
CR019	x				Cromarty Firth	x				x	0	
CR030	x				Moray Firth	x				x	7 576	
CR040	x				Moray Firth	x				x	3 448	
CR050	x				Macduff, North Sea	x				x	1 042	
CR080	x				Boddam	x				x	0	
CR110	x				Dee	x			x		343 440	
CR110	x				Dee	x				x	125 145	
DV010	x				Dover	x				x	93 703	
DV011	x				Dover	x				x	0	
DV040	x				Sussex coast	x				x	13 959	
FI008	x				Pentland Firth	x			x		337 926	
FI015	x				Kirkwall	x	x			x	0	
FI020	x				Orkney		x		x		0	
FI040	x				Stromness	x				x	0	
FI055	x				Orkney	x			x		0	
FI055	x				Stromness	x				x	0	
FI095	x				Shetland coast	x				x	42 592	
FO010	x				Montrose	x				x	0	
FO020	x				Angus coast	x				x	2 443	
FO028	x				Firth of Tay	x	x			x	20 170	
FO036	x				Firth Of Forth		x		x		0	
FO038	x				Fife coast	x			x		0	
FO038	x				Leith	x				x	0	
FO041	x				Firth Of Forth	x		x		x	34 216	
FO042	x				Firth Of Forth	x		x		x	31 462	
FO043	x				Firth Of Forth	x		x		x	46 460	
FO044	x				Firth Of Forth	x				x	623 736	
FO047	x				Firth Of Forth	x			x		0	
FO047	x				Firth Of Forth	x				x	3 408	
FO048	x				Fife coast, Firth Of Forth	x	x		x		0	
HU015	x				Bridlington	x				x	3 069	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
HU020	x				Humber	x	x			x	447 552	
HU021	x				Humber		x		x		0	
HU021	x				Humber	x	x			x	391 901	
HU030	x				Humber	x	x			x	70 336	
HU040	x				Humber	x				x	5 693	
HU041	x				Humber	x				x	6 958	
HU060	x				Humber, Lincolnshire Coast	x	x	x		x	2 149 126	
HU080	x				Humber	x	x		x		0	
HU080	x				Humber	x	x			x	0	
HU081	x				Humber	x	x		x		0	
HU082	x				Humber	x	x		x		0	
HU083	x				Humber	x	x		x		0	
HU090	x				Humber	x	x		x		0	
HU090	x				Humber	x	x			x	169 616	
HU123	x				Lincolnshire Coast			x	x			
HU143	x				Great Ouse, Norfolk coast	x				x	35 619	
HU150	x				Yare			x		x	4 410	
HU151	x				Norfolk coast	x				x	0	
HU152	x				Norfolk coast	x				x	6 574	
HU153	x				Norfolk coast	x				x	0	
HU154	x				Norfolk coast	x				x		
HU170	x				Humber	x	x			x	16 623	
HU176	x				Avon/Severn estuary, Humber, Norfolk coast, poole, Sussex coast, Thames		x	x		x	121	
IS035	x				Conwy/Deganwy	x				x	2 322	
IS065	x				Conwy/Deganwy	x				x	8 249	
IS099	x				Devonshire coast	x				x	8 751	
IS102	x				Dee		x			x	0	
IS110	x				Mersey	x	x			x	122 567	
IS120	x				Mersey	x	x			x	101 253	
IS128	x				Mersey	x	x			x	47 245	
IS140	x				Mersey		x		x			
IS140	x				Mersey	x	x			x	1 437 969	
IS150	x				Mersey		x		x			
IS170	x				Wyre	x				x	17 369	
IS192	x				Lune	x				x	2 652	
IS195	x				Irish Sea			x	x		0	
IS200	x				Lancashire coast	x				x	214 431	
IS205	x				Cumbrian coast	x		x		x	826 192	
IS240	x				Cumbrian coast	x				x	0	
IS241	x				Cumbrian coast	x				x	90 836	
IS251	x				Cumbrian coast		x			x	5 575	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
IS290	x				Rhins coast	x			x		4 722	
IS400	x				IOM waters	x				x	0	
IS420	x				IOM waters	x				x	0	
IS591	x				Lagan, Lough, NI	x		x	x		844 135	
IS591	x				Lagan		x			x	0	
IS650	x				Kilkeel	x				x	6 076	
IS671	x				Carlingford Lough	x				x	2 364	
LU010	x				Camel	x				x	1 835	
LU055	x				Washford	x				x	562	
LU070	x				Avon/Severn estuary	x	x			x	57 028	
LU080	x				Avon/Severn estuary	x	x			x	45 665	
LU083	x				Avon/Severn estuary	x	x			x		
LU084	x				Avon/Severn estuary	x	x			x	0	
LU085	x				Avon/Severn estuary	x	x			x	0	
LU086	x				Avon/Severn estuary	x	x			x	0	
LU088	x				Avon/Severn estuary		x			x	0	
LU110	x				Avon/Severn estuary	x				x	297 133	
LU115	x				Avon/Severn estuary	x				x	24 630	
LU130	x				Avan	x		x	x		0	
LU130	x				Avan, Swansea	x		x		x	822 001	
LU140	x				Usk	x				x	95 017	
LU190	x				Milford Haven	x				x	1 024	
MA021	x				Argyll coast	x			x		0	
MA021	x				Clyde, Firth of Clyde	x	x			x	202 379	
MA030	x				Argyll coast	x			x		19 703	
MA050	x				Firth of Clyde	x				x	44 717	
MA060	x				Clyde	x			x		22 171	
PL031	x				Plym, Tamar/ Plymouth Sound	x	x		x		39 012	
PL031	x				Tamar/ Plymouth Sound	x	x			x	8 111	
PL060	x				Fowey	x				x	1 977	
PL075	x				Fal		x		x		0	
PL075	x				Fal	x		x		x	2 266	
PO070	x				Exe, Teign	x	x			x	37 612	
TH005	x				Lowestoft/Waveney	x				x	49 418	
TH034	x				Stour/Orwell	x	x			x	8 306	
TH052	x				Stour/Orwell		x		x			
TH052	x				Kent coast, Medway, Stour/Orwell. Suffolk, coast	x	x	x		x	1 061 242	
TH055	x				Stour/Orwell	x				x	0	
TH056	x				Essex coast			x	x		69 758	
TH062	x				Maldon		x			x	622	
TH063	x				Maldon		x			x	347	
TH070	x				Kent coast, Medway	x	x			x	46 122	

OSPAR Deposit Site Code	categories				In case of dredged material					Total quantity (dry weight (T))	notes	
	dredged material	inert material	fish waste	others	origin / name of watersystem	Type of areas dredged			Dredging operation type			
						Harbour	Estuary	Sea	capital			maintenance
TH073	x				Kent coast	x				x	376	
TH140	x				Kent coast	x				x	14 559	
TH211	x				Stour/Orwell	x				x	0	
TH216	x				Stour/Orwell	x				x	7 147	
TH217	x				Stour/Orwell	x				x	4 192	
TH218	x				Stour/Orwell	x				x	2 389	
TH219	x				Stour/Orwell	x				x	2 389	
TY042	x				Blyth	x				x	104 251	
TY070	x				Tyne		x		x		0	
TY070	x				Tyne	x	x			x	104 749	
TY081	x				Tyne		x		x		0	
TY081	x				Tyne	x	x			x	103 585	
TY090	x				Wear	x	x			x	65 842	
TY130	x				Durham coast, Tyne	x				x	3 746	
TY150	x				Tees/Hartlepool	x	x		x		0	
TY160	x				Tees/Hartlepool	x	x		x			
TY160	x				Tees/Hartlepool	x	x	x		x	540 243	
TY180	x				Esk	x		x		x	38 337	
TY181	x				Tees/Hartlepool			x		x	0	
TY182	x				Tyne	x				x	0	
TY190	x				North Yorkshire coast	x				x	4 069	
WI010	x				Ouse, Sussex	x		x		x	230 257	
WI020	x				Sussex coast	x				x	15 347	
WI031	x				Adur	x				x	44 865	
WI046	x				Chichester harbour, Southampton water/ Portsmouth	x				x	245	
WI060	x				Langstone Harbour, Medina, Southampton water/ Portsmouth	x	x		x		15 836	
WI060	x				Chichester harbour, IOW coast, Southampton water/ Portsmouth, Langstone Harbour	x	x	x		x	673 123	
WI071	x				Ryde, IOW coast	x				x	1 718	
WI080	x				Southampton water/ Portsmouth	x	x		x		287 123	
WI080	x				Lymington, Southampton water/ Portsmouth, Yar	x	x			x	7 029	
WI090	x				Southampton water/ Portsmouth, Yar	x	x			x	0	
WI110	x				Christchurch Harbour, Poole	x	x		x		29 805	
WI110	x				Poole	x	x	x		x	7 732	
WI111	x				Poole	x		x		x	21 270	
IS015					Colne		x				976	
Total											14 103 597	

OSPAR Deposit Site Code	in tonnes													in kilogrammes																			
	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB28	CB52	CB101	CB118	CB138	CB153	CB180	PCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/notes					
TH073	0,0000	0,0000	0,0100	0,0200	0,0100	0,0100	0,0100	0,0500						0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000						0,0000	0,0000			
TH140	0,0020	0,0020	0,2500	0,6900	0,3800	0,3800	0,3400	1,2600		14,9000	133,4000																						
TH216		0,0000	0,1400	0,3300	0,1400	0,2500	0,2000	0,6500		7,9000	31,0000																			0,0001	0,0000		
TH217		0,0000	0,0800	0,1900	0,0800	0,1400	0,1200	0,3800		4,7000	18,2000																			0,0000	0,0000		
TH218		0,0000	0,0500	0,1100	0,0500	0,0800	0,0700	0,2200		2,7000	10,4000																			0,0000	0,0000		
TH219		0,0000	0,0500	0,1100	0,0500	0,0800	0,0700	0,2200		2,7000	10,4000																			0,0000	0,0000		
TY042	0,0260	0,0160	2,5100	4,4700	3,5300	6,1500	3,5300	13,9300		929,3000	5017,8000			0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0006	0,0016						0,0003	0,0003			
TY070	0,2490	0,0250	2,4400	4,8700	6,5400	28,8100	3,7800	65,3100																							0,0295	0,0033	
TY081	0,2470	0,0250	2,4100	4,8100	6,4700	28,4900	3,7400	64,5800																							0,0291	0,0033	
TY090	0,0440	0,0110	1,4900	2,3200	1,9200	19,2200	1,8000	17,2200		462,2000	2473,5000																				0,0008	0,0003	
TY130	0,0020	0,0010	0,0800	0,1400	0,2000	0,4300	0,1100	0,6900		42,9000	330,1000			0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001	0,0001						0,0007	0,0002			
TY160	0,4210	0,3420	15,2000	40,0000	42,2600	101,5700	19,3900	149,4200		6705,8000	30935,3000			0,0002	0,0002	0,0002	0,0002	0,0003	0,0003	0,0002	0,0015	0,0035	0,0003	0,0000	0,0006			0,0546	0,0157				
TY180	0,0050	0,0020	0,6600	0,7300	0,6300	1,7800	0,9200	3,3800		107,4000	532,1000																				0,0031	0,0001	
TY190	0,0000	0,0000	0,1000	0,1200	0,0800	0,2300	0,0800	0,3900		20,0000	119,5000																				0,0001	0,0000	
WI010	0,0440	0,0150	2,5900	4,7700	3,7300	4,4700	3,3800	14,6600		281,2000	492,0000			0,0001	0,0001	0,0001	0,0001	0,0001	0,0001	0,0000	0,0005	0,0214							0,0074	0,0020			
WI020	0,0030	0,0010	0,1700	0,2800	0,1500	0,2100	0,1600	0,6900																							0,0000	0,0000	
WI031	0,0080	0,0020	0,3900	0,8400	0,4600	0,5100	0,4700	1,8500																							0,0001	0,0000	
WI046	0,0000	0,0000	0,0000	0,0100	0,0100	0,0100	0,0100	0,0200																							0,0000	0,0000	
WI060	0,0020	0,0020	0,2500	0,6000	0,3300	0,4100	0,3200	1,2300		8,0000	14,1000			0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0001							0,0009	0,0002			
WI060	0,0880	0,0840	14,1200	21,2100	24,4600	20,3100	13,6600	61,9600		801,6000	1831,5000			0,0001	0,0001	0,0002	0,0002	0,0002	0,0002	0,0001	0,0011	0,1283							0,0235	0,0052			
WI071	0,0000	0,0000	0,0100	0,0200	0,0100	0,0100	0,0100	0,0300																							0,0000	0,0000	
WI080	0,0770	0,0500	7,0800	7,2900	6,6800	12,0400	6,0300	48,5800		7294,6000	11237,3000			0,0001	0,0002	0,0002	0,0002	0,0002	0,0002	0,0001	0,0011	0,0028							0,0076	0,0032			
WI080	0,0010	0,0020	0,1400	0,2800	0,2600	0,2100	0,1600	0,7400		1,5000	3,5000			0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000						0,0005	0,0002			
WI110	0,0010	0,0080	0,1000	0,1200	0,1300	0,1700	0,0600	0,3500		4,6000	9,8000			0,0000	0,0000	0,0001	0,0001	0,0001	0,0000	0,0000	0,0003	0,0006							0,0002	0,0001			
WI110	0,0060	0,0030	0,1400	0,3000	0,4700	0,4000	0,1500	1,5300		3,8000	7,3000			0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000						0,0005	0,0002			
WI111	0,0060	0,0030	0,3000	0,5000	0,6900	0,5500	0,3100	2,1200		61,6000	115,0000																			0,0008	0,0002		
Total	51,39	66,43	171,27	493,78	496,03	776,06	356,60	1 956,63	0,00	38 689,40	119 919,50	0,00	0,00	369,75	0,01	0,01	0,01	0,01	0,01	0,01	0,00	0,05	0,22	0,00	0,00	0,02	0,68	0,12					

Part II - Information

1. General information

The continental decimal system is used throughout this report. Empty cells indicate that no information was available. Italic numbers are used when the measured/calculated value was smaller than the actual number given in the cell.

2. Additional information

(Referring to section 4 of the Format for Annual Reporting on Dumping Operations at Sea (Agreement 2009-3))

2.1 Deposit site

2.1.1 Germany

The following two new deposit sites are notified for the first time by the competent water authorities of the "Land Schleswig-Holstein":

D/130 Hoernum

D/131/ Pellworm

Coordinates of all newly reported deposit sites are summarised in the following table:

Deposit site	Long	Lat
D/127	54°45,62'	8°17,76'
D/128	54°30,7'	8°41,8'

2.1.1 Iceland

Deposit sites for dumping of dredged material at sea which were used in 2011 but not in 2012:
IS 28

Deposit sites for dumping of dredged material at sea not used in 2011, but used in 2012:
IS 28

2.1.2 Ireland

Dumpsite IR/59 was new in 2012, as an area that had been plough dredged for the first time.
IR55 – sediment was deposited in the intertidal zone as beach nourishment.

2.1.3 Norway

New Deposit Sites:

Name	ID	UTM33_N	UTM33_E
Kvalvika	FI4	7859410	819539
Aursfjorden between Kvernelva and Perhansanes	TR13	7691116	643696
Hamnes, Lyngen	TR14	7751966	710548
Løksfjorden	TR15	7773114	640762

Torsbukti, Leikanger	SF8	6810743	58703
Bulandet	SF9	6839794	-55198
Selje harbour	SF10	6935538	-11053
Solund shipyard	SF11	6814531	-44544
Frøysjøen	SF12	6889104	-28285
Nishammaren	SF13	6842128	-11794
Stieihalsen	SF14	6842294	-14618
Helvikfjorden	VA11	6470425	13882
Spangereid	VA12	6459632	36990
Vallebukta	VA13	6457685	53382
Festvåg ferry quay	NO8	7480580	489926
Between Ytterkvarøya and Langøya	NO9	7375116	406724
Stamsund	NO10	7555626	452118
Risøysundet, west of Litle Flesa	NO11	7652723	530529

2.1.4 Spain

The following table includes the codes for new sites geographical coordinates and updates the information of sites reported in 2011.

Name	Code	Longitude	Latitude
Bermeo	E/2D	2 ° 40' W	43° 27' N
Luarca	E/5I	6° 32' W	43° 33,40' N
San Miguel (Cartaya)	E/10D	6 ° 53' 55" W	36° 56' 48" N

2.1.5 United Kingdom

New disposal sites for 2012 are:

<i>Disposal Site Code</i>	<i>Disposal Site</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Site Shape</i>
FI008	Scrabster extension	58,635	-3,49067	polygon
FI008	Scrabster extension	58,63383	-3,49233	polygon
FI008	Scrabster extension	58,63583	-3,4985	polygon
FI008	Scrabster extension	58,637	-3,497	polygon
HU204	Triton Knoll	53,485	0,688	Polygon
HU204	Triton Knoll	53,52367	0,70967	Polygon
HU204	Triton Knoll	53,536	0,85667	Polygon
HU204	Triton Knoll	53,40517	0,98983	Polygon
HU204	Triton Knoll	53,40517	0,935	Polygon

2.2 Method of determination

2.2.1 France

Definition of assumptions made in calculating quantities of dry matter in Table 3a

Relationship between the saturated density of the mixture ρ_{sat} and the concentration of dry matter

ρ_{ms} :

These two parameters are connected through the following relationship:

$$\rho_{ms} = \frac{\rho_{ss}}{(\rho_{ss} - \rho_o)} \times (\rho_{sat} - \rho_o) \text{ in which:}$$

- ρ_{sat} = density of the mixture (in kg/m³)
- ρ_{ms} = concentration of dry matter in the mixture (in kg dry matter/m³)
- ρ_o = density of water at 4°C (in kg/m³)
- ρ_{ss} = density of the dry sediment (in kg/m³).

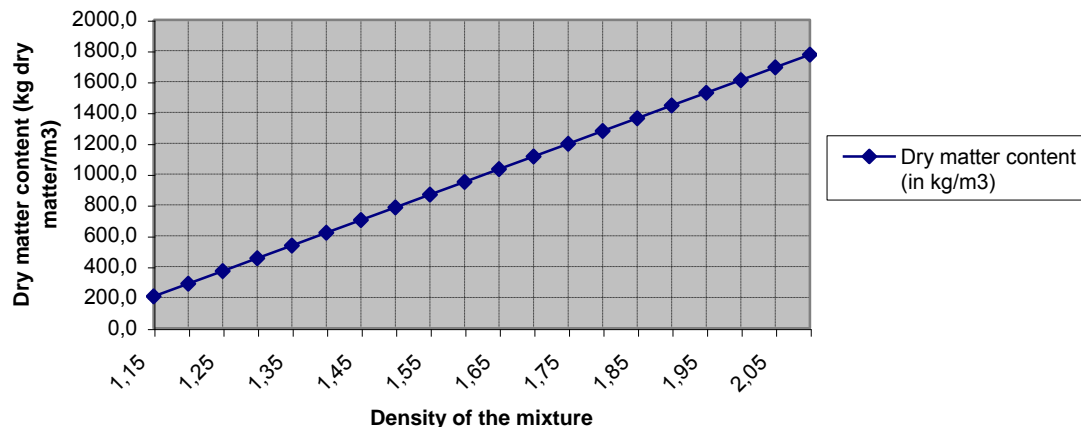
Assuming that $\rho_{ss} = 2\,600 \text{ kg/m}^3$ and $\rho_o = 1\,025 \text{ kg/m}^3$, the following simplified formula is obtained:

$$\rho_{ms} = 1\,650,8 \times (d - 1\,025)$$

where d is the density of the mixture.

This can be represented graphically as follows:

Estimation of dry matter content as a function of the density



Calculation of quantities of dry matter deposited

If the volume in situ to be dredged is known, an approximate calculation of the quantities of dry matter dredged can be carried out using the following assumptions according to the situation encountered:

Type of material	Mean density in situ	Density for calculation	Dry matter content (kg dry matter/m ³)
Fresh sludge	1,1 to 1,3	1,2	288,9
Consolidated sludge	1,3 to 1,6	1,45	701,6
Sand	1,6 to 2	1,8	1 279,4

In practice, data relating to the mean densities in situ of the sediments dredged in the principal French ports are known and listed by the Groupement d'Interêt Economique Dragages-Ports (Port-dredging Economic Interest Grouping).

If the volume in the hoppers is known, an approximate calculation of the quantities of dry matter dredged can be carried out using the following assumptions according to the situation encountered:

Type of dredging	Type of material	Mean density in the Hoppers	Density for calculation	Dry matter content (kg dry matter/m ³)
Trailer Suction dredge	Liquid sludge	1,2	1,2	288,9
	Consolidated sludge	1,25 to 1,35	1,3	454,0
	Sand	1,8	1,8	1 279,4
Mechanical dredge	Fresh sludge	1,15 to 1,25	1,2	288,9
	Consolidated sludge	1,3 to 1,4	1,35	536,5
	Sand	1,8	1,8	1 279,4

Hydrocarbons

Hydrocarbons (Table 3b) are analysed on 2mm fraction of marine sediments, by extraction with CC14 in Infra Red.

Total CB and Oil were not requested to laboratories in 2005.

2.2.2 Germany

For Germany where necessary, the quantities in Table 3a have been converted from cubic metres into tonnes dry weight. The following conversion factors (specific gravity) have been used:

in case of silt: 1,2

in case of sand: 1,8

in case of lacking information or composition of sand and silt: 1,5

in cases where no dry weight (DW) was indicated, the DW was estimated to be 50% (in order to calculate the annual load from the concentration given).

DDT:

From 2002 onwards, the figure given under DDT reflects the "pp-DDT-portion". Additional information for pp-DDD and pp-DDE are given in the column "other" in Table 3b.

Total PAH:

Like in the preceding years, the figure under total PAH reflects the sum of PAH₆.(benzo[ghi]perylene; benzo[a]pyrene; fluoranthene; indeno[1,2,3-cd]pyrene; benzo[b]fluoranthene; benzo[k]fluoranthene)

2.2.3 Ireland

- Only CB 28; CB 52; CB 101; CB 118; CB 138; CB 153; and CB 180 measured
- For PAH, usually US EPA 16 PAH measured.

PCB and OC determination:

Sample plus surrogate standards are extracted with DCM/Acetone by ASE. The solvent extract is reduced in volume and cleaned up using High Resolution Size Exclusion Chromatography (SEC/GPC). The extract is further cleaned up on Florisil and Silica columns. The cleaned up extract is analysed by GCMS in SIM mode.

PAH determination:

The sediment sample is extracted with an Accelerated Solvent Extraction system using a Dichloromethane/Acetone (50/50) solvent mixture. The extract is cleaned up with Gel Permeation chromatography and Silica gel and analysed via GC/MS in SIM mode.

Extractable hydrocarbons:

Sediment is extracted with pentane, dried and analysed by fluorescence spectroscopy.

The limits of detection requested from laboratories are as follows. Occasionally, these cannot be met. Analyses are generally not sent elsewhere if known problems or sources do not exist in the dredged area.

Contaminant	Concentration	Units (dry weight)	Contaminant	Concentration	Units (dry weight)
Hg	0,05	mg kg ⁻¹	CB28	1,0	µg kg ⁻¹
As	1,0	mg kg ⁻¹	CB52	1,0	µg kg ⁻¹
Cd	0,1	mg kg ⁻¹	CB101	1,0	µg kg ⁻¹
Cu	5,0	mg kg ⁻¹	CB118	1,0	µg kg ⁻¹
Pb	5,0	mg kg ⁻¹	CB138+163	1,0	µg kg ⁻¹
Zn	10,0	mg kg ⁻¹	CB153	1,0	µg kg ⁻¹
Cr	5,0	mg kg ⁻¹	CB180	1,0	µg kg ⁻¹
Ni	15	mg kg ⁻¹	DDE pp	1,0	µg kg ⁻¹
TBT & DBT	0,01	mg kg ⁻¹	DDT pp	1,0	µg kg ⁻¹
PAHs	20	µg kg ⁻¹	DDD pp	1,0	µg kg ⁻¹
			Dieldrin	1,0	µg kg ⁻¹
			Lindane	1,0	µg kg ⁻¹
			HCB	1,0	µg kg ⁻¹

All sample batches are required to have CRM analysed alongside, and results submitted as part of the report.

2.2.4 Spain

The grain size fraction analysed, in all cases, it has been smaller than 0,063 mm. The methodology used for the analysis is the following:

Sample preparation

- Drying of the sample at 60°C during 24h.
- Sieving of the sample with a 2 mm sieve.
- Separation, when done, of the smaller than 0,063 mm fraction, using water and a 0,063 mm plastic sieve.
- Homogenisation and grinding of the sample in an agate mortar.
- Determination of the humidity by drying at 105°C up to constant weight

Poly-chlorinated-biphenyls

- Extraction of homogenised and grinded sample with a methylene chloride:hexane (1:1) mixture.
- Extract concentration and passing through an anhydrous sodium sulphate column.
- Sulphur elimination by purification with powder of copper.
- Extract purification in column, avoiding the organochlorated compounds with a mixture of ethylic ether in hexane at successive concentrations of 6, 15 and 50%, ending with pure hexane.
- Quantitative determination by gas chromatography with electron capture detector, using an HP-S capillary column of 0,22 mm inner diameter.

Polyaromatic hydrocarbons

- Extraction by means of decantation, mixture with acetone:hexane (1:1) and ultrasounds.
- Purification by means of decantation with salt saturated with sodium sulfate.
- Determination using gas chromatography with a 60 mm capillary column, BOD5 and flame ionization detector.
- Confirmation, when necessary, by means of mass chromatography.

2.2.5 Sweden

Comments relevant to table 3 b

Table 3b Total loads (indicate the method of determination in section 4.2)

OSPAR-	in tonnes				in kg	
codes						
Deposit	Cd	Hg	Cu	ΣPCB7	TBT	
site						
SWE 11	0	0	0	**	39,8	
SWE 10	NI	NI	NI	**	7,33	

2.2.6 United Kingdom

UK methods of determination are all as previously reported to EIHA/SEABED.

Total PCBs measured consists of the following congeners:

CB 18	CB 49	CB 110	CB 149	CB 170
CB 28	CB 52	CB 118	CB 151	CB 180
CB 31	CB 66	CB 128	CB 153	CB 183
CB 44	CB 101	CB 138	CB 156	CB 187
CB 47	CB 105	CB 141	CB 158	CB 194

Total PAHs measured consists of the following PAH compounds:

2, 3 Benzantracene	Benzo[ghi]perylene	Fluoranthene
Acenaphene	Benzo [k] fluoranthene	Fluorene
Acenaphthylene	C1-Naphthalenes	Indeno[123-cd]pyrene
Anthracene	C1- Phenanthrenes	Naphthalene
Benzo[a]anthracene	C2-Naphthalenes	Perylene
Benzo[a]pyrene	C3-Naphthalenes	Phenanthrene
Benzo [b] fluoranthene	Chrysene	Pyrene
Benzo[e]pyrene	Dibenzo[a,h]anthracene	

All analyses of dredged material on <2mm fraction. Methods of determination as specified in reports listed below:

- Allchin, C.A., Kelly, C.A. and Portmann, J.P., 1989. Methods of analysis for chlorinated hydrocarbons in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (6), pp.25.
- Jones, B.R. and Laslett, R.E., 1994. Methods for analysis of trace metals in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (11), pp. 29.
- Kelly, C.A., Law, R.J., and Emerson, H.S., 2000. Methods of analysing hydrocarbons and polycyclic aromatic hydrocarbons (PAH) in marine samples. Science Series, Aquatic Environmental Protection: Analytical Methods, CEFAS Lowestoft. (12), pp. 18.
- Law, R.J., Fileman, T.W. and Portmann, J.P., 1988. Methods of analysis of hydrocarbons in marine and other samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (2), pp. 25.
- Waldock, M.J., Waite, M.E., Miller, D., Smith, D.J. and Law, R.J., 1989. The determination of total tin and organotin compounds in environmental samples. Aquatic Environmental Protection: Analytical Methods, MAFF Directorate of Fisheries Research, Lowestoft, (4), pp. 25.

2.3 Toxicity

Spain: In the case of the Santander Harbour (E/3) and the Avilés Harbour (E/5), additionally to the chemical characterisation, two different bioassays using *Chlorella vulgaris* and Microtox (*Vibrio fischeri*), were conducted. The results indicated a negative toxicity.

2.4 Quality assurance of analyses of dumped material

a. Do the laboratories carrying out the analyses undertake: <i>Contracting Parties responding "Yes" to this question are indicated under the respective columns with their country abbreviation.</i>	All	None	Some
(i) the analysis of blank samples and laboratory reference materials with each batch of samples of waste and other material dumped in the maritime area that is analysed by that laboratory;	IE, F, UK		Se
(ii) periodic comparative analysis of laboratory reference materials and certified reference materials;	IE, F, Se, UK		
(iii) the compilation of quality control charts based upon the data resulting from the analyses of the laboratory reference materials and certified reference materials, and the use of those quality control charts to monitor analytical performance in relation to all samples of dumped wastes or other materials;	IE*, F, Se, UK		
(iv) periodic participation in interlaboratory comparison exercises, including, where possible, international comparison exercises;	IE, F (at least yearly), Se, UK		
(v) periodic participation in national and, where possible, international laboratory proficiency schemes, under which: <ul style="list-style-type: none"> • participating laboratories are asked to analyse samples of substances which are provided by the organisers of the scheme; • the composition of those samples is not disclosed in advance; • the results of the scheme for each participating laboratory are made available to all participating laboratories. 	IE, F (only in national comparison exercises), Se, UK		

^{IE*} Ireland: compiled and maintained by analysing laboratory.

b. If reporting "Some" in the table above, please indicate which parts of the data set are not subject to the full range of QA procedures.

In Germany, several laboratories, often commercial laboratories, are involved in analyses of dredged material. Most of these laboratories are accredited and apply the QA procedures (i) to (v).

c. Describe any practical action taken to apply the QA procedures described above (e.g. participation in interlaboratory comparison exercises and international QA/QC schemes).

Ireland: all analyses were carried out by UK Environment Agency National Laboratory Service, which takes part in the QUASIMEME Laboratory Proficiency Scheme for sediment analysis.

d. Are any special difficulties encountered in applying Quality Assurance procedures?

Ireland: Sometimes LoDs specified cannot be achieved. This provides a difficulty in calculating quantities for Table 3b.

In cases where results are <LoD, the following procedures were applied to get the best “guesstimate”

- *LoD was excluded from calculations for average concentrations, if there were other values in the sample set.*
- *Half of LoD was used to calculate quantities of contaminants.*
- *If LoD is considered very high, 95%ile value for background sediment is applied, for samples in remote areas.*
- *If LoD is appropriately low, then no amount is reported for samples in remote areas.*

2.5 Other relevant information

3. Footnotes to all tables

3.1 Table 1

3.1.1 Belgium

- (1) The amounts licensed are the maximum amounts per year. The permits issued are valid for 5 years, 01.01.2012 – 31.12.2016. It should also be noted that these permits only consider dredged material dumped at sea. No permits were issued for internal waters.

3.1.2 Denmark

- (1) Denmark has not calculated the permitted dredging volumes for 2012, as the authorised levels in many cases are not linked to a single year. The permits are often given for 5 years. The permissions do not always specify for which year the amounts can be used.

3.1.3 Germany

- (1) Permits for dredging/disposing of dredged material are issued by the competent authorities of the Federal States. Permits are not issued for dredging/disposing activities of the German Federal Water and Shipping Directorate (the Directorate does not issue permits for its own activities). However, the dredging/disposing activities of the Directorate are governed by national regulations which are in accordance with OSPAR and LC requirements.

3.1.4 Iceland

- (1) According to Iceland law, dumping of vessels and aircrafts is not permitted. One of the permits issued was not used. Not all of the amount licensed was dumped in 2012. Permits issued are for amount of dredged material in cubic metres (not metric tonnes), and therefore the total amounts given are the estimated dry weight

3.1.5 Ireland

- (1) Permits currently issued mostly on multi-annual bases therefore reference to permits granted in an individual year are less relevant. Permits are often granted in the previous year, or previous several years but are multi annual permits. Tonnes licenced reflect this.
- (2) Two existing multi-annual permits were still active from previous years.

- (3) Total amount licensed is calculated in wet weight. Dry weight was calculated using formulae from HELCOM and granulometry.

3.1.6 Netherlands

- (1) Since early 2009 a new system of regulating the disposal of dredged material is in effect in the Netherlands. The planned disposal needs to be announced and agreed upon within 5 working days after the announcement. This so called 'bbk-announcement' should at least give insight in the sediment quality and expected amounts. This information is identical to the application of a permit but a formal permit is no longer required.
- (2) Announcements mentioned under 1) are based on the estimated amounts to be dredged in cubic metres (not metric tonnes) therefore total amounts are estimated.
- (3) Permits (and announcements mentioned under 1) issued for dumping of dredged materials in national waters are numerous and are not taken into account in the overview of total amounts licensed in tables 1 and 2 but are specified in table 3.

3.1.7 Norway

- (1) All weights are wet weights.

3.1.8 Spain

- (1) In 2012, the following new permits were issued;

- Bermeo (E/2D) (1 permit)
- Lastres (E/4D) (1 permit)
- Viavélez (E/5G) (1 permit)
- San Miguel (Cartaya) (E/10D) (1 permit)
- Chipiona (E/12B) (1 permit)

In the following cases the disposal operations were licensed in previous years:

- Ondarroa (E/2C)
- A joint permit was issued for the following harbours: Santoña (E/3F), Colindres (E/3B), Suances (E/3C), Comillas (E3/E) and San Vicente de la Barquera (E/3G)
- Avilés (E/5)
- LLanes (E/4B)
- Candás (E4/C)
- San Esteban de Pravia and San Juan de la Arena (E/5B)
- Luarca (E/5I)
- Puerto de Vega (E/5E)
- Vilagarcía (E/8)
- Marín (E/8)
- Cadiz and Puerto de Santa María (E/12)

3.1.9 Sweden

- (1) 12 new Swedish licenses were issued in 2012 for the OSPAR area. One of these licenses (20 000 m³, approximately 23 000 tonnes) are also reported to HELCOM. For Skagerrak alone 11 licenses (41 000 m³, approximately 33 785 tonnes) were issued.

3.1.10 United Kingdom

- (1) UK licensed tonnages are usually on a wet weight basis. These are the estimated dry weight equivalents.
- (2) A significant number of UK dredged material licences are now issued for 3 years, including some with very large tonnages.
- (3) 2 000 tonnes dry weight of fish waste was licensed for deposit in the sea in 2012 under a 1 year licence issued in March 20012 from 5th March 2012 to 4th March 2013. The material was licensed for deposit directly onto the intertidal zone but is not dumping under the terms of the Convention. 976 tonnes of fish waste was deposited under this licence during 2012.

3.2 Table 2

3.2.1 Denmark

- (1) There is no dumped material with a content of hazardous substances above the upper action level. No dumped materials other than dredging spoil are allowed.

3.2.2 Germany

- (1) Part of the dredged material from the inner Elbe estuary beyond the OSPAR-Convention area was disposed of in the OSPAR area, since the capacity of deposits near the dredging sites was depleted. Furthermore, it is supposed that there is a return transport of dredged material from close-by deposits due to hydromorphological conditions. Disposal of part of the material at more seaward sites should reduce the increased sediment amounts to be dredged. A new concept for the management of dredged material is under development.
The average concentrations of contaminants exceeding action level 2 and the related amount of dredged material are shown in Table 2 in column (3) + (4).

3.2.3 Iceland

- (1) Results for one sample (out of 19) were marginally above the upper action levels for Σ TBT&DBT and for Zn. Decision was made to allow disposal as overall concentration as the area involved represented less than 2% of the total sediment to be dredged, and the average concentrations for area were well below upper action levels. All other samples had levels well below AL2.

3.2.4 Norway

- (1) All weights are in wet weights.

3.2.5 Sweden

No material dumped during 2012 was considered to have exceptionally high pollutant concentrations.

3.3 Table 3 a

3.3.1 Netherlands

- (1) In Scheveningen and Slijkgat no dredging was done in 2012, therefore no amounts are stated for the deposit site NL-6 and NL-16.
- (2) The amounts for deposit sites NL-13, 14 and 15 were not available at the time of reporting.

3.3.2 Norway

- (1) All weights are wet weights.

3.3.3 Sweden

General remark: the numbering of notes is the same in the reports to HELCOM and IMO (London Convention and Protocol).

- (1) 120 m³ clay and sand (Permit number at the Swedish agency for Marine and Water Management (SWaM) 2517-12), 250 m³ clay and gravel (Permit number SWaM 1859-11), 50 m³ material not specified (Permit number SWaM 3106-12). Pollution loads only available for 250 m³ (Permit number SWaM 1859-11) Quantification limit for Hg <1 mg/kg TS
- (2) 1700 m³ material not specified (Permit number M 1736-07)
- (3) 500 m³ mainly clay (Permit number SWaM 2661-12)
- (4) 1375 m³ sand, gravel and clay (permit number at the Swedish Environmental Protection Agency (SEPA) 523-4317-09)
- (5) 2500 m³ clay (Permit number SEPA 523-2984-01)
- (6) 3554 m³ clay (Permit number SEPA 523-2984-01)
- (7) 375 m³ material not specified (Permit number SEPA 1526-10). New dumping site SWE/29.
- (8) 800 m³ sand and mud (Permit number SEPA 523-1757-10) Quantification limit for Hg <0,05 mg/kg TS Quantification limit for CB28, CB52, CB 101, CB 118, CB 138, CB 153 and CB 180 <0,0004 mg/kg TS. Quantification limit for ΣPCB7 <0,002 mg/kg TS. New dumping site SWE/30
- (9) 3000 m³ silt, soft and muddy, and sand (Permit number SWaM 1740-11). Quantification limit for ΣPAH9 and Total PAH <0,3 mg/kg TS. New dumping site SWE/31.
- (10) 45 000 m³ clay (Permit number SWaM 1242-11). Quantification limit for CB28, CB52, CB 101, CB 118, CB 138, CB 153 and CB 180 <0,002 mg/kg TS Quantification limit for ΣPCB7 <0,01 mg/kg TS. No information on quantification limit for ΣPAH9 and total PAH. New dumping site SWE/32.

3.4 Table 3 b

3.4.1 Denmark

- (1) The volume of dumped material is mostly reported in m³ from the ports. Then the amount in tonnes has been calculated from knowledge of the content of dry matter.

In permissions where Denmark expects that the dredged material is uncontaminated, there is no analysis. The quantity of hazardous substances has been calculated from knowledge of the background values for the inner Danish waters.

3.4.2 Germany

- (1) The LoD values have been reported in a separate table whose data will be incorporated in the OSPAR database.

3.4.3 Iceland

- (1) Concentrations of contaminants in samples did not exceed level 3 (disposal at sea generally allowed) of the national action levels, and in general, analysed values were within the range observed in unpolluted sediments. Therefore, calculations of loads are not considered relevant.

3.4.4 Ireland

- (1) Ireland adopted a new approach in 2010 using a combination of WFD guidance and best professional judgement to calculate amounts of contaminants disposed in cases where chemical

analysis results are lower than LoD. This method has been continued this year. While it may appear that the quantities of contaminants disposed of have, in some cases, significantly increased this is in fact a result of the method of calculation. The intention is to give a more accurate picture of amounts, so that a best estimate is reported instead of zero, as has occasionally been the case in the past.

(2) In cases where results are <LoD, the following procedures were applied to get the best “guesstimate”

- LOD was excluded from calculations for average concentrations if there were other values in the sample set that could be used
- Half of LoD was used to calculate quantities of contaminants where LoD was considered to be a reasonable measure
- If LoD was considered very high, 95%ile value for background sediment was applied, for samples in remote areas
- If LoD is appropriately low, then no amount is reported for samples in remote areas.

Limits of Detection indicated by < in Table 3b

- Dumpsite 8, DBT - <0,02 mg kg⁻¹
- Dumpsite 17, DBT- < 0,004 mg kg⁻¹
- Dumpsite 20, DBT - < 0,002 mg kg⁻¹
- Dumpsite 58, χ -HCH - < 1,0 $\mu\text{g kg}^{-1}$

3.4.5 Netherlands

(1) In Scheveningen and Slijkgat no dredging was done in 2012, therefore no amounts are stated for the deposit site NL-6 and NL-16.

4. Legend to all tables

NA	Not applicable
ND	Not determined
NI	No information
DL	Detection limit

Part III - Maps



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Overview Map

60° N

50° N

40° N

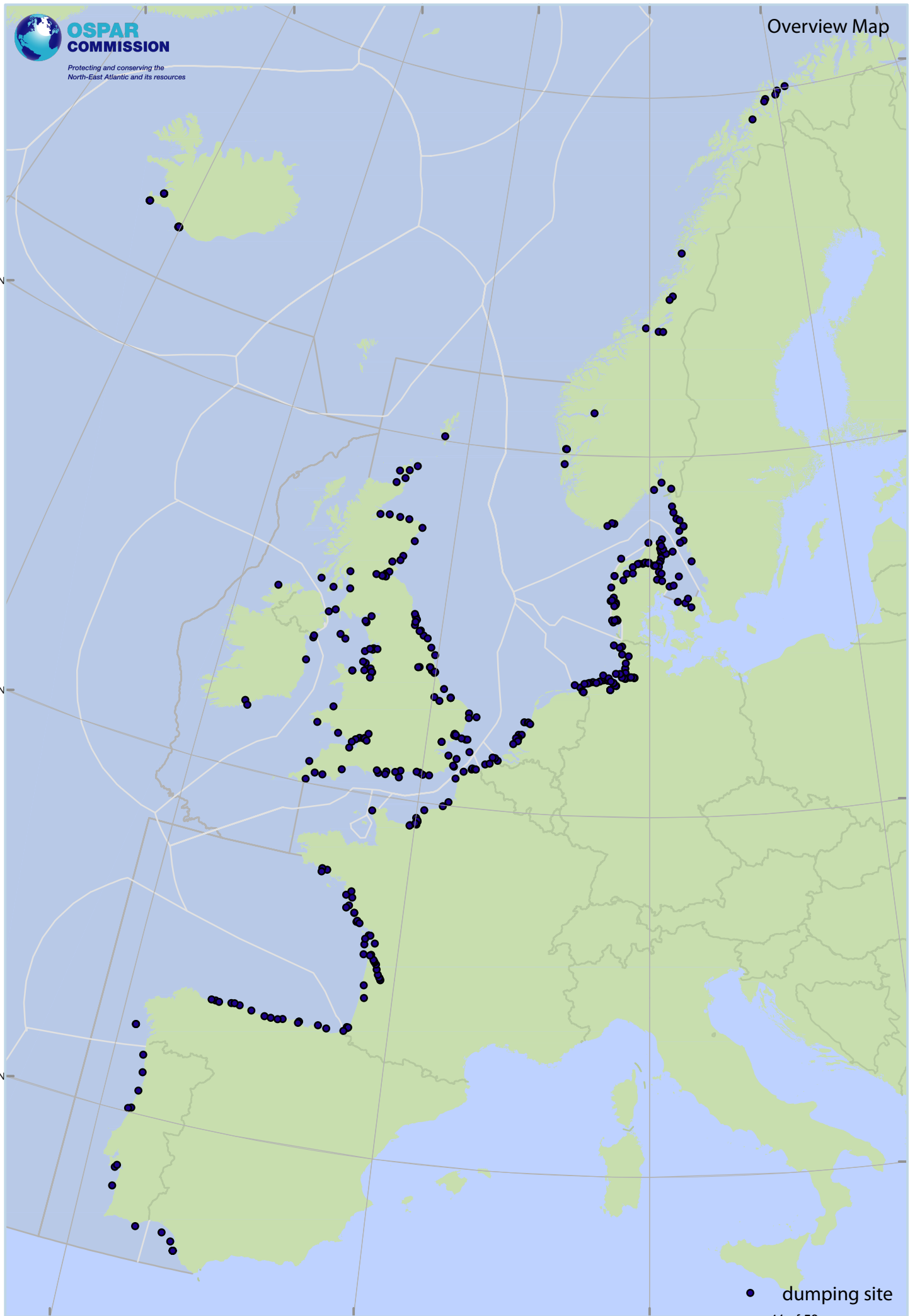
10° W

0°

10° E

● dumping site

41 of 53





51° N

3° E

Br & W
Nieuwpoort

Br & W
Oostende

Br &
W S1

Br &
W S2

Br & W
Zeebrugge
Oost

● dumping site

57° N

56° N

9° E

10° E

43 of 53



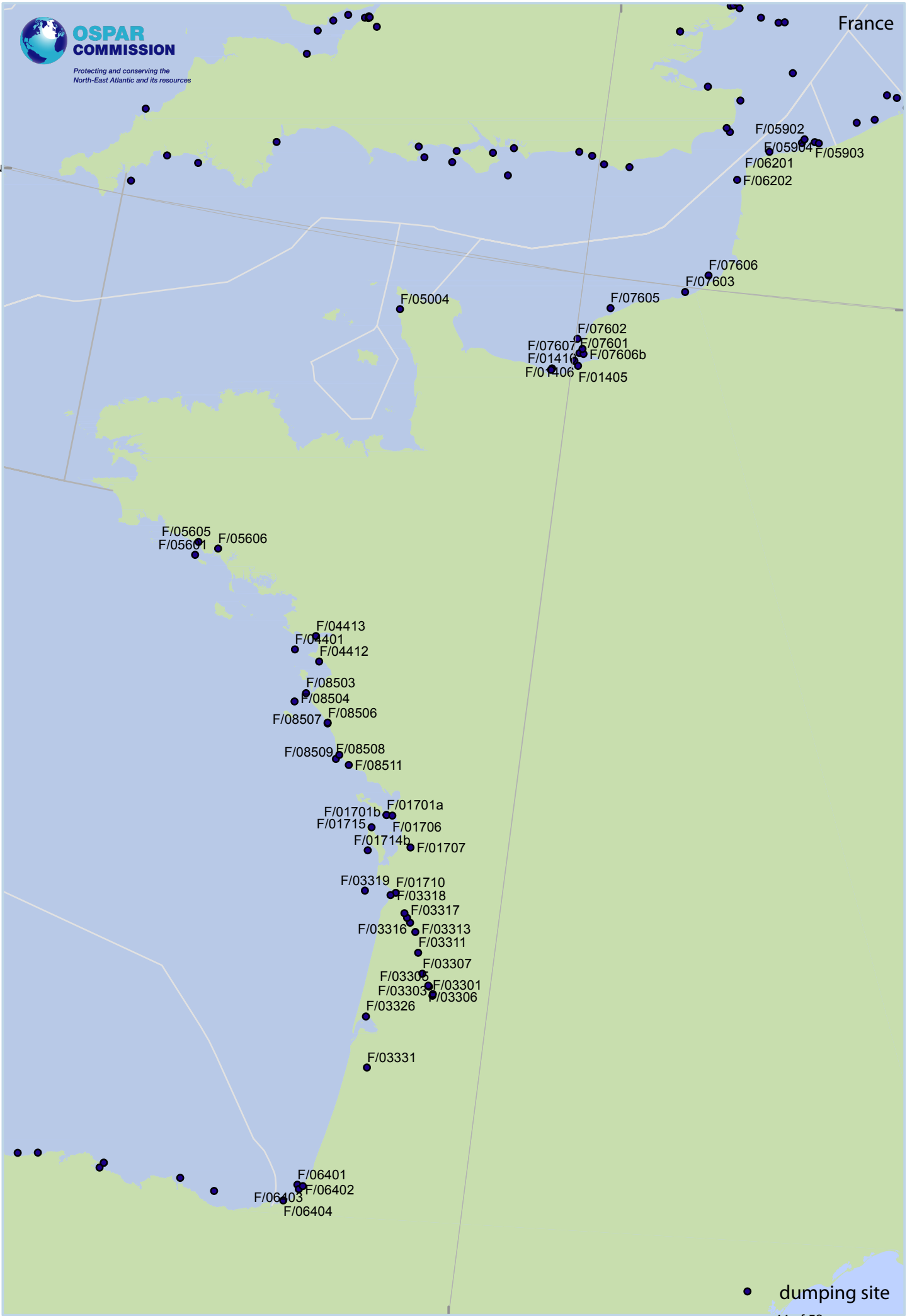


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France

50° N



● dumping site



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Germany

55° N

54° N

53° N

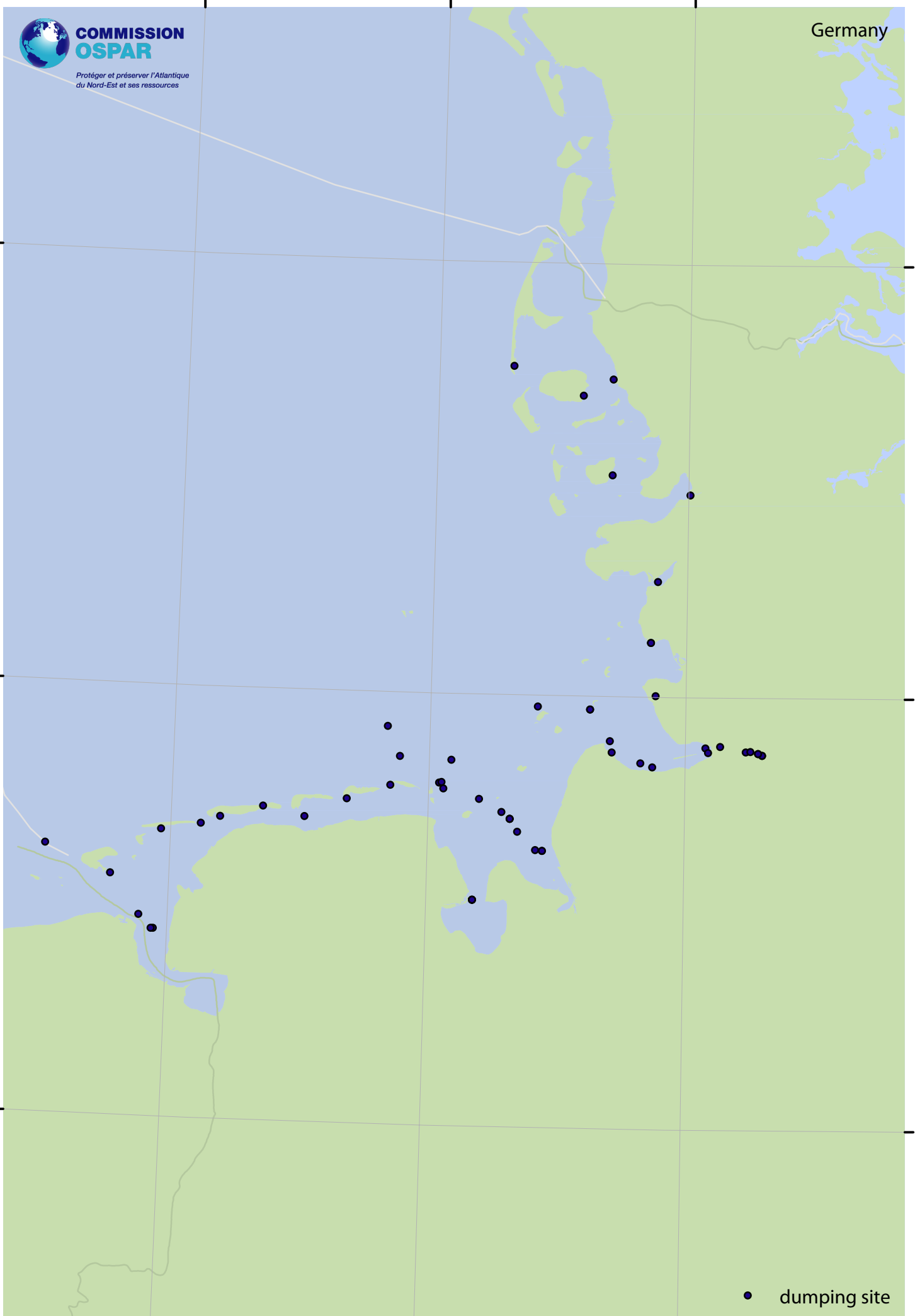
7° E

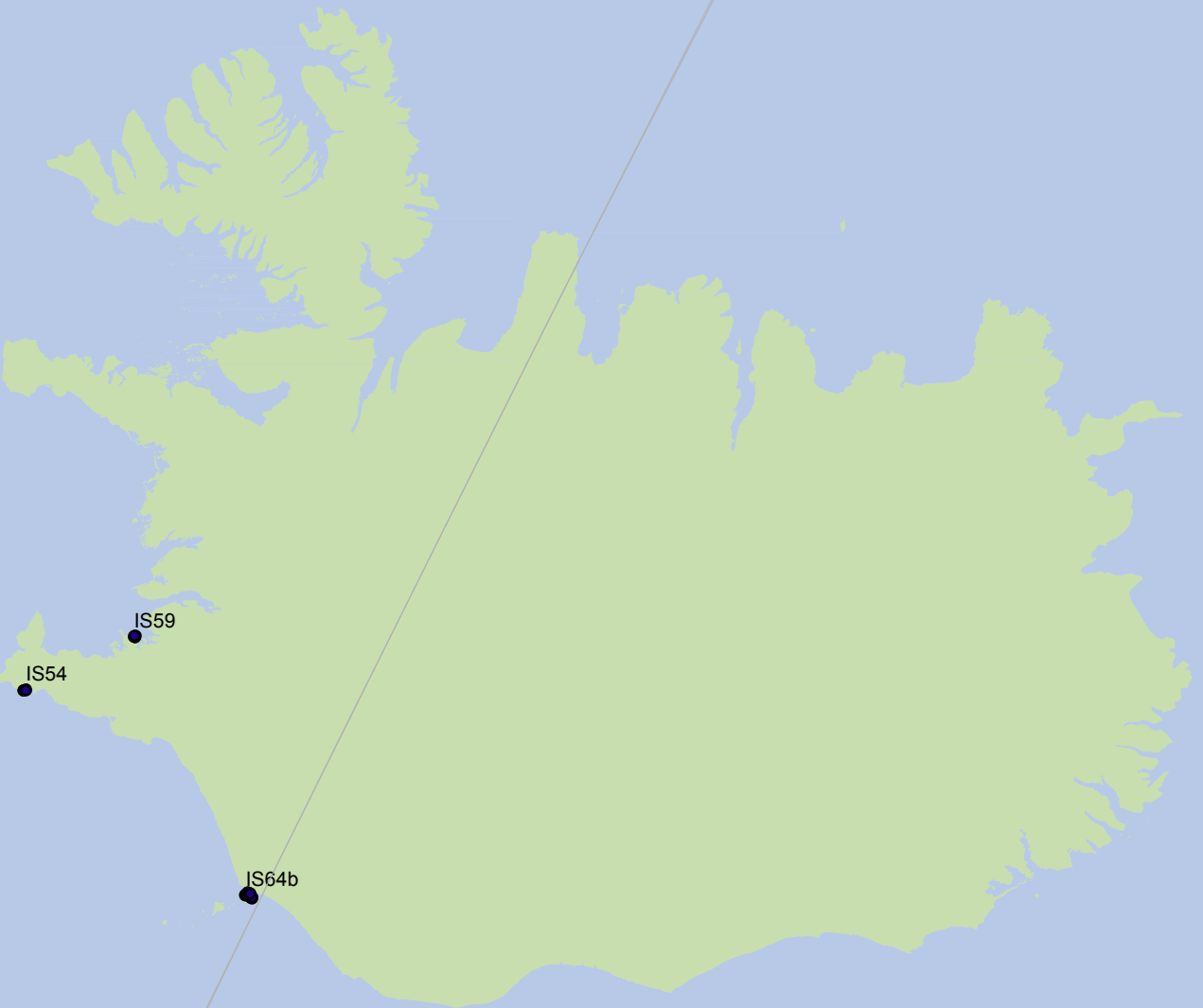
8° E

9° E

● dumping site

45 of 53



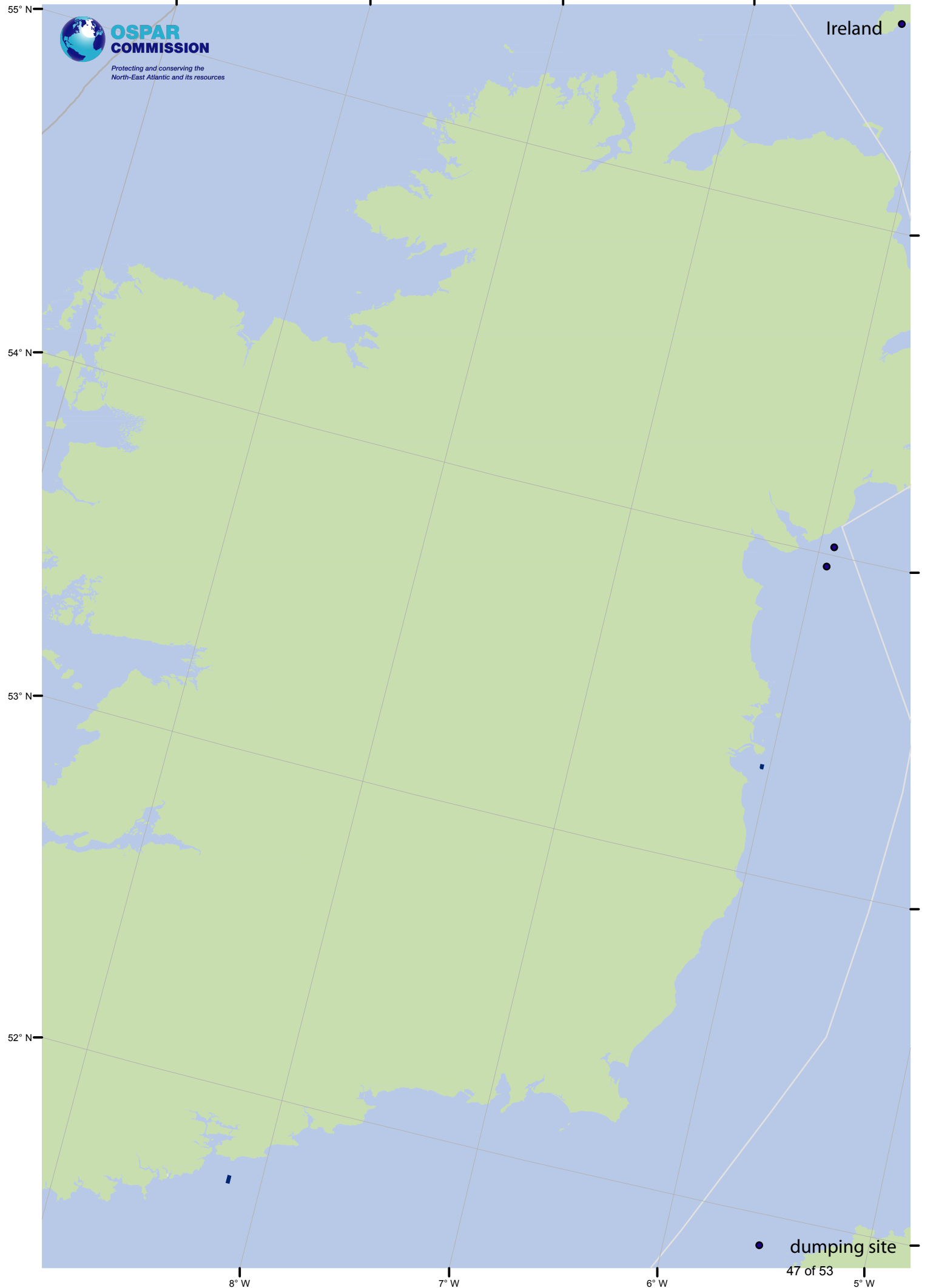




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Ireland ●



● dumping site



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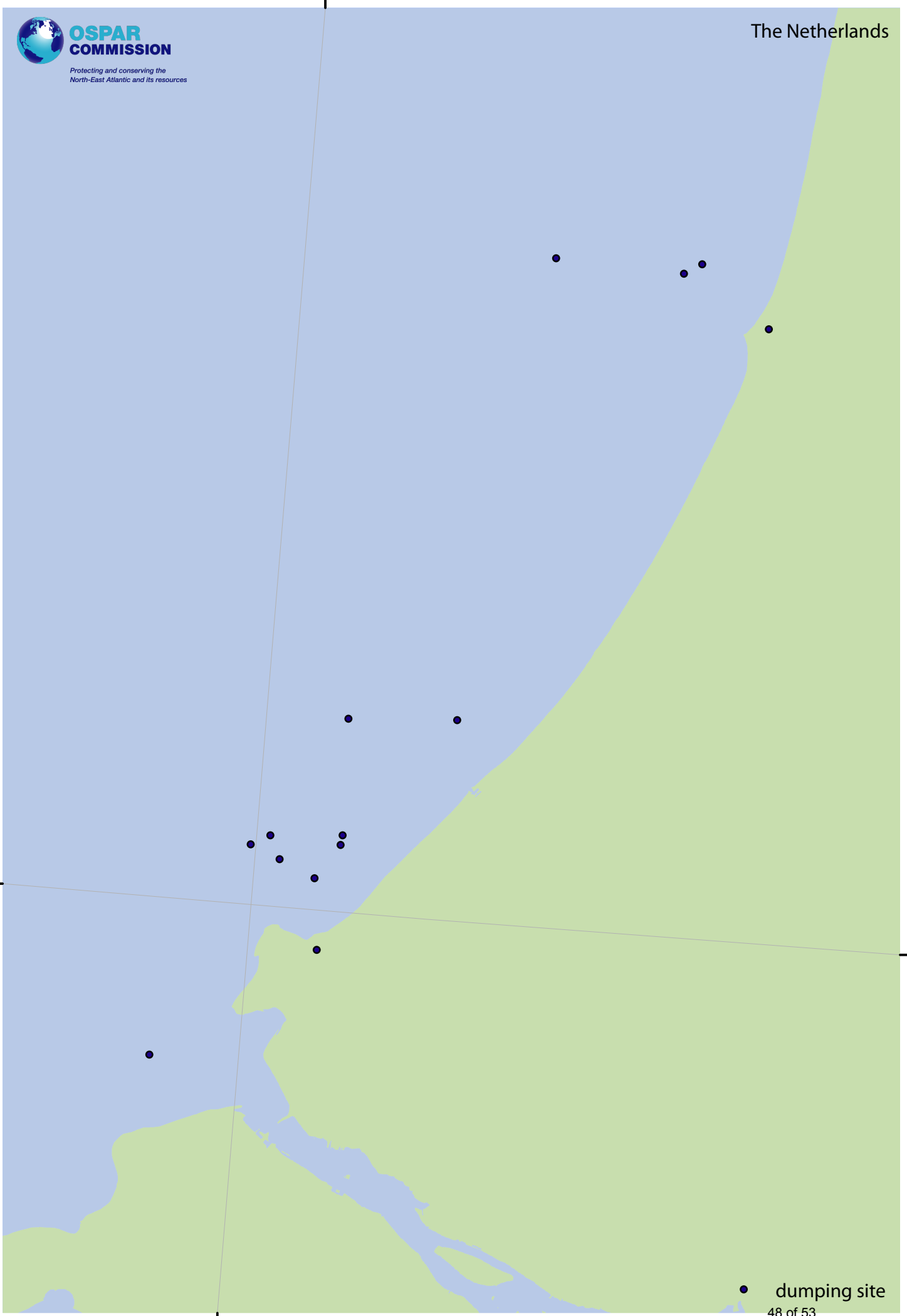
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The Netherlands

52° N

4° E

● dumping site





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Norway

70° N

60° N

10° E

49 of 53 20° E

1941.0044
1938.0050
1938.0049
1902.0272
1902.0285

1931.0103

1815.0030

1703.0112
1725.0040

1622.0023
1601.0364
1714.0120

1419.0018

1243.0089
1243.0091
1219.0086

0706.0131
0135.0020
0105.0128

1001.0439
1001.0423
1018.0062

● dumping site



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Portugal

40° N

30° N

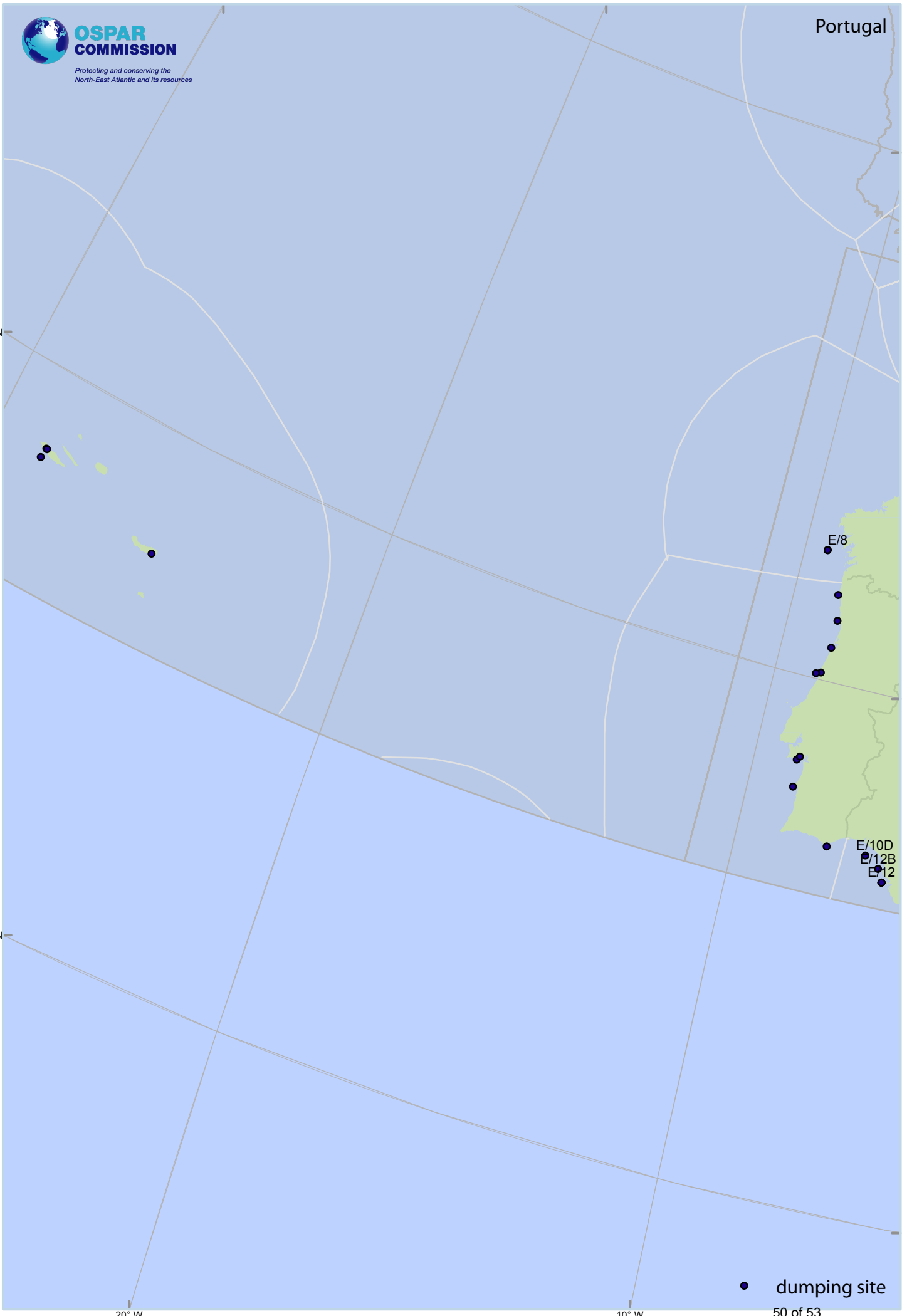
20° W

10° W

E/8

E/10D
E/12B
E/12

● dumping site

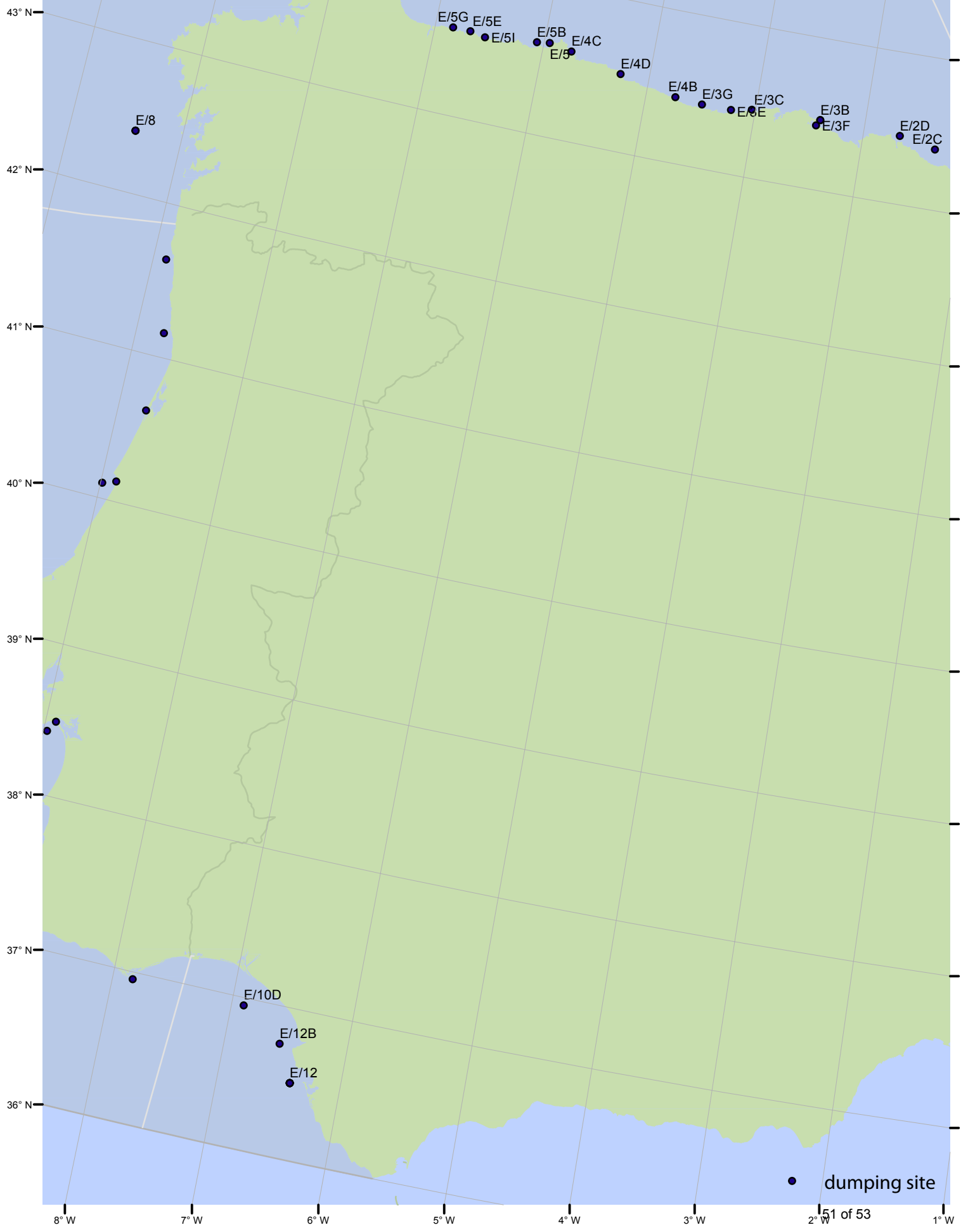




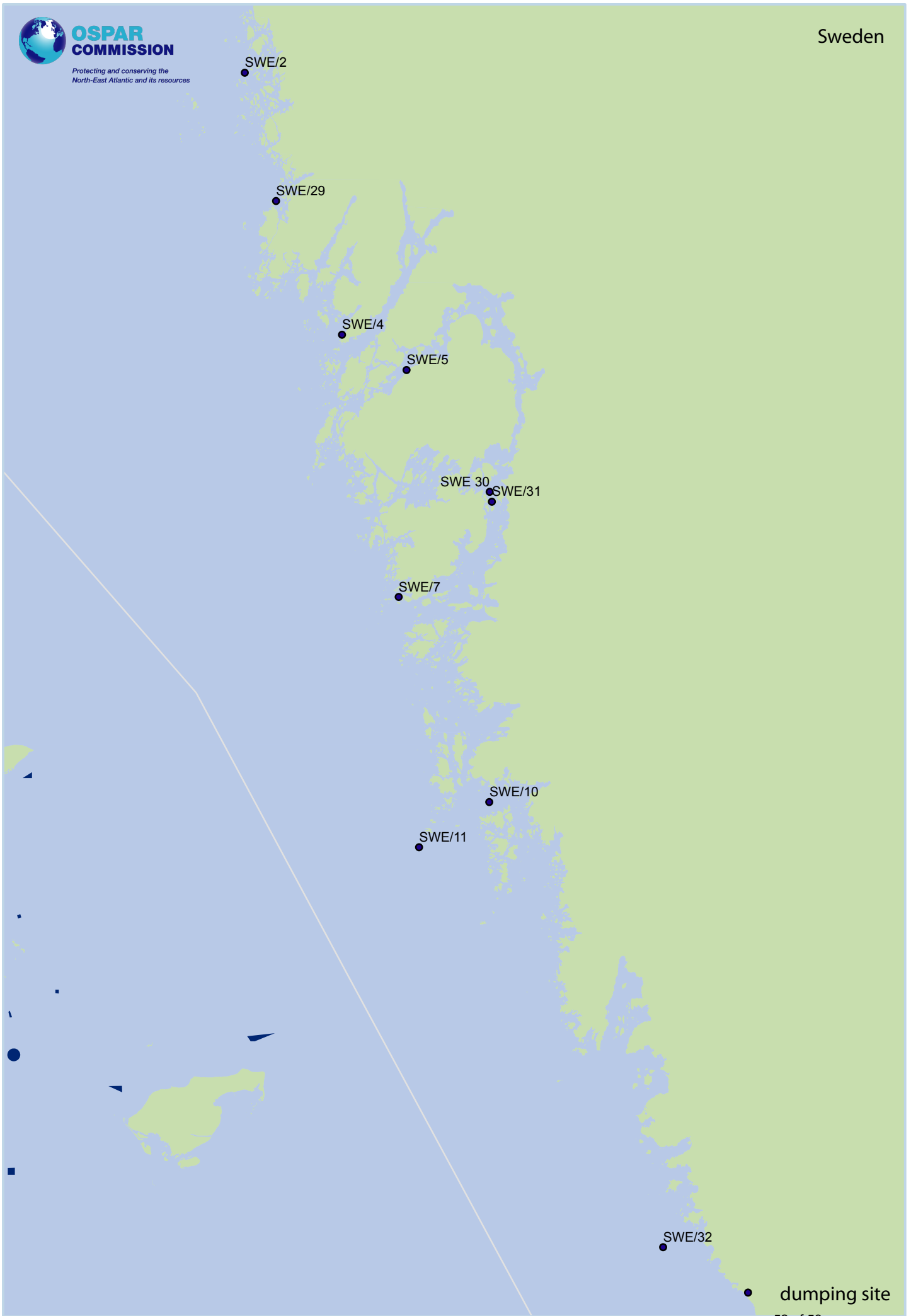
**OSPAR
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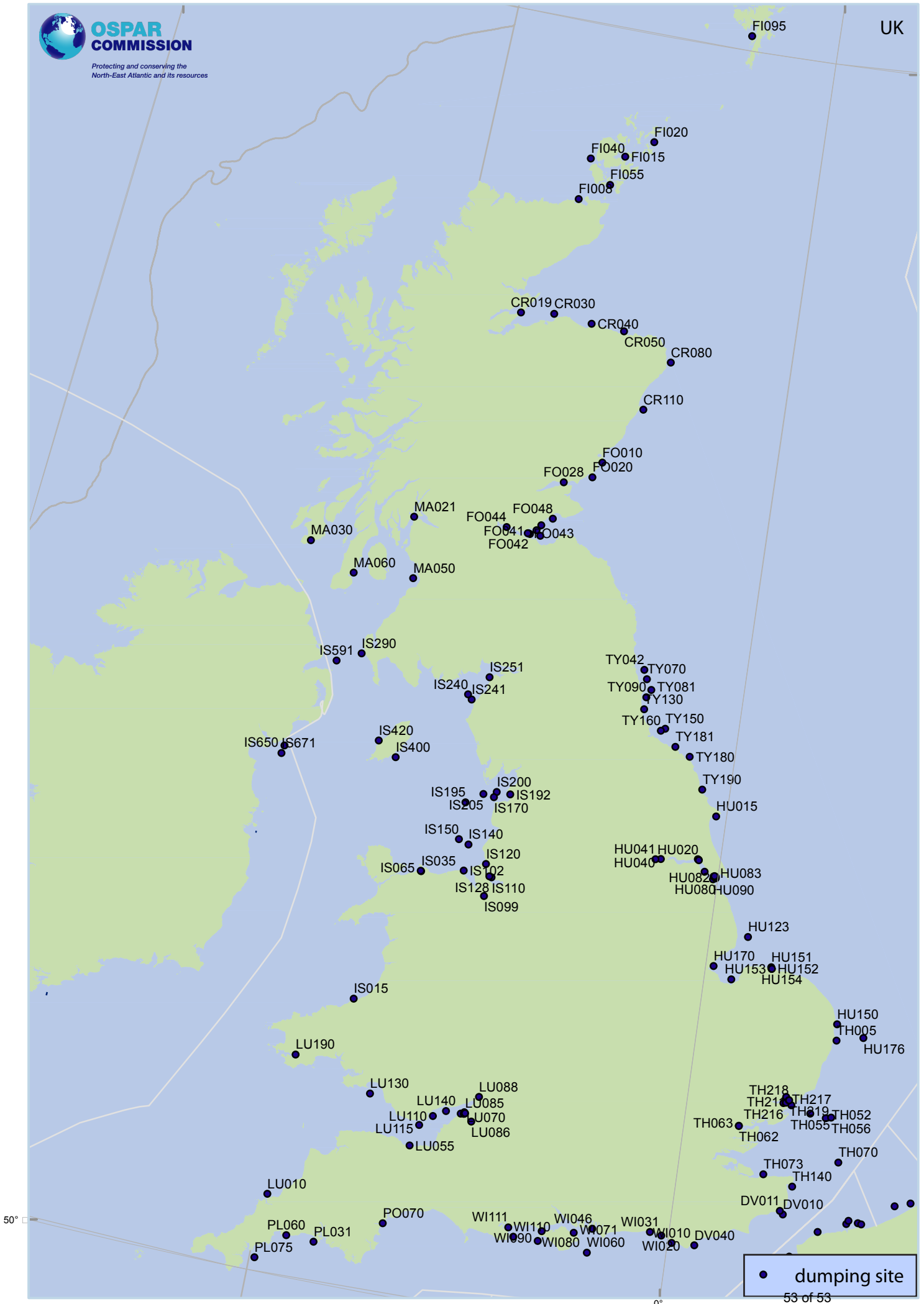
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Spain



● dumping site





● dumping site



Victoria House
37-63 Southampton Row
London WC1B 4DA
United Kingdom

t: +44 (0)20 7430 5200
f: +44 (0)20 7242 3737
e: secretariat@ospar.org
www.ospar.org

**OSPAR's vision is of a clean, healthy and biologically diverse
North-East Atlantic used sustainably**

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