



**OSPAR**  
**COMMISSION**

Annual OSPAR report on dumping of wastes  
or other matter at sea in 2007

### **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 Community 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 la Communauté européenne et l'Espagne.

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## Report on Dumping Permits Issued in 2007

Table 1 Overview of number of permits issued, tonnes licensed and tonnes dumped in 2007

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	Vessels or aircraft	Others				
Belgium	0 (North Sea dumping)	0	0	0			33 600 000* 21450 000**	9 736 491	(1)
	2 (internal water dumping)						15 000 000 m <sup>3</sup> *** 14 000 000 m <sup>3</sup> ****		(2) (3)
Denmark	6					0	4 536 300	3 925 700	
France	71	0	0	0	0	0	76 813 800	24 401 690	(1)
Germany	19					42	9 227 300		(1)
							17 524 300	27 775 000	(2) (3)
Iceland	10	0	0	0	0	0		464 181	
Ireland	6	0	0	0	0	0	528 600	608 390	(1) (2) (3)
Netherlands	9					numerous	20 000 000 m <sup>3</sup>	10 539 647	(1) (2)
Norway	48						574 133	588 654	
		2					12 150		
			1				100		
Portugal	11						2 694 365	2 557 370	
Spain	22	0	0	0	0	0	2 409 163	2 409 163	(1) (2)
Sweden	4	0	0	0		1	59 100	31 620	(1) (2)
United Kingdom	101	0	0	0	0	0	24 375 099	17 179 852	(1) (2)

NI = No information

\* dry substance (maintenance dredging)

\*\* dry substance (capital dredging)

\*\*\* capital dredging

\*\*\*\* maintenance dredging

**Table 2 Specific reporting on permits issued in 2007\***

Contracting Party	Number of permits issued *				Contaminants/ Material of concern		Tonnes dumped ** (dry weight)	Reasons for classification ***
	Dredged material	Inert Material	Vessels or aircraft	Others	Type	Level 2 (mg/kg)		
France	2				CB28 CB52 CB101 CB118 CB138 CB153 CB180	50 50 100 50 100 100 50	314200	
Germany (1)	1				HCB p,p- DDD p,p- DDE p,p- DDT γ- HCH	0,006 0,010 0,003 0,003 0,0006	1 775	(2)
	1				HCB p,p- DDD p,p- DDE p,p- DDT	0,006 0,010 0,003 0,003	46 482	(3)
	7				PAK 6 p,p-DDT PCB 52 PCB 101 PCB 138 PCB 153 PCB 180	0,003 0,003 0,003 0,006 0,012 0,015 0,006	2 874 607	(4)
	1				HCB pp,-DDD p,p-DDE p,p-DDT γ- HCH	0,006 0,010 0,003 0,003 0,0006	817 000	(5)
Ireland					Cu Pb Zn PAH	80,31 138,20 584,27 9,69	16 930	(1)
Norway		2					12150	
				1	fish waste		100	

\* The number of permits in this column includes the operations regulated by other means

\*\* For dredged material the tonnes dumped refer to material exceeding level 2

for inert material - numbers of permits issued in total and tonnes dumped in total

\*\*\* Footnotes are listed at the end of the report

## Amounts of Wastes Dumped at Sea in 2007

Table 3a Details of deposit sites and dumping methods

OSPAR-codes Deposit site	categories of waste				origin name of watersystem	dredged material type of areas dredged			dredging operation type		total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
<b>Belgium</b>													
B/1	x				Pas van het Zand			x		x		1 843 042	
B/1	x				CDNB Zeebrugge			x		x		1 440 044	
B/1	x				Scheur Oost			x		x		1 015 288	
B/1	x				Scheur West			x		x		390 183	
B/1	x				Voorhaven Zeebrugge	x				x		983 442	
B/3	x				Pas van het Zand			x		x		445 352	
B/3	x				CDNB Zeebrugge			x		x		212 098	
B/3	x				Scheur Oost			x		x		231 646	
B/3	x				Scheur West			x		x		68 756	
B/3	x				Voorhaven Zeebrugge	x				x		117 500	
B/6	x				Haven en voorhaven Zeebrugge	x				x		2 025 491	
B/6	x				CDNB Zeebrugge			x		x		297 092	
B/6	x				Toegang Blankenberge			x		x		36 137	
B/9	x				Toegangseul Oostende					x		180 872	
B/9	x				Haven Oostende	x				x		247 967	
B/99	x				Haven Nieuwpoort	x				x		61 514	
B/99	x				Oude Vlotkom	x				x		81 012	
B/99	x				Toegangseul Nieuwpoort			x		x		34 056	
B/99	x				Vaargeul en havengeul Nieuwpoort			x		x		24 999	
<b>Total</b>												<b>9 736 491</b>	
<b>Denmark</b>													
VSJ48	x				Rørvig Havn	x				x		750	
VSJ48	x				Rørvig Havn, indsejling		x			x		850	
RIB01	x				Fanø, Slunden		x			x		7 100	
RIB02	x				Fanø, Slunden		x			x		7 100	
RIB02	x				Esbjerg H., Sejlrende		x			x		21 300	
RIB01	x				Gråbyb Barre			x		x		567 000	
RIB02	x				Gråbyb Barre			x		x		567 000	
RIB08	x				Gråbyb Barre			x		x		567 000	
RIB03	x				Esbjerg Havn	x				x		286 400	
RIB04	x				Esbjerg Havn	x				x		286 400	
RIB01	x				Esbjerg Havn, Atlantkaj	x				x		35 200	
AAR01	x				Anholt Havn	x				x		27 400	
NJL01	x				Asaa Havn	x				x		1 300	
NJL02	x				Attrup Havn					x		3 800	

OSPAR-codes Deposit site	categories of waste				origin name of watersystem	dredged material type of areas dredged			dredging operation type		total quantity (in metric tonnes)		notes
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	
NJL05	x				Egense Lystbådehavn	x				x	3 500		
NJL04	x				Frederikshavn Marina	x				x	12 900		
NJL08	x				Gjøl Havn	x				x	11 800		
AAR09	x				Grenå Lystbådehavn	x				x	3 800		
NJL10	x				Hals Barre			x		x	12 400		
VIB09	x				Hanstholm Forhavn	x				x	77 600		
NJL11	x				Haverslav Havn	x				x	1 500		
NJL13	x				Hirtshals Havn, indseling	x				x	982 300		
NJL12	x				Hirtshals Havn, Østbassin	x				x	89 200		
NJL01	x				Hou Lystbådehavn v Hals	x				x	2 000		
RIN10	x				Hvide Sande Havn	x				x	2 200		
NJL20	x				Løgstør Grunde			x		x	67 700		
NJL05	x				Mou Bro Lystbådehavn	x				x	900		
NJL26	x				Nibe Havn	x				x	49 800		
VIB13	x				Nykøbing M Lystbådehavn	x				x	8 400		
NJL31	x				Rønnerhavnen	x				x	6 100		
NJL22	x				Mariager Fjord, Sejlrende			x		x	43 200		
NJL10	x				Hals Barre, Sejlrende				x	x	12 400		
RIN24	x				Skaven Havn	x				x	700		
RIN25	x				Stauning Havn	x				x	3 300		
NJL39	x				Sæby Havn	x				x	8 100		
RIN26	x				Sælhundeholm Løb			x		x	66 400		
RIN30	x				Thorsminde Havn	x				x	7 100		
RIN05	x				Thyborøn Færgehavn, Sejlrende			x		x	41 600		
RIN05	x				Thyborøn Havn	x				x	19 500		
NJL50	x				Aalbæk Havn	x				x	12 700		
<b>Total</b>											<b>3 925 700</b>		

<b>France</b>													
F/05901	x						x				x	539 681	5 569
F/05902	x						x				x	333 561	4 458
F/05903	x						x				x	109 723	2 477
F/05904	x						x				x	361 508	6 117
F/06201	x						x				x	296 000	7 351
F/06202	x						x				x	468 000	10 372
F/07601	x						x				x	7 117 234	85 808
F/07602	x						x		x		x	2 495 902	222 612
F/07603	x						x				x	148 629	1 558
F/07604	x						x				x	4 292	NI
F/07606	x						x				x	38 870	290
F/01401	x						x			x	x	494 400	3 314
F/01405	x						x				x	46 600	804
F/05004	x						x				x	11 000	55

OSPAR-codes Deposit site	categories of waste				origin name of watersystem	dredged material type of areas dredged			dredging operation type		total quantity (in metric tonnes)		notes
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	
F/05602	x					x				x	103 800	514	
F/04401	x						x			x	3 078 191	90 717	
F/04412	x					x				x	9 500	352	
F/08503	x					x				x	45 131	NI	
F/08506	x					x				x	10 730	177	
F/08508	x					x				x	7 956	59	
F/08510	x					x				x	2 704	NI	
F/01701a	x					x				x	27 600	NI	
F/01701b	x					x				x	113 000	NI	
F/01706	x					x				x	83 500	1 656	
F/01707	x					x				x	126 800	7	
F/01709	x					x				x	800	13	
F/01710	x					x				x	44 900	822	
F/03326	x							x		x	14 200	8 520	
F/03325	x							x		x	10 000	41 500	
F/03319	x							x		x	551 000	1 019	
F/03318	x							x		x	117 000	2 299	
F/03311 F/03314 F/03315 F/03316 F/03317	x							x		x	2 058 000	21 433	
F/03307 F/03308 F/03309 F/03311	x							x		x	2 946 000	42 979	
F/03301 F/03302 F/03303 F/03305 F/03306 F/03307 F/03311	x							x		x	1 329 000	16 845	
F/03312	x							x		x	12 900	NI	
F/06401	x					x				x	1 207 960	30 027	
F/06401 et F/06403	x					x				x	32 370	1 100	
F/06404	x					x				x	3 247	179	
<b>Total</b>											<b>24 401 690</b>	<b>611 001</b>	

Germany													
D/10	x				Dagebüll harbour	x				x	23 000	NI	
D/12	x				Husum harbour	x				x	59 000	1,38	
D/13	x				Harbour and outer harbour of Büsum	x				x	26 000	0,76	
D/20	x				Outer harbour of Hooksiel	x				x	39 000	0,31	
D/21	x				Wangerooge harbour	x				x	1 000	0,00	
D/22	x				Spiekeroog harbour	x				x	14 000	0,38	
D/25	x				Baltrum harbour	x				x	1 000	0,02	
D/30	x				Norderney harbour	x				x	15 000	0,44	
D/32	x				Norddeich harbour	x				x	12 000	0,32	

OSPAR-codes Deposit site	categories of waste				origin name of watersystem	dredged material			dredging operation type		total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
D/36	x				Borkum, Minitrain harbour and approach channel of Borkum island	x				x	2 000	0,01	
D/40	x				Harbour basin of river Eider flood gate system	x				x	38 000	0,10	(1)
D/44	x				Langeoog harbour	x				x	6 000		(2)
D/45	x				Approach channel of Juist harbour	x				x	4 000	0,12	
D/52	x				Wyk habour (Föhr)	x				x	12 000	0,27	
D/54	x				Friedrichskoog harbour	x				x	7 000		
D/55	x				Amrum /Wittdün harbour	x				x	46 000	0,64	
D/56	x				Niedersachsenbrücke Wilhelmshaven (seaward mooring berth)	x	x			x	1 000	0,03	
D/57	x				Hamburg harbour	x				x	119 000	1,97	
D/58	x				Langeoog harbour, Bengersiel harbour and approach channel to Bengersiel harbour	x				x	817 000	23,73	
D/60	x				Ems estuaray, navigation channel km 90,0-105,0; Borkum harbour			x		x	16 000	0,43	
D/63	x				Ems estuaray, navigation channel km 40,7-74,6			x		x	144 000		(3)
D/65	x				Ems estuaray, navigation channel km 40,7-70,0; km 25,0-40,7			x		x	926 000	22,37	(4)
D/69	x				Ems estuaray, navigation channel km 40,7-50,0			x		x	1 334 000		(3)
D/70	x				Jade bay / navigation channel km 6,0-15,0; Neuer Vorhafen WHV	x	x			x	1 102 000	53,11	(4)
D/71	x				Jade bay / navigation channel km 6,0-22,0; km 35,0-54,0	x	x			x	906 000		(3)
D/72	x				Jade bay / navigation channel km 6,0-15,0	x	x			x	348 000	3,43	(4)
D/73	x				Jade bay / navigation channel km 41,0-54,0	x	x			x	319 000	4,52	(4)
D/74	x				Jade bay / navigation channel km 6,0-15,0; km 22,0-54,0	x	x			x	1 044 000	18,71	(4)
D/75	x				Jade bay / navigation channel km 41,0-54,0	x	x			x	21 000		(3)
D/76	x				Jade bay / navigation channel Neuer Vorhafen WHV	x	x			x	103 000	0,85	(4)
D/78	x				Jade bay / navigation channel Neuer Vorhafen WHV	x	x			x	23 000		
D/80	x				Weser estuary / navigation channel km 78,0-91,0			x		x	344 000	24,19	(4)
D/82	x				Weser estuary / navigation channel km 70,4-78,0; km 91,0-110,0			x		x	1 533 000		(3)
D/84	x				Weser estuary / navigation channel km 70,4-78,0; km 91,0-130,0			x		x	320 000		
D/85	x				Weser estuary / navigation channel km 55,0-91,0			x		x	800 000	26,46	(4)
D/86	x				Weser estuary / navigation channel km 55,0-110,0			x		x	751 000		(3)
D/87	x				Weser estuary / navigation channel km 70,4-78,0; km 91,0-110,0			x		x	593 000	22,62	(4)
											779 000		(3)
											957 000		(3)

OSPAR-codes Deposit site	categories of waste				dredged material						total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	type of areas dredged			dredging operation type		dry weight	Tot. org. carbon	notes
						Harbour	Estuary	Sea	capital	maintenance			
D/88	x				Elbe estuary / navigation channel; km 689,8-717	x	x			x	414 000	23,62	(4)
											839 000		(3)
D/89	x				Elbe estuary / navigation channel; Brunsbüttel km 689,8-698,5, Medemgrund km 709-717	x	x			x	135 000		(3)
D/91	x				Elbe estuary / navigation channel; okm 689,8-726,0; Weststrecke	x	x			x	43 000	6,90	(4)
											363 000		(3)
D/92	x				Elbe estuary / navigation channel; km 689,9-732,0	x	x			x	380 000		(3)
D/93	x				Elbe estuary / navigation channel; km 698,5-739,0	x	x			x	28 000	21,33	(4)
											1 276 000		(3)
D/94	x				Elbe estuary / navigation channel; km 698,5-748,0	x	x			x	13 000	58,95	(4)
											3 625 000		(3)
D/95	x				Elbe estuary / navigation channel; Altenbruch km 717,0-726,0	x	x			x	100 000		(3)
D/96	x				Elbe estuary / navigation channel; km 717,0-739,0	x	x			x	980 000		(3)
D/97	x				Elbe estuary / navigation channel; km 732,0-748,0	x	x			x	371 000		(3)
D/98	x				Elbe estuary / navigation channel; Altenbruch km 717,0-726,0; km 732,0-748,0	x	x			x	311 000		(3)
D/99	x				Elbe estuary / navigation channel; km 709,0-726,0; östl. Medemrinne 732,0-739,0	x	x			x	214 000		(3)
D/100	x				Elbe estuary / navigation channel; Brunsbüttel km 689,8-698,5; km 709,0-726,0; km 732,0-748,0	x	x			x	254 000		(3)
D/101	x				outer part of the lock to the "Nord-Ostsee-Kanal" (Kiel-Canal); inner part of "Nord-Ostsee-Kanal"	x	x			x	2 083 000	77,93	(4)
											546 000		
D/107	x				Elbe estuary / navigation channel; Wedel km 638,9-644	x	x			x	2 000	0,04	(4)
D/110	x				Jade bay / navigation channel km 15,0-22,0	x	x			x	8 000	0,12	(5)
D/111	x				Jade bay / navigation channel km 22,0-35,0	x	x			x	6 000	0,09	(5)
D/112	x				Jade bay / navigation channel km 35,0-41,0	x	x			x	2 000	0,03	(5)
D/113	x				Elbe estuary / navigation channel; km 680,5-685,5	x	x			x	46 000	0,98	(5)
D/114	x				Elbe estuary / navigation channel; km 685,5-689,8	x	x			x	50 000	1,27	(5)
D/115	x				Elbe estuary / navigation channel; km 689,8-698,5	x	x			x	244 000	6,22	(5)
D/116	x				Elbe estuary / navigation channel; km 698,5-709,0	x	x			x	15 000	0,19	(5)
D/117	x				Elbe estuary / navigation channel; km 709,0-717,0	x	x			x	19 000	0,25	(5)
D/118	x				Elbe estuary / navigation channel; km 717,0-726,0	x	x			x	12 000	0,16	(5)
<b>Total</b>											<b>27 775 000</b>	<b>417,014</b>	

<b>Iceland</b>													
Is 4	x					x			x		97 600		
IS 5	x					x				x	26 840		
IS 18	x					x			x		4 880		
IS 21	x					x			x		2 196		
IS 22	x					x				x	7 271		
IS 25	x					x				x	43 367		
IS 41	x					x			x		3 294		
IS 51	x					x			x		3 294		

OSPAR-codes	categories of waste				origin name of watersystem	dredged material			dredging operation type		total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
IS 53	x					x			x		29 280		
IS 59	x					x			x		246 159		
<b>Total</b>											<b>464 181</b>		

<b>Ireland</b>													
Irl 6	x				Burford Bank	x	x			x	253 643	1,500	
Irl 8	x				Hook Head		x			x	149 948	1,700	
Irl 20	x				Drogheda		x			x	83 663	nd	
Irl 33	x				Shannon / Foynes		x			x	21 269	nd	
Irl 47	x				Drogheda		x			x	41 207	nd	
Irl 48	x				Port Oriel	x				x	35 100	nd	
Irl 51	x				Inisbofin	x			x		23 560	0,830	
<b>Total</b>											<b>608 390</b>	<b>4,030</b>	

<b>Netherlands</b>													
NL-6 Scheveningen	x					x				x	324 558		
NL-7 IJmuiden	x					x					1 549 222		
NL-8 Rotterdam	x					x				x	3 526 696		
NL-10 Eastern Sceldt													
NL-11 Western Sceldt													
NL-13 Waddensea West	x					x					534 102		
NL-14 Waddensea East	x					x	x			x	2 299 408		
NL-15 Ems-Dollard	x					x	x			x	2 305 661		
<b>Total</b>											<b>10 539 647</b>		

<b>Norway</b>													
1 Østfold	x				Oslofjord	x				x	1 280		
2 Østfold	x				Oslofjord	x				x	2 400		
3 Østfold	x				Oslofjord	x				x	240		
4 Østfold	x				Oslofjord	x				x	800		
5 Østfold	x				Oslofjord	x				x	192		
6 Østfold	x				Oslofjord	x				x	6 880		
7 Østfold	x				Oslofjord	x				x	2 480		
8 Østfold	x				Oslofjord	x				x	2 400		
9 Østfold	x				Oslofjord	x				x	3 200		
10 Østfold	x				Oslofjord	x				x	800		
11 Østfold	x				Oslofjord	x				x	3 200		
12 Oslo og A	x				Oslofjord	x				x	2 400		
13 Oslo og A	x				Oslofjord	x				x	196 000		
14 ^Vestfold	x				Oslofjord	x				x	384		
15 ^Vestfold	x				Oslofjord	x				x	800		
16 ^Vestfold	x				Oslofjord	x				x	240		
17 ^Vestfold	x				Oslofjord	x				x	1 040		
18 ^Vestfold	x				Oslofjord	x				x	800		
19 Vestfold	x				Oslofjord	x				x	1 280		

OSPAR-codes Deposit site	categories of waste				dredged material			dredging operation type		total quantity (in metric tonnes)			
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	type of areas dredged Harbour Estuary Sea			capital	maintenance	dry weight	Tot. org. carbon	notes
20 Vestfold	x				Oslofjord	x				x	1 760		
21 Vestfold	x				Oslofjord	x				x	1 120		
22 Vestfold	x				Oslofjord	x				x	768		
23 Vestfold	x				Oslofjord	x				x	10 080		
24 Vestfold	x				Oslofjord	x				x	240		
25 Vestfold	x				Oslofjord	x				x	2 880		
26 Vestfold	x				Oslofjord	x				x	960		
27 Vestfold	x				Oslofjord	x				x	1 536		
28 Vestfold	x				Oslofjord	x				x	720		
29 Vestfold	x				Oslofjord	x				x	256		
30 Buskerud	x				Oslofjord	x				x	960		
31 Buskerud	x				Oslofjord	x				x	952		
32 Vest-Agder	x				Skagerak	x				x	256		
33 Vest-Agder	x				Skagerak	x				x	2 400		
34 Vest-Agder	x				Skagerak	x				x	72 304		
35 Hordaland	x				Skagerak	x				x	800		
36 Hordaland	x				Skagerak	x				x	768		
37 Hordaland	x				North Sea	x				x	640		
38 Hordaland	x				North Sea	x				x	3 200		
39 Hordaland	x				North Sea	x				x	238		
40 Hordaland	x				North Sea	x				x	24 000		
41 Møre & Romsd	x				Norwegian Sea	x				x	2 000		
42 Møre & Romsdal					Norwegian Sea	x				x	32 250		
43 Møre & Romsdal	x				Norwegian Sea	x				x	2 500		
44 Møre & Romsd	x				Norwegian Sea	x				x	1 000		
45 Møre & Romsdal	x				Norwegian Sea	x				x	1 400		
46 Nord-Trøndelag	x				Norwegian Sea					x	126 000		
47 Nordland		x			Norwegian Sea						8 100		
48 Nordland	x				Norwegian Sea	x				x	38 400		
49 Nordland				x	Norwegian Sea						100		
50 Finnmark		x			Norwegian sea						4 050		
51 Finnmark	x				Barents Sea	x				x	19 200		
<b>Total</b>											<b>588 654</b>		

Portugal													
P/1	x				Aveiro	x					925 000		
P/2	x				Figueira da Foz	x					187 500		
P/3	x				Lisboa	x					81 250		
P/4	x				Lisboa	x					217 500		
P/5	x				Lisboa	x					625 000		
P/6	x				Lisboa	x					165 000		
P/7	x				Lisboa	x					250 000		
P/8	x				Loulé	x					90 200		
P/9	x				Tavira	x					7 500		
P/10	x				Tavira	x					8 420		

OSPAR-codes	categories of waste				origin name of watersystem	dredged material			dredging operation type		total quantity (in metric tonnes)			
	dredged material	inert material	fish waste	vessels/ aircraft		Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes	
P/11	x				Açores	x						136 995		
<b>Total</b>												<b>2 557 370</b>		

**Spain**

E/2B	x				Plentzia	x				x		3 606		NI
E/3B	x				Laredo	x				x		39 467		NI
E/3B	x				Santoña	x				x		55 668		NI
E/3B	x				Colindres			x		x		57 940		NI
E/3C	x				Suances			x		x		37 485		NI
E/4C	x				Candás	x				x		55 087		NI
E/5	x				Avilés			x		x		147 433	13024,12835	
E/5B	x				San Esteban de Pravia			x		x		868 132		NI
E/5B	x				San Juan de la Arena			x		x		71 750		NI
E/5C	x				Navia			x		x		163 459		NI
E/5D	x				Luarca	x				x		18 947		NI
E/5E	x				Puerto de Vega	x				x		5 120		NI
E/5F	x				Figueras			x		x		24 150		NI
E/8	x				Vilagarcía	x			x			5 114	6,1356	
E/9B	x				Marín/Pontevedra	x			x			318 098	2449,3469	
E/9C	x				Baiona	x			x			18 204		NI
E/10	x				Huelva	x				x		103 079		NI
E/10	x				El Terrón			x		x		95 744		NI
E/10B	x				La Moharra	x				x		48 314		NI
E/10C	x				Isla Cristina	x				x		16 458		NI
E/11	x				Sevilla			x		x		20 517	3692,88	
E/12	x				Cádiz	x				x		186 476		NI
E/12B	x				Chipiona	x				x		48 915		NI
<b>Total</b>												<b>2 409 163</b>	<b>19 172,49</b>	

**Sweden**

SWE/7	x				Kalvsund, Skagerrak				x	x		22 500		(1)
SWE/8	x				Spanghamn, Skagerrak	x					x	1 425		(2)
SWE/11	x				Fiskebäck & Hammar, Kattegat	x					x	3 045		(3)(4)
SWE/10	x				Fiskebäck, Kattegat	x					x	150		(5)
SWE/21	x				Brämmanstrand, Kattegat	x					x	2 000		(6)
SWE/22	x				Skallkroken, Kattegat	x					x	2 500		(7)
<b>Total</b>												<b>31 620</b>		

**United Kingdom**

CR010	x				Wick River			x				0		
CR019	x				Cromarty Firth	x					x	9 570		
CR020	x				Helmsdale River	x					x	2 934		
CR027	x				Beaully Firth	x					x	24 182		
CR030	x				Moray Firth	x					x	7 635		
CR040	x				Spey Bay/Moray Firth	x					x	7 027		

OSPAR-codes Deposit site	categories of waste				dredged material			dredging operation type		total quantity (in metric tonnes)			
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	Harbour	Estuary	Sea	capital	maintenance	dry weight	Tot. org. carbon	notes
CR050	x				Grampian Coast	x				x	1 744		
CR080	x				Grampian Coast	x				x	0		
CR110	x				Dee River	x				x	94 516		
DM001	x				Cumbria Coast	x				x	518		(1)
DV010	x				Kent Coast	x		x	x		0		
DV010	x				Kent Coast	x				x	249 542		
DV011	x				Kent Coast	x				x	0		
DV040	x				Rother River and Kent Coast	x				x	39 367		
FI100	x				Ham Voe	x				x	0		
FO007	x				Grampian Coast	x				x	0		
FO010	x				South Esk River	x				x	40 435		
FO020	x				Tayside Coast	x				x	11 116		
FO028	x				Firth of Tay	x				x	37 812		
FO036	x				Firth Of Forth	x				x	2 059		
FO038	x				Firth Of Forth	x				x	11 180		
FO041	x				Firth Of Forth	x				x	8 775		
FO042	x				Firth Of Forth	x				x	10 123		
FO043	x				Firth Of Forth	x				x	10 269		
FO044	x				Firth Of Forth	x			x		3 029		
FO044	x				Firth Of Forth	x				x	529 467		
FO048	x				Firth Of Forth	x				x	2 856		
FO080	x				Tweed River	x				x	0		
HE050	x				Loch Broom		x			x	2 065		
HU015	x				Humberside Coast	x				x	3 637		
HU020	x				Humber River	x				x	60 550		
HU030	x				Humber River			x		x	627 409		
HU040	x				Humber River	x				x	3 832		
HU041	x				Humber River	x				x	11 670		
HU060	x				Humber River	x			x		29 016		
HU060	x				Humber River	x	x	x		x	3 263 668		
HU080	x				Humber River	x	x			x	0		
HU090	x				Humber River	x	x			x	389 680		
HU112	x				Humber River		x			x	0		
HU143	x				Great Ouse River	x	x			x	48 418		
HU150	x				Yare River	x	x			x	21 152		
HU170	x				Witham River	x				x	7 461		
HU199	x				Orwell River	x				x	58 596		
HU202	x				Norfolk Coast			x	x		139 478		
IS040	x				Anglesey Coast	x				x	30 137		
IS102	x				Dee River, Wales		x	x		x	140 552		
IS110	x				Mersey River	x	x			x	162 973		
IS120	x				Mersey River/Liverpool Bay	x		x		x	252 999		
IS128	x				Mersey River		x			x	259 974		
IS140	x				Mersey River	x	x	x		x	1 663 586		
IS150	x				Mersey River/Liverpool Bay	x	x		x		35 247		

OSPAR-codes Deposit site	categories of waste				dredged material						total quantity (in metric tonnes)		notes
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	type of areas dredged			dredging operation type		dry weight	Tot. org. carbon	
						Harbour	Estuary	Sea	capital	maintenance			
IS150	x				Mersey River/Liverpool Bay	x		x		x	0		
IS170	x				Wyre River	x				x	811 555		
IS192	x				Lune River	x				x	1 968		
IS200	x				Morecambe Bay	x		x		x	386 051		
IS205	x				Cumbria Coast	x		x		x	432 567		
IS231	x				Cumbria Coast	x				x	0		
IS240	x				Cumbria Coast			x	x		0		
IS240	x				Cumbria Coast	x				x	0		
IS241	x				Cumbria Coast	x				x	102 402		
IS251	x				Cumbria Coast			x		x	0		
IS591	x				Belfast Lough		x		x		229 874		
IS591	x				Belfast Lough		x			x	10 587		
IS595	x				Belfast Lough		x			x	0		
IS620	x				Down Coast	x				x	0		
IS650	x				Down Coast	x				x	9 762		
IS671	x				Carlingford Lough	x				x	14 852		
LU010	x				Camel River	x				x	73		
LU055	x				Somerset Coast	x				x	1 081		
LU070	x				Avon River	x	x			x	76 100		
LU080	x				Avon River	x	x			x	82 684		
LU083	x				Avon River	x	x			x	1 277		
LU084	x				Avon River	x	x			x	2 920		
LU085	x				Avon River	x	x			x	5 440		
LU086	x				Avon River	x	x			x	0		
LU110	x				Taff R./Severn Est.	x				x	208 251		
LU115	x				Severn Estuary	x				x	9 004		
LU125	x				Tawe & Neath Rivers/Swansea Bay	x				x	401		
LU130	x				Tawe & Neath Rivers/Swansea Bay	x		x		x	1 099 199		
LU140	x				Usk River	x				x	48 623		
LU145	x				Loughor River	x			x		37 393		
LU168	x				Milford Haven	x	x		x		225		
LU169	x				Milford Haven		x		x		0		
LU190	x				Milford Haven		x			x	2 230		
MA010	x				Loch Ryan	x			x		25 582		
MA010	x				Loch Ryan	x				x	25 882		
MA016	x				Firth of Clyde	x	x			x	0		
MA021	x				Firth Of Clyde	x	x			x	129 484		
MA025	x				Firth Of Clyde	x				x	0		
MA050	x				Firth Of Clyde	x				x	34 716		
MA501	x				Foyle River	x				x	0		
MA545	x				Foyle River	x				x	0		
NS100	x				Suffolk Coast			x	x		0		(2)
PL031	x				Tamar River & Kingsbridge Estuary	x	x			x	48 845		
PL060	x				Fowey River/Cornwall Coast South	x				x	12 205		
PL072	x				Penrhyn River	x				x	0		

OSPAR-codes Deposit site	categories of waste				dredged material						total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	type of areas dredged			dredging operation type		dry weight	Tot. org. carbon	notes
						Harbour	Estuary	Sea	capital	maintenance			
PL075	x				Falmouth Harbour/Truro River/Mounts Bay		x		x		0		
PL075	x				Falmouth Harbour/Truro River/Mounts Bay	x				x	0		
PO070	x				Teign River		x		x		0		
PO070	x				Teign River	x				x	0		
TH005	x				Waveney River	x				x	41 019		
TH034	x				Orwell River	x	x		x		598		
TH034	x				Orwell River		x			x	7 043		
TH037	x				Orwell River	x	x			x	13 492		
TH052	x				Orwell/Stour Rivers + Thames Estuary		x		x		0		
TH052	x				Orwell/Stour Rivers + Thames Estuary	x	x	x		x	1 378 876		
TH053	x				Orwell River	x	x			x	13 462		
TH062	x				Blackwater River		x			x	820		
TH070	x				Thames Estuary			x	x		0		
TH070	x				Thames Estuary		x	x		x	206 639		
TH073	x				Kent Coast	x				x	0		
TH080	x				Thames Estuary			x	x		1 044 214		
TH140	x				Kent Coast	x				x	67 759		
TH146	x				Kent Coast	x				x	0		
TH147	x				Kent Coast	x				x	0		
TH207	x				Orwell River	x	x			x	43 858		
TH208	x				Orwell River	x	x			x	46 038		
TH209	x				Orwell River	x	x			x	18 982		
TH210	x				Orwell River	x	x			x	0		
TH211	x				Orwell River	x	x			x	90 967		
TY022	x				Coquet River	x				x	0		
TY025	x				Coquet River		x			x	13 071		
TY042	x				Northumberland Coast	x			x		0		
TY042	x				Northumberland Coast	x				x	60 202		
TY070	x				Tyne River		x		x		0		
TY070	x				Tyne River	x				x	74 615		
TY081	x				Tyne River		x		x		0		
TY081	x				Tyne River	x	x			x	40 532		
TY130	x				Durham Coast	x		x		x	12 219		
TY150	x				Tees River/Hartlepool Bay	x	x		x		0		
TY150	x				Tees River/Hartlepool Bay	x	x	x		x	0		
TY160	x				Tees River/Hartlepool Bay	x			x		0		
TY160	x				Tees River/Hartlepool Bay	x	x	x		x	782 114		
TY180	x				Esk River	x		x	x	x	40 657		
TY181	x				North Yorkshire Coast			x		x	34 492		
TY190	x				North Yorkshire Coast	x			x		0		
TY190	x				North Yorkshire Coast	x				x	1 941		
WI010	x				Ouse River (E.Sussex)	x		x		x	181 138		
WI020	x				East Sussex Coast	x				x	13 866		
WI031	x				Sussex Coast	x				x	104 994		
WI035	x				Sussex Coast			x		x	1 118		

OSPAR-codes Deposit site	categories of waste				dredged material						total quantity (in metric tonnes)		
	dredged material	inert material	fish waste	vessels/ aircraft	origin name of watersystem	type of areas dredged			dredging operation type		dry weight	Tot. org. carbon	notes
						Harbour	Estuary	Sea	capital	maintenance			
WI045	x				Chichester Harbour	x	x			x	628		
WI046	x				Chichester Harbour	x				x	0		
WI060	x				So'ton Water, loW, Portsmouth...	x	x		x		18 362		
WI060	x				So'ton Water, loW, Portsmouth...	x	x	x		x	316 822		
WI064	x				Portsmouth Harbour	x				x	0		
WI080	x				So'ton Water, loW etc.	x				x	220 284		
WI090	x				So'ton Water, loW etc.	x				x	0		
WI110	x				Poole Harbour	x			x		0		
WI110	x				Poole Harbour	x	x	x		x	119 069		
XX999	x				Norfolk Coast			x	x		2 478		(3)
<b>Total</b>											<b>17 179 852</b>		





OSPAR-cod Deposit site	in tonnes										in kilogrammes																				
	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/			
D/45	0,003	0,000	0,137	0,261	0,201	0,340	0,206	1,372	0,423	0,005	0,004	20,229	10,956	0,003	0,00	0,012	0,009	0,027	0,028	0,017	0,100	0,005	<0,0003	0,002	0,037	0,017	<0,0003	<0,0003			
D/52	0,001	0,001	0,031	0,080	0,054	0,065	0,041	0,268	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0,369	0,061	ND	ND			
D/54	<0,009	0,004	0,342	1,091	0,269	0,063	0,456	2,789	<1,14	<0,01	<0,001	ND	ND	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,228	<0,114	<0,114	0,315	0,237	<0,114	<0,114	
D/55	0,000	0,000	0,018	0,049	0,023	0,028	0,024	0,128	0,032	0,001	0,001	ND	ND	<0,00004	0,00	0,000	<0,00004	0,001	0,000	0,000	0,002	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	<0,00004	0,000
D/56	0,021	0,013	1,000	4,978	1,228	2,985	1,636	8,043	9,421	0,066	0,047	ND	ND	0,0356	0,02	0,030	0,037	0,056	0,069	0,025	0,275	0,015	0,007	0,012	1,491	0,385	0,013	0,023			
D/57	1,164	0,604	14,951	31,046	28,822	29,730	17,427	227,445	78,873	0,919	0,560	2 202,877	897,066	0,481	0,66	1,151	0,663	2,333	2,357	1,949	9,305	4,8285	0,2149	2,6634	49,682	9,216	7,839	2,692			
D/58	0,005	0,000	0,222	0,361	0,273	0,596	0,333	1,703	0,555	0,004	0,003	44,423	14,378	0,003	0,00	0,009	0,010	0,016	0,014	0,009	0,065	0,0081	<0,0004	<0,0004	0,162	0,116	<0,0004	0,001			
D/63	0,130	0,098	6,001	19,272	4,769	10,067	8,770	39,480	71,004	0,365	0,218	1 740,139	331,777	0,194	0,11	0,296	0,296	0,574	0,759	0,491	2,723	0,7224	0,046	0,0648	4,881	4,260	0,167	0,130			
D/65	<0,288	0,179	12,411	34,752	10,526	25,769	17,944	88,980	110,748	0,434	0,497	3 736,432	749,480	0,639	0,41	0,694	0,783	1,323	1,830	0,860	6,536	0,915	0,132	0,165	14,218	8,553	0,419	0,474			
D/69	0,049	0,037	2,253	7,235	1,791	3,779	3,293	14,822	26,657	0,063	0,082	653,303	124,559	0,073	0,04	0,111	0,111	0,216	0,285	0,184	1,022	0,271	0,017	0,024	1,832	1,599	0,063	0,049			
D/70	0,046	0,073	3,379	9,253	3,822	7,678	4,724	36,639	18,194	0,139	0,112	ND	ND	0,124	0,10	0,121	0,153	0,210	0,220	0,150	1,061	0,089	0,025	0,057	2,161	1,963	0,096	0,086			
D/71	0,149	0,240	11,071	30,319	12,522	25,159	15,478	120,053	59,614	0,454	0,366	ND	ND	0,407	0,31	0,397	0,501	0,689	0,721	0,491	3,478	0,292	0,084	0,188	7,081	6,433	0,313	0,282			
D/72	0,004	0,006	0,492	1,070	0,280	0,807	0,458	2,564	4,377	0,035	0,025	ND	ND	0,026	0,03	0,026	0,026	0,049	0,026	0,048	0,219	0,034	0,010	<0,026	<0,051	<0,051	<0,026	<0,026			
D/74	0,049	0,079	3,643	9,976	4,120	8,278	5,093	39,502	19,615	0,149	0,120	ND	ND	0,134	0,10	0,131	0,165	0,227	0,237	0,162	1,144	0,096	0,027	0,062	2,330	2,117	0,103	0,093			
D/76	0,030	0,049	1,976	5,735	2,559	4,854	3,031	24,668	8,624	0,064	0,056	461,591	111,134	0,065	0,04	0,060	0,085	0,101	0,136	0,057	0,545	0,028	0,007	0,012	1,573	1,422	0,042	0,036			
D/78	0,078	0,129	5,178	15,029	6,707	12,721	7,943	64,645	22,601	0,169	0,147	1 209,663	291,242	0,170	0,11	0,158	0,224	0,265	0,356	0,148	1,429	0,073	0,019	0,032	4,122	3,727	0,110	0,095			
D/85	0,200	0,096	5,321	17,226	7,561	19,715	10,705	70,865	65,009	0,404	0,266	1 657,330	385,659	0,280	0,27	0,616	0,480	1,080	1,512	0,864	5,097	0,248	0,040	0,488	18,514	7,193	0,496	0,408			
D/86	0,148	0,071	3,944	12,770	5,605	14,615	7,936	52,535	48,193	0,300	0,198	1 228,642	285,904	0,208	0,20	0,457	0,356	0,801	1,121	0,641	3,778	0,184	0,030	0,362	13,725	5,332	0,368	0,303			
D/88	0,174	0,170	5,540	14,825	7,984	14,564	8,142	64,915	38,915	0,289	0,192	1 447,259	281,365	0,220	0,19	0,410	0,319	0,622	0,903	0,485	3,137	0,866	0,066	0,373	16,880	11,436	1,947	0,622			
D/91	0,018	0,017	0,569	1,523	0,820	1,497	0,837	6,671	3,999	0,030	0,020	148,722	28,913	0,023	0,02	0,042	0,033	0,064	0,093	0,050	0,322	0,089	0,007	0,038	1,735	1,175	0,200	0,064			
D/93	0,012	0,012	0,376	1,007	0,542	0,989	0,553	4,409	2,643	0,020	0,013	98,302	19,111	0,015	0,01	0,028	0,022	0,042	0,061	0,033	0,213	0,059	0,005	0,025	1,147	0,777	0,132	0,042			
D/94	0,005	0,005	0,169	0,453	0,244	0,445	0,249	1,982	1,188	0,009	0,006	44,191	8,591	0,007	0,01	0,013	0,010	0,019	0,028	0,015	0,096	0,026	0,002	0,011	0,515	0,349	0,059	0,019			
D/101	1,250	1,271	36,619	94,213	53,199	96,108	52,574	450,151	279,118	1,787	1,179	7 409,727	1 877,714	1,500	1,40	2,770	2,083	4,333	6,124	3,416	21,621	6,915	0,500	3,249	122,145	89,047	15,206	4,791			
D/107	0,001	0,000	0,024	0,040	0,030	0,066	0,037	0,188	0,321	0,003	0,001	9,864	4,102	0,002	0,00	0,003	0,002	0,005	0,006	0,004	0,024	0,013	0,000	0,005	0,152	0,042	0,017	0,006			
D/110	0,001	0,002	0,087	0,239	0,099	0,199	0,122	0,948	0,471	0,004	0,003	ND	ND	0,003	0,00	0,003	0,004	0,005	0,006	0,004	0,027	0,002	0,001	0,001	0,056	0,051	0,002	0,002			
D/111	0,001	0,001	0,065	0,179	0,074	0,148	0,091	0,707	0,351	0,003	0,002	ND	ND	0,002	0,00	0,002	0,003	0,004	0,004	0,003	0,020	0,002	0,000	0,001	0,042	0,038	0,002	0,002			
D/112	0,000	0,001	0,024	0,065	0,027	0,054	0,033	0,259	0,128	0,001	0,001	ND	ND	0,001	0,00	0,001	0,001	0,001	0,002	0,001	0,007	0,001	0,000	0,000	0,015	0,014	0,001	0,001			
D/113	0,041	0,033	0,854	2,100	1,378	2,319	1,242	11,986	6,774	0,037	0,024	136,390	32,424	0,031	0,03	0,058	0,041	0,088	0,126	0,071	0,445	0,167	0,010	0,089	2,688	1,418	0,325	0,108			
D/114	0,030	0,030	0,876	2,254	1,272	2,299	1,258	10,767	6,676	0,043	0,028	177,236	44,914	0,036	0,03	0,066	0,050	0,104	0,146	0,082	0,517	0,165	0,012	0,078	2,922	2,130	0,364	0,115			
D/115	0,146	0,149	4,291	11,040	6,234	11,263	6,161	52,752	32,709	0,209	0,139	868,319	220,043	0,176	0,16	0,325	0,244	0,508	0,718	0,400	2,534	0,810	0,059	0,381	14,314	10,435	1,782	0,561			
D/116	0,004	0,003	0,134	0,385	0,190	0,353	0,147	1,421	0,789	0,008	0,005	50,090	6,672	0,005	0,00	0,009	0,008	0,014	0,021	0,010	0,069	0,013	0,001	0,004	0,334	0,182	0,031	0,010			
D/117	0,004	0,004	0,170	0,489	0,241	0,449	0,187	1,806	1,003	0,010	0,007	63,685	8,482	0,006	0,00	0,012	0,010	0,017	0,026	0,013	0,088	0,016	0,001	0,004	0,424	0,231	0,039	0,010			
D/118	0,003	0,003	0,109	0,312	0,154	0,287	0,119	1,154	0,641	0,006	0,004	40,684	5,419	0,004	0,00	0,008	0,006	0,011	0,017	0,008	0,056	0,010	0,001	0,003	0,271	0,148	0,025	0,008			
<b>Total</b>	<b>4,094</b>	<b>3,416</b>	<b>125,235</b>	<b>337,434</b>	<b>168,543</b>	<b>305,334</b>	<b>181,326</b>	<b>1 430,707</b>	<b>931,747</b>		<b>4,444</b>	<b>23 779,270</b>	<b>5 913,076</b>	<b>1,477</b>	<b>4,32</b>	<b>8,079</b>	<b>6,804</b>	<b>13,904</b>	<b>18,075</b>	<b>10,752</b>	<b>66,452</b>	<b>17,068</b>	<b>1,331</b>	<b>8,418</b>	<b>298,024</b>	<b>173,793</b>	<b>30,193</b>	<b>11,053</b>			

Ireland																													
Iri 6	0,224	0,035	2,436	7,411	8,909	12,936	6,788	38,992	nd	0,372	0,491	nd	nd	0,475	0,09	0,172	0,251	0,184	0,220	0,109	1,142	0,003	0,000	0,311	1,237	3,043			
Iri 8	0,023	0,009	0,789	4,474	1,011	3,035	1,836	11,697	nd	0,144	0,462	nd	nd	<dl	<dl	<dl	&lt												

OSPAR-cood	in tonnes													in kilogrammes																						
	Deposit site	Cd	Hg	As	Cr	Cu	Pb	Ni	Zn	Oil	ΣPAH9	Total PAH	N	P	CB 28	CB 52	CB 101	CB 118	CB 138	CB 153	CB 180	ΣPCB7	Total CB	HCB	g-HCH	DDT	TBT	DBT	other/							
E/5F	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/8	0,000	0,001	0,037	0,259	0,132	0,087	0,122	0,364	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/9B	0,658	0,143	NI	14,620	16,827	20,454	6,699	49,369	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0,003	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/9C	0,003	0,015	NI	0,109	0,093	0,182	0,106	0,680	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/10	0,159	0,208	0,353	2,506	44,895	13,670	1,729	49,446	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0,951	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/10	0,005	0,011	NI	2,177	2,973	2,302	1,489	7,504	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0,287	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/10B	0,010	0,027	NI	2,544	2,109	1,653	1,211	3,641	NI	NI	NI	NI	NI	NI	0,242	0,242	0,242	0,242	0,242	0,242	0,242	1,691	NI	NI	NI	NI	NI	NI	NI	NI	NI					
E/10C	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI				
E/11	0,002	0,003	NI	0,315	0,315	0,403	0,315	1,109	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI				
E/12	0,037	0,043	0,317	1,952	1,768	0,965	1,403	3,851	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0,001	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI				
E/12B	0,035	0,012	0,608	4,118	4,446	4,820	1,264	8,657	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	1,357	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI				
<b>Total</b>	<b>2,062</b>	<b>0,799</b>	<b>22,531</b>	<b>88,059</b>	<b>109,806</b>	<b>84,293</b>	<b>45,042</b>	<b>287,425</b>	<b>19,037</b>	<b>0,108</b>	<b>0,306</b>				<b>0,242</b>	<b>15,457</b>	<b>0,180</b>																			
<b>Sweden</b>																																				
SWE/7	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI			
SWE/8	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
SWE/11	0,0014	0,0004	NI	NI	0,0035	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	0,02	NI	NI	NI	NI	NI	0,21	NI	NI	NI	NI	NI			
SWE/10	0,0002	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
SWE/21	0,0008	**	0,009	0,036	0,042	0,018	0,02	0,16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SWE/22	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		
<b>Total</b>	<b>0,002</b>	<b>0,000</b>		<b>0,036</b>	<b>0,046</b>	<b>0,018</b>	<b>0,020</b>	<b>0,160</b>														<b>0,020</b>											<b>0,210</b>			
<b>United Kingdom</b>																																				
CR010																																				
CR019																																				
CR020																																				
CR027																																				
CR030																																				
CR040	0,0001	0,0000	0,0020	0,0049	0,0048	0,0087	0,0037	0,0184														0,002											0,004			
CR050	0,0004	0,0001	0,0066	0,0246	0,0966	0,0214	0,0159	0,1985																										0,09		
CR080																																				
CR110		0,0046	0,3800	3,3151	0,4451	0,9506	3,8343	3,1873																												
DM001	0,0002	0,0001	0,0093	0,0266	0,0131	0,0230	0,0162	0,0608																										0,005	0,001	
DV010																																				
DV010	0,0010	0,0481	4,4235	8,6547	2,6445	4,6158	4,4716	13,9436																										12,02	0,24	
DV011																																				
DV040	0,0041	0,0022	0,6238	1,4834	0,3643	0,7128	0,6675	2,2457																										0,082	0,082	
F1100																																				
FO007																																				
FO010																																			0,112	
FO020																																				
FO028	0,0061	0,0053	0,3774	1,6592	0,8175	1,3030	1,0829	3,4764																												
FO036																																				
FO038	0,0018	0,0017	0,0292	0,1409	0,1445	0,2393	0,0881	0,4269	0,0287																											
FO041		0,0006	0,0475	0,3620	0,0763	0,1012	0,4300	0,3689	0,0755																											
FO042		0,0007	0,0536	0,4082	0,0860	0,1141	0,4848	0,4160	0,0851																											
FO043		0,0007	0,0564	0,4296	0,0906	0,1201	0,5103	0,4379	0,0896																											
FO044																																				
FO044	0,0782	0,3192	8,7369	31,7182	18,2951	30,1751	14,6252	61,2624														2,885												15,963		
FO048	0,0011	0,0006	0,0282	0,0862	0,1136	0,0714	0,0643	0,3800	0,0363																											
FO080																																				
HE050	0,0004	0,0004	0,0159	0,0202	0,1225	0,2420	0,0199	0,0999																												
HU015	0,0004	0,0004	0,0473	0,1127	0,0873	0,1527	0,0909	0,2909																										0,564	0,007	
HU020	0,0172	0,0219	1,5646	4,0680	2,6598	5,4761																														





## 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 Part II of the Format for Annual Reporting on Dumping Operations at Sea adopted at BDC 2001)

### 2.1 Deposit site

#### 2.1.1 France

In 2007 France did not use any new deposit sites.

#### 2.1.2 Germany

The following new deposit site is notified for the first time by the Federal German State Niedersachsen:

- **"Rute"** (new OSPAR-Code **D/58**)

The following list shows existing deposit sites in Elbe, Weser and Jade, which in previous years were reported as "deposition stretches", illustrated as arrows in the relevant maps. These "deposition stretches" have now been broken down into deposition sites for which details are notified for the first time by the German Federal Water and Shipping Directorate (cf. footnote to table 1).

At deposit sites no. D/110, D/111, D/112, D/113, D/114, D/115, D/116, D/117 and D/118 sediments are dredged and relocated within the same area by water injection. The WID (water injection dredging) sections are indicated in the attached maps with arrows.

<b>new OSPAR code</b>	<b>deposit sites</b>
D/60	Riffgat km 98,4, Ems estuary
D/63	Dukegat km 69,1, Ems estuary
D/65	entrance Osteems km 64,4, Ems estuary
D/69	deposit site 26 km 54,5, Ems estuary
D/70	Südreede 2, Jade bay
D/71	Mellumplate Nord, Jade bay
D/72	Mellumplate Mitte, Jade bay
D/73	wreck "Santos", Jade bay
D/74	deposit site Jade-Weser, Jade bay
D/75	Jade/Weser deposit site 01, Jade bay
D/76	Vareler navigation channel, Jade bay
D/78	Mellumplate Nord 2, Jade bay
D/80	Langlütjensand-Nord km 87,2 - 88,0, Weser estuary
D/82	Robbennordsteert km 92,3 - 94,5, Weser estuary
D/84	Roter Grund km 113 - 115, Weser estuary
D/85	Wremer Loch km 80,8 - 81,4, Weser estuary
D/86	Fedderwarder navigation channel km 90,9 bis 91,6, Weser estuary
D/87	Hoheweg Rinne km 100,1 bis 101,1, Weser estuary
D/88	Brunsbüttel East km 688,90-690,10, Elbe estuary
D/89	Oste km 706,68-707,22, Elbe estuary
D/91	Pegel Otterndorf km 714,10-714,95, Elbe estuary
D/92	Glameyer Stack km 716,65-717,35, Elbe estuary
D/93	Cuxhaven km 723,27-724,06, Elbe estuary
D/94	Steinriff km 730,43-731,578, Elbe estuary
D/95	Spitzsand km 732,16-733,33, Elbe estuary
D/96	Norderrinne 1 km 737,64-739,16, Elbe estuary
D/97	Norderrinne 2 km 745,85-748,13, Elbe estuary
D/98	Bake B km 752,24-753,36, Elbe estuary
D/99	Vorspül. Glameyer Stack Ost, Elbe estuary
D/100	Vorspül. Glameyer Stack West, Elbe estuary
D/101	deposit site 700, Elbe estuary
D/107	Amtsgrenze AG 1 km 688,25; Elbe estuary
D/110	Jade bay / navigation channel km 15,0-22,0
D/111	Jade bay / navigation channel km 22,0-35,0
D/112	Jade bay / navigation channel km 35,0-41,0
D/113	Elbe estuary / navigation channel; km 680,5-685,5
D/114	Elbe estuary / navigation channel; km 685,5-689,8
D/115	Elbe estuary / navigation channel; km 689,8-698,5
D/116	Elbe estuary / navigation channel; km 698,5-709,0
D/117	Elbe estuary / navigation channel; km 709,0-717,0
D/118	Elbe estuary / navigation channel; km 717,0-726,0

Co-ordinates of all newly reported deposit sites are summarized in the following table:

Deposit site	Co-ordinates													
	long	lat												
D/58	53°42'19,86"	07°31'10,32"	53°42'24,72"	07°31'16,44"	53°42'08,40"	07°31'55,50"	53°42'3,54"	07°31'49,74"						
D/60	53°37'17,63'	06°30'53,2"	53°37'19,03"	06°32'47,69"	53°36'59,58"	06°33'05,39"								
D/63	53°27'53,3"	06°53'19,58"	53°27'24,87"	06°54'06,68"	53°27'11,03"	06°54'18,31"	53°27'8,35"	06°54'14,24"	53°27'57,33"	06°52'55,22"	53°27'59,81"	06°53'00,75"		
D/65	53°26'02,34'	06°56'50,26"	53°25'24,34"	06°57'05,23"	53°25'22,35"	06°56'43,25"	53°25'59,34"	06°56'29,23"						
D/69	km 54,5													
D/70	53°31'24,52'	08°10'51,19"	53°31'24,63"	08°11'07,47"	53°31'10,08"	08°11'07,75"	53°31'09,97"	08°10'51,47"						
D/71	53°47'33,12'	08°02'27,25"	53°47'39,21"	08°03'01,53"	53°47'16,66"	08°03'12,14"	53°47'11,05"	08°02'37,85"						
D/72	53°46'44,92'	08°03'27,33"	53°46'48,48"	08°3',49,37"	53°46'21,09"	08°04'02,53"	53°46'17,36"	08°03'40,5"						
D/73	53°50'49,81'	07°48'10,23"	53°50'48,49"	07°48'16,45"										
D/74	53°51'05,31'	07°53'05,48"	53°51'21,05"	07°53'11,08"	53°51'07,06"	07°55'06,07"	53°50'51,32"	07°55'00,46"						
D/75	53°55'12,47'	07°50'02,18"	53°55'39,38"	07°53'16,27"	53°54'45,52"	07°56'33,29"	53°54'15,42"	07°52'57,13"						
D/76	53°30'04,04'	08°10'33,31"	53°30'05,41"	08°10'38,34"	53°29'49,42"	08°10'41,36"	53°29'51,42"	08°10'46,31"	53°29'42,4"	08°10'47,35"	53°29'43,41"	08°10'52,33"	53°29'28,42"	08°10'59,34"
D/78	53°47'39,21'	08°03'01,53"	53°47'42,94"	08°03'23,29"	53°47'20,39"	08°03'34,73"	53°47'16,66"	08°03'12,14"						
D/80	53°40'59,97'	08°20'58,47"	53°41'03,42"	08°21'07,13"	53°40'43,51"	08°21'34,68"	53°40'39,91"	08°21'26,56"						
D/82	53°43'40,58'	08°17'12,36"	53°43'51,33"	08°17'24,72"	53°43'03,98"	08°18'55,49"	53°42'55,99"	08°18'44,45"						
D/84	53°50'46,21'	08°05'11,31"	53°51'15,85"	08°05'38,02"	53°51'45,84"	08°04'01,61"	53°51'16,85"	08°03'35,99"						

Deposit site	Co-ordinates													
	long	lat	long	lat	long	lat	long	lat	long	lat	long	lat	long	lat
D/85	53°38'30,37'	08°25'16,77"	53°38'25,17"	08°25'10,53"	53°38'14,33"	08°25'36,42"	53°38'19,63"	08°25'42,5"						
D/86	53°42'45,63'	08°19'10,79"	53°42'40,26"	08°19'05,09"	53°42'23,45"	08°19'34,31"	53°42'29,14"	08°19'39,95"						
D/87	53°45'25,25'	08°11'54,93"	53°45'13,54"	08°11'35,67"	53°44'50,83"	08°12'14,03"	53°45'02,51"	08°12'33,51"						
D/88	53°52'30,87'	09°14'14,97"	53°52'33,94"	09°14'16,91"	53°52'27,23"	09°14'54,36"	53°52'21,53"	09°15'15,4"	53°52'18,3"	09°15'13,19"	53°52'24,16"	09°14'52,43"		
D/89	53°50'59,53'	08°59'18,44"	53°51'04,23"	08°59'47,98"	53°51'01,15"	08°59'49,89"	53°50'56,3"	08°59'20,08"						
D/91	53°50'17,24'	08°52'20,92"	53°50'21,17"	08°53'05,75"	53°50'17,45"	08°53'06,85"	53°50'13,53"	08°52'22,02"						
D/92	53°50'24,2"	08°50'07,73"	53°50'25,22"	08°50'46,28"	53°50'18,75"	08°50'47,13"	53°50'17,73"	08°50'8,58"						
D/93	53°51'26,45'	08°44'31,28"	53°51'30,41"	08°44'37"	53°51'13,5"	08°45'09,66"	53°51'9,44"	08°45'03,66"						
D/94	53°50'17,24'	08°52'20,92"	53°50'21,17"	08°53'05,75"	53°50'17,45"	08°53'06,85"	53°50'13,53"	08°52'22,02"						
D/95	53°55'49,52'	08°40'24,12"	53°55'54,91"	08°40'42,72"	53°55'20,86"	08°41'11,75"	53°55'15,15"	08°40'52,34"						
D/96	53°58'09,84'	08°37'29,07"	53°58'01,89"	08°37'20,20"	53°57'30,81"	08°38'24,32"	53°57'38,86"	08°38'34,95"						
D/97	53°59'16,82'	08°28'10,09"	53°59'27,70"	08°30'13,72"	53°59'17,52"	08°30'16,31"	53°59'06,00"	08°28'12,97"						
D/98	53°58'47,31'	08°23'21,01"	53°58'41,15"	08°23'18,90"	53°58'34,66"	08°24'18,25"	53°58'41,13"	08°24'19,26"						
D/99	53°49'51,93'	08°51'03,09"	53°49'57,75"	08°51'03,88"										
D/100	53°49'55,13'	08°48'43,36"	53°49'57,07"	08°48'43,36"										
D/101	53°53'00,25'	09°04'44,53"	53°53'04,20"	09°04'42,18"	53°53'10,32"	09°05'12,25"	53°53'06,15"	09°05'14,59"						

Deposit site	Co-ordinates													
	long	lat	long	lat	long	lat	long	lat	long	lat	long	lat	long	lat
D/107	53°52'20,44'	09°16'09,85"	53°52'08,82"	09°16'00,20"	53°52'15,83"	09°15'35,62"	53°52'27,45"	09°15'45,27"						
D/110	Jade bay km 15-22													
D/111	Jade bay km 22-35													
D/112	Jade bay km 35-41													
D/113	Elbe estuary km 698,5-739,0													
D/114	Elbe estuary km 698,5-739,0													
D/115	Elbe estuary km 689,8-698,5													
D/116	Elbe estuary km 698,5-709,0													
D/117	Elbe estuary km 709,0-717,0													
D/118	Elbe estuary km 717,0-726,0													

### 2.1.3 Iceland

The following site was used in 2006 but not in 2007: IS 44

The following sites were not used in 2006, but used in 2007:  
IS 18, IS 21, IS 22, IS 25, IS 41, IS 51.

### 2.1.4 Ireland

The locations of the deposit sites in Ireland are indicated in Part II-Figure 3 and their co-ordinates in Table 1 to that figure. No new dumpsites were added in 2007.

### 2.1.5 Norway

Number of deposit sites per county in Norway for 2007 in the OSPAR Convention area:

Number County	2006		
	Dredged material	Inert material	Other waste
1 Østfold	11		
2 Akershus/Oslo	2		
3 Vestfold	16		
4 Buskerud	2		
5 Telemark	0		
6 Aust-Agder	0		
7 Vest-Agder	3		
8 Rogaland	0		
9 Hordaland	6		
10 Sogn og Fjordane	0		
11 Møre og Romsdal	5		
12 Sør-Trøndelag	0		
13 Nord-Trøndelag	1		
14 Nordland	1	1	1*
15 Troms	0		
16 Finnmark	1	1	
<b>Total</b>	<b>48</b>	<b>2</b>	<b>1</b>

\* = waste from fish production

### 2.1.6 Spain

Several new deposit sites have been incorporated with respect to previous years. Table 1 includes the OSCOM codes for these new sites with its geographical coordinates and updated the information of sites used in 2006.

*Geographical coordinates (WGS 84) for Spanish deposit sites*

OSCOM-code	Name	Latitude	Longitude
E/2B	Plentzia	43° 25' N	3° 05' W
E/3B	Laredo	43° 27.7' N	3° 24.1' W
E/3B	Santoña	43° 27.7' N	3° 24.1' W
E/3B	Colindres	43° 27.7' N	3° 24.1' W
E/3C	Suances	43° 26.8' N	4° 1.78' W
E/4C	Candás	43° 35'18" N	5° 44'18" W
E/5	Avilés	43° 36.8' N	5° 56.8' W
E/5B	San Juan de la Arena	43° 36'N	6° 3.7' W
E/5B	San Esteban de Pravia	43° 36'N	6° 3.7' W
E/5C	Navia	43° 34.3' N	6° 42.5' W
E/5D	Luarca	43° 34.15' N	6° 30' W
E/5E	Puerto de Vega	43° 34.5' N	6° 38' W
E/5F	Figueras	43° 35' N	7° 2' W
E/8	Vilagarcía	42° 25'N	9° 2' W
E/9B	Marín-Pontevedra	42° 17' N	8° 54.56' W
E/9C	Baiona	42° 24.5 ' N	9° 2.5' W
E/10	Huelva	36° 58' 8" N	6° 53' 8" W
E/10	El Terrón	36° 58' 8" N	6° 53' 8" W
E/10B	La Moharra	37° 7' 50" N	7° 17' 5" W
E/10C	Isla Cristina	37° 4' 00" N	7° 22' 00" W
E/11	Sevilla	36° 46.15' N	6° 29.3' W
E/12	Cádiz	36° 30' 30" N	6° 24' 30" W
E/12B	Chipiona	36° 45' 53,4" N	6° 33' 33,66" W

Three maps have been reported showing the geographical location of disposal sites. The first map is a general view of Spanish marine disposal sites while the second and the third ones are respectively, a view of detail of the northern and southern Spanish Coast.

### 2.1.7 Sweden

Two dumping sites have not been previously reported:

SWE/21 N 57° 19,29', E 12° 02,05

SWE/22 N 56° 42,5', E 12° 25,0'

## 2.1.8 United Kingdom

New disposal sites this year are:

Sitecode	Name	Degrees & Decimal Mins		Site Shape
		Latitude	Longitude	
NS100	BRITNED	51 40.332 N	01 52.860 E	Polygon
NS100	BRITNED	51 40.620 N	01 53.640 E	
NS100	BRITNED	51 40.824 N	01 54.186 E	
NS100	BRITNED	51 41.142 N	01 55.026 E	
NS100	BRITNED	51 41.436 N	01 55.812 E	
NS100	BRITNED	51 41.622 N	01 56.322 E	
NS100	BRITNED	51 41.670 N	01 56.442 E	
NS100	BRITNED	51 41.820 N	01 56.844 E	
NS100	BRITNED	51 41.958 N	01 57.216 E	
NS100	BRITNED	51 42.012 N	01 57.372 E	
NS100	BRITNED	51 42.060 N	01 57.486 E	
NS100	BRITNED	51 42.102 N	01 57.600 E	
NS100	BRITNED	51 42.156 N	01 57.738 E	
NS100	BRITNED	51 42.294 N	01 58.122 E	
NS100	BRITNED	51 42.420 N	01 58.452 E	
NS100	BRITNED	51 43.140 N	02 00.372 E	
NS100	BRITNED	51 43.296 N	02 00.780 E	
NS100	BRITNED	51 43.398 N	02 01.056 E	
NS100	BRITNED	51 43.710 N	02 01.878 E	
NS100	BRITNED	51 45.150 N	02 05.736 E	
NS100	BRITNED	51 47.346 N	02 11.610 E	
NS100	BRITNED	51 47.382 N	02 11.706 E	
NS100	BRITNED	51 47.598 N	02 12.294 E	
NS100	BRITNED	51 50.430 N	02 21.042 E	
NS100	BRITNED	51 50.472 N	02 21.186 E	
NS100	BRITNED	51 50.994 N	02 23.088 E	
NS100	BRITNED	51 51.150 N	02 23.640 E	
NS100	BRITNED	51 53.052 N	02 30.912 E	
NS100	BRITNED	51 52.920 N	02 32.496 E	
XX999	Reserved site			

## 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  $\rho_{sat}$  and the concentration of dry matter  $\rho_{ms}$  :

These two parameters are connected through the following relationship:

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

-  $\rho_{sat}$  = density of the mixture (in kg/m<sup>3</sup>)

-  $\rho_{ms}$  = concentration of dry matter in the mixture (in kg dry matter/m<sup>3</sup>)

- $\rho_o$  = density of water at 4°C (in kg/m<sup>3</sup>)
- $\rho_{ss}$  = density of the dry sediment (in kg/m<sup>3</sup>).

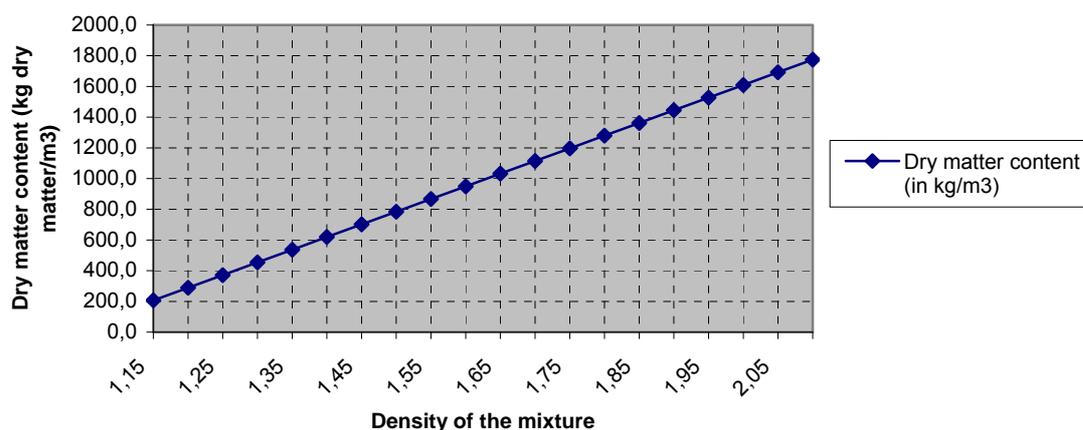
Assuming that  $\rho_{ss} = 2\,600\text{ kg/m}^3$  and  $\rho_o = 1\,025\text{ kg/m}^3$ , the following simplified formula is obtained:

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

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 <sup>3</sup> )
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 <sup>3</sup> )
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 PAH<sub>6</sub> (benzo[ghi]perylene; benzo[a]pyrene; fluoranthene; indeno[1,2,3-cd]pyrene; benzo[b]fluoranthene; benzo[k]fluoranthene)

### 2.2.3 Ireland

*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.

In many cases the material dumped at particular sites originates from more than one area. Sediment analysis is carried out by independent laboratories and consequently the limits of detection vary.

The limits of detection requested from laboratories are:

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

The limits of detection achieved are:

	Irl 8	Irl 17	Irl 20	Irl 33	Irl 45	Irl 47	Irl 48	Irl 49	Irl 50	Irl 51
Hg (mg kg <sup>-1</sup> )	-	0,01-1	-	0,05	-	-	0,03	-		0,05
As (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		-
Cd (mg kg <sup>-1</sup> )	0,05	0,04-1	-	-	-		0,05	-		0,1
Cu (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		5
Pb (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		5
Zn (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		10
Cr (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		5
Ni (mg kg <sup>-1</sup> )	-	1	-	-	-		0,05	-		15
TBT (mg kg <sup>-1</sup> )	0,001-0,02	0,01	0,001	0,001	0,001	0,001	0,02	0,02		0,02
DBT (mg kg <sup>-1</sup> )	0,001	0,001-0,01	0,001	0,001	0,001	0,001	0,02	0,05		0,02
CB28 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB52 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB101 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB118 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB138 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB153 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
CB180 (ug kg <sup>-1</sup> )	0,01-3,4	1,0-8,7	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDE pp (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDT pp (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
TDE pp (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
DDT op (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
Dieldrin (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
g-HCH (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1
HCB (ug kg <sup>-1</sup> )	0,01-3,4	6,7-10,0	2,8	5,0-7,0	7,0	2,8	1,0	1		1

**Notes:**

Units are all dry weight.

Where ranges are given this indicates that different labs testing sediments from various locations dumped at one dumpsite achieved varying detection limits.

**Notes:**

In some instances the material dumped at a particular site can comprise sediment dredged from various dredging locations. Often a contaminant may be detected in the sediment from one location dumped at a dumpsite whilst the same contaminant from another location (dumped at the same site) is below the detection limits. In such cases the amount of the substance dumped is given as a maximum (e.g. 0,10 tonnes + <0,02 tonnes is quoted as <0,12 tonnes).

**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

**Heavy metals analysis**

*For Cd, Pb, Cu, Zn, Ni and Cu:*

- Acid digestion with nitric acid in a microwave oven.
- Quantitative determination by atomic absorption spectrophotometry, in flame or in graphite chamber, depending on the sample concentration.

*For As:*

- Acid digestion in microwave oven with nitric acid.
- Previous reduction of the sample.
- Determination by hydride generation matched to an atomic absorption spectrophotometer.

*For Hg:*

- Acid digestion in microwave oven with nitric acid.
- Determination by cold steam technique matched to atomic absorption spectrophotometry.

**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.

**Organic matter**

For this parameter we have used two types of techniques.

- *As volatile solids:*

- Drying of the sample at 105°C, grinding in a mortar and combustion in muffle at 550°C up to constant weight.
- Determination of total quantity as (formula used in our "Recommendations for the management of dredged material in the ports of Spain"):

$$\text{TOC mass (tn)} = \frac{0,35 \times \text{Volatile solids concentration (\%)} \times \text{dumped mass (tn)}}{100}$$

- As Total organic carbon (TOC):

- Drying at 105°C, elimination of the inorganic carbon with HCL and determination by means of calcination and detection of CO<sub>2</sub> with an infrared detector (Elementary analysis).

- Determination of the total quantity as:

$$\text{TOC mass (tn)} = \frac{\text{TOC concentration (\%)} \times \text{dumped mass (tn)}}{100}$$

## 2.2.5 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 Avilés Harbour (E/5), two different bioassays using *Chlorella vulgaris* and Microtox 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;	<i>Is, F, Ie, UK</i>		<i>De, Se,</i>
(ii) periodic comparative analysis of laboratory reference materials and certified reference materials;	<i>Is, F, Se, Ie, UK</i>		<i>De</i>
(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;	<i>Is, F, Se, Ie, UK</i>		<i>D</i>
(iv) periodic participation in interlaboratory comparison exercises, including, where possible, international comparison exercises;	<i>Is, F (at least yearly), Ie, UK</i>		<i>De</i>
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

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
(v) periodic participation in national and, where possible, international laboratory proficiency schemes, under which: <ul style="list-style-type: none"> <li>• participating laboratories are asked to analyse samples of substances which are provided by the organisers of the scheme;</li> <li>• the composition of those samples is not disclosed in advance;</li> <li>• the results of the scheme for each participating laboratory are made available to all participating laboratories.</li> </ul>	<i>F (only in national comparison exercises), Ie, UK</i>		<i>De</i>

- 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).*

*"Some" has been marked in a(i) for Sweden because of difficulties in obtaining reference samples.*

- 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).

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

*Sweden reported that although information about laboratory was lacking in some cases, it can be assumed that all laboratories were accredited. There are, however, uncertainties about sampling quality.*

## 2.5 Other relevant information

### 2.5.1 France

49 dumping sites among 83 regulated sites were used in 2007.

25 dumping permits among 71 issued permits were used in 2007.

## 3. Footnotes to all tables

### 3.1 Table 1

#### 3.1.1 Belgique

- (1) Permits were issued for 2 years (2006-2008). The tonnes licensed are maximum amounts per year. The tonnes licensed with the permits issued during 2006 are being increased by an amendment of the licenses. The actually permitted quantities are mentioned in column 4
- (2) The permits for maintenance dredging are valid for 10 years. The amounts licensed are maximum amounts per year.
- (3) The permits for maintenance dredging are valid for 10 years. The amounts licensed are maximum amounts per year.

#### 3.1.2 France

- (1) 25 used in 2007 among the 71 valid permits.

#### 3.1.3 Germany

- (1) This quantity refers to silt.
- (2) 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/LP requirements. The number of approvals increased compared to previous years, as for the year 2007, for the first time, dredged material disposal on deposit sites of the German Federal Water and Shipping Directorate was reported more detailed. In the past, information on the disposal of dredged material deposit sites were pooled, i.e. reporting did not differentiate single disposal sites for the 3 large estuaries and the Jade Bay, but each of these areas was regarded as one large deposit site.
- (3) This quantity refers to sand.

#### 3.1.4 Ireland

- (1) 6 new permits were issued in 2007 and 6 permits were amended from earlier years.
- (2) The amount licensed was substantially more than the amount dumped. This is because most applications contained substantial amounts for contingency.

#### 3.1.5 Netherlands

- (1) Permits issued for dumping of dredged materials at sea are licensed in cubic metres (not metric tonnes).
- (2) Permits 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.

### 3.1.6 Spain

- (1) In 2007 the following new permits were issued for:

*Plentzia* (E/2B) : 1 permit

A joint permit was issued for the followings harbours: *Laredo*, *Colindres* and *Santoña* with the same dumping site (E/3B) and *Suances* (E/3C).

*Candás* (E/4C) : 2 permits. These permits are added to the permit issued in 2006 for the period 2006-2010.

*San Esteban de Pravia* (E/5B): 1 permit

*San Juan de la Arena* (E/5B): 1 permit

*Navia* (E/5C): 2 permits

*Figueras* harbour (E/5F): 1 permit

*Baiona* harbour (E/9C): 1 permit

*Marín/Pontevedra* (E/9B): 1 permit

*La Moharra* (E/10B): 1 permit

*Isla Cristina* (E/10C): 1 permit

*El Terrón* (E/10): 1 permit

*Sevilla* (E/11): 1 permit

*Cádiz* (E/12): 1 permit

*Chipiona* (E/12B): 1 permit

- (2) In the following cases the disposal operations of dredging works started (and licensed) in previous years:

*Luarca* (permit issued in year 2005 for the period 2005 – 2009)

*Puerto de Vega* (permit issued in 2004 for the period 2004 – 2008)

*Avilés* (OSCOM code E/5) in year 2005 - *Vilagarcía* (OSCOM code E/8) in year 2004. This permit includes the period until 2007.

*Huelva* (OSCOM code E/10): in year 2003, including the period until 2010.

### 3.1.7 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 licenses are now issued for 3 years, including some with very large tonnages.
- (3) 6 000 tonnes dry weight of fish waste was licensed for deposit in the sea in 2005 under a 3 year licence issued in December 2005 to run from 1<sup>st</sup> February 2006 to 31<sup>st</sup> January 2009 *i.e.* 2 000 tonnes per annum. The material was licensed for deposit directly onto the intertidal zone but is not dumping under the terms of the Convention. 1,469 tonnes of fish waste was deposited under this licence during 2007.

## 3.2 Table 2

### 3.2.1 Germany

- (1) Action levels and contaminant concentrations reported in footnotes (2), (3), (4), (5) and (6) refer to the fine-grained fraction <20 µm.

*Concentrations of contaminants which exceed action level 2 in the fraction < 20 µm*

Reasons for classification	(2)	(3)	(4)	(5)
Contaminants (in fraction < 20 µm)				
HCB (mg/kg)	0,017	0,008		0,018
p,p-DDT (mg/kg)	0,006	0,004		0,010
p,p-DDD (mg/kg)	0,021	0,016	0,011	0,030
p,p-DDE (mg/kg)	0,007	0,005	0,004	0,010
γ-HCH (mg/kg)	0,0006			0,0008
PCB 180 (mg/kg)				0,007
Tonnes disposed of (dry weight)	1 775	46 482	2 874 607	817 000

- (2) & (3) dredging areas from Elbe-km 639 to 685,5

Part of the dredged material from the inner Elbe estuary upstream of the freshwater limit and thus outside 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 I in column (2) + (3).

- (4) dredging areas from Elbe-km 685,5 to 748,0

Although pp-DDE and pp-DDD concentrations exceed action level 2 slightly, disposal in the Elbe estuary was allowed, as no contaminants are added to the estuary. Sediments are dredged and relocated within short distance. A considerable amount of dredged material disposed of is returned by the currents, and therefore the same material has to be dredged and disposed of repeatedly. The concentrations of pp-DDE and pp-DDD in the dredged material and in suspended particulate matter of the Elbe are very similar. They originate from the upper reaches of the Elbe. There are no local sources of these contaminants in the dredging area.

The average concentrations of contaminants exceeding action level 2 and the related amount of dredged material are shown in Table I in column (4).

- (5) The maintenance of the Hamburg Seaport requires continuous dredging of the access channels to the harbour basins. According to the concept of management of dredged material established by the authority for economic and environmental affairs of the City of Hamburg, disposal of dredged material not exceeding given quality criteria may be carried out in the Elbe downstream of Hamburg only during winter time in order to retain viable oxygen concentrations. About 1 Mio m<sup>3</sup>/a of highly contaminated dredged material is deposited on land, partially after mechanical treatment of the material. In summer 2005, there was an increasing need for dredging in order to keep accesses to the harbour basins open. However, disposal in the river Elbe in summer was not permitted, since it could severely affect the water quality (e.g. oxygen depletion). Moreover, it is suspected that large amounts of dredged material disposed of downstream of Hamburg is transported back to the harbour area. In order to reduce the need for dredging, the Hamburg Port Authority intended to remove part of the material from the sediment cycle and deposit it on land. However, it was not possible to increase the capacity of the sediment treatment plant.

Thus, in summer 2005, the Federal State Schleswig-Holstein permitted disposing of 0,8 Mio m<sup>3</sup> of dredged material in 2005 and a further 3,7 Mio m<sup>3</sup> in the period 2006 to 2008 at a sediment disposal site in the Southern German Bight, provided the permit conditions of Schleswig-Holstein were met. A long term sediment management concept is being developed. Disposal of dredged material is accompanied by a comprehensive monitoring program.

The average concentrations of contaminants exceeding action level 2 and the related amount of dredged material are shown in Table I in column (5).

### 3.2.2 Ireland

- (1) Elevated levels of Cu, Pb, Zn and PAH in material considered to be localised contamination only. Material capped at dumpsite, and monitored.

## 3.3 Table 3 a

### 3.3.1. Germany

- (1) Silt, water injection dredging.
- (2) Sand, water injection dredging.
- (3) Sand, exempted from chemical analyses.
- (4) Silt.
- (5) Water injection dredging.

### 3.3.2 Ireland

- (1) Organic carbon not determined in some cases.

### 3.3.3 Netherlands

- (1) The amounts for deposit sites NL-10, 11, 14 and 15 (Eastern and Western Scheldt, Waddensea East, Ems Dollard) were not available at the time of reporting.

### 3.3.4 Sweden

- (1) 15 000 m<sup>3</sup>. N 57° 56,23', E 11° 32,89'
- (2) 1 900 m<sup>3</sup>. N 57° 50,00, E 11° 37,59
- (3-4) 5 075 m<sup>3</sup>. N 57° 36,64', E 11° 34,88'. Dredged material from two harbours
- (5) 250 m<sup>3</sup>. N 57° 40,03', E 11° 45,21'

- (6) 2 000 m<sup>3</sup>. N 57° 19,29', E 12° 02,05'. Mud, sand. Permit issued in 2007. See also under "Deposit site". The Hg-concentration was below the level of quantification, 0,025 mg/kg
- (7) 1 925 m<sup>3</sup>. N 56° 42,5', E 12° 25,0'. Sand, organic matter. See also under "Deposit site".

### 3.3.5 United Kingdom

- (1) DM001 was a deposit site at Harrington Harbour off the North-West coast of England.
- (2) NS100 was a deposit site in the North Sea disposal of pipeline pre-sweep sediment.
- (3) XX999 was a site for the disposal of sediment/rock from the emplacement of monopiles.

## 3.4 Table 3 b

### 3.4.1 Germany

- (1) Water injection dredging.
- (2) The Hamburg harbour sediments dumped amounted to 802 000 t (DW) in 2006 and to 817 000 t (DW) in 2007. While the quantity in 2007 is thus marginally higher (about 2%) than in the previous year, the quantities of TBT decreased from 99,4 kg in 2006 to 49,7 kg in 2007 (-50%) and the quantities of DBT decreased from 16,2 kg in 2006 to 9,2 kg in 2007 (-43%). This indicates, that the Regulation (EC) No 782/2003 on the prohibition of organotin compounds on ships and, in anticipation, the IMO Convention on the Control of Harmful Anti-fouling Systems on Ships have been taking effect.
- (3) Sand which is exempted from analyses according to § 5.2 of the OSPAR Guidelines for the Management of Dredged Material (Ref. No.: 1998-20) is given as additional information in Table 3a.

### 3.4.2 Iceland

- (1) No samples exceeded level 2 and in general, analysed values are within the range observed in unpolluted sediments in the relevant region. Therefore, calculation of loads are not considered relevant.

### 3.4.3 Netherlands

- (1) The amounts for deposit sites NL-10, 11, 14 and 15 (Eastern and Western Scheldt, Waddensea East, Ems-Dollard) were not available at the time of reporting.
- (2) Individual PCBs are determined but not reported since a limit is introduced from sum PCB 7.

### 3.4.4 Norway

- (1) In most cases loads have not been determined as analyses have not been carried out. Most permits are given in areas where there is no reason to expect contamination of sediments. Instead of making a table full of "ND = not determined", Norway has only included those sites where loads have been calculated.
- (2) The dredging in Oslo harbour is part of an environmental remediation project. Contaminated sediments are removed from shallow areas where they are shifted around by passenger ships, traffic, etc., and deposited in a deepwater disposal site in an already contaminated area nearby. The contaminated sediments will then be capped. The activities started in early 2006 and will be terminated in 2008. Deposited material will be capped by clean material in the second half of 2008.

### 3.4.5 Spain

- (1) The concentration showed in the column "ΣPAH9" is the sum of the following PAHs (6-Borneff PAHs): benzo[a]pyrene; benzo[b] fluoranthene; benzo[ghi]perylene; benzo[k] fluoranthene; fluoranthene and indeno[1,2,3-cd]pyrene.

### 3.4.6 Sweden

- (1) Corresponds to footnote (2) in Table 3a.
- (2) Corresponds to footnote (3) in Table 3a. The masses dumped at SWE/10 contain much less than 0,1 kg PCB and less than 0,1 kg TBT.
- (3) Corresponds to footnote (5) in Table 3a. Sn: 16 kg.

## 4. Legend to all tables

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

## Part III - Figures

FIGURE 1a: Dredging and dumping zones in Belgium in 2007

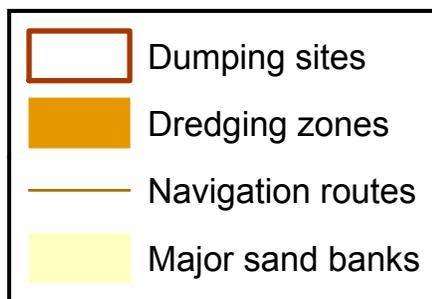
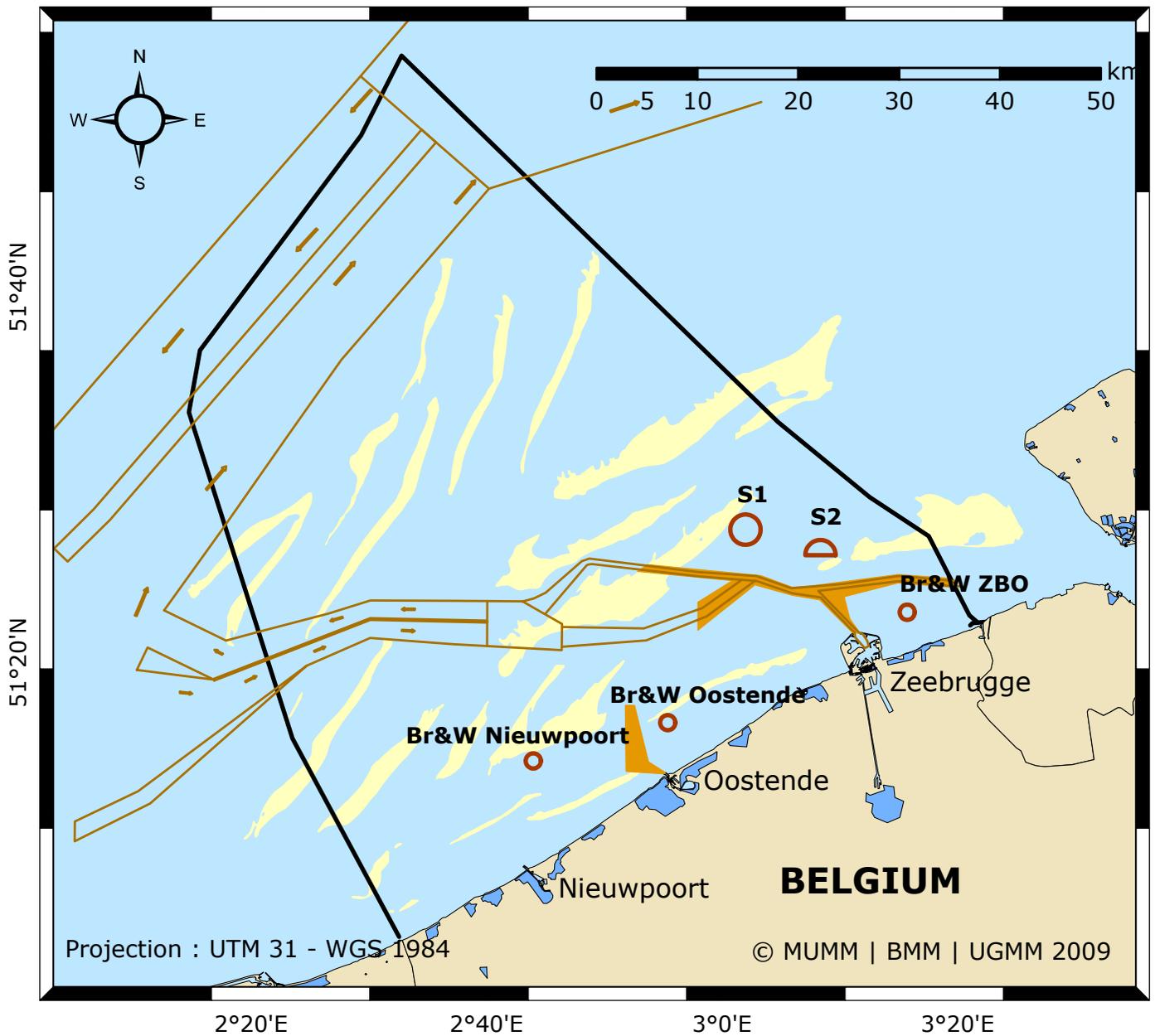




Figure 2a: Dumping sites of dredged material in France from 2000 to 2007 (Atlantic Ocean)

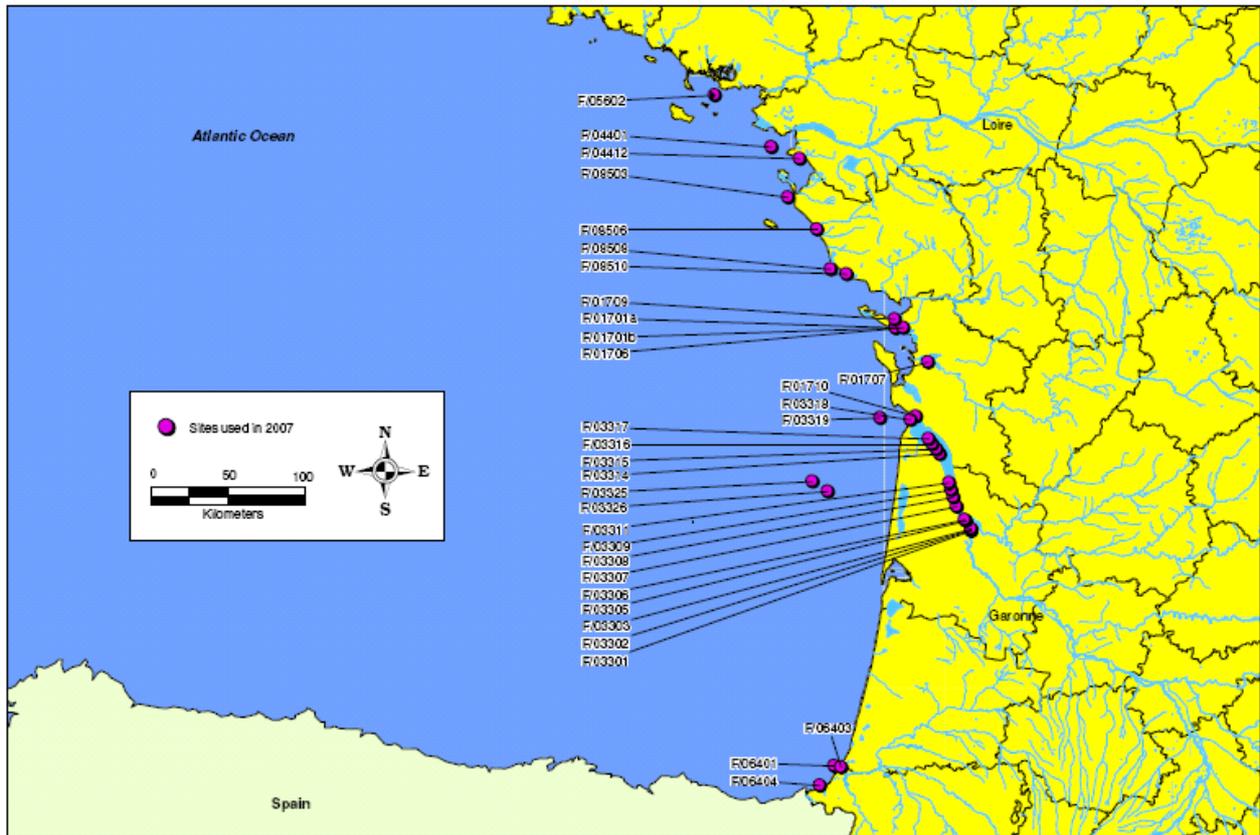


Figure 2b: Dumping sites of dredged material in France from 2000 to 2007 (English Channel)

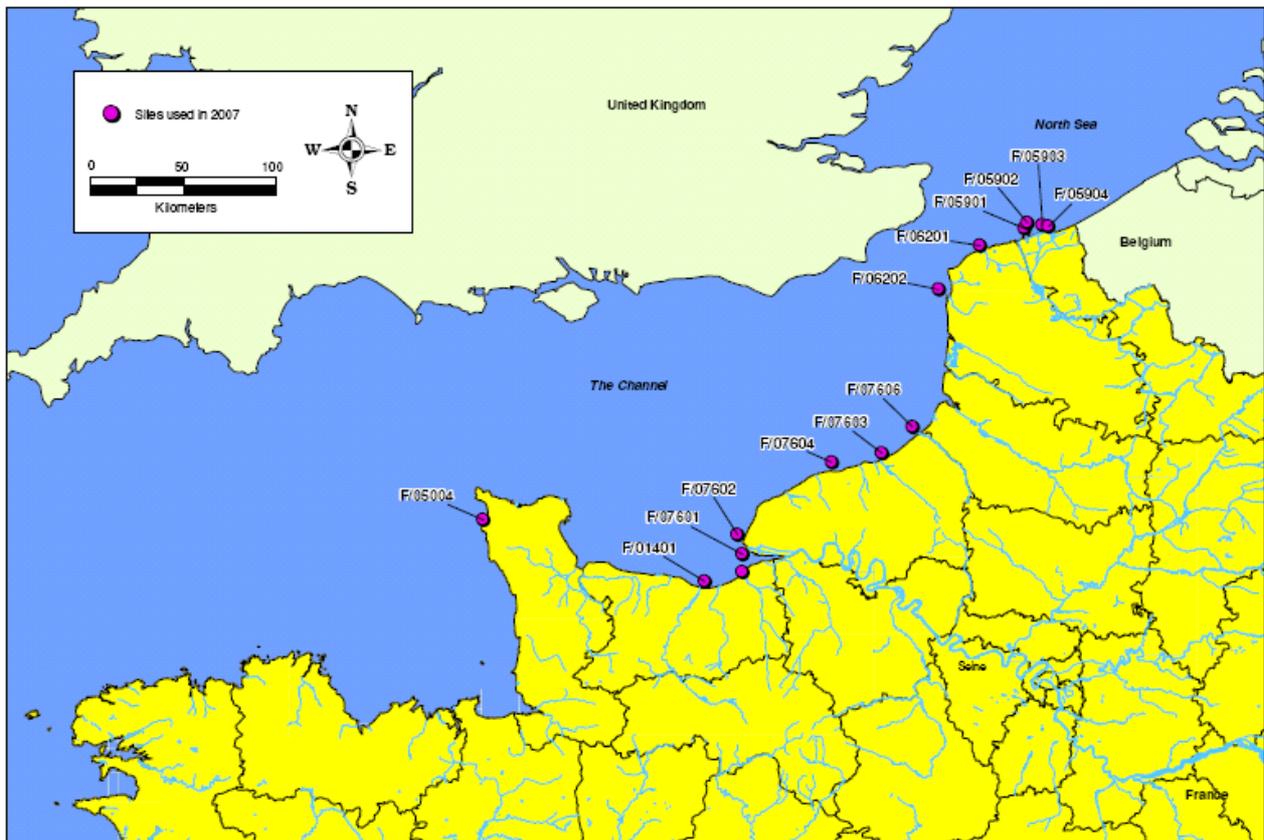


Figure 3a: Dumping sites of dredged material in Germany in 2007



Figure 3b: Detailed map with disposal sites in the estuary of the river Elbe - 2007

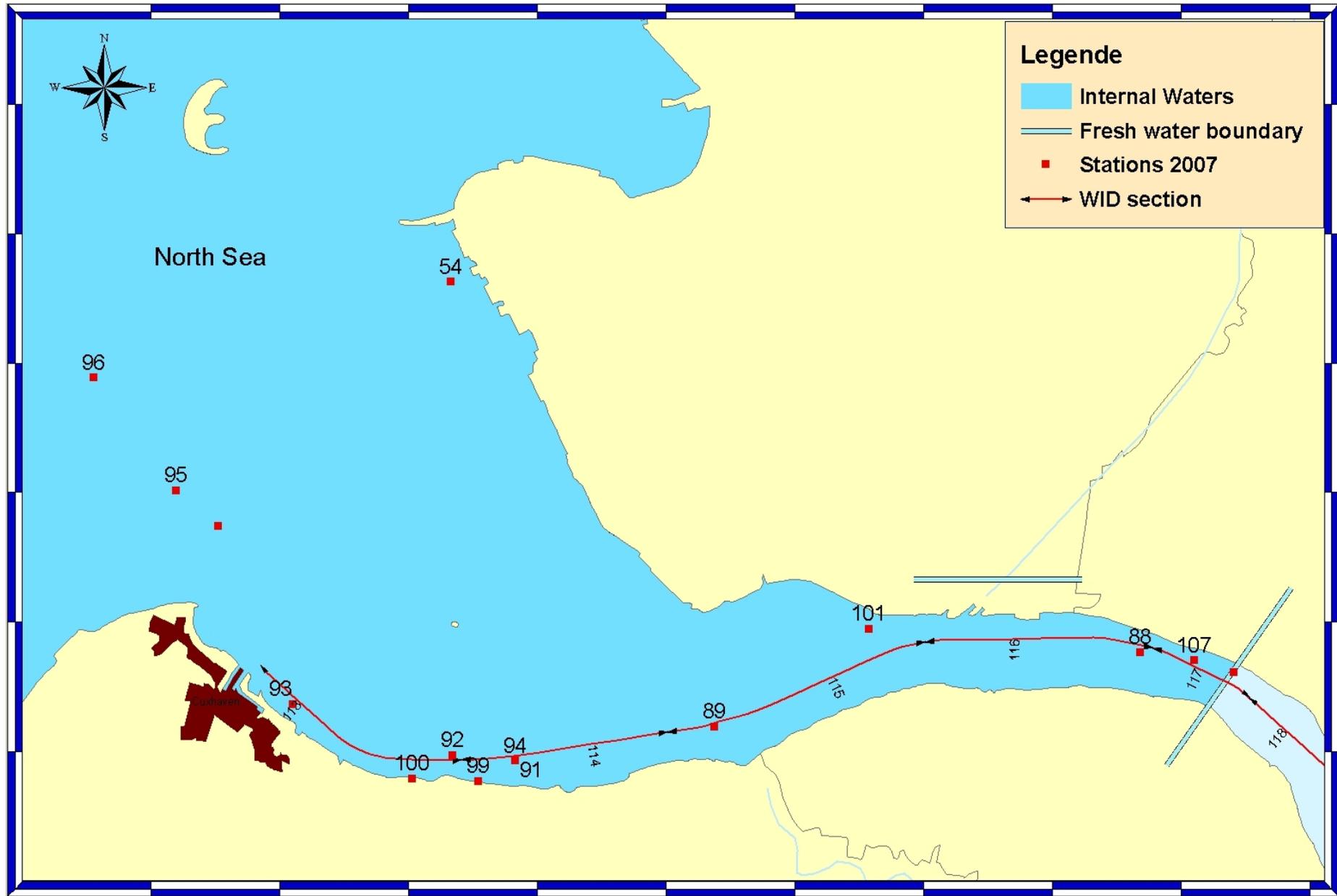
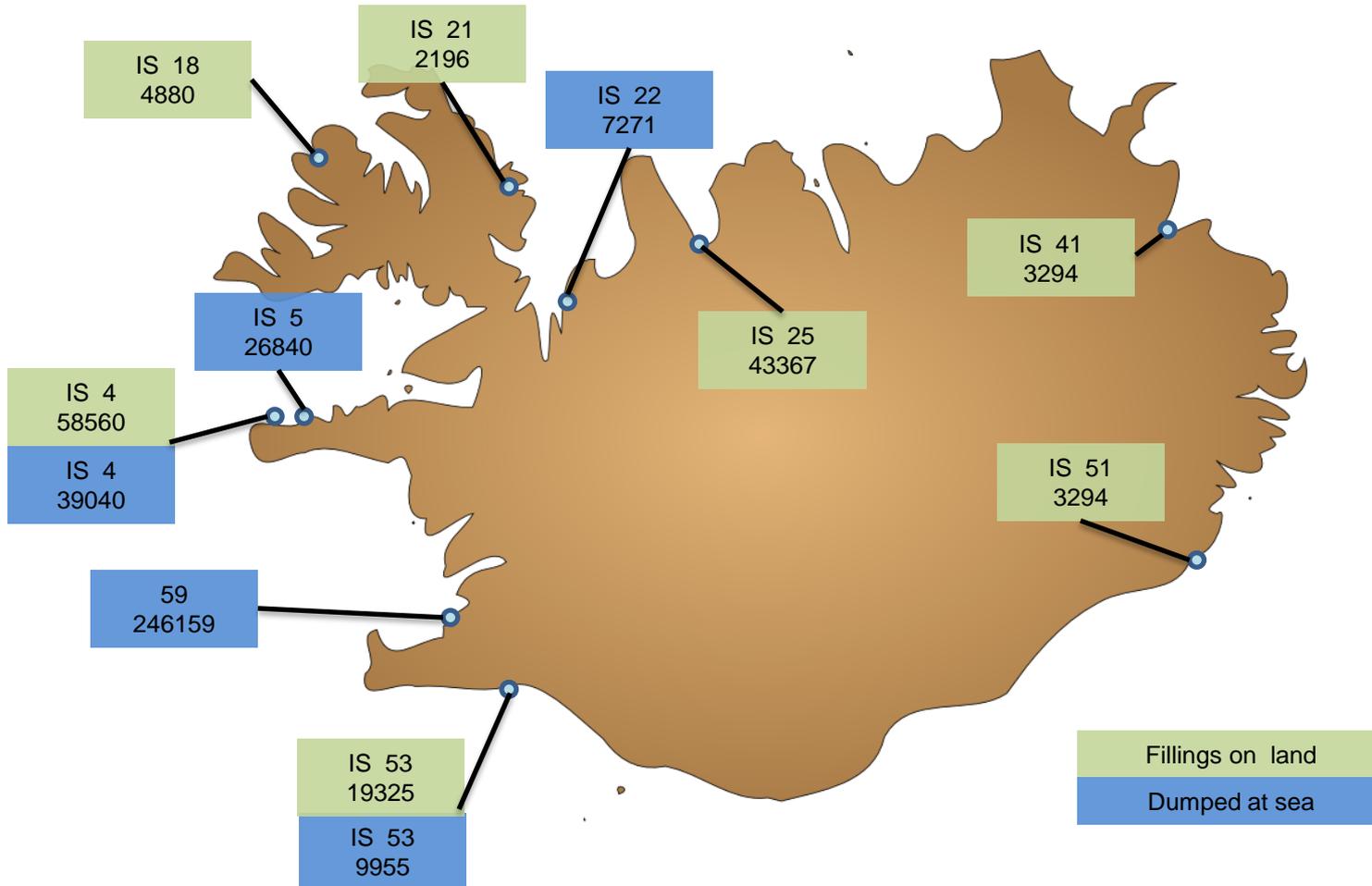


Figure 4: Dumping sites of dredged material in Iceland

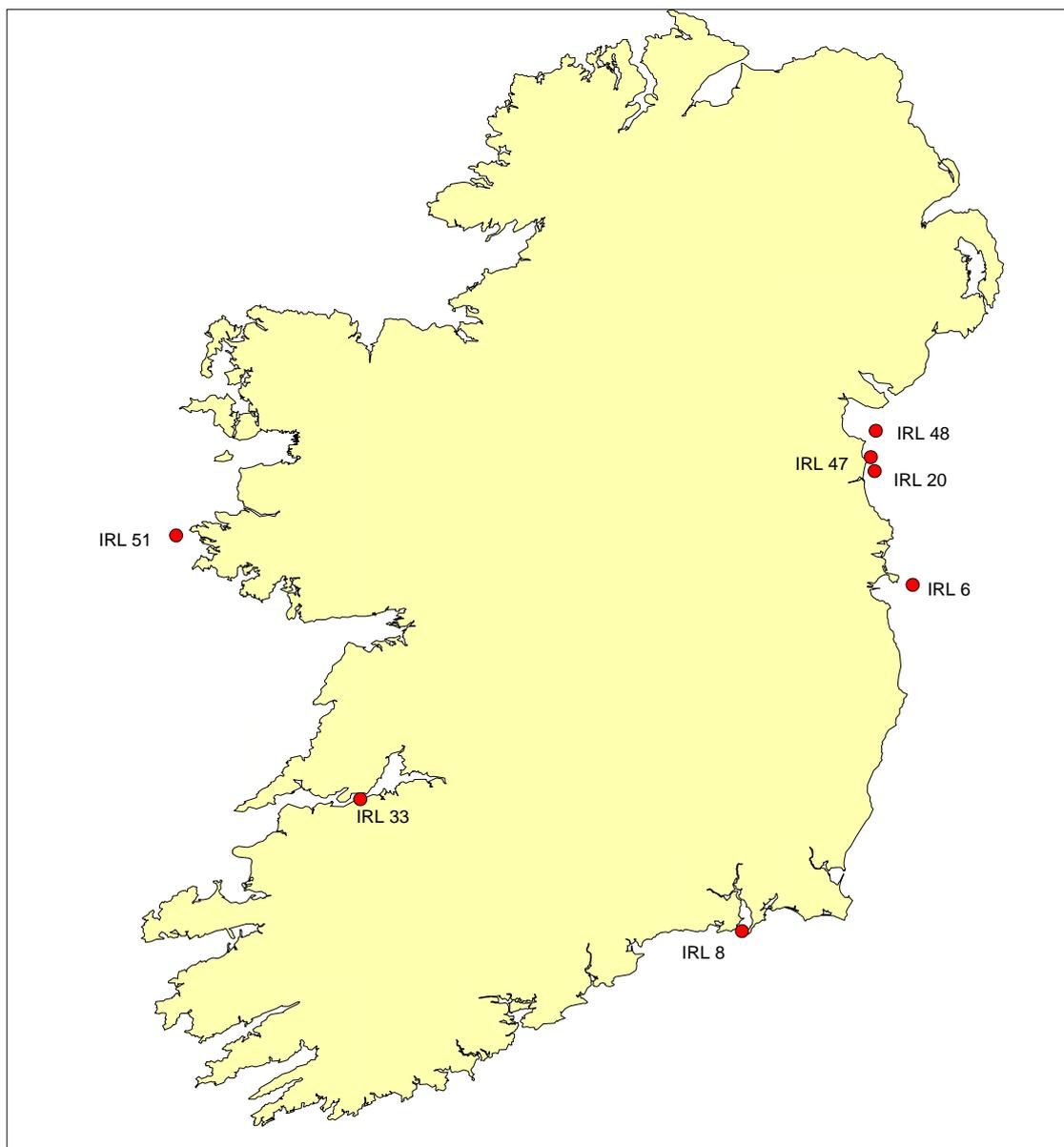
# Disposal of dredged material in Iceland 2007



The figure shows approximate positions of dumping sites for dredged material in Iceland for the given year. Dumping sites are labelled using OSPAR codes, weights are given in dry weights (metric tonnes).

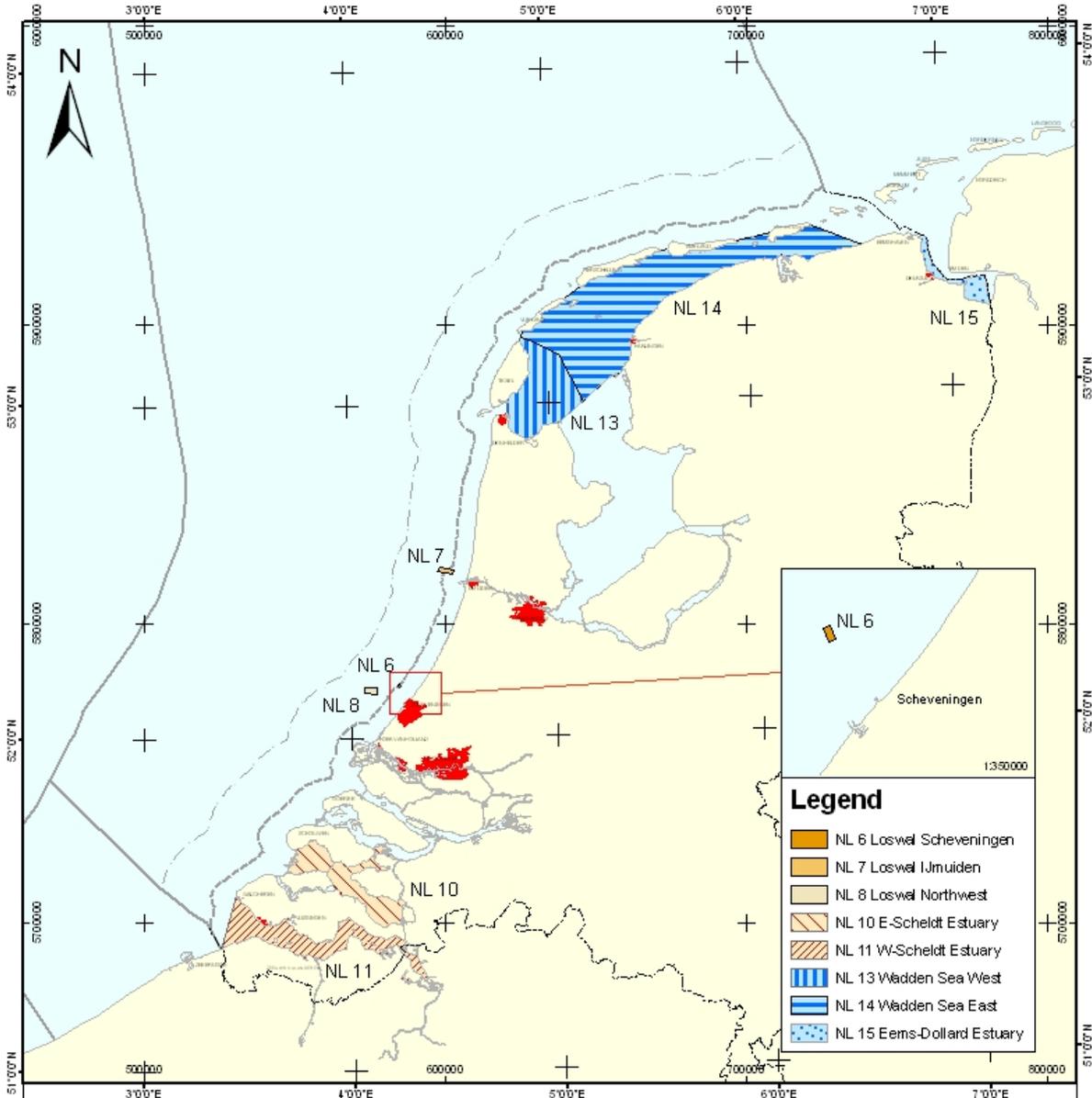
**Figure 5: Dumping sites of dredged material in Ireland**

Co-ordinates of the sites are given in Table 1.

**Table 1.**

Dumpsite Code	Longitude	Latitude
Irl 6	-6.05	53.32
Irl 8	-6.95	52.13
Irl 20	-6.18	53.75
Irl 33	-9.143	52.622
Irl 47	-6.224	53.764
Irl 48	-6.215	53.934
Irl 51	-10.35	53.608

Figure 6: Dumping sites of dredged material in the Netherlands in 2007

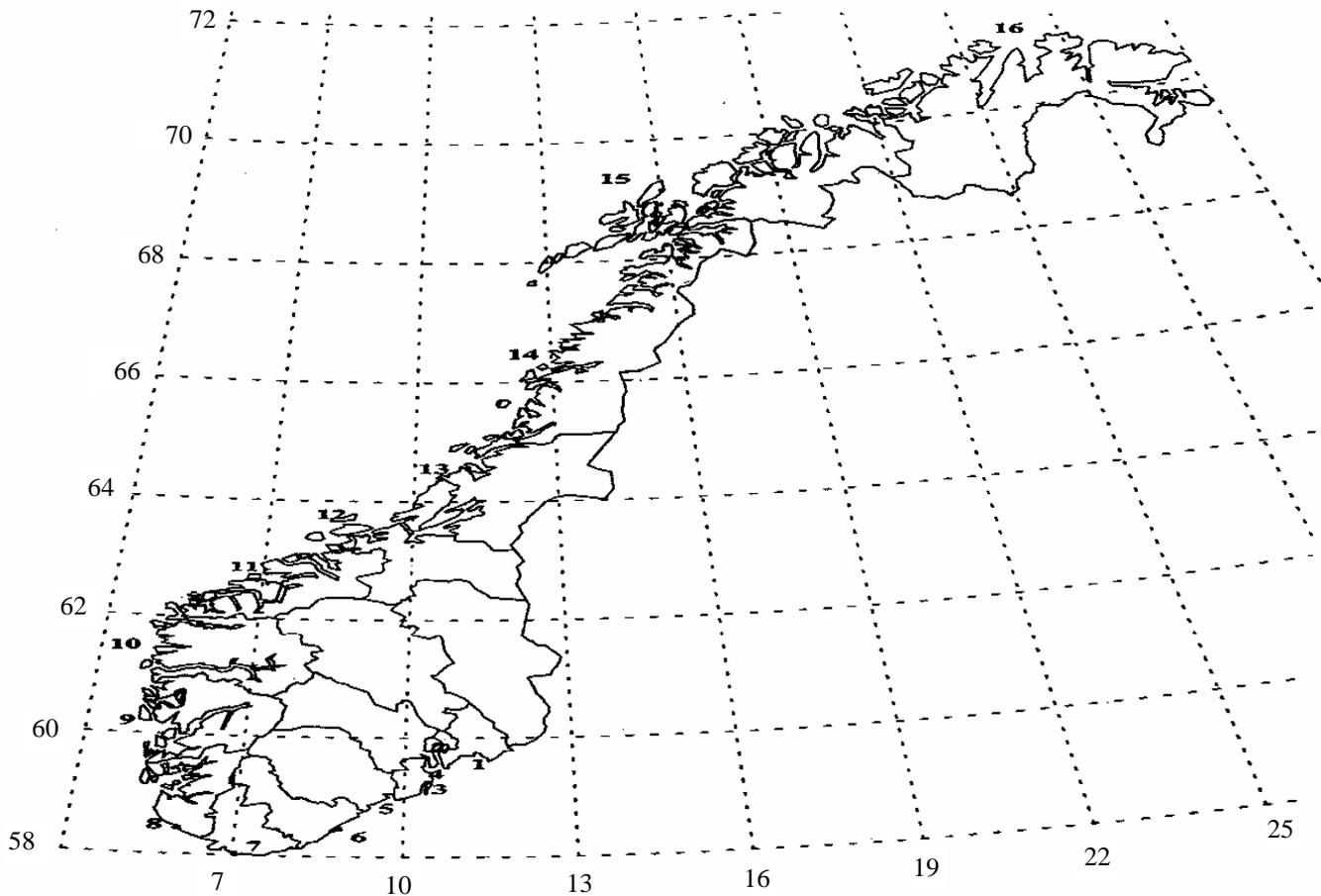


**APPROXIMATE POSITION OF THE DUMPING SITES FOR DREDGED MATERIALS IN OSLO CONVENTION WATERS USED IN 2007 BY THE NETHERLANDS**

Opdrachtgever:  Rijkswaterstaat Directie Water en Scheepvaart (WS) Afdeling Vergunningverlening (WSV) S. de Jong Tel: 070-33 66 641	QMS projectcode	08 NZE 9647 dv 01	
	Kaartnummer	NZWS-2008 - 0105	
	Kaartserie	Blad 1/1	
	Coördinatenstelsel	UTM ED50, zone 31	
	Formaat	A4	
Opdrachtnemer:  Rijkswaterstaat Directie Water en Scheepvaart (WS) Meet- en Informatiedienst (WSM) RWS NZ / tel: 070-33 66 800	Schaal 1:1.750.000		
			
	Getekend	Gezien	Akkoord
	Rvth		
03 juli 2008			

Aan deze uitgave kunnen geen rechten worden ontleend.

**Figure 7 - Dumping sites of dredged material in Norway in 2007**



**Figure 1. Map of Norway showing latitude (58-72°N, left side) and longitude (7-25°E, bottom). The different counties along the coast are indicated.**

1: Østfold, 2: Akershus/Oslo, 3: Vestfold, 4: Buskerud, 5: Telemark, 6: Aust-Agder, 7: Vest-Agder, 8: Rogaland, 9: Hordaland, 10: Sogn og fjordane, 11: Møre og Romsdal, 12: Sør-Trøndelag, 13: Nord-Trøndelag, 14: Nordland, 15: Troms, 16: Finnmark.

Dredged material:	N/1-4, 7, 9, 11, 13, 14, 16	Total amounts: 574 133 tonnes
Inert material:	N/14, 16	Total amounts: 12 150 tonnes
Fish waste:	N/14	100 tonnes fish waste

Figure 8a: Dumping sites of dredged material in Spain in 2007 (General sites)

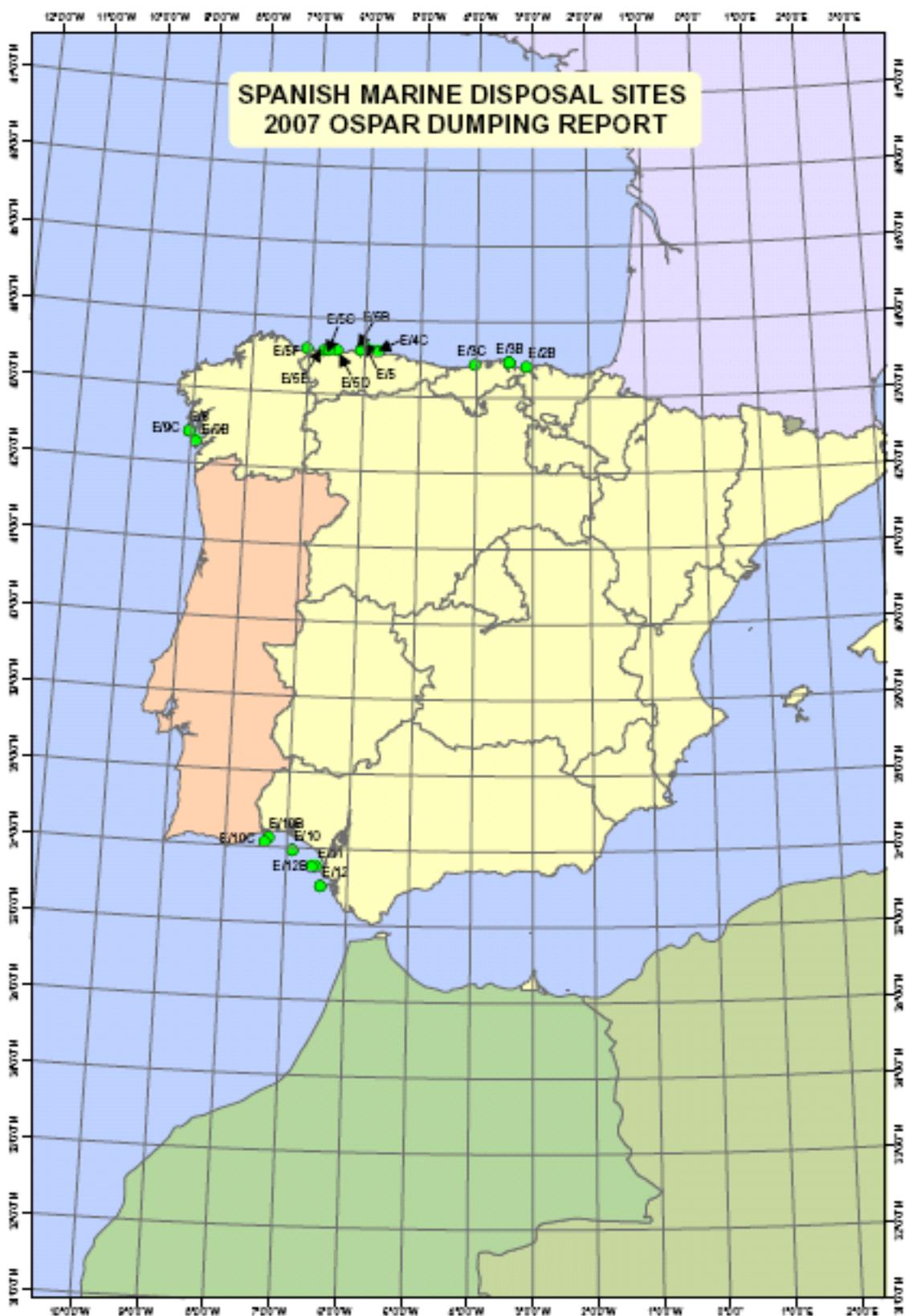


Figure 8b: Dumping sites of dredged material in Spain in 2007 (Northern Spain)

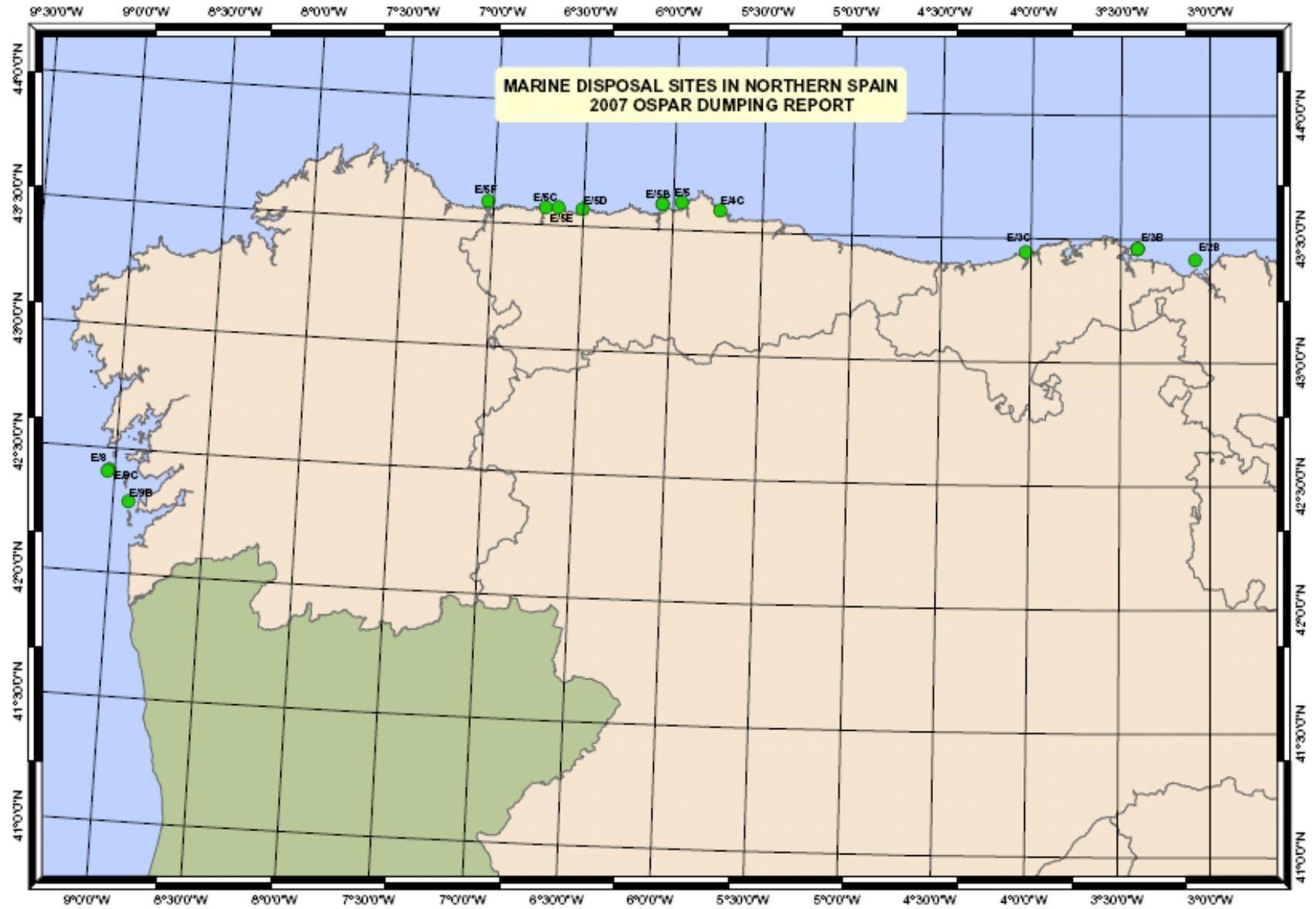


Figure 8c: Dumping sites of dredged material in Spain in 2007 (Southern Spain)

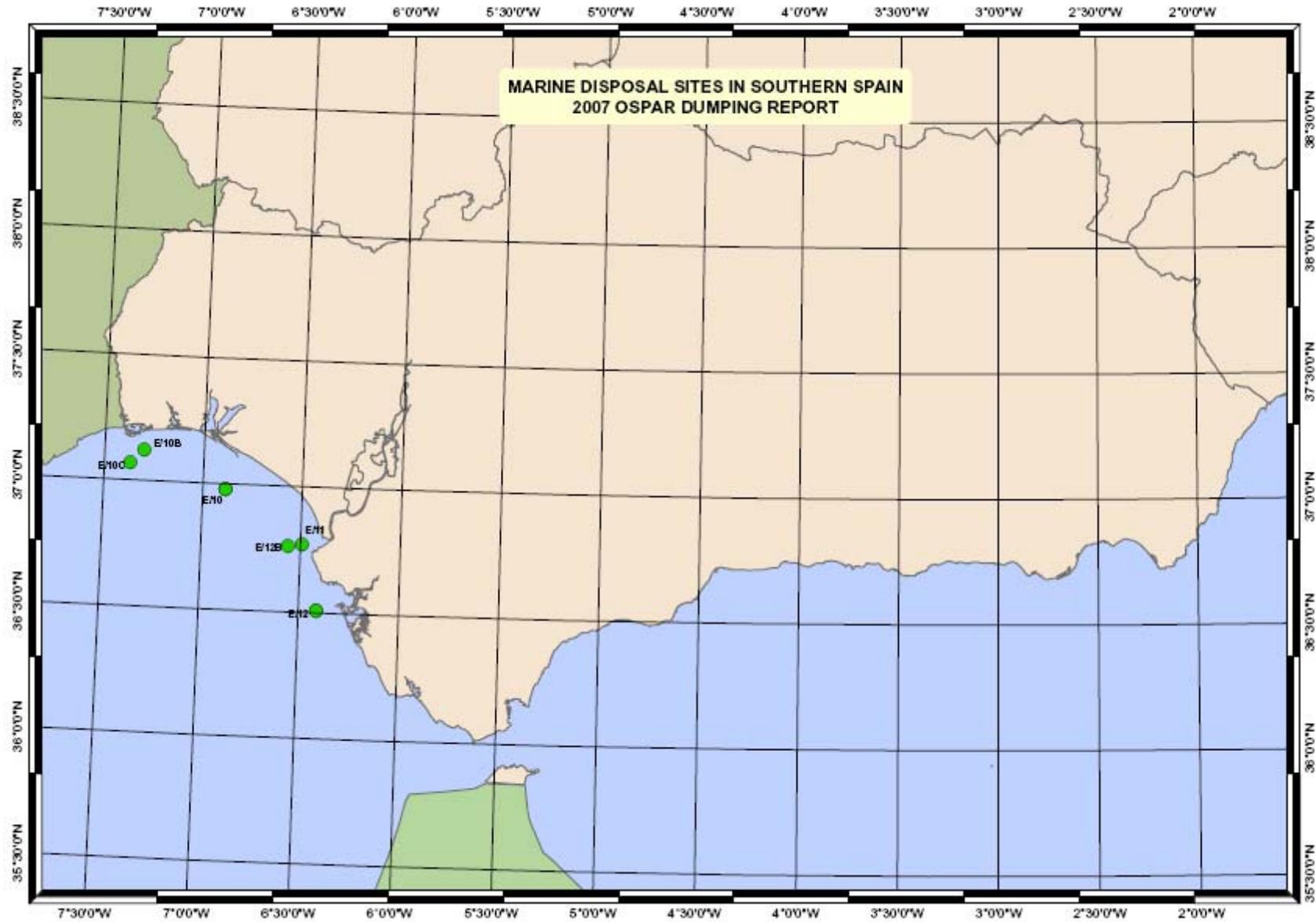


Figure 9a - Dumping sites of dredged material in the UK in 2007 (East England)

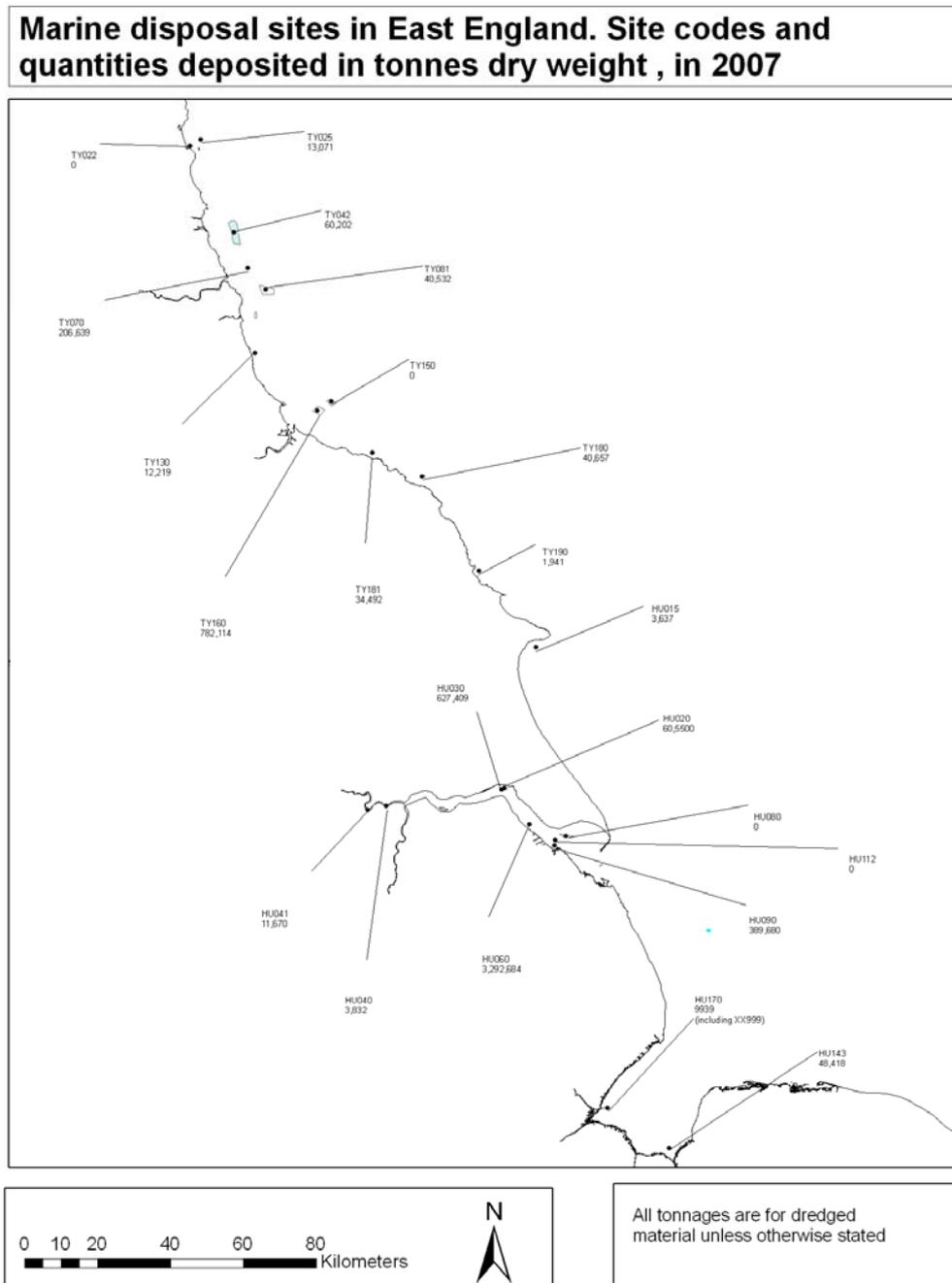


Figure 9b - Dumping sites of dredged material in the UK in 2007 (South-East England)

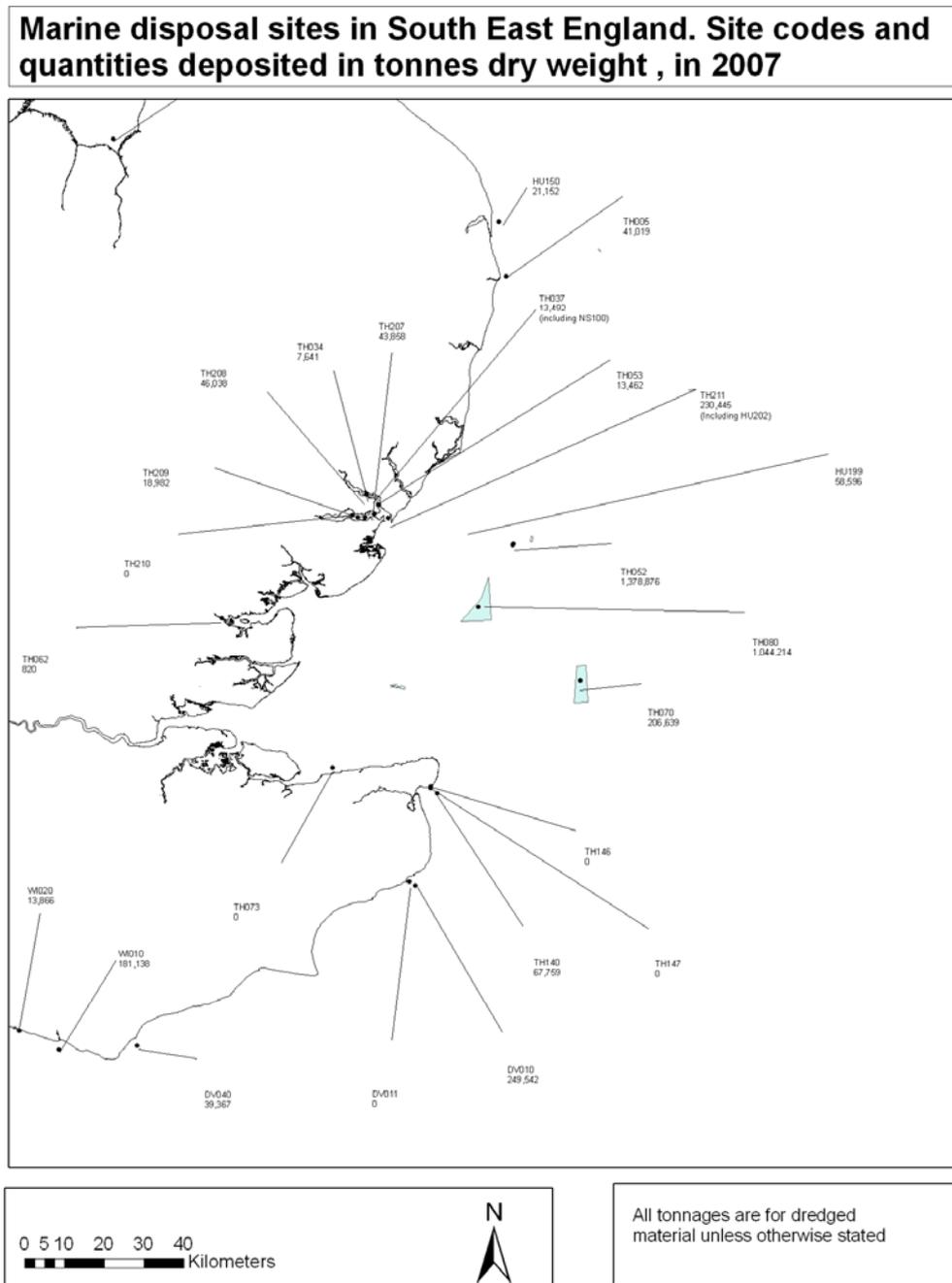
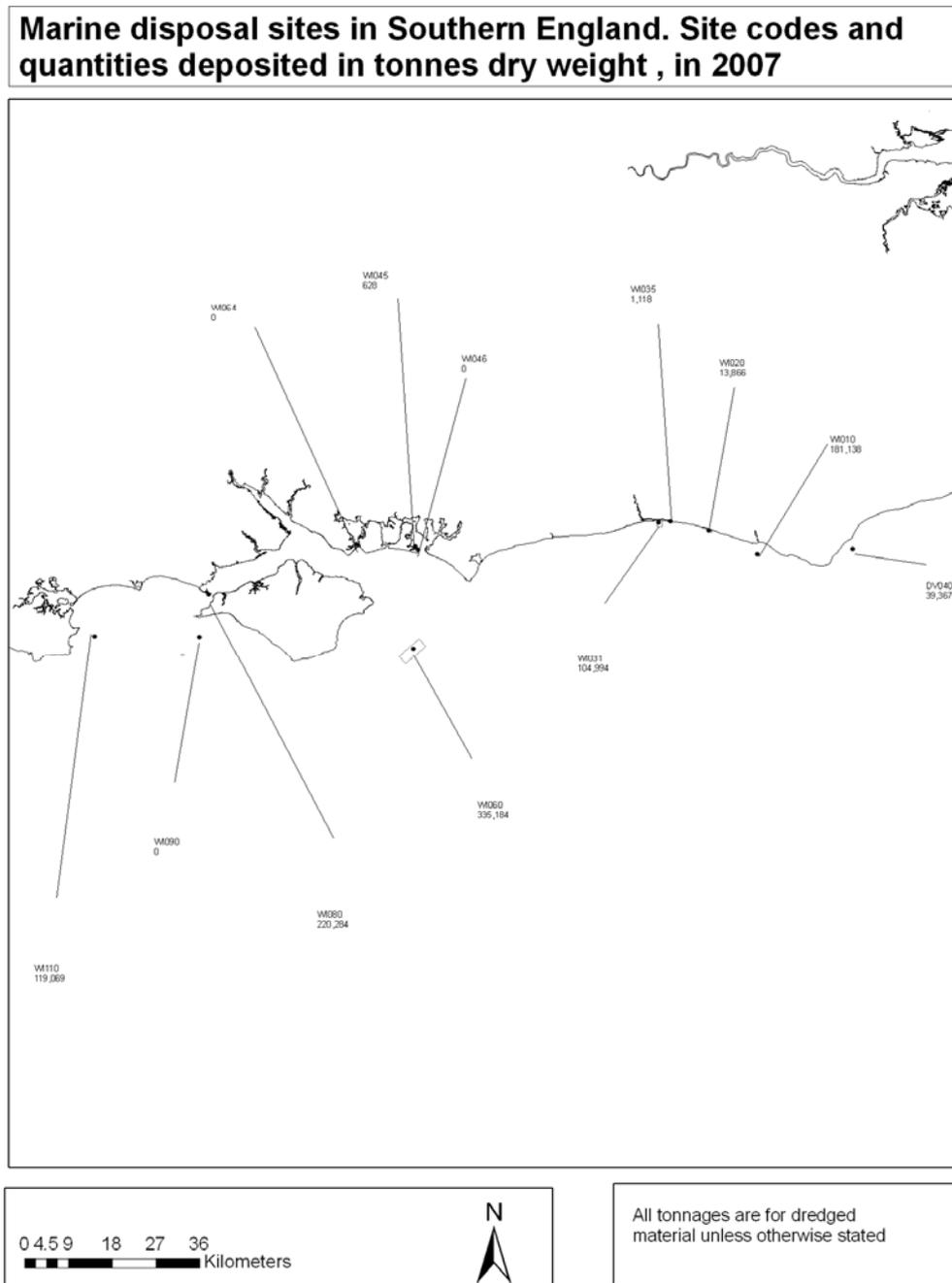


Figure 9c - Dumping sites of dredged material in the UK in 2007 (Southern England)



**Figure 9d - Dumping sites of dredged material in the UK in 2007 (South-West England and South Wales)**

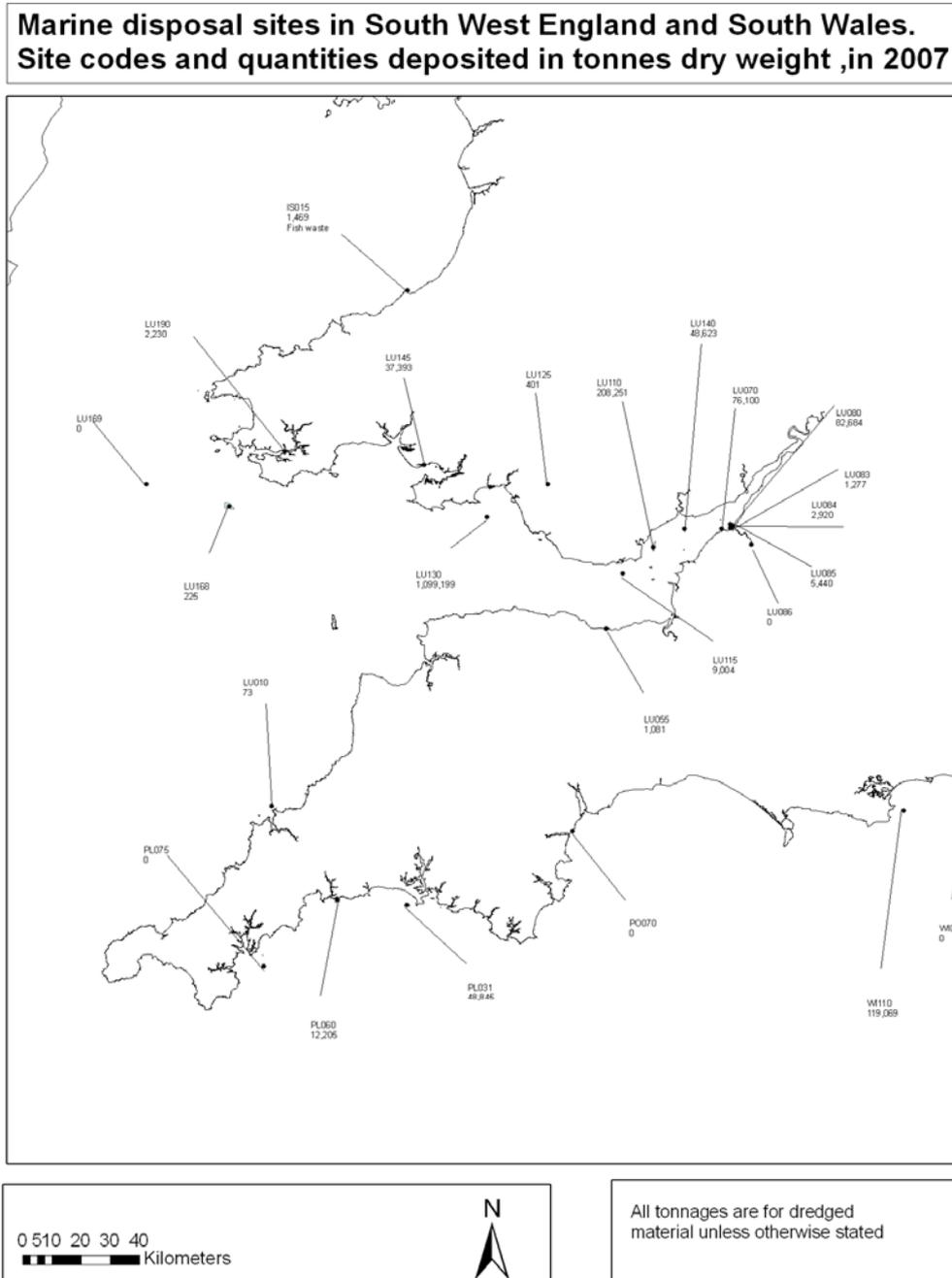
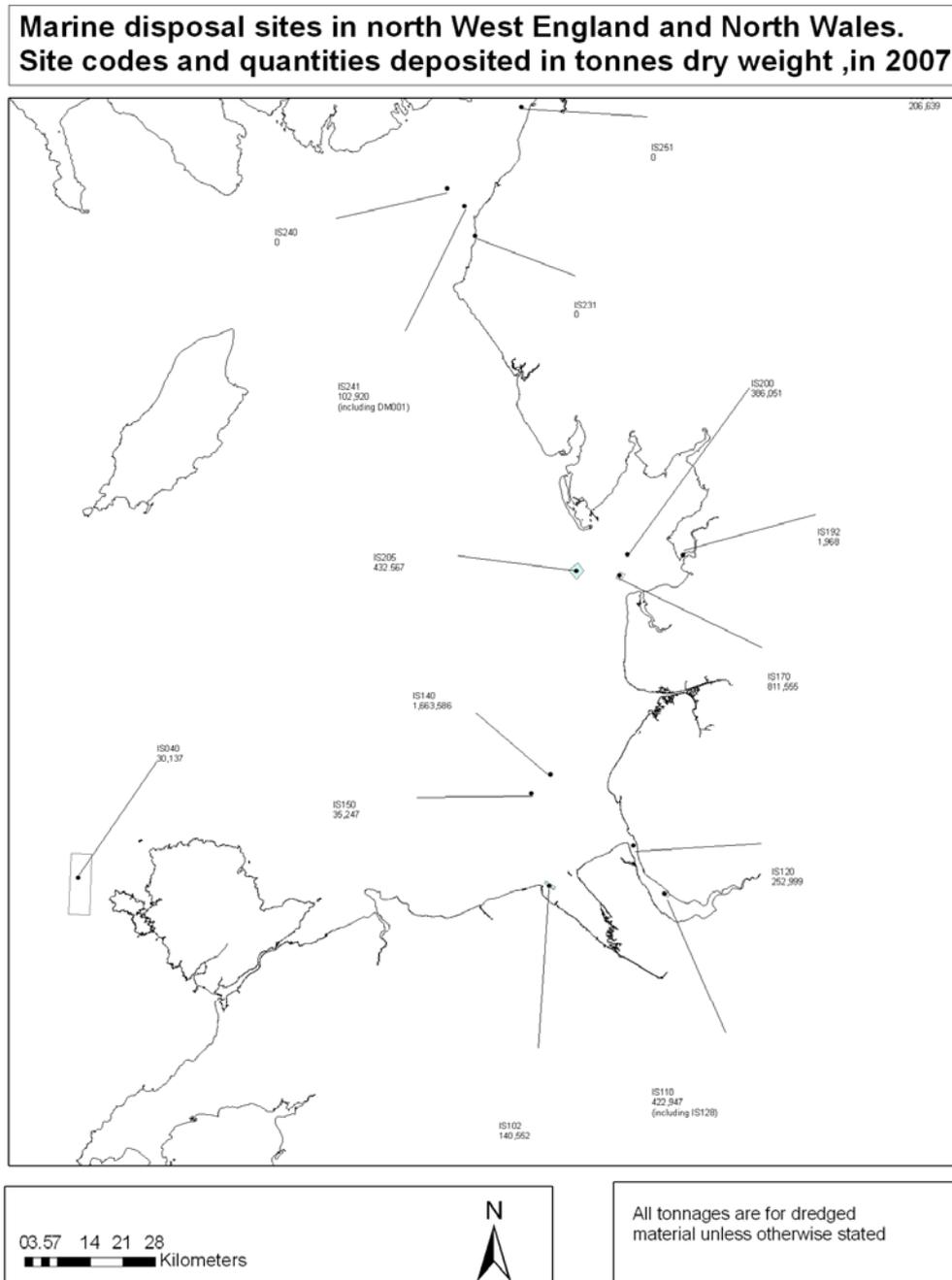
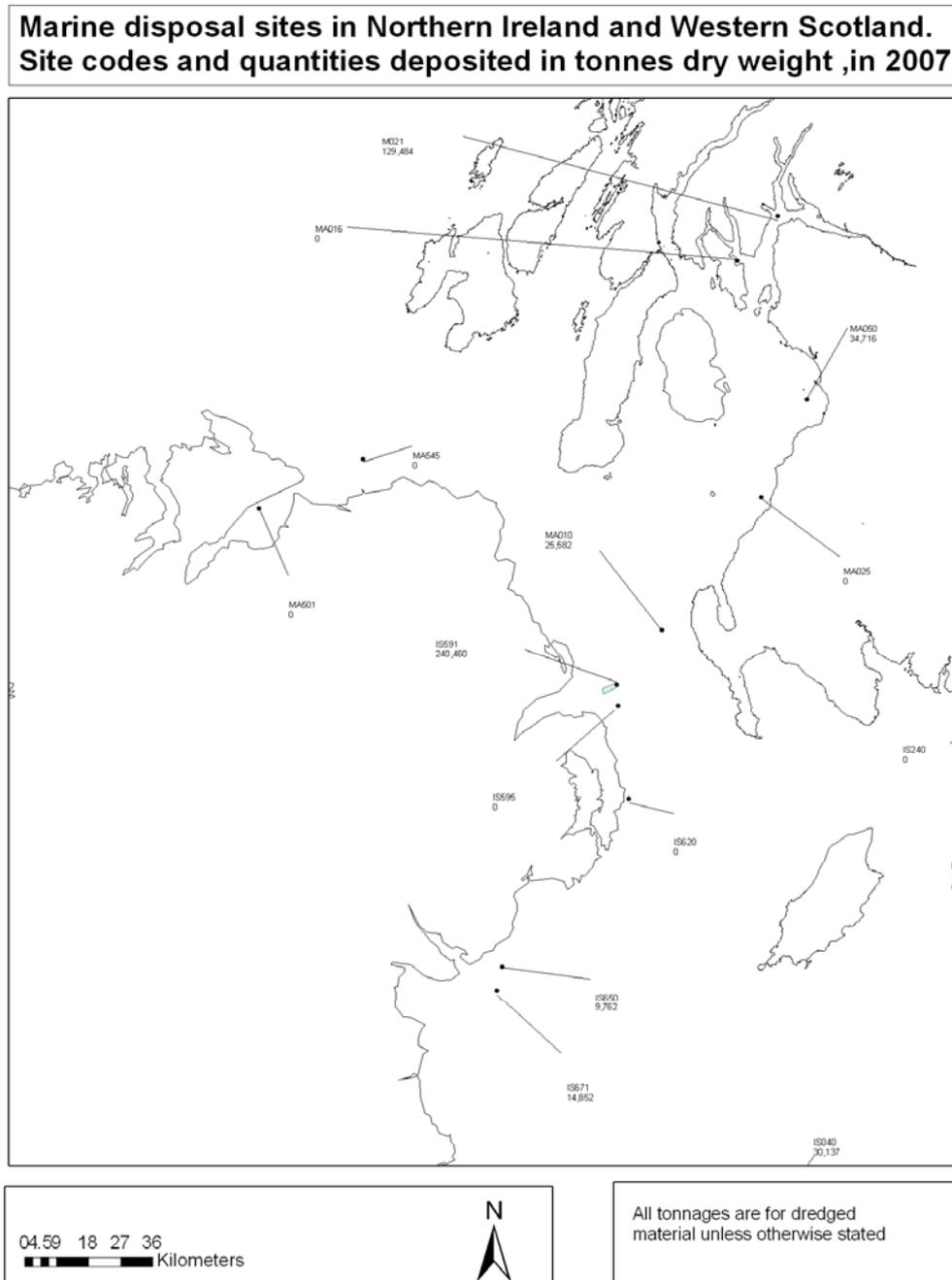


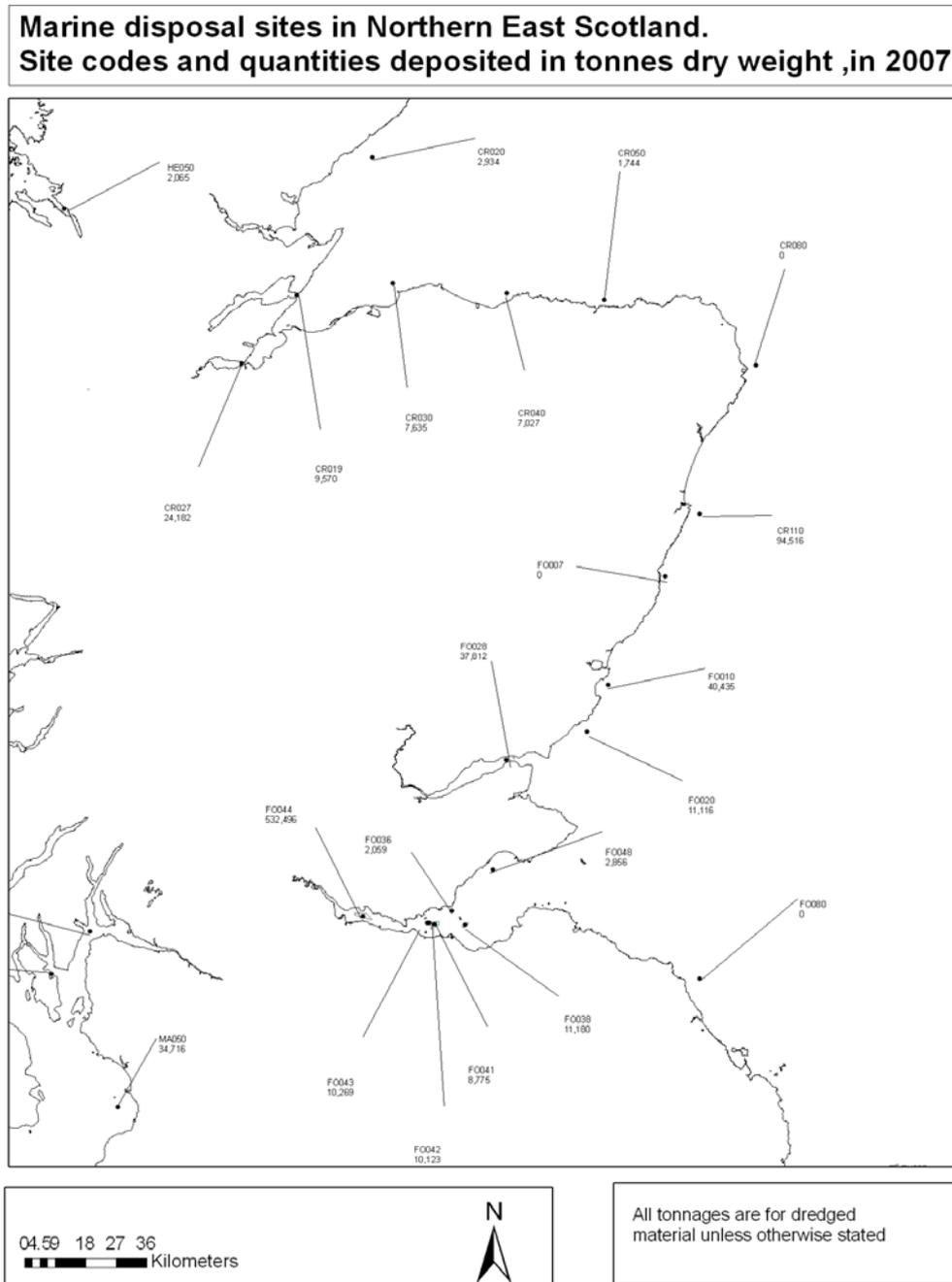
Figure 9e - Dumping sites of dredged material in the UK in 2007 (North-West England and North Wales)



**Figure 9f - Dumping sites of dredged material in the UK in 2007 (Northern Ireland and Western Scotland)**



**Figure 9g - Dumping sites of dredged material in the UK in 2007 (Northern East Scotland)**





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**OSPAR's vision is of a healthy and diverse North-East Atlantic ecosystem**

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