



OSPAR
COMMISSION

Riverine Inputs and Direct Discharges to
Convention Waters

OSPAR Contracting Parties' RID 2009 Data Report



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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Addendum *(available only in electronic version through the hyperlink below)*

[Addendum 1: National 2009 RID data reports](#)

GLOSSARY

Catchment	The whole of an area having one common outlet for its drainage water. A catchment area could be subdivided into a monitored and unmonitored area, depending on where the monitoring point is located.
Cd	Cadmium
Cu	Copper
Direct discharges	A mass of a determinant discharged to the Maritime Area from point sources (sewage effluents, industrial effluents or other) per unit of time at a point on a coast or to an estuary downstream of the point at which the riverine estimate of inputs is made.
Heavy metals	Refers to the five metals whose direct discharges and riverine inputs were studied in this assessment namely: cadmium, copper, lead, mercury and zinc.
Hg	Mercury
LOD	Limit of Detection is, according to the definitions (IUPAC, IS/TR 13530), “the limit of detection (LOD) is, in broad terms, the smallest amount or concentration of an analyte in the test sample that can be reliably distinguished from zero”.
LOQ	The limit of quantification (LOQ) is the smallest amount or concentration of analyte in the test sample which can be determined with a fixed precision, e.g. relative standard deviation $S_{rel} = 33,3 \%$. This means in other words, that a substance can only be correctly qualified from LODs, while it only can be quantified from LOQs.
Main river	A river to be monitored at least once a month (12 datasets) every year in accordance with the objectives of the Comprehensive Study. Main rivers should be major load bearing rivers.
Monitored area	The catchment upstream of the river monitoring point.
Nutrients	Refers to the nutrients whose direct discharges and riverine inputs were examined in this assessment, namely total Nitrogen and total Phosphorus.
Pb	Lead
RID	Comprehensive Study of Riverine Inputs and Direct Discharges (reference number: 1998-5), as amended by ASMO 2005 (Annex 5 to the ASMO 2005 Summary Record, ASMO 05/13/1).
Riverine inputs	A mass of a determinant carried to the Maritime Area by a watercourse (natural river or man-made watercourse) per unit of time.
SPM	Suspended Particulate Matter
Total inputs	Sum of direct discharges and riverine inputs.
Total-N	Total Nitrogen
Total-P	Total Phosphorus
Tributary river	A river with separate catchment from a main river and with an outlet directly to the maritime area or to a main river downstream of a river monitoring point. A tributary river should be a minor load bearing river and can be sampled at a frequency determined by each Contracting Party.
Unmonitored area	Defined as any sub-catchment(s) located downstream the riverine monitoring points within catchments and any areas between catchments. The unmonitored areas may contribute to the losses/discharges of substances downstream of the monitoring point or directly to the sea (OSPAR Maritime Area).
Zn	Zinc

Introduction

The RID Centre 2009 data report gives the annual overview tables (*hereafter* AA tables; Annex 2) of the national RID reporting in 2009 carried out by Contracting Parties across the OSPAR Convention area (see Figure 1) under the Comprehensive Study on Riverine Inputs and Direct Discharges (agreement 1998-5, update 2005).¹

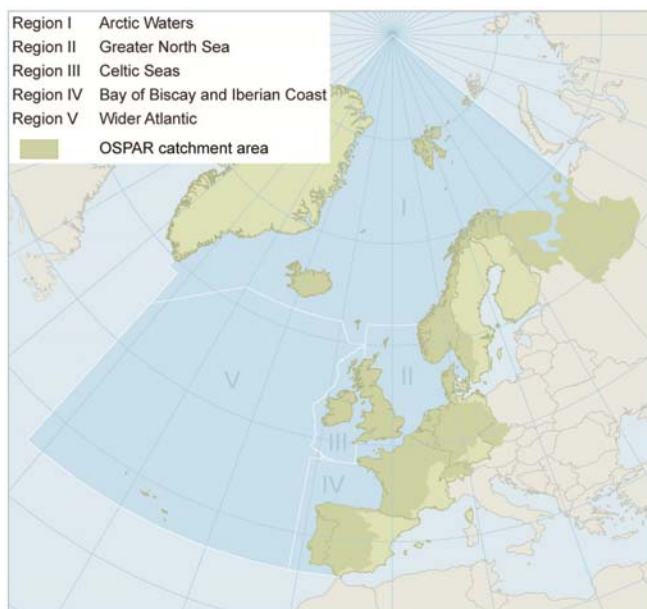


Figure 1: OSPAR maritime area, its five Regions and its catchment area. OSPAR Regions I: Arctic Waters, II: Greater North Sea, III: Celtic Seas, IV: Bay of Biscay and V: Wider Atlantic.

The RID Study forms one element within the wider Joint Assessment and Monitoring Programme of OSPAR. The purpose of the RID Study is to assess, as accurately as possible, all riverine inputs and direct discharges of selected pollutants to Convention waters on an annual basis. The RID Principles set out the monitoring regime to be employed for generating and reporting input data and to this end describes for example the relevant substances and river systems covered, sampling approach, locations and frequency, detection limits, calculation methodologies and quality assurance. Further details regarding the RID Principles are given in Annex 1.

For the years 2005, 2006 and 2007, comprehensive reports were developed based on the RID data. Here, challenges of the RID programme were presented; including uncertainties, knowledge gaps, lack of documentation on harmonised practises, approaches and methodologies amongst Contracting Parties (Skarbøvik and Borgvang 2007; Borgvang et al. 2008; Borgvang et al. 2009a). In 2009, a RID Database in Access format was prepared, and since then most of the work of the RID data centre (Bioforsk) has focused on the installation and functioning of this database. Thus, for the years 2008 and 2009, the reported data were presented without evaluations of the results (i.e. Skarbøvik et al. 2009 for the 2008 data; and this report for the 2009 data). This decision was further supported by the fact that a comprehensive assessment and trend analysis on the RID Programme data from 1990 – 2006 was developed in 2009 (Borgvang et al. 2009b, OSPAR publication 448/2009).

¹ At its Tenth Meeting (Lisbon, 1988) the Paris Commission¹ (PARCOM) adopted the Principles of the Comprehensive Study on Riverine Inputs (PARCOM 10/10/1, § 4.25 (e)). Such a comprehensive study was conducted for the first time in 1990. The RID Principles were reviewed in 1998 and 2005.

Country submission of RID data for 2009

Tables 1 and 2 provide an overview of the status of submitted information by Contracting Parties on which this report is based. In 2009, the submission of data and written reports did, in general, follow the agreed deadlines. All Contracting Parties except Denmark had a deadline of November 1st, whereas Denmark had a deadline of December 1st. As in 2008, all countries were asked to follow the new data format generated by the RID database, and several countries consequently delivered on the new format. Where data were delivered on other formats, Bioforsk transferred the data into the format of the database. All data were imported into the RID database and thereafter AA Tables 1a - 4b and national data tables 5a - 9 were exported from the database. These files were all sent to the respective Contracting Parties for validation.

Table 1. Overview of submitted information from Contracting Parties

Country	RID 2009 text report submitted	RID 2009 data submitted	RID 2009 data verified
Belgium	Yes	Yes	Yes
Denmark	Yes	Yes	Yes
France	Yes	Yes	Yes
Germany	Yes	Yes	Yes
Iceland	No	No	No
Ireland*	Yes	Yes	Yes
Netherlands	Yes	Yes	Yes
Norway	Yes	Yes	Yes
Portugal	Yes	Yes	Yes
Spain	Yes	Yes	Yes
Sweden	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes

* The report from Ireland was received too late to be taken into account in this report.

Table 2: Overview of information for 2009 on inputs to the OSPAR Maritime Area reported by Contracting Parties within the agreed deadline (green = data reported; NI = no information; NA = not applicable; red = no data submitted).

Country	Sewage effluents	Industrial effluents	Main rivers	Tributary rivers
Belgium	NA	NA		
Denmark				NI ¹
France	NI	NI		
Germany				
Iceland				
Ireland ²				
Netherlands				
Norway				
Portugal	NI	NI		NI
Spain				
Sweden				
UK				NI ¹

¹ Denmark and UK do not report inputs from tributary rivers separately. These inputs are included in the aggregated total riverine inputs.

² The report from Ireland was received too late to be taken into account in this report. It is however available in the compilation of national reports in the addendum.

References

- Borgvang, S.A., Skarbøvik, E. and Pengerud, A. 2008. Comprehensive Study on Riverine Inputs and Direct Discharges (RID): Presentation and Assessment of the OSPAR Contracting Parties' RID 2006 Data. ISBN 978-1-906840-17-4. OSPAR Publication No 376/2008.
- Borgvang, S.A., Stålnacke, P.G. and Pengerud, A. 2009a. Comprehensive Study on Riverine Inputs and Direct Discharges (RID): Presentation and Assessment of the OSPAR Contracting Parties' RID 2007 Data. ISBN 978-1-906840-90-7. OSPAR Publication No 450/2009.
- Borgvang, S.A. et al. 2009b. Trends in waterborne inputs. Assessment of riverine inputs and direct discharges of nutrients and selected hazardous substances to OSPAR maritime area in 1990-2006. OSPAR Commission 2009, Monitoring and Assessment Series no 448/2009; ISBN 978-1-906840-88-4. 113 pp.
- Skarbøvik, E. and Borgvang, S.A, 2007. Comprehensive Study on Riverine Inputs and Direct Discharges (RID): Overview of the RID 2005 Data and an Analysis of the Reliability, Accuracy, Comparability and Completeness of the Data OSPAR Commission. ISBN 978-1-905859-65-8, OSPAR Publication No 326.
- Skarbøvik, E., Gjemlestad, L. Stålnacke, P., Sonesten, L., Svendsen, L. and Larsen, S.E. 2010. OSPAR Contracting Parties' RID 2008 Data Report. OSPAR Commission, 27 pp. ISBN 978-1-907390-53-1. OSPAR Publication No 512/2010.

Annex 1: Details about the RID Principles

Under the RID Principles, Contracting Parties should aim to monitor, on a regular basis, 90 % of the inputs of each selected pollutant.

The following determinants are to be monitored on a mandatory basis:

- Total Mercury (Hg)
- Total Cadmium (Cd)
- Total Copper (Cu)
- Total Zinc (Zn)
- Total Lead (Pb)
- Gamma-HCH (lindane)
- Ammonia, expressed as N
- Nitrates, expressed as N
- Orthophosphates, expressed as P
- Total N
- Total P
- Suspended particulate matter (SPM)
- Salinity (in saline waters)

The following determinants are recommended for monitoring on a voluntary basis:

- a. Hydrocarbons, in particular PAHs² and mineral oil³ (strongly recommended);
- b. PCBs (the following congeners: IUPAC Nos. 28, 52, 101, 118, 153, 138, 180);
- c. Other hazardous substances (particularly organohalogen compounds - in order to determine which organohalogen compounds should be included in future input studies)⁴.

Sources for monitoring and reporting of direct discharges under the RID Principles include sewage effluents, industrial effluents and mariculture. As far as practicable, estimate inputs from unmonitored areas (including diffuse sources, and minor direct sources and rivers) should complement the percentage monitored to 100%.

Contracting Parties are requested to report their annual RID data together with an explanatory text report using the reporting format appended to the RID Principles. The results of annual RID data reporting are published by OSPAR each year.

RID data are to be reviewed periodically with the objective of determining temporal and long-term trends of contaminant concentrations and inputs as a basis for trend assessment. A first assessment of data collected under RID in 1990 – 2002 was carried out by the Environmental Assessment and Monitoring Committee (ASMO) in 2005 (publication number 2005/233); a second assessment for the period 1990 – 2006 was published by OSPAR in 2009 (publication number 2009/446) as contribution to the OSPAR Quality Status Report 2010 for the North-East Atlantic.

² These are as follows: phenanthrene, anthracene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[a]pyrene, benzo[ghi]perylene, indeno[1,2,3-cd]pyrene.

³ Provided that a suitable method is available.

⁴ INPUT November 1995 agreed not to advocate routine monitoring of riverine inputs of pesticides convention-wide, but to address specific requests from SIME or DIFF* on a case by case basis. (* Secretariat note: DIFF was discontinued by OSPAR 2000. The work formerly undertaken by DIFF has been carried out by SPDS until 2004/2005 and HSC until 2009/2010, and, since then, by HASEC. SIME was discontinued by OSPAR 2010; its work is taken on by MIME).

Annex 2: Annual Overview Tables (AA Tables) and statistical information)

Table 1a	Information Received on Inputs to the Maritime Area of the OSPAR Convention in 2009
Table 1b	Determinands Reported by Contracting Parties in 2009
Table 2	Direct Discharges to the Maritime Area of the OSPAR Convention in 2009 by Country
Table 3	Riverine Inputs to the Maritime Area of the OSPAR Convention in 2009 by Country
Table 4a	Summary of Direct (Table 2) and Riverine (Table 3) Inputs to the Maritime Area of the OSPAR Convention in 2009 by Country
Table 4b	Summary of Direct and Riverine Inputs to the Maritime Area of the OSPAR Convention by Sea Area

Statistical information on river catchment areas.

Table 1a. Information Received on Inputs to the Maritime Area of the OSPAR Convention in 2009

Country	Direct Discharges		Coastal Areas	Riverine Inputs	
	Sewage Effluents	Industrial Effluents		Main Rivers	Tributary Rivers
Belgium					
- North Sea (BE)	NI	NI		+	+
Denmark					
- Skagerrak (DK)	+	+		+	NI
- Kattegat (DK)	+	+		+	NI
- North Sea (DK)	+	+		+	NI
France					
- Channel	NI	NI		+	+
- Atlantic	NI	NI		+	+
Germany					
- North Sea (GER)	+	+		+	+
Iceland					
- Atlantic	NI	NI		NI	NI
Ireland					
- Irish Sea	NI	NI		NI	NI
- Celtic Sea	NI	NI		NI	NI
- Atlantic	NI	NI		NI	NI
Netherlands					
- North Sea (NL)	+	+		+	+
Norway					
- Norwegian Sea (NO)	+	+		+	+
- Barents Sea (NO)	+	+		+	+
- Skagerrak (NO)	+	+		+	+
- North Sea (NO)	+	+		+	+
Portugal					
- Bay of Biscay and Iberian Coast (PO)	NI	NI		+	NI
Spain					
- Atlantic (ESP)	+	+		+	+
Sweden					
- Kattegat (SWE)	+	+		+	+
- Skagerrak (SWE)	+	+		+	+
UK					
- North Sea (North)	+	+		+	NI
- North Sea (South)	+	+		+	NI
- Channel	+	+		+	NI
- Irish Sea	+	+		+	NI
- Celtic Sea	+	+		+	NI
- Atlantic	+	+		+	NI

+ = Information available

NI = No information

Table 1b. Determinands reported by Contracting Parties in 2009

Country	Determinands													
	Cd	Hg	Cu	Pb	Zn	g-HCH	PCBs	NH4-N	NO3-N	PO4-P	N-Total	P-Total	SPM	others
Belgium														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
- riverine inputs	R+(4)	R+(3)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(3)	R+(3)	R+(3)	R+(3)	
Denmark														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	+	+	+	+	+	NI	
- riverine inputs	NI	NI	NI	NI	NI	NI	NI	+	+	+	+	+	+	
France														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
- riverine inputs	R+(4)	R+(4)	R+(4)	R+(4)	R+(3)	R+(4)	NI	R+(4)	R+(3)	R+(4)	R+(4)	R+(3)	R+(3)	
Germany														
- direct inputs	R+	R+	R+	R+	R+	R+	R+	R+	R+	+	+	+	+	
- riverine inputs	R+(4)	R+(3)	+(3)	R+(3)	R+(3)	R+(3)	R+(4)	R+(3)	+(3)	R+(3)	+(3)	+(3)	R+(3)	
Iceland														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
- riverine inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
Ireland														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
- riverine inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
Netherlands														
- direct inputs	+	+	+	+	+	NI	NI	NI	NI	NI	+	+	NI	
- riverine inputs	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	R(3)+	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	
Norway														
- direct inputs	+	+	+	+	+	+	+	+	+	+	+	+	+	As, Total Cr, Ni, TOC
- riverine inputs	R+(3)	R+(4)	R+(3)	R+(3)	R+(3)	R+(4)	R+(4)	R+(3)	R+(3)	R+(4)	R+(3)	R+(3)	R+(3)	As, Total Cr, Ni, TOC
Portugal														
- direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
- riverine inputs	+	NI	+	+	+	NI	NI	+	+	+	+	+	+	
Spain														
- direct inputs	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	
- riverine inputs	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	NI	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	
Sweden														
- direct inputs	R+	R+	R+	R+	R+	NI	NI	R+	NI	NI	R+	R+	NI	
- riverine inputs	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	NI	NI	R+(3)	R+(3)	R+(3)	R+(3)	R+(3)	NI	
UK														
- direct inputs	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	
- riverine inputs	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	R+	

+ : Data provided

R: Estimate given as a range

(3) 70 % of measurements above detection limit

(4) Less than 70 % of measurements above detection limit

NI: No information

Table 2. Direct Discharges to the Maritime Area of the OSPAR Convention in 2009 by Country

Country	Region		Cd [t/a]	Hg [t/a]	Cu [t/a]	Pb [t/a]	Zn [t/a]	g-HCH [kg/a]	PCBs [kg/a]	NH4-N [kt/a]	NO3-N [kt/a]	PO4-P [kt/a]	N-Total [kt/a]	P-Total [kt/a]	SPM [kt/a]
Belgium	North Sea (BE)	lower upper	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
Denmark ^{1,2}	Kattegat (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.040 0.040	0.364 0.364	0.022 0.022	0.40 0.40	0.03 0.03	NI NI
	North Sea (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.008 0.008	0.070 0.070	0.005 0.005	0.08 0.08	0.01 0.01	NI NI
	Skagerrak (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.001 0.001	0.012 0.012	0.001 0.001	0.01 0.01	0.00 0.00	NI NI
France	Atlantic	lower upper	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
	Channel	lower upper	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
Germany	North Sea (GER)	lower upper	0.036 0.090	0.013 0.048	1.87 2.64	0.84 1.62	10.25 15.37	0.021 0.281	0.040 2.850	1.661 1.661	1.718 1.719	0.080 0.080	3.54 3.54	0.38 0.38	1.93 1.93
Iceland	Atlantic	lower upper	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
Ireland	Atlantic	lower upper	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
	Celtic Sea	lower upper	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
	Irish Sea	lower upper	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
Netherlands	North Sea (NL)	lower upper	0.266 0.266	0.019 0.019	2.59 2.59	2.12 2.12	10.82 10.82	NI NI	NI NI	NI NI	NI NI	NI NI	1.56 1.56	0.31 0.31	NI NI
Norway ¹	Barents Sea (NO)	lower upper	NI NI	0.000 0.000	NI NI	NI NI	NI NI	NI NI	NI NI	0.194 0.194	0.013 0.013	0.020 0.020	0.26 0.26	0.03 0.03	0.01 0.01
	North Sea (NO)	lower upper	0.088 0.088	0.006 0.006	1.73 1.73	1.08 1.08	11.07 11.07	NI NI	0.840 0.840	3.035 3.035	0.202 0.202	0.265 0.265	4.05 4.05	0.44 0.44	13.81 13.81
	Norwegian Sea (N)	lower upper	0.057 0.057	0.002 0.002	0.93 0.93	1.68 1.68	3.87 3.87	NI NI	0.000 0.000	3.352 3.352	0.223 0.223	0.311 0.311	4.47 4.47	0.52 0.52	24.55 24.55
	Skagerrak (NO)	lower upper	0.048 0.048	0.009 0.009	10.75 10.75	0.79 0.79	15.22 15.22	NI NI	20.634 20.634	4.280 4.280	0.285 0.285	0.110 0.110	5.71 5.71	0.18 0.18	5.89 5.89
Portugal	Bay of Biscay and	lower upper	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
Spain ¹	Atlantic (ESP)	lower upper	0.307 6.146	0.584 11.195	8.18 22.16	0.64 23.74	33.97 49.99	0.326 1.953	0.000 13.288	7.278 8.324	1.492 1.786	0.552 0.565	15.31 15.79	1.59 1.77	393.66 400.54
Sweden ³	Kattegat (SWE)	lower upper	0.027 0.027	0.007 0.007	1.63 1.63	0.14 0.14	4.10 4.10	NI NI	NI NI	1.394 1.394	NI NI	NI NI	2.03 2.03	0.06 0.06	NI NI
	Skagerrak (SWE)	lower upper	0.001 0.001	0.001 0.001	0.29 0.29	0.38 0.38	0.56 0.56	NI NI	NI NI	0.152 0.152	NI NI	NI NI	0.37 0.37	0.01 0.01	NI NI
UK ¹	Atlantic	lower upper	0.305 0.334	0.079 0.081	4.51 4.54	1.61 1.64	20.62 20.63	2.253 2.270	0.000 0.005	5.575 5.576	1.889 1.896	0.921 0.921	10.83 10.93	1.65 1.65	25.89 25.97
	Celtic Sea	lower upper	0.018 0.041	0.004 0.006	1.82 1.86	1.49 1.68	32.73 32.99	0.163 2.143	0.000 2.423	10.975 11.012	1.643 1.683	1.371 1.395	12.47 12.49	1.37 1.40	12.22 12.26
	Channel	lower upper	0.009 0.034	0.007 0.010	5.38 5.41	1.56 1.63	38.97 39.03	0.053 5.734	0.000 6.047	4.713 4.773	2.343 2.364	0.635 0.677	6.27 6.27	0.64 0.68	17.65 17.68
	Irish Sea	lower upper	1.329 1.375	0.241 0.285	3.60 3.62	3.71 3.79	12.59 12.60	0.004 2.185	0.000 0.340	3.471 6.082	2.126 2.126	0.676 0.711	5.96 6.16	0.76 0.79	8.77 12.20
	North Sea (North)	lower upper	0.026 0.041	0.012 0.013	12.62 12.66	1.88 1.89	27.74 27.74	1.313 4.543	0.324 7.540	10.631 10.633	2.552 2.573	1.514 1.530	16.26 16.26	1.97 1.99	22.75 22.76
	North Sea (South)	lower upper	0.130 0.169	0.059 0.066	13.68 14.13	4.82 5.13	83.07 87.07	0.659 17.335	0.000 38.013	5.250 5.273	9.618 9.631	1.944 1.961	17.71 17.71	1.94 1.96	105.94 105.98

¹ Denmark, Norway, Spain and UK also report inputs from aquaculture/fish farming. AA Table 2 is generated by the RID database as the sum of national data tables 5a and 5b. As inputs from aquaculture/fish farming are reported in other tables (5c or 5d) these inputs are not included in the totals presented here.

² Denmark reports inputs from scattered dwellings, stormwater overflows and fish farms as part of the totals in table 5c. As table 5c is not taken into account when generating AA Table 2 (cf. footnote 1), the totals presented here do not include these additional sources reported by Denmark.

³ Sweden reports inputs from stormwater overflows as part of the totals in table 5a. As table 5a is taken into account when generating AA Table 2 (cf. footnote 1), the totals presented here do also include this additional source reported by Sweden.

Table 3. Riverine Inputs to the Maritime Area of the OSPAR Convention in 2009 by Country

Country	Sea Area		Cd [t/a]	Hg [t/a]	Cu [t/a]	Pb [t/a]	Zn [t/a]	g-HCH [kg/a]	PCBs [kg/a]	NH4-N [kt/a]	NO3-N [kt/a]	PO4-P [kt/a]	N-Total [kt/a]	P-Total [kt/a]	SPM [kt/a]
Belgium	North Sea (BE)	lower upper	1.447 2.435	0.157 0.216	13.56 39.42	31.57 42.34	187.18 190.22	0.207 15.808	0.000 80.046	1.991 2.556	22.962 23.243	1.335 1.649	27.29 31.75	2.09 3.25	302.28 406.63
Denmark ¹	Kattegat (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.524 0.524	14.988 14.988	0.116 0.116	17.59 17.59	0.64 0.64	18.65 18.65
	North Sea (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.337 0.337	12.274 12.274	0.184 0.184	14.64 14.64	0.52 0.52	25.65 25.65
	Skagerrak (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.045 0.045	0.907 0.907	0.015 0.015	1.11 1.11	0.05 0.05	4.68 4.68
			NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.045 0.045	0.907 0.907	0.015 0.015	1.11 1.11	0.05 0.05	4.68 4.68
France ²	Atlantic	lower upper	0.063 31.193	0.620 10.732	139.80 338.02	34.56 105.74	788.57 940.99	0.000 128.735	NI NI	2.572 3.759	220.610 220.619	1.427 2.203	195.16 283.93	5.24 5.43	1770.25 1774.31
	Channel	lower upper	0.386 16.688	0.214 8.951	35.37 39.18	11.13 17.40	210.19 213.08	20.814 348.148	NI NI	3.703 3.849	127.739 127.739	1.649 1.758	128.13 146.34	2.73 2.73	461.19 461.29
Germany	North Sea (GER)	lower upper	3.932 4.483	1.207 1.237	182.41 182.41	115.20 120.21	921.99 930.99	13.422 20.323	5.700 23.800	5.797 5.907	128.745 128.745	1.997 2.011	161.87 161.87	6.97 6.97	1302.08 1446.08
Iceland	Atlantic	lower upper	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
Ireland	Atlantic	lower upper	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
	Celtic Sea	lower upper	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
	Irish Sea	lower upper	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	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI
Netherlands	North Sea (NL)	lower upper	2.123 4.382	0.536 0.579	234.10 234.79	87.81 88.82	724.68 745.13	27.571 29.431	41.964 45.352	7.707 7.797	170.376 170.436	5.499 5.504	230.39 230.48	15.20 15.96	934.33 957.80
Norway ³	Barents Sea (NO)	lower upper	0.067 0.122	0.019 0.027	15.77 15.77	1.21 1.23	20.58 21.02	1.443 2.856	0.043 4.621	0.099 0.101	0.303 0.308	0.020 0.027	2.74 2.74	0.09 0.09	31.43 32.35
	North Sea (NO)	lower upper	0.394 0.422	0.053 0.079	23.49 23.56	8.04 8.78	77.79 79.99	16.863 17.659	0.000 10.382	0.321 0.340	5.722 5.722	0.046 0.076	10.49 10.49	0.22 0.23	79.04 81.81
	Norwegian Sea (N)	lower upper	0.275 0.437	0.058 0.102	61.27 61.28	2.80 3.22	106.96 110.25	17.761 19.527	0.000 14.839	0.294 0.337	3.563 3.567	0.072 0.102	9.53 9.53	0.24 0.25	152.62 156.89
	Skagerrak (NO)	lower upper	1.148 1.176	0.079 0.114	85.46 85.46	17.29 17.51	266.75 266.76	8.726 19.260	0.067 75.295	0.964 0.967	15.069 15.069	0.275 0.288	29.18 29.18	0.73 0.73	290.09 290.09
Portugal	Bay of Biscay and	lower upper	0.190 0.190	NI NI	8.18 8.18	3.82 3.82	39.40 39.40	NI NI	NI NI	0.260 0.260	3.580 3.580	0.670 0.670	5.50 5.50	0.80 0.80	28.00 28.00
Spain	Atlantic (ESP)	lower upper	0.163 2.208	0.010 0.371	36.17 161.13	8.16 21.05	80.16 283.52	0.000 29.927	0.000 45.086	2.603 2.688	18.354 22.389	0.495 0.711	21.81 26.55	1.09 1.19	289.52 320.29
Sweden ¹	Kattegat (SWE)	lower upper	0.284 0.284	0.069 0.069	32.80 32.80	12.00 12.00	102.00 102.00	NI NI	NI NI	0.736 0.736	12.834 12.834	0.179 0.179	23.21 23.21	0.51 0.51	NI NI
	Skagerrak (SWE)	lower upper	0.043 0.043	0.010 0.010	3.32 3.32	1.00 1.00	10.70 10.70	NI NI	NI NI	0.113 0.113	0.702 0.702	0.031 0.031	2.11 2.11	0.09 0.09	NI NI
UK	Atlantic	lower upper	0.147 0.809	0.096 0.148	37.23 38.17	20.54 20.79	120.39 125.12	3.748 23.097	0.000 8.996	0.701 1.036	9.503 9.567	0.885 0.939	13.39 13.67	1.51 1.58	269.83 277.70
	Celtic Sea	lower upper	0.519 1.524	0.017 0.154	51.22 51.72	44.02 53.89	268.04 277.40	0.248 45.624	0.000 37.031	0.723 0.906	37.855 37.855	1.146 1.205	39.06 39.13	1.15 1.21	534.51 536.31
	Channel	lower upper	0.458 0.605	0.034 0.089	38.65 38.67	13.02 14.44	131.64 136.77	0.000 22.647	1.820 52.602	0.312 0.394	24.169 24.169	0.647 0.666	26.62 26.62	0.65 0.67	178.04 180.59
	Irish Sea	lower upper	2.376 3.047	0.162 0.272	96.52 97.27	105.39 110.09	474.54 483.90	2.060 44.892	0.000 63.200	2.246 2.672	27.693 27.920	1.697 1.788	34.52 34.52	1.80 1.89	571.40 580.08
	North Sea (North)	lower upper	1.110 1.514	0.090 0.207	66.49 68.30	177.06 177.35	386.51 394.15	3.281 22.558	0.000 41.516	0.778 0.999	32.295 32.336	0.807 0.934	42.15 42.16	1.37 1.50	590.31 597.48
	North Sea (South)	lower upper	1.208 1.430	0.049 0.141	56.35 56.37	54.35 55.52	252.85 257.63	1.517 38.490	0.000 83.337	1.815 1.853	66.975 66.975	3.198 3.214	74.15 74.15	3.20 3.21	309.33 310.35

¹ Denmark and Sweden report inputs from unmonitored areas as part of tables 6a and 6b, respectively. As AA Table 3 is generated by the RID database as the sum of national data tables 6a and 6b, the totals presented here do also include inputs from unmonitored areas for Denmark and Sweden.

² France reports inputs from unmonitored areas as a separate table, and also includes these inputs in the total riverine inputs reported in national data table 6c. As table 6c is not taken into account when generating AA Table 3, the totals presented here do not include inputs from unmonitored areas reported by France.

³ Norway reports inputs from unmonitored areas as a separate table. These inputs are not included in the totals presented here.

Table 4a. Sum of Direct (Table 2) and Riverine (Table 3) Inputs to the Maritime area of the OSPAR Convention in 2009 by Country

See footnotes to Tables 2 and 3 for explanations to possible deviations from the reported data.

Sea Area	Region		Cd [t/a]	Hg [t/a]	Cu [t/a]	Pb [t/a]	Zn [t/a]	g-HCH [kg/a]	PCBs [kg/a]	NH4-N [kt/a]	NO3-N [kt/a]	PO4-P [kt/a]	N-Total [kt/a]	P-Total [kt/a]	SPM [kt/a]
Belgium	North Sea (BE)	lower	1.447	0.157	13.56	31.57	187.18	0.207	0.000	1.991	22.962	1.335	27.29	2.09	302.28
		upper	2.435	0.216	39.42	42.34	190.22	15.808	80.046	2.556	23.243	1.649	31.75	3.25	406.63
Denmark	Kattegat (DK)	lower	NI	NI	NI	NI	NI	NI	NI	0.564	15.352	0.138	17.99	0.67	18.65
		upper	NI	NI	NI	NI	NI	NI	NI	0.564	15.352	0.138	17.99	0.67	18.65
	North Sea (DK)	lower	NI	NI	NI	NI	NI	NI	NI	0.345	12.345	0.189	14.72	0.53	25.65
		upper	NI	NI	NI	NI	NI	NI	NI	0.345	12.345	0.189	14.72	0.53	25.65
	Skagerrak (DK)	lower	NI	NI	NI	NI	NI	NI	NI	0.046	0.919	0.015	1.12	0.05	4.68
		upper	NI	NI	NI	NI	NI	NI	NI	0.046	0.919	0.015	1.12	0.05	4.68
France	Atlantic	lower	0.063	0.620	139.80	34.56	788.57	0.000	NI	2.572	220.610	1.427	195.16	5.24	1770.25
		upper	31.193	10.732	338.02	105.74	940.99	128.735	NI	3.759	220.619	2.203	283.93	5.43	1774.31
	Channel	lower	0.386	0.214	35.37	11.13	210.19	20.814	NI	3.703	127.739	1.649	128.13	2.73	461.19
		upper	16.688	8.951	39.18	17.40	213.08	348.148	NI	3.849	127.739	1.758	146.34	2.73	461.29
Germany	North Sea (GER)	lower	3.969	1.220	184.28	116.04	932.24	13.443	5.740	7.458	130.463	2.077	165.41	7.35	1304.01
		upper	4.573	1.285	185.06	121.83	946.36	20.604	26.650	7.568	130.464	2.091	165.41	7.35	1448.01
Iceland	Atlantic	lower	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		upper	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Ireland	Atlantic	lower	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		upper	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	Celtic Sea	lower	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		upper	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
	Irish Sea	lower	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		upper	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Netherlands	North Sea (NL)	lower	2.389	0.554	236.69	89.93	735.51	27.571	41.964	7.707	170.376	5.499	231.94	15.51	934.33
		upper	4.648	0.598	237.38	90.94	755.96	29.431	45.352	7.797	170.436	5.504	232.03	16.27	957.80
Norway	Barents Sea (NO)	lower	0.067	0.020	15.77	1.21	20.58	1.443	0.043	0.292	0.316	0.040	3.00	0.13	31.44
		upper	0.122	0.027	15.77	1.23	21.02	2.856	4.621	0.294	0.321	0.047	3.00	0.13	32.36
	North Sea (NO)	lower	0.482	0.059	25.22	9.12	88.85	16.863	0.840	3.356	5.924	0.312	14.53	0.67	92.86
		upper	0.510	0.085	25.28	9.86	91.06	17.659	11.222	3.375	5.924	0.342	14.53	0.67	95.62
	Norwegian Sea (N)	lower	0.332	0.060	62.20	4.48	110.83	17.761	0.000	3.646	3.787	0.383	14.00	0.76	177.17
		upper	0.493	0.103	62.21	4.90	114.12	19.527	14.839	3.689	3.790	0.413	14.00	0.76	181.45
	Skagerrak (NO)	lower	1.196	0.088	96.20	18.08	281.98	8.726	20.701	5.244	15.354	0.385	34.89	0.91	295.98
		upper	1.224	0.123	96.21	18.29	281.98	19.260	95.929	5.246	15.354	0.398	34.89	0.91	295.98
Portugal	Bay of Biscay and	lower	0.190	NI	8.18	3.82	39.40	NI	NI	0.260	3.580	0.670	5.50	0.80	28.00
		upper	0.190	NI	8.18	3.82	39.40	NI	NI	0.260	3.580	0.670	5.50	0.80	28.00
Spain	Atlantic (ESP)	lower	0.471	0.594	44.35	8.80	114.13	0.326	0.000	9.881	19.846	1.047	37.12	2.68	683.17
		upper	8.354	11.566	183.29	44.80	333.50	31.880	58.374	11.012	24.175	1.276	42.34	2.96	720.83
Sweden	Kattegat (SWE)	lower	0.311	0.076	34.43	12.14	106.10	NI	NI	2.130	12.834	0.179	25.23	0.57	NI
		upper	0.311	0.076	34.43	12.14	106.10	NI	NI	2.130	12.834	0.179	25.23	0.57	NI
	Skagerrak (SWE)	lower	0.044	0.011	3.61	1.38	11.26	NI	NI	0.265	0.702	0.031	2.47	0.10	NI
		upper	0.044	0.011	3.61	1.38	11.26	NI	NI	0.265	0.702	0.031	2.47	0.10	NI
UK	Atlantic	lower	0.451	0.176	41.74	22.15	141.01	6.000	0.000	6.276	11.393	1.806	24.22	3.16	295.71
		upper	1.143	0.229	42.71	22.43	145.75	25.367	9.001	6.612	11.463	1.860	24.59	3.23	303.66
	Celtic Sea	lower	0.537	0.020	53.04	45.51	300.77	0.411	0.000	11.698	39.498	2.517	51.53	2.52	546.73
		upper	1.565	0.160	53.58	55.58	310.39	47.767	39.453	11.918	39.538	2.601	51.62	2.60	548.57
	Channel	lower	0.467	0.041	44.02	14.58	170.61	0.053	1.820	5.025	26.513	1.283	32.89	1.28	195.70
		upper	0.640	0.099	44.08	16.07	175.80	28.381	58.649	5.167	26.533	1.343	32.89	1.34	198.27
	Irish Sea	lower	3.705	0.403	100.12	109.11	487.13	2.064	0.000	5.717	29.819	2.373	40.48	2.56	580.17
		upper	4.423	0.558	100.89	113.89	496.49	47.077	63.540	8.754	30.046	2.499	40.68	2.68	592.28
	North Sea (North)	lower	1.136	0.101	79.10	178.93	414.25	4.594	0.324	11.409	34.848	2.322	58.41	3.35	613.06
		upper	1.554	0.220	80.96	179.24	421.89	27.101	49.057	11.633	34.910	2.464	58.43	3.49	620.24
	North Sea (South)	lower	1.338	0.108	70.03	59.17	335.92	2.176	0.000	7.065	76.593	5.141	91.86	5.14	415.27
		upper	1.599	0.207	70.50	60.65	344.70	55.826	121.349	7.125	76.606	5.175	91.86	5.17	416.32

Table 4b. Sum of Direct and Riverine Inputs to the Maritime area of the OSPAR Convention in 2009 by Sea Area

See footnotes to Tables 2 and 3 for explanations to possible deviations from the reported data.

Sea Area		Cd [t/a]	Hg [t/a]	Cu [t/a]	Pb [t/a]	Zn [t/a]	g-HCH [kg/a]	PCBs [kg/a]	NH4-N [kt/a]	NO3-N [kt/a]	PO4-P [kt/a]	N-Total [kt/a]	P-Total [kt/a]	SPM [kt/a]
Arctic Ocean	lower	0.067	0.020	15.77	1.21	20.58	1.443	0.043	0.292	0.316	0.040	3.00	0.13	31.44
	upper	0.122	0.027	15.77	1.23	21.02	2.856	4.621	0.294	0.321	0.047	3.00	0.13	32.36
Atlantic Ocean	lower	0.451	0.176	41.74	22.15	141.01	6.000	0.000	6.276	11.393	1.806	24.22	3.16	295.71
	upper	1.143	0.229	42.71	22.43	145.75	25.367	9.001	6.612	11.463	1.860	24.59	3.23	303.66
Bay of Biscay and Iberian Coast	lower	0.724	1.214	192.33	47.18	942.10	0.326	0.000	12.714	244.036	3.145	237.78	8.72	2481.42
	upper	39.737	22.298	529.49	154.36	1313.89	160.615	58.374	15.031	248.374	4.149	331.77	9.19	2523.14
Celtic Sea	lower	0.537	0.020	53.04	45.51	300.77	0.411	0.000	11.698	39.498	2.517	51.53	2.52	546.73
	upper	1.565	0.160	53.58	55.58	310.39	47.767	39.453	11.918	39.538	2.601	51.62	2.60	548.57
Channel	lower	0.853	0.255	79.39	25.71	380.80	20.867	1.820	8.728	154.251	2.931	161.02	4.01	656.88
	upper	17.328	9.050	83.26	33.47	388.89	376.530	58.649	9.016	154.272	3.101	179.23	4.07	659.57
Irish Sea	lower	3.705	0.403	100.12	109.11	487.13	2.064	0.000	5.717	29.819	2.373	40.48	2.56	580.17
	upper	4.423	0.558	100.89	113.89	496.49	47.077	63.540	8.754	30.046	2.499	40.68	2.68	592.28
Kattegat	lower	0.311	0.076	34.43	12.14	106.10	NI	NI	2.694	28.186	0.317	43.22	1.24	18.65
	upper	0.311	0.076	34.43	12.14	106.10	NI	NI	2.694	28.186	0.317	43.22	1.24	18.65
North Sea (main body)	lower	10.760	2.200	608.89	484.76	2693.95	64.854	48.868	39.332	453.511	16.874	604.17	34.63	3687.46
	upper	15.319	2.611	638.60	504.86	2750.18	166.428	333.675	40.399	453.928	17.414	608.74	36.73	3970.27
Norwegian Sea	lower	0.332	0.060	62.20	4.48	110.83	17.761	0.000	3.646	3.787	0.383	14.00	0.76	177.17
	upper	0.493	0.103	62.21	4.90	114.12	19.527	14.839	3.689	3.790	0.413	14.00	0.76	181.45
Skagerrak	lower	1.240	0.099	99.81	19.46	293.24	8.726	20.701	5.555	16.975	0.431	38.49	1.06	300.65
	upper	1.267	0.134	99.81	19.68	293.24	19.260	95.929	5.557	16.975	0.444	38.49	1.06	300.65

Statistical information on river catchment areas

Statistical Information on River Catchment Areas

River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Statistical Information provided by Belgium:								
Coastal Area	2675				~0.497		2367	NI
Western	1689	Belgium	>1082	NI	>0,305	NI	708	
Middle	499	France	NI	NI	NI	NI		
Eastern	487	Belgium			0.014		501	
		Belgium			0.177		1158	
Scheldt basin								
Scheldt	22004				~10		11139	1949-2008
		Belgium (1)	13324	61	6.9			
		France	6680	30	~2,7			
		Netherlands (1)	2000	9	0.4			
		(1) Ghent-Terneuzen canal comprised						
Ghent-Terneuzen canal	NI						1 885	1991-2008
		Belgium	NI		NI			
		Netherlands	NI		NI			
Statistical Information provided by Denmark:								
Vid å	248.3	DK	248	81			300.5	78-07
Brøns å	94.1	DK	94	100		100	107.0	74-07
Ribe å	675	DK	675	100		100	756.6	33-07
Kongeaen	426.6	DK	427	100		100	627.0	90-07
Sneum å	223	DK	223	100		100	283.1	66-07
Varde å	815	DK	815	100		100	1048.8	69-07
Skjern å	1558.4	DK	1558	100		100	2108.2	74-07
Stor å	1096.7	DK	1097	100		100	1427.3	71-07
Brede å	290	DK	290	100		100	311.0	22-07
Omme å	612	DK	612	100		100	743.1	83-07
Grøn å	563	DK	563	100		100	606.2	59-07
Total	10809	=Total of Danish rivers discharging to the North Sea					8230	71-90
Liver å	249.8	DK	250	100		100	226.4	89-07
Uggerby å	347.5	DK	348	100		100	351.3	89-07
	1097	=Total of Danish rivers discharging to the Skagerrak					863	71-90
Karup å	626.8	DK	527	100		100	635.2	86-07
Jordbro å	110.9	DK	111	100		100	110.7	80-07
Skals å	556.4	DK	556	100		100	389.7	73-07
Simmersted å	214.9	DK	215	100		100	207.6	92-07
Elling å	132.2	DK	132	100		100	123.2	89-07
Voer å	238.7	DK	239	100		100	247.6	89-07
Ger å	153.8	DK	154	100		100	149.6	85-07
Lindeborg å	317.8	DK	318	100		100	310.3	83-07
Haslevgard å	75	DK	75	100		100	62.3	89-07
Kastbjerg å	96.3	DK	96	100		100	70.1	76-07
Guden å	2602.9	DK	2 603	100		100	2837.8	78-07
Ry å	285	DK	285	100		100	264.7	72-07
	15828	=Total of Danish rivers discharging to the Kattegat					5284	71-90

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River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Statistical Information provided by France:								
Coastal area	2308	France		100	0.61	100	2764	1989 - 2006
Canche	3895	France		100	0.38	100	4579	1961 - 2006
Somme	5916	France		100	0.59	100	3197	1963 - 2006
Béthune et Bresle	2153	France		100	0.16	100	2074	1998 - 2006
Saane	1718	France		100	0.16	100	2938	1996 - 2006
Seine	64953	France		100	13.94	100	44842	1974 - 2006
Andelle	789	France		100	0.05	100	691	1972 - 2006
Eure	6023	France		100	0.60	100	2246	1971 - 2006
Coastal area	2439	France		100	0.93	100	1599	1989 - 2006
Risle	2545	France		100	0.16	100	1642	1976 - 2006
Dives	1815	France		100	0.11	100	1296	1968 - 2006
Douve	1474	France		100	0.08	100	625	1989 - 2006
Orne	2976	France		100	0.40	100	2506	1984 - 2006
Seulles	547	France		100	0.06	100	346	1970 - 2006
Touques	1311	France		100	0.10	100	1037	1981 - 2006
Vire	2077	France		100	0.15	100	2246	1993 - 2006
Coastal area	1302	France		100	0.16	100	1174	1989 - 2006
Sélune et Sée	1623	France		100	0.09	100	1987	1994 - 2006
Sienne	1135	France		100	0.09	100	1328	1989 - 2006
Aulne	4312	France		100	0.52	100	6653	1969 - 2006
Rance et Couesnon	2848	France		100	0.27	100	2160	1983 - 2006
Coastal area	4961	France		100	0.49	100	3654	1989 - 2006
	119122	=Total of rivers discharging in ZONE II			20.10		91 582	
Blavet et Scorff	4649	France		100	0.50	100	5702	1982 - 2006
Coastal area	2868	France		100	0.32	100	4558	1989 - 2006
Vilaine	10144	France		100	0.90	100	5443	2001 - 2006
Coastal area	3636	France		100	0.82	100	2847	1989 - 2006
Loire	110178	France		100	6.67	100	73526	1868 - 2006
Sèvre Nantaise	4664	France		100	0.52	100	4234	1993 - 2006
Lay	4522	France		100	0.39	100	3456	1971 - 2006
Sèvre Niortaise	4363	France		100	0.42	100	4752	1992 - 2006
Coastal area	291	France		100	0.02	100	239	1989 - 2006
Boutonne	2141	France		100	0.14	100	1754	1989 - 2006
Charente	7526	France		100	0.43	100	5357	1979 - 2006
Coastal area	1172	France		100	0.09	100	446	1989 - 2006
Seudre	988	France		100	0.06	100	432	1971 - 2006
Eyre	2036	France		100	0.03	100	1814	1967 - 2006
Coastal area	2810	France		100	0.10	100	2264	1989 - 2006
Dordogne	14605	France		100	0.55	100	21859	1997 - 2006
Isle	8472	France		100	0.40	100	6912	1971 - 2006
Coastal area	870	France		100	0.09	100	647	1989 - 2006
Dropt	2672	France		100	0.21	100	1989	1989 - 2006
Garonne	38227	France		100	2.24	100	40003	1966 - 2006
Lot	11541	France		100	0.35	100	12614	2000 - 2006
Coastal area	3875	France		100	0.75	100	10983	1989 - 2006
Coastal area	3105	France		100	0.15	100	2501	1989 - 2006
Adour	7977	France		100	0.37	100	7690	1920 - 2006
Bidouze	1041	France		100	0.04	100	938	1989 - 2006
Gaves réunis	5504	France		100	0.32	100	17453	1925 - 2006
Luy	1367	France		100	0.10	100	1814	1966 - 2006
Nive	1153	France		100	0.12	100	3197	1968 - 2006
Coastal area	644	France		100	0.10	100	1825	1989 - 2006
	263040	=total of rivers discharging in ZONE IV			17.19		247 250	
Statistical Information provided by Germany:								
Ems	15552						7690	1941-2006
		Germany	13152	85.00	3.75	85		
		Netherlands	2400	15.00	0.6	15		
Weser	46306	Germany	-	-	9.0	-	31541	1941-2003
Elbe	148268		148268	100	25.11	-	74500	1926-2003
		Germany	96932	65.38	19.09	76.03		
		Czech Republic	50176	33.84	5.97	23.78		
		Austria	920	0.62	0.05	0.20		
		Poland	240	0.16	NI	NI		
Eider	2065	Germany	-	-	0.159	-	2391	1974-2006

River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Statistical Information provided by Ireland:								
Boyne	2695	Ireland	-	-	NI	-	3280	1940-2006
Liffey	1256	Ireland	-	-	NI	-	1459	1900-2006
								1956-2006
Avoca	652	Ireland	-	0	NI	-	1562.112	1986-2006
Slaney	1762	Ireland	-	-	NI	-	3208.032	1990-2006
	6365	=Total of main Irish rivers discharging to the Irish Sea						
Barrow	3067	Ireland	-	-	NI	-	3784.32	1996-2006
Nore	2530	Ireland	-	-	NI	-	3602.016	1972-2006
Suir	3610	Ireland	-	-	NI	-	5889.024	1972-2006
								1953-2006
Blackwater	3324	Ireland	-	-	NI	-	7521.984	1955-2006
Lee	1253	Ireland	-	-	NI	-	3435.264	1957-2006
Bandon	608	Ireland	-	-	NI	-	1858	1975-2006
Deel	486	Ireland	-	-	NI	-	624.672	1982-2006
Maigue	1052	Ireland	-	-	NI	-	1513.728	1990-2006
Shannon Old Chan.	11700	Ireland	-	-	NI	-	4499.712	1990-2006
Shannon Tailrace		Ireland	-	-		-	13307.33	1947-2006
Fergus	1042	Ireland	-	-	NI	-	1 598	1956-2006
	28672	=Total of main Irish rivers discharging to the Celtic Sea						
								1973-06 excl.
Corrib	3138	Ireland	-	-	NI	-	9011.52	86-90, 92-93
Moy	2086	Ireland	-	-	NI	-	5405.184	1974-2006
Erne	4372	Ireland/UK	2572/1800	60/40	NI	-	7 333	1951-2006
	9596	=Total of main Irish rivers dischrging to the Atlantic						
Statistical Information provided by The Netherlands (with assistance from Germany and Belgium)								
Rhine	185000				2) 55.6		4) 198720	1901-1995
		Switzerland	1) 28000	15	3.0	6		
		France	24000	13	3.7	7		
		Luxembourg	2500	1	0.3	1		
		Germany	105900	57	32.5	65		
		Netherlands	21000	11	10.9	21		
		Belgium	700	0				
		Austria	2500	1				
		Liechtenstein	300	0				
		Italy	100	0				
Meuse	33500				3) 7.15		5) 28080	1911-1995
		France	8500	25	0.50			
		Luxembourg	100	0	0.05			
		Belgium	13150	39	2.00			
		Germany	4300	13	1.00			
		Netherlands	7400	22	3.60			
Scheldt	22004				-10		9331	1949-1995
		France	6680	30.00	-2.7	-27		
		Belgium	13324	61.00	6.9	69		
		Netherlands	2000	9.00	0.4	4		
Ems	15552						7690	1941-2006
		Germany	13152	85.00	3.75	85		
		Netherlands	2400	15.00	0.6	15		
1) Catchment areas rounded off to the nearest hundred km2								
2) Population Rhine catchment per country requires further analysis								
3) Population Meuse catchment: rough estimates								
4) Estimated discharge at outlet: 2.300 m3/s * 24 h/d * 3600 s/h								
5) Estimated discharge at outlet: 325 m3/s * 24 h/d * 3600 s/h								
Statistical Information provided by Norway:								
Glomma (1)	41918	Norway		100.00	0.62	100	61350	1961-1990
Drammenselva (2)	17034	Norway		100.00	0.2	100	28850	1961-1990
Numedalslågen (3)	5577	Norway		100.00	0.04	100	10200	1961-1990
Skienelva (4)	10772	Norway		100.00	0.11	100	23535	1961-1990
Otra (5)	3738	Norway		100.00	0.03	100	12870	1961-1990
	79039	=Total of Norwegian rivers discharging to the Skagerrak						
Orreelva (6)	105	Norway		100.00	0.01	100	335	1961-1990
Suldalslågen (7)	1457	Norway		100.00	0.003	100	7420	1961-1990
	1562	=Total of Norwegian rivers discharging to the North Sea						
Orkla (8)	3053	Norway		100.00	0.02	100	5710	1961-1990
Vefsna (9)	4122	Norway		100.00	0.01	100	15655	1961-1990
	7175	=Total of Norwegian rivers discharging to the Norwegian Sea						
Altaelva (10)	7373	Norway		100.00	0.005	100	7495	1961-1990
	95149	Total catchment for main rivers discharging to all four regions						
	126706	Total catchment for tributary rivers discharging to all four regions						
	221855	Total catchment for monitored rivers						
Statistical Information provided by Portugal:								
Tejo	80149	Portugal	24380	30.8	2.89	32.0	15900	50
		Spain	55769	69.2	6.14	68.0	34800	50
Douro	97600	Portugal	18600	19.1	1.76	43.5	22500	50
		Spain	79000	80.9	2.28	56.5	40900	50
Miño/Minho	17000	Portugal	900	5.3	0.07	7.9	6000	15
		Spain	16100	94.7	0.86	92.1	29000	15

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River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Statistical Information provided by Spain:								
Oyarzun	74	Spain	74	100	0.055	100	166	
Urumea	266	Spain	266	100	0.176	100	633	
Oria	860	Spain	860	100	0.020	100	740	
Cadagua		Spain						
Asua		Spain						
Galindo		Spain						
Ibaizabal		Spain						
Urola	342	Spain	342	100	0.082	100	447	
Deva	531	Spain	531	100	0.146	100	694	
Artibay	106	Spain	106	100	0.016	100	NI	
Lea	81	Spain	81	100	0.010	100	NI	
Oca	132	Spain	132	100	0.022	100	NI	
Butron	175	Spain	175	100	0.024	100	NI	
Barbadun	135	Spain	135	100	0.020	100	NI	
Nervión	1764	Spain	1764	100	0.997	100	1 105	
Pas	620	Spain	606	97				
Eo	818	Spain	715	87				
Saja	955	Spain	955	100	0.104	100	1 166	
Nalón	4866	Spain	4866	100	0.539	100	6 977	
Miera	291	Spain	291	100	0.016	100	352	
Sella	1246	Spain	1246	100	0.035	100	832	
Masma	291	Spain	291	100	0.014	100	404	1970-2005
Oro	189	Spain	189	100	0.007	100	389	1970-2005
Landro	270	Spain	270	100	0.017	100	629	1975-2005
Sor	202	Spain	202	100	0.007	100	528	1996-2005
Mera	127	Spain	127	100	0.007	100	435	1970-2005
Forcadas	68	Spain	68	100	0.000	100	183	1970-2005
Grande de Jubia	182	Spain	182	100	0.004	100	318	1970-2005
Belelle	60	Spain	60	100	0.003	100	1 484	1970-2005
Eume	470	Spain	470	100	0.013	100	1 696	1970-2005
Mandeo	457	Spain	457	100	0.039	100	771	1970-2005
Mero	345	Spain	345	100	0.042	100	456	1984-2005
Allones	516	Spain	516	100	0.049	100	988	1970-2005
Grande	283	Spain	283	100	0.002	100	647	1970-2005
Castro	140	Spain	140	100	0.004	100	167	1970-2005
Jallas	504	Spain	504	100	0.022	100	739	1970-2005
Tambre	1530	Spain	1530	100	0.059	100	3828	1994-2005
Furelos		Spain						
Deza		Spain						
Traba	122	Spain	122	100	0.004	100	316	1970-2005
Ulla	2803	Spain	2803	100	0.104	100	1337	1971-2005
	156	Spain	156	100				
Umia	440	Spain	440	100	0.052	100	846	1970-2005
Lerez	450	Spain	450	100	0.085	100	1249	1970-1999
Verdugo	334	Spain	334	100	0.021	100	484	1970-2005
Miño	17247	Spain	16347	94.8	0.881		25716	1975-95
		Portugal	900	5.2				
Duero	97670	Spain	78960	80.8	3.093			
		Portugal	18710	19.2				
Tajo	80190	Spain	55810	69.6	6.459			
		Portugal	24380	30.4				
Guadiana	67122	Spain	55597	82.8	1.800		8556	1.912 - 1.995
		Portugal	11525	17.2				
Piedras	550	Spain	550	100	0.034	100	61	
Odiel	2417	Spain	2417	100	0.211	100	1 200	1967-1995
Guadaira		Spain						
Tinto	1727	Spain	1727	100	0.090	100	178	1966-1995
Guadalquivir	63241	Spain	63241	100	4.966	100	3423	1942-88
Guadianar								
Guadalete	3360	Spain	3360	100	0.555	100	413	
TOTAL	356726	Spain	301093	84.4	20.907	NI	70553	
		Portugal	55515	15.6	NI			
		TOTAL	356608	100				

River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Statistical Information provided by Sweden:					2005			
Vege å (95)	498	Sweden	498	100	0.0430	100	440	1961-1990
Rönne å (96)	1890	Sweden	1890	100	0.0903	100	2030	1961-1990
Stensån (97)	284	Sweden	284	100	0.0065	100	350	1961-1990
Lagan (98)	6444	Sweden	6444	100	0.1181	100	7410	1961-1990
Genevadsån (99)	225	Sweden	225	100	0.0046	100	350	1961-1990
Fylleån (100)	359	Sweden	359	100	0.0092	100	650	1961-1990
Nissan (101)	2682	Sweden	2682	100	0.0834	100	3690	1961-1990
Suseån (102)	441	Sweden	441	100	0.0074	100	640	1961-1990
Ätran (103)	3343	Sweden	3343	100	0.0657	100	5070	1961-1990
Himleån (104)	214	Sweden	214	100	0.0127	100	330	1961-1990
Viskan (105)	2201	Sweden	2201	100	0.1236	100	2760	1961-1990
Röfsån (106)	723	Sweden	723	100	0.0281	100	1030	1961-1990
Kungsbackaån (107)	310	Sweden	310	100	0.0404	100	410	1961-1990
Göta älv (108)	50230	Sweden	42780.00	85.20	0.8776	ni	50530	1961-1990
		Norway	7450.00	14.80	ni	ni		
69844	=Total of Swedish rivers discharging to the Kattegat							
Bäveån (109)	302	Sweden	302	100	0.0226	100	350	1961-1990
Örekilsälven (110)	1327	Sweden	1327	100	0.0138	100	2050	1961-1990
Strömsån (111)	253	Sweden	253	100	0.0056	100	390	1961-1990
Enningsdalsälven (112)	704	Sweden	704	100	0.0029	100	1360	1961-1990
2586	=Total of Swedish rivers discharging to the Skagerrak							
Statistical Information provided by the United Kingdom:								
Ness (SC2b)	NI	-	-	-	NI	-	7 600	NI
Conon (SC2b)	NI	-	-	-	NI	-	NI	NI
Baeuly (SC2b)	NI	-	-	-	NI	-	NI	NI
Findhorn (SC2b)	NI	-	-	-	NI	-	NI	NI
Shin (SC2b)	NI	-	-	-	NI	-	NI	NI
Helmsdale (SC2b)	NI	-	-	-	NI	-	NI	NI
Naver (SC2b)	NI	-	-	-	NI	-	NI	NI
Thurso (SC2b)	NI	-	-	-	NI	-	NI	NI
Brora (SC2b)	NI	-	-	-	NI	-	NI	NI
Oykel (SC2b)	NI	-	-	-	NI	-	NI	NI
Nairn (SC2b)	NI	-	-	-	NI	-	NI	NI
Carron (Sutherland) (SC2b)	NI	-	-	-	NI	-	NI	NI
Wick (SC2b)	NI	-	-	-	NI	-	NI	NI
Halladale (SC2b)	NI	-	-	-	NI	-	NI	NI
Hope (SC2b)	NI	-	-	-	NI	-	NI	NI
Alness (SC2b)	NI	-	-	-	NI	-	NI	NI
Cassley (SC2b)	NI	-	-	-	NI	-	NI	NI
Fleet (SC2b)	NI	-	-	-	NI	-	NI	NI
Berriedale Water (Sc2b)	NI	-	-	-	NI	-	NI	NI
Borgie (SC2b)	NI	-	-	-	NI	-	NI	NI
Forss Water (SC2b)	NI	-	-	-	NI	-	NI	NI
Loch of Stenness (SC2b)	NI	-	-	-	NI	-	NI	NI
Glass (SC2b)	NI	-	-	-	NI	-	NI	NI
Strathy (Sc2b)	NI	-	-	-	NI	-	NI	NI
Mickle Burn (SC2b)	NI	-	-	-	NI	-	NI	NI
Dunbeath Water (SC2b)	NI	-	-	-	NI	-	NI	NI
Spey (SC3)	NI	-	-	-	NI	-	5 600	NI

UK cont.

River	Catchment area	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period
	[km2]		[km2]	[%]	[10E6]	[%]	[1000 m3/d]	[a]
Dee (Grampian) (SC3)	NI	-	-	-	NI	-	NI	NI
Don (SC3)	NI	-	-	-	NI	-	NI	NI
Deveron (SC3)	NI	-	-	-	NI	-	NI	NI
Ythan (SC3)	NI	-	-	-	NI	-	NI	NI
Ugie (SC3)	NI	-	-	-	NI	-	NI	NI
Bervie Water (SC3)	NI	-	-	-	NI	-	NI	NI
Lossie (SC3)	NI	-	-	-	NI	-	NI	NI
Tay (SC4)	NI	-	-	-	NI	-	14 000	NI
Earn (SC4)	NI	-	-	-	NI	-	NI	NI
North Esk (Tayside) (SC4)	NI	-	-	-	NI	-	NI	NI
South Esk (Tayside) (SC4)	NI	-	-	-	NI	-	NI	NI
Eden (SC4)	NI	-	-	-	NI	-	NI	NI
Lunan Water (SC4)	NI	-	-	-	NI	-	NI	NI
Dightly Water (SC4)	NI	-	-	-	NI	-	NI	NI
Tweed (SC5)	NI	-	-	-	NI	-	NI	NI
Forth (SC5)	NI	-	-	-	NI	-	4 300	NI
Whiteadder Water (SC5)	NI	-	-	-	NI	-	NI	NI
Leven (Fife) (SC5)	NI	-	-	-	NI	-	NI	NI
Almond (SC5)	NI	-	-	-	NI	-	NI	NI
Esk (Lothian) (SC5)	NI	-	-	-	NI	-	NI	NI
Tyne (SC5)	NI	-	-	-	NI	-	3 900	NI
Allan Water (SC5)	NI	-	-	-	NI	-	NI	NI
Devon (SC5)	NI	-	-	-	NI	-	NI	NI
Carron (Falkirk) (SC5)	NI	-	-	-	NI	-	NI	NI
Avon (SC5)	NI	-	-	-	NI	-	NI	NI
Eye Water (SC5)	NI	-	-	-	NI	-	NI	NI
Water of Leith (SC5)	NI	-	-	-	NI	-	NI	NI
Tweed (E1)	NI	-	-	-	NI	-	NI	NI
Coquet (E1)	NI	-	-	-	NI	-	NI	NI
Wansbeck (E1)	NI	-	-	-	NI	-	NI	NI
Blyth (E1)	NI	-	-	-	NI	-	NI	NI
Tyne (E2)	NI	-	-	-	NI	-	NI	NI
Derwent (E2)	NI	-	-	-	NI	-	NI	NI
Team (E2)	NI	-	-	-	NI	-	NI	NI
Wear (E3)	NI	-	-	-	NI	-	NI	NI
Skerne (E5)	NI	-	-	-	NI	-	NI	NI
Tees (E5)	NI	-	-	-	NI	-	NI	NI
Tot.N.Sea (N) catch.	50000						89300	1960 to 1990
Aire (E8)	NI	-	-	-	NI	-	NI	NI
Derwent (E8)	NI	-	-	-	NI	-	NI	NI
Don (E8)	NI	-	-	-	NI	-	NI	NI
Ouse (E8)	NI	-	-	-	NI	-	NI	NI
Wharfe (E8)	NI	-	-	-	NI	-	NI	NI
Ancholme (E8)	NI	-	-	-	NI	-	NI	NI
Trent (E8)	NI	-	-	-	NI	-	7800	NI
Idle (E8)	NI	-	-	-	NI	-	NI	NI
Welland (E9)	NI	-	-	-	NI	-	NI	NI
Nene (E9)	NI	-	-	-	NI	-	NI	NI
Ouse (E9)	NI	-	-	-	NI	-	NI	NI
Witham (E9)	NI	-	-	-	NI	-	NI	NI
Glan (E9)	NI	-	-	-	NI	-	NI	NI
Hundred Foot River (E9)	NI	-	-	-	NI	-	NI	NI
Ten Mile River (E9)	NI	-	-	-	NI	-	NI	NI
Bure (E10)	NI	-	-	-	NI	-	NI	NI
Wensum (E10)	NI	-	-	-	NI	-	NI	NI
Stour (E10)	NI	-	-	-	NI	-	NI	NI
Gipping (E10)	NI	-	-	-	NI	-	NI	NI
Waveney (E10)	NI	-	-	-	NI	-	NI	NI
Yare (E10)	NI	-	-	-	NI	-	NI	NI
Colne (E11)	NI	-	-	-	NI	-	NI	NI
Chalmer (E11)	NI	-	-	-	NI	-	NI	NI
Blackwater (E11)	NI	-	-	-	NI	-	NI	NI
Thames (E12)	NI	-	-	-	NI	-	6700	NI

UK Cont

Beam (E12)	NI	-	-	-	NI	-	NI	NI
Beverley Brook (E12)	NI	-	-	-	NI	-	NI	NI
Brent (E12)	NI	-	-	-	NI	-	NI	NI
Crane (E12)	NI	-	-	-	NI	-	NI	NI
Ingrebourne (E12)	NI	-	-	-	NI	-	NI	NI
Lee (E12)	NI	-	-	-	NI	-	NI	NI
Ravensbourne (E12)	NI	-	-	-	NI	-	NI	NI
Roding (E12)	NI	-	-	-	NI	-	NI	NI
Wandle (E12)	NI	-	-	-	NI	-	NI	NI
Tot.N.Sea (S) catch.	62000						32300	1960 to 1990
Medway (E13)	NI	-	-	-	NI	-	NI	NI
Stour (E13)	NI	-	-	-	NI	-	1130	NI
Rother (E13)	NI	-	-	-	NI	-	NI	NI
Adur (E14)	NI	-	-	-	NI	-	NI	NI
Ouse (E14)	NI	-	-	-	NI	-	NI	NI
Cuckmere (E14)	NI	-	-	-	NI	-	NI	NI
Arun (E14)	NI	-	-	-	NI	-	NI	NI
Itchen (E15)	NI	-	-	-	NI	-	NI	NI
Test (E15)	NI	-	-	-	NI	-	NI	NI
Blackwater (E15)	NI	-	-	-	NI	-	NI	NI
Frome (E16)	NI	-	-	-	NI	-	NI	NI
Stour (E16)	NI	-	-	-	NI	-	NI	NI
Avon (E16)	NI	-	-	-	NI	-	1330	NI
Axe (E17)	NI	-	-	-	NI	-	NI	NI
Dart (E17)	NI	-	-	-	NI	-	NI	NI
Exe (E17)	NI	-	-	-	NI	-	1360	NI
Gara (E17)	NI	-	-	-	NI	-	NI	NI
Otter (E17)	NI	-	-	-	NI	-	NI	NI
Teign (E17)	NI	-	-	-	NI	-	NI	NI
Cober (E18)	NI	-	-	-	NI	-	NI	NI
Erme (E18)	NI	-	-	-	NI	-	NI	NI
Fal (E18)	NI	-	-	-	NI	-	NI	NI
Fowey (E18)	NI	-	-	-	NI	-	NI	NI
Gara (E18)	NI	-	-	-	NI	-	NI	NI
Lynher (E18)	NI	-	-	-	NI	-	NI	NI
Par (E18)	NI	-	-	-	NI	-	NI	NI
Plym (E18)	NI	-	-	-	NI	-	NI	NI
Porthleven (E18)	NI	-	-	-	NI	-	NI	NI
St Austel (E18)	NI	-	-	-	NI	-	NI	NI
Tavy (E18)	NI	-	-	-	NI	-	NI	NI
Tamar (E18)	NI	-	-	-	NI	-	1940	NI
Tot.Channel catch.	22000						16500	1960-1990
Camel (E19)	NI	-	-	-	NI	-	NI	NI
Hayle (E19)	NI	-	-	-	NI	-	NI	NI
Menalhyl (E19)	NI	-	-	-	NI	-	NI	NI
Red River (E19)	NI	-	-	-	NI	-	NI	NI
Taw (Yeo) (E19)	NI	-	-	-	NI	-	NI	NI
Taw (2) (E20)	NI	-	-	-	NI	-	NI	NI
TorrIDGE (E20)	NI	-	-	-	NI	-	NI	NI
Parrett (E21)	NI	-	-	-	NI	-	NI	NI
Tone (E21)	NI	-	-	-	NI	-	NI	NI
Bristol Avon (E22)	NI	-	-	-	NI	-	NI	NI
Severn (2) (E22)	NI	-	-	-	NI	-	9100	NI
Wye (E23)	NI	-	-	-	NI	-	6200	NI
Usk (E23)	NI	-	-	-	NI	-	NI	NI
Rhymney (E23)	NI	-	-	-	NI	-	NI	NI
Ely (E23)	NI	-	-	-	NI	-	NI	NI
Afon Lwyd (E23)	NI	-	-	-	NI	-	NI	NI
Ebbw Fawr (E23)	NI	-	-	-	NI	-	NI	NI
Taff (E23)	NI	-	-	-	NI	-	NI	NI
Cadoxton (E24)	NI	-	-	-	NI	-	NI	NI
Neath (E24)	NI	-	-	-	NI	-	NI	NI
Ogmore (E24)	NI	-	-	-	NI	-	NI	NI
Thaw (E24)	NI	-	-	-	NI	-	NI	NI
Tawe (E24)	NI	-	-	-	NI	-	NI	NI
Ewenny (E24)	NI	-	-	-	NI	-	NI	NI
Nant Y Fendrod (E24)	NI	-	-	-	NI	-	NI	NI
Thaw Kenson (E24)	NI	-	-	-	NI	-	NI	NI
Dafen (E25)	NI	-	-	-	NI	-	NI	NI

UK Cont.

W Cleddau (E25)	NI	-	-	-	NI	-	NI	NI
Tywi (E25)	NI	-	-	-	NI	-	3700	NI
Taf (E25)	NI	-	-	-	NI	-	NI	NI
Loughor (E25)	NI	-	-	-	NI	-	NI	NI
Tot.Celtic S. catch.	32000						36400	1960-1990
Teifi (E26)	NI	-	-	-	NI	-	NI	NI
Ystwyth (E26)	NI	-	-	-	NI	-	NI	NI
Rheidol (E26)	NI	-	-	-	NI	-	NI	NI
Mawddach (E26)	NI	-	-	-	NI	-	NI	NI
Dyfi (E26)	NI	-	-	-	NI	-	NI	NI
Glaslyn (E26)	NI	-	-	-	NI	-	NI	NI
Afon Goch (2) (E27)	NI	-	-	-	NI	-	NI	NI
Clwyd (E27)	NI	-	-	-	NI	-	NI	NI
Cefni (E27)	NI	-	-	-	NI	-	NI	NI
Conwy (E27)	NI	-	-	-	NI	-	NI	NI
Dee (E27)	NI	-	-	-	NI	-	3020	NI
Nant Glywdyr (E27)	NI	-	-	-	NI	-	NI	NI
Alt (E28)	NI	-	-	-	NI	-	NI	NI
Mersey (E28)	NI	-	-	-	NI	-	3540	NI
Weaver (E28)	NI	-	-	-	NI	-	NI	NI
Darwen (E29)	NI	-	-	-	NI	-	NI	NI
Douglas (E29)	NI	-	-	-	NI	-	NI	NI
Ribble (E29)	NI	-	-	-	NI	-	NI	NI
Kent (E29)	NI	-	-	-	NI	-	NI	NI
Lune (E29)	NI	-	-	-	NI	-	3020	NI
Wyre (E29)	NI	-	-	-	NI	-	NI	NI
Leven (E29)	NI	-	-	-	NI	-	NI	NI
Derwent (E30)	NI	-	-	-	NI	-	NI	NI
Eden (E30)	NI	-	-	-	NI	-	4320	NI
Nith (SC1)	NI	-	-	-	NI	-	NI	NI
Annan (SC1)	NI	-	-	-	NI	-	NI	NI
Dee (Solway) (SC1)	NI	-	-	-	NI	-	NI	NI
Esk (Solway) (SC1)	NI	-	-	-	NI	-	NI	NI
Cree (SC1)	NI	-	-	-	NI	-	NI	NI
Bladnoch (SC1)	NI	-	-	-	NI	-	NI	NI
Water of Luce (SC1)	NI	-	-	-	NI	-	NI	NI
Urr Water (SC1)	NI	-	-	-	NI	-	NI	NI
Lochar Water (SC1)	NI	-	-	-	NI	-	NI	NI
Newry (NI2)	NI				NI	-	NI	NI
Quoile (NI2)	NI				NI	-	NI	NI
Lagan (NI2)	NI				NI	-	NI	NI
Tot.Irish Sea catch.	35000						48400	1960-1990
Clyde (SC2)	NI	-	-	-	NI	-	4 000	NI
Awe (SC2)	NI	-	-	-	NI	-	NI	NI
Leven (Loch Lomond (SC2)	NI	-	-	-	NI	-	NI	NI
Ayr (SC2)	NI	-	-	-	NI	-	NI	NI
Irvine (SC2)	NI	-	-	-	NI	-	NI	NI
Kelvin (SC2)	NI	-	-	-	NI	-	NI	NI
Stinchar (SC2)	NI	-	-	-	NI	-	NI	NI
Doon (SC2)	NI	-	-	-	NI	-	NI	NI
Water of Girvan (SC2)	NI	-	-	-	NI	-	NI	NI
White Cart Water (SC2)	NI	-	-	-	NI	-	NI	NI
Garnock (SC2)	NI	-	-	-	NI	-	NI	NI

UK cont.

Etive (SC2)	NI	-	-	-	NI	-	NI	NI
Eachaig (SC2)	NI	-	-	-	NI	-	NI	NI
Black Cart Water (SC2)	NI	-	-	-	NI	-	NI	NI
Gryfe (SC2)	NI	-	-	-	NI	-	NI	NI
Add (SC2)	NI	-	-	-	NI	-	NI	NI
Lochy (SC2a)	NI	-	-	-	NI	-	5 400	NI
Ewe (SC2a)	NI	-	-	-	NI	-	NI	NI
Shiel (SC2a)	NI	-	-	-	NI	-	NI	NI
Leven (Lochaber) (SC2a)	NI	-	-	-	NI	-	NI	NI
Morar (SC2a)	NI	-	-	-	NI	-	NI	NI
Inver (SC2a)	NI	-	-	-	NI	-	NI	NI
Carron (Wester Ross) (SC2a)	NI	-	-	-	NI	-	NI	NI
Gruinard (SC2a)	NI	-	-	-	NI	-	NI	NI
Broom (SC2a)	NI	-	-	-	NI	-	NI	NI
Kirkaig (SC2a)	NI	-	-	-	NI	-	NI	NI
Ling (SC2a)	NI	-	-	-	NI	-	NI	NI
Laxford (SC2a)	NI	-	-	-	NI	-	NI	NI
Abhainn Ghriomarstaidh	NI	-	-	-	NI	-	NI	NI
Aline (SC2a)	NI	-	-	-	NI	-	NI	NI
Loch Linnhe (SC2a)	NI	-	-	-	NI	-	NI	NI
Bush (NI1)	NI				NI		NI	NI
Bann (NI1)	NI				NI		7900	NI
Roe (NI1)	NI				NI		NI	NI
Faughan (NI1)	NI				NI		NI	NI
Burn Dennet NI1	NI				NI		NI	NI
Mourne (NI1)	NI				NI		NI	NI
Finn (NI1)	NI				NI		NI	NI
Tot.Atlantic catchm.	42000						49700	1960-1990

*) LTA = Long-term average



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