



OSPAR COMMISSION

Riverine Inputs and Direct Discharges to Convention Waters

OSPAR Contracting Parties' RID 2013 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

Acknowledgement

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National 2012 RID data reports (excel and word files)

https://odims.ospar.org/en/submissions/ospar_rid_data_reports_2012_01_001/

National 2013 RID data reports (excel and word files)

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Glossary

Catchment area	The area of land delimited by watersheds draining into a body of water (river, basin, reservoir, sea).
Cd	Cadmium
Cu	Copper
Direct discharges	Point sources discharging directly to coastal or transitional waters.
Heavy metals	Five heavy metals are mandatory in the RID Programme: cadmium, copper, lead, mercury and zinc.
Hg	Mercury
LOD	Limit of Detection. The minimum concentration of a compound that can be detected.
LOQ	Limit of quantification. The minimum concentration of a compound that can be quantified confidently. LOQ is determined by assessing the variability (standard deviation) of replicate measurements of analyses at a concentration near the detection limit.
Main river	This term is on its way out of the RID Programme, as main and tributary rivers are exchanged with the term “monitored rivers”. A main river was defined as a river that was monitored at least once a month (12 datasets) every year. Main rivers should be major load bearing rivers.
Monitored area	The catchment upstream of the RID river monitoring station.
Monitored river	All rivers that have RID water quality monitoring stations, irrespective of sampling frequency.
Monitoring station	The site at which water samples are collected for chemical analyses within the RID Programme.
Pb	Lead
Riverine inputs	A mass of a determinand carried to the maritime area by a watercourse (natural or man-made) per unit of time.
SPM	Suspended Particulate Matter

Total inputs	The sum of inputs as measured in the monitored rivers, and estimated from unmonitored areas and direct discharges.
Total-N	Total Nitrogen
Total-P	Total Phosphorus
Tributary river	This term is on its way out of the RID Programme, as main and tributary rivers are now being exchanged with the term “monitored rivers”. A tributary river would have a separate catchment from a main river and 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	Any land area not covered by a riverine monitoring station. This can include the part of the catchment located downstream of the riverine monitoring station and all unmonitored catchments. Unmonitored areas can have both diffuse and point sources of pollution. If point sources are discharging directly to coastal or transitional waters, they are named “direct discharges” and should be reported as such.
Zn	Zinc

Introduction

The Comprehensive Study on Riverine Inputs and Direct Discharges (RID; agreement 1998-5, update 2014-04)¹ is part of 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 OSPAR Convention area is divided into five main regions (Figure 1). Table 1 shows the Contracting Parties (CPs) draining into each region.

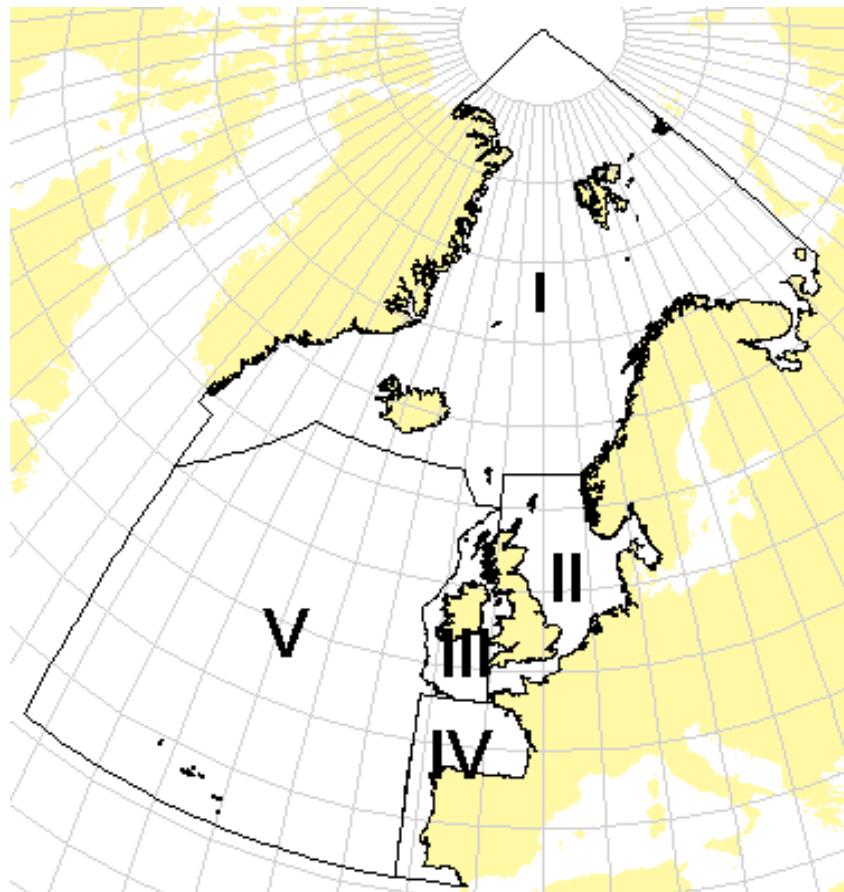


Figure 1. OSPAR Maritime Area and Regions. I: Arctic Waters, II: Greater North Sea, III: Celtic Seas, IV: Bay of Biscay and V: Wider Atlantic.

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)). The RID Principles were reviewed in 1998, 2005, and 2014 (agreement 2014-04).

Table 1. Assignment of countries and sea areas to OSPAR Regions.

Country / Sea Area	OSPAR Region	Country / Sea Area	OSPAR Region
Belgium		Norway	
- North Sea (BE)	II	- Norwegian Sea (NO)	I
Denmark		- Barents Sea (NO)	I
- Skagerrak (DK)	II	- Skagerrak (NO)	II
- Kattegat (DK)	II	- North Sea (NO)	II
- North Sea (DK)	II	Portugal	
France		- Bay of Biscay and Iberian Coast (PO)	IV
- Channel	II	Spain	
- Atlantic	IV	- Atlantic (ESP)	IV
Germany		Sweden	
- North Sea (GER)	II	- Kattegat (SWE)	II
Iceland		- Skagerrak (SWE)	II
- Atlantic	I	UK	
Ireland		- North Sea (North)	II
- Irish Sea	III	- North Sea (South)	II
- Celtic Sea	III	- Channel	II
- Atlantic	III	- Irish Sea	III
Netherlands		- Celtic Sea	III
- North Sea (NL)	II	- Atlantic	III

Submission of RID data for 2012

Table 2 provides an overview of the status of 2012 RID data submitted by Contracting Parties (CPs) by April 22nd 2015. All CPs except Denmark had a deadline of November 1st 2013 for submitting data and text reports. Denmark had a deadline of December 1st 2013.

As for the validation of these data after export from the database, some challenges were encountered, as the 2012 data were reported in the old format of the database (see also the document INPUT 15/05/03.1-E). The validation of the 2012 data will therefore have to proceed into 2015. The data will have to be transferred into the new format, and then the RID Data Centre will import the data into the new version of the database, and send to the countries for validation. For the same reason, overview tables (AA Tables 1-4) have not yet been prepared for 2012 data.

Table 2. Overview of submitted 2012 RID information by Contracting Parties.

Contracting Party	RID 2012 written report submitted	RID 2012 Data submitted
Belgium	-	-
Denmark	-	X
France	X	X
Germany	X	X
Iceland	X	X
Ireland	-	X
Netherlands	X	X
Norway	X	X
Portugal	-	-
Spain	X	X
Sweden	X	X
United Kingdom	X	X

Submission of RID data for 2013

Tables 3 and 4 provide an overview of the status of 2013 RID data submitted by Contracting Parties (CPs) by May 28nd 2015. All CPs except Denmark had a deadline of November 1st for submitting data and text reports. Denmark had a deadline of December 1st.

In 2013, all countries were asked to report based on the template format generated by the new version of the RID database. The national data tables (Tables 5a - 9) were imported to the RID database, and thereafter the database export files were sent to the respective CPs for validation.

Table 3. Overview of submitted information by Contracting Parties.

Contracting Party	RID 2013 written report submitted	RID 2013 Data submitted	RID 2013 Data validated
Belgium	-	-	-
Denmark	-	X	X
France	X	X	X
Germany*	X	X	-
Iceland	X	X	X
Ireland	-	X	X
Netherlands*	X	X	X
Norway	X	X	X
Portugal	-	-	-
Spain	X	X	X
Sweden	X	X	X
United Kingdom	X	X	X

* Word report not yet fully completed.

Table 4. Overview of information for 2013 on inputs to the OSPAR Maritime Area reported by Contracting Parties (green = data submitted; red = no data submitted; NA = not applicable).

Contracting Party	Sewage effluents	Industrial effluents	Aquaculture discharges	Other direct discharges	Monitored rivers	Unmonitored rivers
Belgium ¹	NA	NA				
Denmark						
France ⁵						
Germany						
Iceland						
Ireland ⁴						
Netherlands						
Norway						
Portugal						
Spain ²						
Sweden			NA	NA		
UK ³						

¹ Belgium reports that no sewage or industrial effluents discharge directly to Belgium's Convention Waters.

² For direct discharges, Spain reports on calendar years (i.e. 2013), whereas for riverine inputs data are reported for hydrological years (i.e. Oct 2012 – Sept 2013).

³ UK does not report inputs from main and tributary rivers separately, as they report on areas rather than individual rivers

⁴ Data not yet validated; hence not included in Annex I AA Tables 1-4.

⁵ Note, that France used to monitor direct discharges in 2003-2005. These discharges were, however, found to be not significant compared to riverine inputs, therefore they are not monitored in France any more.

Overview tables 1-4 (AA-tables) for 2013 are given in Annex I.

Annex I Annual Overview Tables 2013 (AA Tables)

AA Table 1a Information Received on Inputs to the Maritime Area of the OSPAR Convention in 2013

AA Table 1b Determinands Reported by Contracting Parties in 2013

AA Table 2 Direct Discharges to the Maritime Area of the OSPAR Convention in 2013 by Country

AA Table 3 Riverine Inputs to the Maritime Area of the OSPAR Convention in 2013 by Country

AA Table 4a Sum of Direct (Table 2) and Riverine (Table 3) Inputs to the Maritime Area of the OSPAR Convention in 2013 by Country

AA Table 4b Sum of Direct and Riverine Inputs to the Maritime Area of the OSPAR Convention in 2013 by Sea Area

AA Table 1a.**Information Received on Inputs to the Maritime Area of the OSPAR Convention in 2013**

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

+ = Information available

NI = No information

AA Table 1b.**Determinants reported by Contracting Parties in 2013**

Country	Determinants													
	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	NI
-riverine inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Denmark														
-direct inputs	NI	NI	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	NI
-riverine inputs	R+(4)	R+(4)	R+(4)	R+(3)	R+(3)	R+(4)	NI	R+(3)	+(3)	R+(3)	R+(4)	R+(3)	R+(3)	R+(3)
Germany														
-direct inputs	R+	R+	R+	R+	R+	R+	R+	R+	R+	+	+	+	+	+
-riverine inputs	R+(4)	R+(4)	+(3)	R+(3)	R+(4)	R+(4)	R+(4)	R+(3)	+(3)	R+(3)	+(3)	+(3)	R+(4)	
Iceland														
-direct inputs	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
-riverine inputs	+	+	+	+	+	NI	NI	NI	+	+	+	+	+	NI
Ireland														
-direct inputs	+	NI	+	+	+	NI	NI	NI	NI	NI	+	+	+	+
-riverine inputs	R+(4)	R+(4)	R+(3)	R+(4)	+(3)	NI	NI	R+(4)	R+(3)	R+(4)	+(3)	R+(3)	R+(4)	
Netherlands														
-direct inputs	+	+	+	+	+	NI	NI	NI	NI	NI	+	+	+	NI
-riverine inputs	+(4)	+(4)	+(4)	+(4)	+(4)	+(4)	+	+(4)	+(4)	+(4)	+(4)	+(4)	+(4)	EOX,PAK6
Norway														
-direct inputs	+	+	+	+	+	NI	+	+	+	+	+	+	+	As,Total Cr,Ni,TOC
-riverine inputs	+(3)	+(4)	+(3)	+(3)	+(3)	NI	NI	+(3)	+(3)	+(4)	+(3)	+(3)	+(3)	As,Total Cr,Ni,TOC
Portugal														
-direct inputs	NI	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	NI
Spain														
-direct inputs	R+	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)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	R+(4)	
Sweden														
-direct inputs	+	+	+	+	+	NI	NI	+	NI	NI	+	+	+	NI
-riverine inputs	+(3)	+(3)	+(3)	+(3)	+(3)	NI	NI	+(3)	+(3)	+(3)	+(3)	+(3)	+(3)	NI
UK														
-direct inputs	R+	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+	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

AA Table 2.**Direct Discharges to the Maritime Area of the OSPAR Convention in 2013 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	
Denmark	Kattegat (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.47 0.47	0.05 0.05	NI NI	
	North Sea (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.09 0.09	0.01 0.01	NI NI	
	Skagerrak (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.02 0.02	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	
	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	
Germany	North Sea (GER)	lower upper	0.00 0.05	0.00 0.04	1.58 2.19	0.73 1.36	8.45 13.47	0.01 0.27	0.03 2.84	1.67 1.67	1.72 1.72	0.07 0.07	3.52 3.52	0.38 0.38	1.53 1.53
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	
Ireland	Atlantic	lower upper	0.01 0.01	NI NI	0.83 0.83	0.39 0.39	7.70 7.70	NI NI	NI NI	NI NI	NI NI	0.70 0.70	0.21 0.21	4.32 4.32	
	Celtic Sea	lower upper	0.02 0.02	NI NI	3.20 3.20	4.40 4.40	21.50 21.50	NI NI	NI NI	NI NI	NI NI	2.67 2.67	0.65 0.65	18.59 18.59	
	Irish Sea	lower upper	0.06 0.06	NI NI	7.50 7.50	3.30 3.30	63.00 63.00	NI NI	NI NI	NI NI	NI NI	6.83 6.83	1.58 1.58	38.13 38.13	
Netherlands	North Sea (NL)	lower upper	0.02 0.02	0.01 0.01	0.42 0.42	0.41 0.41	4.17 4.17	NI NI	NI NI	NI NI	NI NI	1.33 1.33	0.17 0.17	NI NI	
Norway	Barents Sea (NO)	lower upper	0.00 0.00	0.00 75.54	75.54 NI	NI NI	NI NI	3.67 3.67	0.49 0.49	0.53 0.53	4.60 4.60	0.77 0.77	0.02 0.02		
	North Sea (NO)	lower upper	0.06 0.06	0.01 0.01	302.34 302.34	0.55 0.55	10.32 10.32	NI NI	0.01 0.01	16.89 16.89	2.10 2.10	2.27 2.27	21.37 21.37	3.35 3.35	5.78 5.78
	Norwegian Sea (NO)	lower upper	0.01 0.01	0.00 0.00	540.66 540.66	0.38 0.38	1.55 1.55	NI NI	0.65 0.65	28.12 28.12	3.62 3.62	3.91 3.91	35.44 35.44	5.74 5.74	5.51 5.51
	Skagerrak (NO)	lower upper	0.04 0.04	0.01 0.01	7.87 7.87	0.51 0.51	14.65 14.65	NI NI	1.01 1.01	4.41 4.41	0.30 0.30	0.10 0.10	5.88 5.88	0.17 0.17	2.06 2.06
Portugal	Bay of Biscay and Iberian Peninsula	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	
Spain	Atlantic (ESP)	lower upper	0.01 1.17	0.02 0.84	0.32 6.63	0.11 15.20	2.91 20.46	0.10 3.50	0.00 4.93	0.56 3.55	0.65 1.17	0.07 0.55	2.07 3.29	0.16 0.56	2.14 113.46
Sweden	Kattegat (SWE)	lower upper	0.03 0.03	0.01 0.01	1.66 1.66	0.07 0.07	5.00 5.00	NI NI	0.95 0.95	NI NI	NI NI	1.54 1.54	0.04 0.04	NI NI	
	Skagerrak (SWE)	lower upper	0.00 0.00	0.00 0.00	0.23 0.23	0.01 0.01	0.93 0.93	NI NI	0.16 0.16	NI NI	NI NI	0.31 0.31	0.01 0.01	NI NI	
UK	Atlantic	lower upper	0.01 0.31	0.00 0.01	103.81 104.39	0.79 1.56	37.22 37.38	0.87 2.05	0.00 0.00	5.05 5.05	1.31 1.31	1.01 1.01	14.94 14.95	2.30 2.30	21.73 21.75
	Celtic Sea	lower upper	0.01 0.03	0.00 0.00	1.74 1.74	0.23 0.54	9.55 9.57	0.01 2.09	0.14 0.41	3.44 3.51	0.66 0.69	0.36 0.37	4.22 4.28	0.36 0.37	5.11 5.21
	Channel	lower upper	0.01 0.02	0.00 0.00	4.22 4.22	0.45 0.60	8.15 8.95	0.36 7.07	0.00 4.38	4.32 2.18	2.15 0.72	0.66 0.72	6.95 6.98	0.66 0.72	6.35 6.36
	Irish Sea	lower upper	0.01 1.50	0.01 0.01	0.96 3.88	0.38 4.08	12.21 12.74	0.04 0.48	0.00 0.21	0.42 0.51	0.62 0.62	0.35 0.35	1.12 1.19	0.40 0.40	7.39 8.23
	North Sea (North)	lower upper	0.03 0.04	0.02 0.02	31.72 31.74	1.64 1.73	35.92 36.02	0.77 5.18	0.00 8.93	11.80 12.72	2.49 2.54	1.75 1.76	20.47 20.47	2.77 2.79	24.19 24.25
	North Sea (South)	lower upper	0.04 0.25	0.10 0.10	15.49 18.22	3.23 7.14	55.76 62.20	0.00 21.59	0.00 42.40	4.17 4.19	12.72 12.74	2.67 2.67	20.10 20.10	2.67 2.67	98.65 98.94

AA Table 3.**Riverine Inputs to the Maritime Area of the OSPAR Convention in 2013 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	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	Kattegat (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.16 0.16	4.61 4.61	0.07 0.07	17.92 17.92	0.58 0.58	15.90 15.90	
	North Sea (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.33 0.33	7.50 7.50	0.07 0.07	15.28 15.28	0.58 0.58	30.14 30.14	
	Skagerrak (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.04 0.04	0.70 0.70	0.01 0.01	1.12 1.12	0.05 0.05	4.73 4.73	
France	Atlantic	lower upper	0.67 3.09	0.14 1.75	147.95 168.26	1.45 121.35	454.04 613.03	0.00 956.51	NI NI	4.79 4.90	412.06 412.06	3.33 3.38	390.22 520.77	13.12 13.14	9371.63 9376.94
	Channel	lower upper	1.67 1.95	0.00 0.98	107.94 108.73	64.35 71.56	448.84 449.57	18.54 191.18	NI NI	3.67 3.68	238.85 238.85	2.61 2.61	230.83 275.70	4.36 4.36	1432.63 1433.11
Germany	North Sea (GER)	lower upper	4.90 5.51	1.70 1.71	224.03 224.03	121.25 128.39	1124.87 1160.57	17.00 58.40	3.40 26.27	6.12 6.63	186.03 186.03	2.47 2.52	221.16 221.16	8.10 8.10	1453.27 1596.53
Iceland	Atlantic	lower upper	0.07 0.07	0.02 0.02	7.32 7.32	0.45 0.45	21.64 21.64	NI NI	NI NI	0.55 0.55	0.36 0.36	0.15 0.15	0.48 0.48	NI NI	
Ireland	Atlantic	lower upper	0.00 1.58	0.06 0.91	21.73 23.99	3.12 13.28	84.33 84.33	NI NI	NI NI	0.25 0.63	5.68 8.72	0.13 0.27	15.32 15.32	0.49 0.51	68.38 147.20
	Celtic Sea	lower upper	0.02 2.34	0.10 1.34	26.66 30.59	18.14 30.46	124.00 124.00	NI NI	NI NI	0.62 0.82	44.16 44.31	0.59 0.64	50.98 50.98	0.87 0.92	252.68 333.52
	Irish Sea	lower upper	0.18 0.70	0.04 0.30	12.03 12.26	5.98 8.61	93.24 93.24	NI NI	NI NI	0.22 0.22	17.44 17.44	0.09 0.10	19.91 19.91	0.18 0.19	51.83 60.02
Netherlands	North Sea (NL)	lower upper	6.90 8.61	0.98 0.98	280.87 280.87	146.67 146.75	912.61 912.75	24.21 24.21	144.20 148.38	7.38 7.48	204.94 205.02	4.85 4.86	263.61 263.90	9.20 9.22	1955.71 2070.00
Norway	Barents Sea (NO)	lower upper	0.23 0.28	0.00 0.02	69.48 69.48	2.87 2.90	31.55 31.57	NI NI	NI NI	0.30 0.30	2.05 2.05	0.06 0.06	5.45 5.45	0.19 0.19	28.19 28.23
	North Sea (NO)	lower upper	0.44 0.46	0.03 0.06	24.75 24.77	8.99 9.00	103.17 103.19	NI NI	NI NI	1.32 1.32	16.72 16.72	0.41 0.42	27.87 27.87	0.70 0.71	225.83 225.84
	Norwegian Sea (NO)	lower upper	0.32 0.44	0.04 0.08	47.89 47.90	6.81 6.83	127.50 127.52	NI NI	NI NI	1.36 1.38	14.66 14.66	0.38 0.39	27.78 27.79	0.88 0.88	390.39 390.52
	Skagerrak (NO)	lower upper	0.93 0.94	0.06 0.10	94.82 94.82	17.56 17.56	662.89 662.89	NI NI	NI NI	1.31 1.31	19.70 19.70	0.41 0.42	33.94 33.94	0.89 0.89	383.58 383.58
Portugal	Bay of Biscay and Ibe	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	
Spain	Atlantic (ESP)	lower upper	0.00 7.38	0.03 0.22	0.25 197.33	0.00 17.73	0.82 224.86	0.00 71.51	0.00 233.15	0.09 0.89	1.31 15.81	0.06 0.53	2.01 12.80	0.09 0.98	81.07 203.85
Sweden	Kattegat (SWE)	lower upper	0.27 0.27	0.04 0.04	32.50 32.50	6.46 6.46	81.40 81.40	NI NI	NI NI	0.75 0.75	13.81 13.81	0.21 0.21	20.78 20.78	0.47 0.47	NI NI
	Skagerrak (SWE)	lower upper	0.04 0.04	0.01 0.01	3.71 3.71	0.93 0.93	11.10 11.10	NI NI	NI NI	0.14 0.14	0.81 0.81	0.05 0.05	2.04 2.04	0.10 0.10	NI NI
UK	Atlantic	lower upper	0.08 0.81	0.04 0.17	32.79 35.14	13.09 14.83	94.15 96.86	NI NI	NI NI	0.81 1.13	9.51 10.54	0.58 0.66	13.23 13.54	1.55 1.56	174.37 185.25
	Celtic Sea	lower upper	0.52 1.53	0.35 0.45	45.33 46.22	35.11 44.26	254.83 258.49	0.00 39.52	0.00 47.83	0.88 1.04	41.32 41.32	1.19 1.24	45.07 45.14	1.19 1.24	447.31 449.83
	Channel	lower upper	0.53 0.66	0.18 0.23	41.35 41.48	16.15 18.24	147.82 150.32	0.11 21.87	0.00 56.68	0.39 0.47	27.56 27.57	0.64 0.65	31.19 31.19	0.64 0.65	181.60 183.53
	Irish Sea	lower upper	0.81 1.35	0.23 0.34	60.12 60.97	77.33 81.91	298.29 299.89	0.27 33.98	0.00 59.47	1.80 2.07	29.45 29.67	1.42 1.53	36.31 36.31	1.64 1.72	398.10 408.27
	North Sea (North)	lower upper	0.51 1.26	0.03 0.28	34.74 36.56	88.51 90.58	218.93 219.47	0.00 9.91	0.00 26.63	0.57 0.95	22.59 23.58	0.27 0.48	28.57 28.58	0.81 0.85	243.31 263.99
	North Sea (South)	lower upper	0.97 1.11	0.08 0.17	52.18 52.20	42.51 43.59	215.67 216.62	0.14 38.63	0.00 103.51	1.91 1.94	86.08 86.08	2.85 2.86	89.88 89.89	2.85 2.86	235.54 236.45

AA Table 4a.**Sum of Direct (Table 2) and Riverine (Table 3) Inputs to the Maritime area of the OSPAR Convention in 2013 by Country**

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 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	
Denmark	Kattegat (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.16 0.16	4.61 4.61	0.07 0.07	18.39 18.39	0.63 0.63	15.90 15.90	
	North Sea (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.33 0.33	7.50 7.50	0.07 0.07	15.37 15.37	0.59 0.59	30.14 30.14	
	Skagerrak (DK)	lower upper	NI NI	NI NI	NI NI	NI NI	NI NI	NI NI	0.04 0.04	0.70 0.70	0.01 0.01	1.13 1.13	0.05 0.05	4.73 4.73	
France	Atlantic Channel	lower upper lower upper	0.67 3.09 1.67 1.95	0.14 1.75 0.00 0.98	147.95 168.26 107.94 108.73	1.45 121.35 64.35 71.56	454.04 613.03 448.84 449.57	0.00 956.51 18.54 191.18	NI NI NI NI	4.79 4.90 3.67 3.68	412.06 412.06 238.85 238.85	3.33 3.38 2.61 2.61	390.22 520.77 230.83 275.70	13.12 13.14 4.36 4.36	9371.63 9376.94 1432.63 1433.11
Germany	North Sea (GER)	lower upper	4.90 5.56	1.70 1.75	225.61 226.22	121.97 129.75	1133.32 1174.04	17.01 58.67	3.43 29.11	7.79 8.29	187.75 187.75	2.54 2.59	224.68 224.68	8.47 8.47	1454.81 1598.06
Iceland	Atlantic	lower upper	0.07 0.07	0.02 0.02	7.32 7.32	0.45 0.45	21.64 21.64	NI NI	NI NI	NI NI	0.55 0.55	0.36 0.36	0.15 0.15	0.48 0.48	NI NI
Ireland	Atlantic Celtic Sea Irish Sea	lower upper lower upper lower upper	0.01 1.59 0.04 2.36 0.24 0.76	0.06 0.91 0.10 1.34 0.04 0.30	22.56 24.82 29.86 33.79 19.53 19.76	3.51 13.67 22.54 34.86 9.28 11.91	92.03 92.03 145.50 145.50 156.24 156.24	NI NI NI NI NI NI	0.25 0.63 0.62 0.82 0.22 0.22	5.68 8.72 44.16 44.31 17.44 17.44	0.13 0.27 0.59 0.64 0.09 0.10	16.02 16.02 53.65 53.65 26.75 26.75	0.70 0.72 1.52 1.57 1.75 1.76	72.70 151.52 271.27 352.11 89.96 98.15	
Netherlands	North Sea (NL)	lower upper	6.92 8.63	0.99 0.99	281.29 281.29	147.07 147.16	916.78 916.92	24.21 24.21	144.20 148.38	7.38 7.48	204.94 205.02	4.85 4.86	264.94 265.23	9.37 9.39	1955.71 2070.00
Norway	Barents Sea (NO) North Sea (NO) Norwegian Sea (NO) Skagerrak (NO)	lower upper lower upper lower upper lower upper	0.23 0.28 0.49 0.52 0.33 0.45 0.97 0.98	0.00 0.02 0.04 0.07 0.04 0.08 0.07 0.11	145.02 145.02 327.09 327.10 588.56 588.57 102.69 102.69	2.87 2.90 9.54 9.54 7.19 7.21 18.07 18.07	31.55 31.57 113.49 113.51 129.06 129.08 677.54 677.54	NI NI NI NI NI NI NI NI	3.97 3.97 0.01 0.01 0.65 0.65 1.01 1.01	2.54 2.54 18.82 18.82 18.28 18.28 5.72 5.72	0.58 0.59 2.68 2.69 4.29 4.30 0.51 0.52	10.05 10.05 49.24 49.24 63.22 63.23 39.82 39.82	0.96 0.96 4.06 4.06 6.62 6.62 1.06 1.06	28.21 28.25 231.62 231.62 395.90 396.03 385.63 385.63	
Portugal	Bay of Biscay and Iberian Coast (PO)	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	
Spain	Atlantic (ESP)	lower upper	0.01 8.55	0.05 1.06	0.56 203.96	0.11 32.93	3.73 245.32	0.10 75.01	0.00 238.07	0.65 4.44	1.96 16.99	0.13 1.07	4.08 16.09	0.25 1.55	83.21 317.31
Sweden	Kattegat (SWE) Skagerrak (SWE)	lower upper lower upper	0.30 0.30 0.04 0.04	0.05 0.05 0.01 0.01	34.16 34.16 3.94 3.94	6.53 6.53 0.94 0.94	86.40 86.40 12.03 12.03	NI NI NI NI	1.69 1.69 0.30 0.30	13.81 13.81 0.81 0.81	0.21 0.21 0.05 0.05	22.32 22.32 2.35 2.35	0.51 0.51 0.11 0.11	NI NI NI NI	
UK	Atlantic Celtic Sea Channel Irish Sea North Sea (North) North Sea (South)	lower upper lower upper lower upper lower upper lower upper lower upper	0.10 1.12 0.53 1.56 0.54 0.67 0.82 2.84 0.54 1.30 1.01 1.37	0.04 0.17 0.35 0.46 0.18 0.24 0.23 0.35 0.05 0.31 0.17 0.28	136.60 139.53 47.07 47.95 45.57 45.70 61.08 64.84 66.46 68.29 67.67 70.42	13.89 16.39 35.34 44.79 16.60 18.84 77.71 85.99 90.15 92.31 45.74 50.73	131.37 134.25 264.38 268.06 155.97 158.47 310.49 312.63 254.84 255.49 271.43 278.82	0.87 2.05 0.01 41.60 0.47 28.82 0.31 34.47 0.77 15.08 0.14	0.00 0.00 0.14 48.24 0.00 63.75 0.00 59.68 0.00 35.56 0.00 145.90	5.85 6.18 4.33 4.55 4.71 4.85 2.22 2.57 12.37 12.75 6.12 6.12	10.81 11.85 41.98 42.01 29.71 29.75 30.07 30.29 25.08 26.12 98.82 98.82	1.59 1.66 1.55 1.61 1.30 1.37 1.77 1.88 2.02 2.23 5.52 5.53	28.17 28.49 49.30 49.42 38.14 38.17 37.43 37.50 49.04 49.05 109.98 109.99	3.85 3.86 1.55 1.61 1.30 1.37 2.04 2.12 3.59 3.64 5.52 5.53	196.09 207.00 452.42 455.04 187.96 189.89 405.49 416.50 267.50 288.24 334.19 335.39

AA Table 4b.**Sum of Direct and Riverine Inputs to the Maritime area of the OSPAR Convention in 2013 by Sea Area**

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	0.23	0.00	145.02	2.87	31.55	NI	NI	3.97	2.54	0.58	10.05	0.96	28.21
	upper	0.28	0.02	145.02	2.90	31.57	NI	NI	3.97	2.54	0.59	10.05	0.96	28.25
Atlantic Ocean	lower	0.10	0.10	159.16	17.40	223.40	0.87	0.00	6.11	16.49	1.71	44.19	4.55	268.79
	upper	2.71	1.08	164.35	30.06	226.28	2.05	0.00	6.81	20.56	1.93	44.51	4.57	358.52
Bay of Biscay and Iberian Coast	lower	0.68	0.19	148.51	1.56	457.77	0.10	0.00	5.44	414.03	3.47	394.30	13.37	9454.84
	upper	11.64	2.81	372.22	154.28	858.35	1031.52	238.07	9.34	429.05	4.45	536.86	14.69	9694.25
Celtic Sea	lower	0.56	0.46	76.93	57.88	409.88	0.01	0.14	4.95	86.14	2.14	102.94	3.07	723.69
	upper	3.92	1.80	81.75	79.66	413.56	41.60	48.24	5.38	86.32	2.25	103.07	3.18	807.15
Channel	lower	2.21	0.18	153.52	80.96	604.82	19.01	0.00	8.38	268.57	3.91	268.97	5.66	1620.59
	upper	2.62	1.22	154.43	90.40	608.04	220.01	63.75	8.52	268.61	3.98	313.87	5.73	1623.00
Irish Sea	lower	1.06	0.27	80.61	86.98	466.73	0.31	0.00	2.44	47.51	1.86	64.18	3.79	495.46
	upper	3.61	0.66	84.61	97.90	468.87	34.47	59.68	2.80	47.73	1.98	64.25	3.88	514.64
Kattegat	lower	0.30	0.05	34.16	6.53	86.40	NI	NI	1.85	18.42	0.28	40.71	1.14	15.90
	upper	0.30	0.05	34.16	6.53	86.40	NI	NI	1.85	18.42	0.28	40.71	1.14	15.90
North Sea (main body)	lower	13.86	2.95	968.10	414.48	2689.86	42.12	147.64	52.15	542.89	17.68	713.26	31.59	4273.96
	upper	17.37	3.39	973.32	429.49	2738.78	158.19	358.97	53.19	544.02	17.97	713.57	31.69	4553.46
Norwegian Sea	lower	0.33	0.04	588.56	7.19	129.06	NI	0.65	29.48	18.28	4.29	63.22	6.62	395.90
	upper	0.45	0.08	588.57	7.21	129.08	NI	0.65	29.50	18.28	4.30	63.23	6.62	396.03
Skagerrak	lower	1.01	0.08	106.63	19.01	689.56	NI	1.01	6.06	21.50	0.57	43.31	1.22	390.36
	upper	1.02	0.12	106.63	19.01	689.56	NI	1.01	6.06	21.50	0.59	43.31	1.22	390.36

Annex II Statistical information on river catchment areas

Statistical Information on River Catchment Areas

River	Catchment area [km ²]	Countries	Share in catchment area		Population (1990)		LTA* [1000 m ³ /d]	LTA-period [a]
			[km ²]	[%]	[10E6]	[%]		
Statistical Information provided by Belgium:								
Coastal Area	2675							
Western	1689	Belgium France	>1082	NI NI	~0.497 >0,305	NI NI	2367 708	NI
Middle	499	Belgium			0.014		501	
Eastern	487	Belgium			0.177		1158	
Scheldt basin								
Scheldt	22004						11139	1949-2008
Ghent-Terneuzen canal	NI						1 885	1991-2008
Statistical Information provided by Denmark:								
Vid å	248.3	DK	248	81			300.5	78-07
Brøns å	94.1	DK	94	100			107.0	74-07
Ribe å	675	DK	675	100			756.6	33-07
Kongeåen	426.6	DK	427	100			627.0	90-07
Sneum å	223	DK	223	100			283.1	66-07
Varde å	815	DK	815	100			1048.8	69-07
Skjern å	1558.4	DK	1558	100			2108.2	74-07
Stor å	1096.7	DK	1097	100			1427.3	71-07
Brede å	290	DK	290	100			311.0	22-07
Omme å	612	DK	612	100			743.1	83-07
Grøn å	563	DK	563	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			226.4	89-07
Uggerby å	347.5	DK	348	100			351.3	89-07
	1097				=Total of Danish rivers discharging to the Skagerrak		863	71-90
Karup å	626.8	DK	527	100			635.2	86-07
Jordbro å	110.9	DK	111	100			110.7	80-07
Skals å	556.4	DK	556	100			389.7	73-07
Simmersted å	214.9	DK	215	100			207.6	92-07
Elling å	132.2	DK	132	100			123.2	89-07
Voer å	238.7	DK	239	100			247.6	89-07
Ger å	153.8	DK	154	100			149.6	85-07
Lindeborg å	317.8	DK	318	100			310.3	83-07
Haslevågå å	75	DK	75	100			62.3	89-07
Kastbjerg å	96.3	DK	96	100			70.1	76-07
Guden å	2602.9	DK	2 603	100			2837.8	78-07
Ry å	285	DK	285	100			264.7	72-07
	15828				=Total of Danish rivers discharging to the Kattegat		5284	71-90

River	Catchment area [km ²]	Countries	Share in catchment area [%]	Population (1990) [10E6]	LTA* [1000 m ³ /d]	LTA-period [a]
Statistical Information provided by France:						
Coastal area	2308	France	100	0.61	100	2764
Canche	3895	France	100	0.38	100	4579
Somme	5916	France	100	0.59	100	3197
Béthune et Bresle	2153	France	100	0.16	100	2074
Saane	1718	France	100	0.16	100	2938
Seine	64953	France	100	13.94	100	44842
Andelle	789	France	100	0.05	100	691
Eure	6023	France	100	0.60	100	2246
Coastal area	2439	France	100	0.93	100	1599
Risle	2545	France	100	0.16	100	1642
Dives	1815	France	100	0.11	100	1296
Douve	1474	France	100	0.08	100	625
Orne	2976	France	100	0.40	100	2506
Seulles	547	France	100	0.06	100	346
Touques	1311	France	100	0.10	100	1037
Vire	2077	France	100	0.15	100	2246
Coastal area	1302	France	100	0.16	100	1174
Sélune et Sée	1623	France	100	0.09	100	1987
Sienne	1135	France	100	0.09	100	1328
Aulne	4312	France	100	0.52	100	6653
Rance et Couesnon	2848	France	100	0.27	100	2160
Coastal area	4961	France	100	0.49	100	3654
	19122	=Total of rivers discharging in ZONE II		20.10		91 582
Blavet et Scorff	4649	France	100	0.50	100	5702
Coastal area	2868	France	100	0.32	100	4558
Vilaine	10144	France	100	0.90	100	5443
Coastal area	3636	France	100	0.82	100	2847
Loire	110178	France	100	6.67	100	73526
Sèvre Nantaise	4664	France	100	0.52	100	4234
Lay	4522	France	100	0.39	100	3456
Sèvre Niortaise	4363	France	100	0.42	100	4752
Coastal area	291	France	100	0.02	100	239
Boutonne	2141	France	100	0.14	100	1754
Charente	7526	France	100	0.43	100	5357
Coastal area	1172	France	100	0.09	100	446
Seudre	988	France	100	0.06	100	432
Eyre	2036	France	100	0.03	100	1814
Coastal area	2810	France	100	0.10	100	2264
Dordogne	14605	France	100	0.55	100	21859
Isle	8472	France	100	0.40	100	6912
Coastal area	870	France	100	0.09	100	647
Dropt	2672	France	100	0.21	100	1989
Garonne	38227	France	100	2.24	100	40003
Lot	11541	France	100	0.35	100	12614
Coastal area	3875	France	100	0.75	100	10983
Coastal area	3105	France	100	0.15	100	2501
Adour	7977	France	100	0.37	100	7690
Bidouze	1041	France	100	0.04	100	938
Gaves réunis	5504	France	100	0.32	100	17453
Luy	1367	France	100	0.10	100	1814
Nive	1153	France	100	0.12	100	3197
Coastal area	644	France	100	0.10	100	1825
	263040	=total of rivers discharging in ZONE IV		17.19		247 250
Statistical Information provided by Germany:						
Ems	15552	Germany	13152	85.00	3.75	7690
		Netherlands	2400	15.00	0.6	1941-2006
Weser	46306	Germany	-	-	9.0	31541
Elbe	148268	Germany	148268	100	25.11	1941-2003
		Czech Republic	96932	65.38	19.09	74500
		Austria	50176	33.84	5.97	1926-2003
		Poland	920	0.62	0.05	
Eider	2065	Germany	240	0.16	NI	1974-2006
				0.159	NI	

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River	Catchment area [km ²]	Countries	Share in catchment area [km ²]	Population (1990) [10E6]	LTA* [1000 m ³ /d]	LTA-period [a]
Statistical Information provided by Ireland:						
Boyne	2695	Ireland	-	-	NI	-
Liffey	1256	Ireland	-	-	NI	-
Avoca	652	Ireland	-	0	NI	-
Slaney	1762	Ireland	-	-	NI	-
	6365	=Total of main Irish rivers discharging to the Irish Sea				
Barrow	3067	Ireland	-	-	NI	-
Nore	2530	Ireland	-	-	NI	-
Suir	3610	Ireland	-	-	NI	-
Blackwater	3324	Ireland	-	-	NI	-
Lee	1253	Ireland	-	-	NI	-
Bandon	608	Ireland	-	-	NI	-
Deel	486	Ireland	-	-	NI	-
Maigue	1052	Ireland	-	-	NI	-
Shannon Old Chan.	11700	Ireland	-	-	NI	-
Shannon Tailrace		Ireland				13307.33
Fergus	1042	Ireland	-	-	NI	-
	28672	=Total of main Irish rivers discharging to the Celtic Sea				
Corrib	3138	Ireland	-	-	NI	-
Moy	2086	Ireland	-	-	NI	-
Erne	4372	Ireland/UK	2572/1800	60/40	NI	-
	9596	=Total of main Irish rivers discharging to the Atlantic				
Statistical Information provided by The Netherlands (with assistance from Germany and Belgium)						
Rhine	185000	Switzerland	1) 28000	15	2) 55.6	4) 198720
		France	24000	13	3.0	6
		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
		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
		France	6680	30.00	-2.7	
		Belgium	13324	61.00	6.9	1949-1995
		Netherlands	2000	9.00	0.4	
Ems	15552	Germany	13152	85.00	3.75	7690
		Netherlands	2400	15.00	0.6	
					85	1941-2006
					15	
1) Catchment areas rounded off to the nearest hundred km ²						
2) Population Rhine catchment per country requires further analysis						
3) Population Meuse catchment: rough estimates						
4) Estimated discharge at outlet: 2.300 m ³ /s * 24 h/d * 3600 s/h						
5) Estimated discharge at outlet: 325 03/s * 24 h/d * 3600 s/h						
Statistical Information provided by Norway:						
Glomma (1)	41918	Norway	100.00	0.62	100	61350
Drammenselva (2)	17034	Norway	100.00	0.2	100	28850
Numedalslågen (3)	5577	Norway	100.00	0.04	100	10200
Skienselva (4)	10772	Norway	100.00	0.11	100	23535
Otra (5)	3738	Norway	100.00	0.03	100	12870
	79039	=Total of Norwegian rivers discharging to the Skagerrak				
Orreelva (6)	105	Norway	100.00	0.01	100	335
Suldalstlågen (7)	1457	Norway	100.00	0.003	100	7420
	1562	=Total of Norwegian rivers discharging to the North Sea				
Orkla (8)	3053	Norway	100.00	0.02	100	5710
Vefsna (9)	4122	Norway	100.00	0.01	100	15655
	7175	=Total of Norwegian rivers discharging to the Norwegian Sea				
Altaelva (10)	7373	Norway	100.00	0.005	100	7495
	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
		Spain	55769	69.2	6.14	68.0
Douro	97600	Portugal	18600	19.1	1.76	43.5
		Spain	79000	80.9	2.28	56.5
Miño/Minho	17000	Portugal	900	5.3	0.07	7.9
		Spain	16100	94.7	0.86	92.1
	221855	Total catchment for monitored rivers				

River	Catchment area [km ²]	Countries	Share in catchment area		Population (1990)		LTA*	LTA-period [a]
			[km ²]	[%]	[10E6]	[%]		
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
Guadiamar		Spain						
Guadalete	3360	Spain	3360	100	0.555	100	413	
TOTAL	356726	Spain	301093	84.4	20.907	NI	70553	
		Portugal	55515	15.6				
		TOTAL	356608	100				

River	Catchment area [km ²]	Countries	Share in catchment area [km ²]	Population (1990) 2005	LTA*	LTA-period
			[%]	[10E6]	[1000 m ³ /d]	[a]
Statistical Information provided by Sweden:						
Vege å (95)	498	Sweden	498	100	0.0430	100
Rönne å (96)	1890	Sweden	1890	100	0.0903	100
Stensån (97)	284	Sweden	284	100	0.0065	100
Lagan (98)	6444	Sweden	6444	100	0.1181	100
Genevadsån (99)	225	Sweden	225	100	0.0046	100
Fylleån (100)	359	Sweden	359	100	0.0092	100
Nissan (101)	2682	Sweden	2682	100	0.0834	100
Suseån (102)	441	Sweden	441	100	0.0074	100
Ätran (103)	3343	Sweden	3343	100	0.0657	100
Himleån (104)	214	Sweden	214	100	0.0127	100
Viskan (105)	2201	Sweden	2201	100	0.1236	100
Rolfsån (106)	723	Sweden	723	100	0.0281	100
Kungsbackaån (107)	310	Sweden	310	100	0.0404	100
Göta älv (108)	50230	Sweden	42780.00	85.20	0.8776	ni
		Norway	7450.00	14.80	ni	50530
	69844	=Total of Swedish rivers discharging to the Kattegat				
Bäveån (109)	302	Sweden	302	100	0.0226	100
Örekilsälven (110)	1327	Sweden	1327	100	0.0138	100
Strömsån (111)	253	Sweden	253	100	0.0056	100
Enningsdalsälven (112)	704	Sweden	704	100	0.0029	100
	2586	=Total of Swedish rivers discharging to the Skagerrak				
Statistical Information provided by the United Kingdom:						
Ness (SC2b)	NI	-	-	-	NI	-
Conon (SC2b)	NI	-	-	-	NI	-
Baeuly (SC2b)	NI	-	-	-	NI	-
Findhorn (SC2b)	NI	-	-	-	NI	-
Shin (SC2b)	NI	-	-	-	NI	-
Helmsdale (SC2b)	NI	-	-	-	NI	-
Naver (SC2b)	NI	-	-	-	NI	-
Thurso (SC2b)	NI	-	-	-	NI	-
Brora (SC2b)	NI	-	-	-	NI	-
Oykel (SC2b)	NI	-	-	-	NI	-
Nairn (SC2b)	NI	-	-	-	NI	-
Carron (Sutherland) (SC2b)	NI	-	-	-	NI	-
Wick (SC2b)	NI	-	-	-	NI	-
Halladale (SC2b)	NI	-	-	-	NI	-
Hope (SC2b)	NI	-	-	-	NI	-
Alness (SC2b)	NI	-	-	-	NI	-
Cassley (SC2b)	NI	-	-	-	NI	-
Fleet (SC2b)	NI	-	-	-	NI	-
Berriedale Water (Sc2b)	NI	-	-	-	NI	-
Borgie (SC2b)	NI	-	-	-	NI	-
Forss Water (SC2b)	NI	-	-	-	NI	-
Loch of Stenness (SC2b)	NI	-	-	-	NI	-
Glass (SC2b)	NI	-	-	-	NI	-
Strathy (Sc2b)	NI	-	-	-	NI	-
Mickle Burn (SC2b)	NI	-	-	-	NI	-
Dunbeath Water (SC2b)	NI	-	-	-	NI	-
Spey (SC3)	NI	-	-	-	NI	-
					5 600	NI

UK cont.

River	Catchment area	Countries	Share in catchment area [km ²]	Population (1990) [10E6]	LTA*	LTA-period
			[km ²]	[%]	[1000 m ³ /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
Dighty 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 (\$ 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
Menalhy (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
Torrige (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 Glyndyr (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) (SC	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
Kirkraig (SC2a)	NI	-	-	-	NI	-	NI	NI
Ling (SC2a)	NI	-	-	-	NI	-	NI	NI
Laxford (SC2a)	NI	-	-	-	NI	-	NI	NI
Abhainn Ghriomarstaith	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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