OSPAR MSFD Fact Sheets

Monitoring Subprogrammes

http://www.ospar.org/content/content.asp?menu=01520838000000_000000_000000

D5 – Chlorophyll

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Stand: 15. Oktober 2014

OSPAR Fact Sheet:
D5 - Chlorophyll

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	1995
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	To be completed by individual Contracting Parties.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The programme covers OSPAR maritime area, divided into suitable assessment units. COMP 2013 para 2.11 "Contracting Parties should divide their waters in the OSPAR maritime area into suitable assessment units based on the relevant physical features. This process of characterisation could be undertaken in accordance with the Annex II to the Water Framework Directive. Guidance on this typology is given in Section 3." The Eutrophication Monitoring Programme (EMP) is related to the Comprehensive Procedure that contains a screening procedure to inform risk-based monitoring. There is a differentiation in monitoring effort (spatial and temporal intensity and frequency) depending on eutrophication status. Monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas. Monitoring is conducted as recommended by the OSPAR Common Procedure (i.e. in accordance with the OSPAR Agreement on a Eutrophication Monitoring Programme) [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental state and impacts; Pressures (see fact sheets on OSPAR RID and CAMP monitoring); Effectiveness of measures
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)) [F], which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP) [FF] It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
		• Describe how the existing monitoring will contribute to MSFD needs including how it is integrated into your MSFD programme.		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)), which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP) [F]. It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met. Contracting Parties apply the OSPAR Common Procedure (Reference number: 2013-8, supersedes agreements 1997-11 and 2002-20.) Monitoring, in the form of repeated measurements of chlorophyll concentrations at key locations provides information on direct effects of nutrient enrichment. [F] http://www.ospar.org/documents/dbase/decrecs/agreements/10-01e_the%20cemp.doc

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OSPAR COMMISSION
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No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	State/impact: Habitat condition-biological; Growing season chlorophyll concentrations (µg l-1); Monitoring of growing season chlorophyll concentrations are in conjunction with salinity measurements (see Common Procedure, §§ 4.26 and 4.29); Salinity – supporting parameter
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Concentration of chlorophyll-a
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP Eutrophication monitoring guidelines on chlorophyll - revised cf. OSPAR Agreement 2012-11 [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/12-11e_JAMP_GL_Chrolophyll.doc
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	OSPAR EMP: http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc; (See JAMP guidelines in 9c)
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See Guidelines Section 8 on QA.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	See Guidelines Section 8 on QA. [F] [F]: In a 6-yr MSFD cycle all waters are sampled, because even areas not at-risk are subject to periodic checks as part of OSPAR COMP.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	The spatial resolution of nutrient monitoring is informed by the EMP screening procedure based on identifying areas with consistently low nutrients, as set out in the Comprehensive Procedure. The screening procedure enables a risk-based monitoring programme to be established. There is a differentiation in monitoring effort (spatial resolution) depending on eutrophication status. The monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas, referring to areas where there are eutrophication problems. Monitoring is less frequent in area where there are no eutrophication problems.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Demand driven data collection. Monitoring is at frequencies recommended by the OSPAR Common Procedure (OSPAR Eutrophication Monitoring Programme Agreement) [F] - COMP recommendations: (1) Non-problem areas – about every three years during winter; (2) Potential problem areas and Problem areas – annually during winter when algal growth is at a minimum and during monitoring of direct and indirect effect.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	

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OSPAR COMMISSION
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No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Other - see 10b for supporting text.
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR Common Procedure guidance [F] on aggregation paragraphs 1.2, 3.3, 3.4 and 3.5 [F] OSPAR Agreement Reference number: 2013-8; http://www.ospar.org/v_measures/get_page.asp?v0=13-08e_common_proc_eutrophication.doc&v1=5
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	Unprocessed/raw data
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR Contracting Parties prefer to make data available via the use of existing data stream with a yearly data submissions mechanisms: through ICES http://ocean.ices.dk/HydChem/HydChem.aspx?plot=yes and WISE WFD http://water.europa.eu/. This has the benefit of additional QA checks.
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Open access [F] [F] To ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
		When will the data first become available?	Date: MM/YYYY	06/2014 [F] [F] data are updated annually in the ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	Annually
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme (of which the Eutrophication Monitoring Programme is a part) are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D5 - Nutrient Concentrations

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	1995
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	To be completed by individual Contracting Parties.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The programme covers OSPAR maritime area, divided into suitable assessment units. COMP 2013 para 2.11 "Contracting Parties should divide their waters in the OSPAR maritime area into suitable assessment units based on the relevant physical features. This process of characterisation could be undertaken in accordance with the Annex II to the Water Framework Directive. Guidance on this typology is given in Section 3." The Eutrophication Monitoring Programme (EMP) is related to the Comprehensive Procedure that contains a screening procedure to inform risk-based monitoring. There is a differentiation in monitoring effort (spatial and temporal intensity and frequency) depending on eutrophication status. Monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas. Monitoring is conducted as recommended by the OSPAR Common Procedure (i.e. in accordance with the OSPAR Agreement on a Eutrophication Monitoring Programme) [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental state and impacts; Pressures (see fact sheets on OSPAR RID and CAMP monitoring); Effectiveness of measures
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)) [F], which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP) [FF] It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
		• Describe how the existing monitoring will contribute to MSFD needs including how it is integrated into your MSFD programme.		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)), which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP). It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met. The core marine environmental monitoring activity under the JAMP is the OSPAR CEMP. The CEMP is currently focussed on monitoring of the concentrations and effects of selected contaminants and nutrients in the marine environment as follows: • nutrients in sea water; • eutrophication effects. Monitoring, in the form of repeated measurements of nutrient concentrations at key locations provides the basis for assessing progress towards good environmental status and the evaluation of the effectiveness of actions being taken to protect the sea. The CEMP also includes a pre-CEMP covering components which the Contracting Parties are preparing to monitor in a co-ordinated manner through the development of monitoring guidance, quality assurance procedures and/or assessment tools. Currently the pre-CEMP includes the following components: • ocean acidification parameters pH, Total Alkalinity, Dissolved inorganic carbon, pCO2.

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OSPAR COMMISSION
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No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure: nutrient enrichment
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Winter dissolved inorganic nitrogen (DIN); the sum of NH4-N, NO2-N and NO3-N; Winter dissolved inorganic phosphate (DIP); · NH4-N (µmol l-1); · NO2-N (µmol l-1); · NO3-N (µmol l-1); · PO4-P (µmol l-1); · SiO4-Si (µmol l-1). Monitoring of winter DIN, DIP and Si should be in conjunction with salinity measurements (see Common Procedure, §§ 4.26 and 4.29). Salinity – supporting parameter
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP Eutrophication monitoring guidelines on nutrients [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/13-04e_guidelines_monitoring_nutrients.doc
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	OSPAR EMP: http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc; (See JAMP guidelines in 9c)
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See Guidelines Sections 8 and 9.3 for analytical QA.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	100% [F] [F]: In a 6-yr MSFD cycle all waters are sampled, because even areas not at-risk are subject to periodic checks as part of OSPAR COMP.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	The spatial resolution of nutrient monitoring is informed by the EMP screening procedure based on identifying areas with consistently low nutrients, as set out in the Comprehensive Procedure. The screening procedure enables a risk-based monitoring programme to be established. There is a differentiation in monitoring effort (spatial resolution) depending on eutrophication status. The monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas, referring to areas where there are eutrophication problems. Monitoring is less frequent in area where there are no eutrophication problems.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Demand driven data collection. Monitoring is at frequencies recommended by the OSPAR Common Procedure (OSPAR Eutrophication Monitoring Programme Agreement) [F] - COMP recommendations: (1) Non-problem areas – about every three years during winter; (2) Potential problem areas and Problem areas – annually during winter when algal growth is at a minimum and during monitoring of direct and indirect effect.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	

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OSPAR COMMISSION
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No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Other - see 10b for supporting text.
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR Common Procedure guidance [F] on aggregation paragraphs 1.2, 3.3, 3.4 and 3.5 [F] OSPAR Agreement Reference number: 2013-8; http://www.ospar.org/v_measures/get_page.asp?v0=13-08e_common_proc_eutrophication.doc&v1=5
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	Unprocessed/raw data
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR Contracting Parties prefer to make data available via the use of existing data stream with a yearly data submissions mechanisms: through ICES http://ocean.ices.dk/HydChem/HydChem.aspx?plot=yes and WISE WFD http://water.europa.eu/. This has the benefit of additional QA checks.
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Open access [F] [F] To ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
		When will the data first become available?	Date: MM/YYYY	06/2014 [F] [F] data are updated annually in the ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	Annually
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme (of which the Eutrophication Monitoring Programme is a part) are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D5 - Nutrient Inputs From Land-Based (Diffuse and Point) Sources

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to around 1990.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	The programme covers mainly terrestrial, transitional and coastal waters.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The OSPAR Riverine Inputs and Direct Discharges monitoring programme (RID) estimates the riverborne and direct inputs of nutrients to the waters covered by the Convention. The main pressures covered are nutrients arising from agriculture, wastewater treatment plants and industrial installations and aquaculture.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and impacts; pressures, human activities causing the pressures, effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Riverine Inputs and Direct Discharges Monitoring Programme (RID)
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/content/content.asp?menu=00920301420000_000000_000000
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Inputs of fertilisers and other nitrogen — and phosphorus-rich substances (e.g. from point and diffuse sources, including agriculture, aquaculture, atmospheric deposition), — inputs of organic matter (e.g. sewers, mariculture, riverine inputs).
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Ammonia expressed as N, Nitrates expressed as N, Total N, Total P, Orthophosphates expressed as P
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	Principles of the Comprehensive Study on Riverine Inputs and Direct Discharges (RID). Revised in 2005 and 2014 (> application from 2015). Updated in 2006 and 2007. Adopted: 1998. OSPAR Agreement Ref. No.: Agreement 1998-05
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	See RID Section 12.
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		See RID.
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See RID Section 11. Annual reports from Contracting Parties indicate the extent that it has been applied. Data managed at OSPAR level are subject to validation by Contracting Parties.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Laboratories are required to use validated methods

OSPAR Fact Sheet:
D5 - Nutrient Inputs From Land-Based (Diffuse and Point) Sources

OSPAR COMMISSION
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No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	See RID Section 4.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	See RID Section 4. Many rivers are sampled monthly, but large rivers can be monitored continuously. Inputs from Smaller rivers can be modelled. Annual national reports provide further information.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	See RID Section 4.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. See Annual RID Data reports for practice 1990-2012.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR produces assessments at the North East Atlantic Scale [and its sub-regions]
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR RID Database subject to OSPAR data policy.
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR RID Database subject to OSPAR data policy. Submit request to OSPAR Secretariat.
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	RID data reported by Contracting Parties to OSPAR under this programme are managed by an external data centre (2014-15: Bioforsk; Norway).

OSPAR Fact Sheet:
D5 - Nutrient Inputs via the Atmosphere

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to around 1987.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	The programme covers mainly terrestrial, transitional and coastal waters.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The OSPAR Comprehensive Atmospheric Monitoring Programme (CAMP) consists of coastal atmospheric monitoring stations where monitoring data are estimated to represent marine atmospheric deposition conditions.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and impacts; pressures, human activities causing the pressures, effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Comprehensive Atmospheric Monitoring Programme (CAMP) [F] [F] Principles for the Comprehensive Atmospheric Monitoring Programme. Revised in 2005. Adopted: 2001. OSPAR Agreement Ref. No.: 2001-07
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/documents/dbase/decrecs/agreements/01-07e_CAMP%20Principles.doc
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Inputs of fertilisers and other nitrogen — and phosphorus-rich substances (e.g. from point and diffuse sources, including agriculture, aquaculture, atmospheric deposition), — inputs of organic matter (e.g. sewers, mariculture, riverine inputs).
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Ammonium in precipitation; Nitrate in precipitation; in gaseous phase: NO2, HNO3, and NH3 in aerosol phase (*) : ammonium (NH4+) and nitrate (NO3-) *: As an alternative, total nitrate (sum of gaseous HNO3 and particulate NO3) and total ammonium (sum of gaseous NH3 and particulate NH4) can be measured
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	See CAMP Principles and reference to EMEP methods.
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		See CAMP Principles and reference to EMEP methods.
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See CAMP Principles.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Guidance on Quality control set out in the CAMP Principles. Data managed at OSPAR level are subject to validation by Contracting Parties.

OSPAR Fact Sheet:
D5 - Nutrient Inputs via the Atmosphere

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Contracting Parties participate in CAMP with one or more coastal monitoring stations.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	Network of fixed coastal monitoring stations.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	See CAMP Principles.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. See OSPAR publications of annual CAMP Data reports for historic and current practice by OSPAR Contracting Parties.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR produces assessments at the North East Atlantic Scale [and its sub-regions]
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR CAMP Database at NILU http.ebas.nilu.no subject to OSPAR data policy.
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR CAMP Database at NILU http.ebas.nilu.no subject to OSPAR data policy. Database can be queried online.
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Database already online.
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	CAMP data reported by Contracting Parties to OSPAR under this programme are managed by an external data centre (NILU; Norway).

OSPAR Fact Sheet:
D5 - Oxygen

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	1995
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	To be completed by individual Contracting Parties.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The programme covers OSPAR maritime area, divided into suitable assessment units. COMP 2013 para 2.11 "Contracting Parties should divide their waters in the OSPAR maritime area into suitable assessment units based on the relevant physical features. This process of characterisation could be undertaken in accordance with the Annex II to the Water Framework Directive. Guidance on this typology is given in Section 3." The Eutrophication Monitoring Programme (EMP) is related to the Comprehensive Procedure that contains a screening procedure to inform risk-based monitoring. There is a differentiation in monitoring effort (spatial and temporal intensity and frequency) depending on eutrophication status. Monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas. Monitoring is conducted as recommended by the OSPAR Common Procedure (i.e. in accordance with the OSPAR Agreement on a Eutrophication Monitoring Programme) [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental state and impacts
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)) [F], which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP) [FF] It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc
		• Describe how the existing monitoring will contribute to MSFD needs including how it is integrated into your MSFD programme.		OSPAR Contracting Parties implement the Eutrophication Monitoring Programme (EMP) Agreement (reference number: 2005-4 (as updated in 2013) supersedes the Nutrient Monitoring Programme adopted by OSPAR 1995 (Reference number 1995-5)), which is part of the OSPAR 'Co-ordinated Environmental Monitoring Programme' (CEMP) [F]. It is carried out primarily to assess the extent to which the objectives of the OSPAR Eutrophication Strategy have been met. Contracting Parties apply the OSPAR Common Procedure (Reference number: 2013-8, supersedes agreements 1997-11 and 2002-20.) Monitoring, in the form of repeated measurements of oxygen concentrations at key locations provides information on direct effects of nutrient enrichment. [F] http://www.ospar.org/documents/dbase/decrecs/agreements/10-01e_the%20cemp.doc

OSPAR Fact Sheet:
D5 - Oxygen

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	State/impact: Habitat condition-physical/chemical; Growing season oxygen concentrations (mg l-1)
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Concentration of oxygen
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP Eutrophication monitoring guidelines on oxygen- revised cf. OSPAR Agreement 2013-05 [F] [F] http://www.ospar.org/documents/dbase/decrecs/agreements/13-05e_guidelines_monitoring_oxy.doc
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	OSPAR EMP: http://www.ospar.org/documents/dbase/decrecs/agreements/05-04e_eut_mon_prog.doc; (See JAMP guidelines in 9c)
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See Guidelines Section 8 on QA.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	100% [F] [F] In a 6-yr MSFD cycle all waters are sampled, because even areas not at-risk are subject to periodic checks as part of OSPAR COMP.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	The spatial resolution of nutrient monitoring is informed by the EMP screening procedure based on identifying areas with consistently low nutrients, as set out in the Comprehensive Procedure. The screening procedure enables a risk-based monitoring programme to be established. There is a differentiation in monitoring effort (spatial resolution) depending on eutrophication status. The monitoring programme is designed on a risk-based approach, so that monitoring effort is concentrated on 'at-risk' areas, referring to areas where there are eutrophication problems. Monitoring is less frequent in area where there are no eutrophication problems.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Demand driven data collection. Monitoring is at frequencies recommended by the OSPAR Common Procedure (OSPAR Eutrophication Monitoring Programme Agreement) [F] - COMP recommendations: (1) Non-problem areas – about every three years during winter; (2) Potential problem areas and Problem areas – annually during winter when algal growth is at a minimum and during monitoring of direct and indirect effect. [F] http://www.ospar.org/v_measures/get_page.asp?v0=13-08e_common_proc_eutrophication.doc&v1=5
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	

OSPAR Fact Sheet:
D5 - Oxygen

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Other - see 10b for supporting text.
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR Common Procedure guidance [F] on aggregation paragraphs 1.2, 3.3, 3.4 and 3.5 [F] OSPAR Agreement Reference number: 2013-8; http://www.ospar.org/v_measures/get_page.asp?v0=13-08e_common_proc_eutrophication.doc&v1=5
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	Unprocessed/raw data
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR Contracting Parties prefer to make data available via the use of existing data stream with a yearly data submissions mechanisms: through ICES http://ocean.ices.dk/HydChem/HydChem.aspx?plot=yes and WISE WFD http://water.europa.eu/. This has the benefit of additional QA checks.
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Open access [F] [F] To ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
		When will the data first become available?	Date: MM/YYYY	06/2014 [F] [F] data are updated annually in the ICES database
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	Annually
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme (of which the Eutrophication Monitoring Programme is a part) are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D8 - Biological Effects, Contaminants

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. The programme is not performed in all Contracting Parties on a regular basis.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	The programme covers mainly coastal and territorial waters. OSPAR Contracting Parties provide geographical coordinates for their sampling. The extent of past OSPAR coordinated monitoring can be viewed from OSPAR CEMP assessment reports.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	Monitoring is done mainly in areas where risks indicate that contaminants are likely to be present, based on local knowledge of the Contracting Parties. Takes place in coastal waters where elevated concentrations have been found and TBT has been used in the past (harbours, dockyards, marinas).
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and trends; pressures and effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Coordinated Environmental Monitoring Programme (CEMP)
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/content/content.asp?menu=00170301000116_000000_000000
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure and impact: effect of contamination by organotin compounds.
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Degree of imposex and intersex in snails.
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP Guidelines for contaminant-specific biological effects monitoring (OSPAR Agreement Ref. No. 2008-09)
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	OSPAR Contracting Parties may take account of scientific updates such as are published e.g. in ICES TIMES publications (www.ices.dk)
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		Advice for QA is given by ISO/IEC EN 17025 for testing laboratories and HELCOM Combine Manual Part B (www.helcom.fi). External QA/QC is performed by participation in laboratory testing schemes as provided by QUASIMEME and other providers. For data transfer check ICES Data Centre is providing data tools (DATRAS) [F] [F] http://ices.dk/marine-data/tools/Pages/Submission%20status.aspx
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	BEQUALM and/or via the ICES Working Group on Biological Effects of Contaminants.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Laboratories are required to use validated methods

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Information on numbers of samples per area is given in the JAMP guidelines for contaminant-specific biological effects (OSPAR Agreeement Ref. No. 2008-09)
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Most of the OSPAR Contracting Parties collect data annually.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. The sampling programme is to some extent, risk-based, and both the frequency and coverage are determined according to previous surveys. The previous assessments undertaken may lead to conclusions and recommendations which result in the development of a temporal trend programme from a spatial survey or vice versa. For example: if an area of concern is identified in a spatial programme, a temporal trend programme may be implemented at a limited number of representative sites; or opposite if a temporal trend changes unexpectedly, a spatial programme may be used to identify contaminant sources or the extent of the problem.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		Development of and decision on method and degree of aggregation is in progress
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR Contracting Parties prefer to make data available via the use of existing data streams (through ICES), which has the benefit of additional QA checks. Making data available through ICES with a yearly data submissions mechanism is the preferred way.
		What method/mechanism will be used to make the data available?	Select from List: Data access rights	Access of data included in ICES DOME is already in place for EC/EEA
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their monitoring data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D8 - Contaminant Inputs From Land-Based (Diffuse and Point) Sources

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to around 1990.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	The programme covers mainly terrestrial, transitional and coastal waters.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The OSPAR Riverine Inputs and Direct Discharges monitoring programme (RID) estimates the riverborne and direct inputs of some contaminants to the waters covered by the Convention. The main pressures covered are contaminants arising from agriculture, industry, households, wastewater treatment plants and industrial installations and aquaculture.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and impacts; pressures, human activities causing the pressures, effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Riverine Inputs and Direct Discharges Monitoring Programme (RID)
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/content/content.asp?menu=00920301420000_000000_000000
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	introduction of synthetic and non-synthetic substances and compounds (e.g. heavy metals, hydrocarbons, PCBs, pesticides)
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Total Mercury (Hg), Total Cadmium (Cd), Total Lead (Pb); additionally: total Copper (Cu), Total Zinc (Zn), Gamma-HCH (lindane).
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	Principles of the Comprehensive Study on Riverine Inputs and Direct Discharges (RID). Revised in 2005 and 2014 (> application from 2015). Updated in 2006 and 2007. Adopted: 1998. OSPAR Agreement Ref. No.: Agreement 1998-05
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	See RID Section 12.
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		See RID.
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See RID Section 11. Annual reports from Contracting Parties indicate the extent that it has been applied. Data managed at OSPAR level are subject to validation by Contracting Parties.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Laboratories are required to use validated methods

OSPAR Fact Sheet:
D8 - Contaminant Inputs From Land-Based (Diffuse and Point) Sources

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	See RID Section 4.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	See RID Section 4. Many rivers are sampled monthly, but large rivers can be monitored continuously. Inputs from Smaller rivers can be modelled. Annual national reports provide further information.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	See RID Section 4.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. See Annual RID Data reports for practice 1990-2012.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR produces assessments at the North East Atlantic Scale [and its sub-regions]
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR RID Database subject to OSPAR data policy.
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR RID Database subject to OSPAR data policy. Submit request to OSPAR Secretariat.
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	RID data reported by Contracting Parties to OSPAR under this programme are managed by an external data centre (2014-15: Bioforsk; Norway).

OSPAR Fact Sheet:
D8 - Contaminant Inputs via the Atmosphere

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to around 1987.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	The programme covers mainly terrestrial, transitional and coastal waters.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The OSPAR Comprehensive Atmospheric Monitoring Programme (CAMP) consists of coastal atmospheric monitoring stations where monitoring data are estimated to represent marine atmospheric deposition conditions.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and impacts; pressures, human activities causing the pressures, effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Comprehensive Atmospheric Monitoring Programme (CAMP) [F] [F] Principles for the Comprehensive Atmospheric Monitoring Programme. Revised in 2005. Adopted: 2001. OSPAR Agreement Ref. No.: 2001-07
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/documents/dbase/decrecs/agreements/01-07e_CAMP%20Principles.doc
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Deposition of contaminants, ambient air concentrations of contaminants
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Concentrations of heavy metals Cd, Hg and Pb in precipitation, and in air (aerosol, PM10 and/or air)
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	See CAMP Principles and reference to EMEP methods. See CAMP Principles and reference to EMEP methods.
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	See CAMP Principles.
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Guidance on Quality control set out in the CAMP Principles. Data managed at OSPAR level are subject to validation by Contracting Parties.

OSPAR Fact Sheet:
D8 - Contaminant Inputs via the Atmosphere

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Contracting Parties participate in CAMP with one or more coastal monitoring stations.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	Network of fixed coastal monitoring stations.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	See CAMP Principles.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. See OSPAR publications of annual CAMP Data reports for historic and current practice by OSPAR Contracting Parties.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		OSPAR produces assessments at the North East Atlantic Scale [and its sub-regions]
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR CAMP Database at NILU http.ebas.nilu.no subject to OSPAR data policy.
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR CAMP Database at NILU http.ebas.nilu.no subject to OSPAR data policy. Database can be queried online.
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Database already online.
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	CAMP data reported by Contracting Parties to OSPAR under this programme are managed by an external data centre (NILU; Norway).

OSPAR Fact Sheet:
D8 - Contaminants in Biota

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to 1987.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	OSPAR Contracting Parties provide geographical coordinates for their sampling. The programme covers mainly coastal, territorial and other marine waters. The extent of past OSPAR coordinated monitoring can be viewed from OSPAR CEMP assessment reports.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Environmental status and trends; pressures and effectiveness of measures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Coordinated Environmental Monitoring Programme (CEMP)
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/content/content.asp?menu=00170301000116_000000_000000
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure: contamination by hazardous substances
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Concentrations in biota of contaminants Hg, Cd, Pb, PCBs, PAHs (excluding in fish) and PBDEs
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP guidelines on contaminants in biota (OSPAR Agreement Ref. No. 1999-02)
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	OSPAR Contracting Parties may take account of scientific updates such as are published e.g. in ICES TIMES publications (www.ices.dk)
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		Advice for QA is given by ISO/IEC EN 17025 for testing laboratories and HELCOM Combine Manual Part B (www.helcom.fi). External QA/QC is performed by participation in laboratory testing schemes as provided by QUASIMEME and other providers. For data transfer check ICES Data Centre is providing data tools (DATRAS) [F] [F] http://ices.dk/marine-data/tools/Pages/Submission%20status.aspx
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Laboratories are required to use validated methods

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Numbers of samples per area are given in the JAMP guidelines on contaminants in biota (OSPAR Agreeement Ref. No. 1999-02)
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Most of the OSPAR Contracting Parties collect data annually respecting the biological status. For shellfish it may be more than one time per year when combining sampling with that for food control purposes.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. The sampling programme is to some extent, risk-based, and both the frequency and coverage are determined according to previous surveys. The previous assessments undertaken may lead to conclusions and recommendations which result in the development of a temporal trend programme from a spatial survey or vice versa. For example: if an area of concern is identified in a spatial programme, a temporal trend programme may be implemented at a limited number of representative sites; or opposite if a temporal trend changes unexpectedly, a spatial programme may be used to identify contaminant sources or the extent of the problem.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		Development of and decision on method and degree of aggregation is in progress
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR Contracting Parties prefer to make data available via the use of existing data streams (through ICES), which has the benefit of additional QA checks. Making data available through ICES with a yearly data submissions mechanism is the preferred way.
		What method/mechanism will be used to make the data available?	Select from List: Data access rights	Access of data included in ICES DOME is already in place for EC/EEA
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their monitoring data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D8 - Contaminants in Sediments

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	The programme is on-going. OSPAR has regular annual reporting information that goes back to 1977 and became more regular since 1996.
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	OSPAR Contracting Parties provide geographical coordinates for their sampling. The programme covers mainly coastal, territorial and other marine waters. The extent of past OSPAR coordinated monitoring can be viewed from OSPAR CEMP assessment reports.
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	Monitoring is done mainly in areas where risks indicate that contaminants are likely to be present, based on local knowledge of the Contracting Parties. Usually in coastal waters where elevated concentrations have been found in previous surveys. The first selection of stations was originally done in industrialised estuaries and those adjacent coastal areas with a known history of contaminant input.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Mainly environmental state and impacts, but pressures and effectiveness of measures are also relevant.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Coordinated Environmental Monitoring Programme (CEMP)
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		http://www.ospar.org/content/content.asp?menu=00170301000116_000000_000000
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure: contamination by hazardous substances
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Concentrations in sediment of contaminants Hg, Cd, Pb, PCBs, PAHs, organotin and PBDEs
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	JAMP guidelines on contaminants in sediments (Ref. No. 2002-16)
9d	Method alteration	Describe the methods used if they deviate from the published method provided.	Free text or URL web link or section in paper report	OSPAR Contracting Parties may take account of scientific updates such as are published e.g. in ICES TIMES publications (www.ices.dk)
		If this field is left blank it is assumed the method used is according to the published method given in Q9c.		Advice for QA is given by ISO/IEC EN 17025 for testing laboratories and HELCOM Combine Manual Part B (www.helcom.fi). External QA/QC is performed by participation in laboratory testing schemes as provided by QUASIMEME and other providers. For data transfer check ICES Data Centre is providing data tools (DATRAS) [F] [F] http://ices.dk/marine-data/tools/Pages/Submission%20status.aspx
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	Laboratories are required to use validated methods

OSPAR Fact Sheet:
D8 - Contaminants in Sediments

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Samples should be collected throughout the area of interest at an appropriate frequency, taking account of the advice on statistical considerations) and considering the variability in the contaminant content of the sediment and the bottom topography.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Most of the OSPAR Contracting Parties collect data annually, but the density of sampling is relatively low and as indicated focussed on risk areas (variability possible, depends on the determinant and country). The OSPAR CEMP is originally intended to generate data for temporal trends and spatial distribution by gathering data on an annual basis.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	Not addressed in detail in this OSPAR fact sheet. The sampling programme is to some extent, risk-based, and both the frequency and coverage are determined according to previous surveys. The previous assessments undertaken may lead to conclusions and recommendations which result in the development of a temporal trend programme from a spatial survey or vice versa. For example: if an area of concern is identified in a spatial programme, a temporal trend programme may be implemented at a limited number of representative sites; or opposite if a temporal trend changes unexpectedly, a spatial programme may be used to identify contaminant sources or the extent of the problem.
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regions and Region of the North-East Atlantic
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		Development of and decision on method and degree of aggregation is in progress
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	OSPAR Contracting Parties prefer to make data available via the use of existing data streams (through ICES), which has the benefit of additional QA checks. Making data available through ICES with a yearly data submissions mechanism is the preferred way.
		What method/mechanism will be used to make the data available?	Select from List: Data access rights	Access of data included in ICES DOME is already in place for EC/EEA
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their monitoring data annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Monitoring data reported by Contracting Parties to OSPAR under the Coordinated Environmental Monitoring Programme are managed on behalf of OSPAR by ICES.

OSPAR Fact Sheet:
D10 - Beach Litter

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	2005
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	EEZ
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	Survey sites are present in the whole north-east Atlantic region. However for OSPAR Beach Litter Monitoring the Bay of Biscay and Iberian coast has been split into two regions and the Greater North Sea has been divided into "Southern North Sea" and "Northern North Sea". This is to reflect the different types and abundances of litter found in these regions.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Pressures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		OSPAR pre-CEMP Appendix 15 - 'Beach Litter'
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		
		• Describe how the existing monitoring will contribute to MSFD needs including how it is integrated into your MSFD programme.		
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure: Other Physical Disturbance
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Intensity of pressure: Number of items of marine litter on beaches per 100m
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	OSPAR Guideline for monitoring marine litter on the beaches in the OSPAR maritime area. (OSPAR Agreement 2010-02)
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	Quality assurance is outlined in Guideline for monitoring marine litter on the beaches in the OSPAR maritime area. (OSPAR Agreement 2010-02)
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	National Contact Points quality control submitted data

OSPAR Fact Sheet:
D10 - Beach Litter

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Presently (2013) there are 50 sites in 11 countries along NE Atlantic coastline.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	Presently (2013) there are 50 sites in 11 countries along NE Atlantic coastline.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Sampling is quarterly.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Regional.
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		Data can also be aggregated at a beach, national, monitoring region, sub region or regional level.
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	Raw data
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR website
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Access of data already in place for EC/EEA
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
		When will the data first become available?	Date: MM/YYYY	2014
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	Annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Raw data and assessment products will be made available through the OSPAR website. Data will be available at http://www.ospar.org/content/content.asp?menu=01511400000000_000000_000000

OSPAR Fact Sheet:
D10 - Litter in the Stomachs of Fulmars

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
Question 4: About the sub-programme				
4g	Sub-Programme ID	Provide a unique identifier for sub-programme.	Use sub(region) and MS code (e.g. BALDE) plus MS-defined alpha-numeric code (e.g. MADIT-D08-01)	Not addressed in this OSPAR fact sheet.
4h	Temporal scope	Provide the start date of the sub-programme (past or future) and, if appropriate, an end date, or indicate the programme is ongoing	Start date: YYYY	2002
			End Date: YYYY, 9999 (ongoing)	9999
4i	Spatial scope	Indicate the coverage of the sub-programme according to the four jurisdictional zones of MSFD Marine Waters (or outside this, either landward or beyond marine waters if appropriate, e.g. for pressures).	Select all relevant from List: Monitoring zones	EEZ
4j	Description_Spatial Scope	Briefly describe the rationale for the geographic scope of the programme (e.g. in relation to relevant environmental characteristics, such as distribution of a species or habitat, to pressures or to relevant activities and measures).	Free text or URL web link or section in paper report	The programme covers the greater North Sea as it was originally developped as part of the OSPAR suite North Sea Ecological Quality Objectives (EcoQO's) and this area fits within the Fulmar's natural range.
4k	Purpose	For what purpose is this sub-programme aimed at collecting data and information?	Select all relevant from List: Monitoring purpose	Pressures.
4l	Links to programmes of other directives & conventions	If monitoring for other Community legislation or international agreements is contributing to your MSFD programme (as indicated in Question 8a), give details as follows:	Free text (for programme name and description) and URL web link(s) or indicate Not relevant (to this sub-programme).	OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)
		• Name of other programme		Monitoring by Contracting Parties started for the purpose of the EcoQO for the North Sea.
		• A specific URL web link(s) to where the information required for each part of Question 9 can easily be found and is directly relevant for your marine waters.		
		• Describe how the existing monitoring will contribute to MSFD needs including how it is integrated into your MSFD programme.		
Question 9: Methodology				
9a	Elements monitored	Which elements (ecosystem components, pressures from MSFD Annex III) are monitored?	List the specific elements (e.g. particular species or contaminants) within the broad categories reported under Question 5c.	Pressure: Other Physical Disturbance
9b	Parameters measured	What parameters of the elements are measured?	Choose from the List: Monitoring parameters, e.g. concentration in sediment, population size, intensity of pressure [full list to be developed].	Intensity of pressure: Mass of plastics in stomachs of seabirds, i.e. Northern Fulmar (Fulmar glacialis)
9c	Monitoring method	What is the method used for monitoring (data collection) in the field and, where appropriate, any subsequent laboratory processing?	Provide a reference to a published method or, if unpublished, describe the method used.	Handbook for the application of Ecological Quality Objectives in the North Sea. Second Edition - 2009. OSPAR Biodiversity Series Publication 307/2009
9d	Method alteration	Describe the methods used if they deviate from the published method provided. If this field is left blank it is assumed the method used is according to the published method given in Q9c.	Free text or URL web link or section in paper report	
9e	Quality Assurance (QA)	In addition to a specified method, is there any additional Quality Assurance used?	Select one from List: Monitoring QA	Quality assurance is outlined in Guideline for monitoring marine litter on the beaches in the OSPAR maritime area. (OSPAR Agreement 2010-02)
9f	Quality Control (QC)	What type of Quality Control is used?	Select one from List: Monitoring QC	National Contact Points quality control submitted data

OSPAR Fact Sheet:
D10 - Litter in the Stomachs of Fulmars

OSPAR COMMISSION
Protecting and conserving the North-East Atlantic and its resources

No.	Topic	Question	Summary Information	OSPAR FACT SHEET ELEMENT
9g	Spatial resolution (density) of sampling	What is the proportion of the geographic scope (given in Q4i) which is covered by sampling?	Approximate proportion (%)	Presently (2013) there are 50 sites in 11 countries along NE Atlantic coastline.
		What is the density of sampling within the proportion given above?	Approximate number of samples expected to be taken from the assessment area (No./year)	The monitoring system is based on specimens of Northern Fulmars found dead on beaches or accidentally killed by collisions or fisheries. These are collected continuously on an opportunity basis. Most specimens are provided in cooperation with groups that conduct regular Beached Bird Surveys, but material is also provided through municipal beach cleaning programs or fisheries programs.
9h	Temporal resolution (periodicity) of sampling	What is the temporal frequency of the sub-programme?	Select one from List: Monitoring frequency	Sampling is continuous on an opportunity basis.
9i	Description_Sub-programme	Where the information for Questions 9a-9h varies within the sub-programme (e.g. spatially or temporarily), provide details. This could include, for example:	Free text or URL web link or section in paper report	
Question 10: Monitoring data				
10a	Aggregation of data	At which scale can the data from the sub-programme be aggregated for environmental assessments?	Select one from List: Monitoring data aggregation scale	Sub-regional.
10b	Description_DataAggregation	If the data cannot be aggregated (beyond the national scale), give reasons?		Data can also be aggregated at a beach, national, monitoring region, sub regional level.
10c	Access to data	Nature of data/information to be made available:	Select one or more from List: Data type	Raw data
		What method/mechanism will be used to make the data available?	Select from List: Data access mechanism	OSPAR website
		Will the EC/EEA have use rights?	Select one from List: Data access rights	Access of data included in ICES DOME is already in place for EC/EEA
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	OSPAR recommends Contracting Parties submit their data annually.
		When will the data first become available?	Date: MM/YYYY	2014
		How frequently are the data expected to be updated thereafter?	Select one from List: Monitoring frequency	Annually.
10d	Description_DataAccess	Describe how the data and information from the programme will be made accessible to the EC/EEA, indicating whether this is in place already or under development.	Free text or URL web link or section in paper report	Previous raw data can be access on request from the data contact at IMARES. Future raw data will be available from the OSPAR website. Assessment products available from OSPAR website. Data will be available at http://bit.ly/1ggNS2E