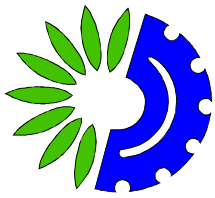

UNDER CONTRACT
TO THE EUROPEAN
ENVIRONMENT
AGENCY

Guidance on the update of Priority Data Flow on transitional, coastal and marine waters through EUROWATERNET and the population of WATERBASE

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Final version 1.0

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1 INTRODUCTION

This paper contains guidance on the updating of the priority data flow on transitional, coastal and marine waters, collected through the EUROWATERNET process. This guidance document can be downloaded from the EIONET Water Interest Group on CIRCLE:

http://eea.eionet.eu.int:8980/Public/irc/eionet-circle/water/library?l=/eurowaternet/eurowaternet_2003&vm=detailed&sb=Title

The data and information obtained through EUROWATERNET are required for updating the data flows and factsheets associated with the EEA's core set of indicators.

The EUROWATERNET priority data flow is an annual event. Data provided by the Marine Conventions and national sources are stored in the working database *WATERBASE-Transitional, Coastal and Marine Waters*. The data are used to produce indicator factsheets, the basis of EEA assessments and reports, and are not used for compliance testing. The data are made publicly available over the Internet via Reference WATERBASE, located on the EEA Data Service's web site. Data on rivers, lakes and groundwater currently exist in Reference WATERBASE. By the end of November 2003, data on water quantity and hazardous substances in biota of transitional, coastal and marine waters will also be available. By Spring 2004, all other data on transitional, coastal and marine waters collected through the EUROWATERNET process will be visible on Reference WATERBASE.

Technical guidelines for the implementation of EUROWATERNET in transitional, coastal and marine waters have been published on the EEA's web site as Technical Report No. 97 (2003). The guidelines will be updated in the future to take into account the requirements of the Water Framework Directive and the EEA's need to develop data flows for biological and hydro-morphological quality elements.

It is recognised that whilst countries already make a data supply to the Marine Conventions, the time series are somewhat incomplete. It is not the EEA's intention that the EUROWATERNET data flow should require countries to make duplicate supplies of data. Any data already submitted to the Marine Conventions need not be re-supplied through the EUROWATERNET process as these will be requested directly from the Marine Conventions. However, it is necessary to ask each country to supply any missing or additional data. The EUROWATERNET data request is therefore sent to both Marine Conventions and national sources.

The deadline for delivery of data under the 2003 EUROWATERNET update of the priority data flow on transitional, coastal and marine waters is:

Friday 30 January 2004.

2 SUMMARY

In summary, this is what is requested from you:

- The application of the EUROWATERNET criteria to your national monitoring networks for the identification and selection of monitoring stations in your transitional, coastal and marine waters for inclusion in WATERBASE.
- Validation of existing information in WATERBASE. By the end of November 2003, Reference WATERBASE will contain data on hazardous substances in biota. Quality data aggregated to annual values, disaggregated data from national sources (not Marine Conventions), physical characteristics of the monitoring stations and pressure information will be available for download from Reference WATERBASE for validation purposes.
- Preparation of your national data deliveries in the data exchange formats described in this guidance document. Please make use of the templates provided in the EIONET Water Interest Group on CIRCLE:

  http://eea.eionet.eu.int:8980/Public/irc/eionet-circle/water/library?l=/eurowaternet/eurowaternet_2003/templates
- Submission of the most recent water quality data available, ideally from 2002, but no later. In addition, we require data from as many previous years as are available and/or comparable in order to produce as long a time series as possible.
- Delivery of files of data to the national data repository of your country. This is either your country's folder in the Central Data Repository or a designated CIRCLE Interest Group on your national EIONET server. In both cases your National Focal Point co-ordinates the upload of data files. More information on your national repository choice is available on the EIONET portal.
- The transmission of your EUROWATERNET data on hazardous substances in biota, sediment and seawater in disaggregated format.
- The transmission of your EUROWATERNET data on nutrients in seawater in disaggregated format.
- The transmission of your EUROWATERNET data on riverine input loads and direct discharges in annually aggregated format.
- The transmission of data on the physical characteristics of your EUROWATERNET transitional, coastal and marine waters monitoring stations and flux stations at which loads are calculated, together with proxy pressure information.
- An acknowledgement to Birger Bjerkeng at the email address below of receipt of this guidance paper and confirmation of your participation in EUROWATERNET by **Friday 28 November 2003**.
- **Receipt of your EUROWATERNET data by Friday 30 January 2004.**

The update of EUROWATERNET for transitional, coastal and marine waters is the responsibility of Birger Bjerkeng of the Norwegian Institute of Water Research (NIVA). For any further information on the update guidance and process please contact:

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3 DATA REQUIRED

3.1 EUROWATERNET-TRANSITIONAL, COASTAL AND MARINE WATERS

Data relating to the EUROWATERNET-Transitional, Coastal and Marine water monitoring networks are required on:

- physical characteristics of the monitoring stations;
- physical characteristics of the flux stations at which loads are calculated;
- upstream catchment or basin pressures;
- biota, seawater and sediment quality;
- annual riverine input loads;
- direct discharges.

3.1.1 Network

The information and data requested through EUROWATERNET are derived from existing national and/or regional monitoring networks within each EEA Member Country. Criteria for the selection of transitional, coastal and marine water monitoring stations are described in the technical guidelines EEA Technical Report No. 97.

Different 'types' of monitoring station have been identified, including:

Reference stations would occur in waters that are minimally impacted by human activity. Some countries will not have reference stations. Reference stations in transitional waters have catchments or drainage basins with little or no human activity and the percentage of natural landscape is higher than 90%. They are expected to be minimally impacted through inflow of water from the adjacent coastal or marine waters, themselves impacted by human activity. Reference stations in coastal waters are also associated with River Basin Districts with little or no human activity and the percentage of natural landscape is higher than 90%. In addition, it is expected that the adjacent marine waters, with which water is exchanged, would be minimally impacted by human activity.

In terms of hazardous substances (including WFD Priority Substances, Dangerous Substances Directive Lists I and II, and the Marine Conventions' lists of priority substances, as detailed in Annex 1) and physico-chemical determinands (Annex 2) that occur naturally, it is expected that the concentrations measured at these stations would give an indication of 'background levels'. Transitional, coastal and marine waters remote from the main centres of human activity may still be impacted by the atmospheric deposition of contaminants, in particular volatile synthetic substances. This may be the principal or only pollution source in these waters and data from such areas might be used to assess the significance of atmospheric deposition. However, stations in such waters do not qualify as reference stations if the deposited contaminants resulted in a measurable ecological effect.

Representative stations[1] reflect the general quality of the transitional and coastal water bodies and marine water areas with respect to pressures placed upon them.

Stations selected under EUROWATERNET are representative of the hazardous substances, including those detailed on the WFD Priority Substance List, Lists I and II of the Dangerous Substances Directive and the Marine Conventions' lists of priority substances (Annex 1) and the physico-chemical quality elements, such as nutrients and organic pollution indicators (Annex 2). The water quality at these stations is influenced by diffuse and/or point sources of pollution depending on human activities upstream and in adjacent waters. It is expected that pollutants from point sources would be fully mixed and diluted within the ambient water flow/volume. These stations might be included in National Networks used to obtain an overview of the numbers and concentrations of hazardous substances present and of the general levels of nutrients and organic pollution indicators. This type of station is likely to be included in 'surveillance' monitoring programmes as required by the WFD. Many of these stations may, therefore, have long time series of data.

Impact stations are monitoring stations within the zone (area or volume of water) where initial mixing of emissions from a particular discharge or concentrated group of discharges takes place with the receiving waters (sometimes called 'hot spots'). Concentrations of determinands are expected to be relatively high ('worst-case' concentrations) at these stations. These stations may be used by the regulatory authorities to assess the compliance of discharges within standards or limits. Thus, monitoring at these stations may in some cases be limited to those substances present within any particular discharge. Stations of this type are likely to be included in 'operational' monitoring programmes as required by the WFD. Many of these stations may, therefore, have a relatively long time series of data and should be included in the EUROWATERNET reporting procedure.

River Flux stations are those stations currently being used for the assessment of international transboundary loads or riverine loads entering Europe's seas. In terms of EUROWATERNET-Transitional, Coastal and Marine Waters, these stations relate to load data rather than quality data. Flux stations are also requested under EUROWATERNET-Rivers where water quality data are requested.

Countries are asked to report data from all of the above station types. Comparisons will be made by station type in order that like is compared with like. Data are not requested from monitoring stations established for ad-hoc purposes, such as for investigative monitoring, and which are sampled for only a limited time period.

3.1.2 Physical Characteristics

This year we request that you provide information on the physical characteristics of the flux stations at which loads are calculated, together with any missing information on the physical characteristics of the quality monitoring stations selected under EUROWATERNET. This will make the information more compatible with the Water Framework Directive.

[1] Harmonised selection methodology and criteria for representative stations in transitional waters, including for example the salinity question for nutrients and other dissolved substances, will be crucial. Guidelines are available from Marine Conventions or ICES.

3.1.3 Determinands

Quality data are requested for the following determinands monitored in biota, seawater and sediment:

- the Water Framework Directive Priority Substances and substances noted in Lists I and II of the Dangerous Substances Directive (Annex 1);

and for the following determinands monitored in seawater only:

- nutrients and organic pollution indicators (Annex 2).

Quality data are also requested for the following determinands required for riverine and direct load assessments:

- nutrients, organic pollution indicators and hazardous substances (Annex 3).

These lists are not exhaustive. Data are also requested on any other hazardous or dangerous substance regularly monitored. Countries are asked to provide the name and CAS Number of any additional determinands included in their data submissions.

3.1.4 Aggregation

Data on hazardous substances in biota, sediment and seawater and nutrients in seawater are requested in disaggregated format (i.e. concentration values by day/month/year/sample) as we expect that many of the analytical determinations will be at or below the limit of detection for the analytical method. The single sample determinations are required to give a more robust assessment of how the data should be statistically treated and presented. The collection of disaggregated data for priority substances necessitate the definition of the limit of detection[2] and limit of determination[3]. These data will be aggregated to annual values by the ETC for use in Reference WATERBASE and the production of indicators.

Data on riverine input loads and direct discharges are requested as annually aggregated values.

3.2 VALIDATION

EEA member countries that have implemented EUROWATERNET-Transitional, Coastal and Marine Waters and have previously submitted data to the ETC/WTR are asked to validate the physical characteristic and pressure data relating to current EUROWATERNET stations and provide any missing data. The physical characteristic and pressure data will be available for download from the Reference WATERBASE web site **from the end of November 2003**.

Countries are also asked to validate their hazardous substances in biota data by downloading disaggregated data from Reference WATERBASE. Disaggregated data provided by the Marine Conventions will not be made available for download. The ETC has aggregated all disaggregated hazardous substances in biota data delivered from both national sources and Marine Conventions to annual values.

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[2] The LoD is that concentration for which there is a desirably small probability that the determinand will not be detected (usually with 95% confidence).

[3] The smallest concentration that can be distinguished from the analytical blank at a chosen level of statistical confidence (usually 95%).

These aggregated data can be analysed and viewed in, and downloaded from, Reference WATERBASE with effect from the end of November 2003.

All other transitional, coastal and marine water data, including nutrients in seawater, hazardous substances in sediment and seawater, and riverine input loads and direct discharges will be made available for analysis in and download from Reference WATERBASE in Spring 2004.

3.3 UPDATE REQUIREMENTS

With regard to the current EUROWATERNET update, both countries and Marine Conventions are asked to deliver data from 2002 along with as long a time series of data as possible, for as many determinands as possible, relating to as many stations as possible.

In addition to the data delivery made to the Marine Conventions, countries are asked to provide the EEA with any missing or additional data required by EUROWATERNET. The Marine Conventions will be asked to provide a copy of the data that countries have already submitted. Countries are asked to concentrate on:

1. Filling in any gaps in existing data.
2. Providing any earlier year data not already submitted.
3. Providing as long a time series of data as possible, for as many determinands, at as many stations as possible.
4. Submitting annually aggregated data on riverine input loads and direct discharges.
5. Providing physical characteristics of the flux stations at which loads are calculated.
6. Providing upstream catchment / basin pressure information for each station based on CORINE Land Cover data or its equivalent.
7. Please use the templates detailed in the Excel spreadsheet ***EWN_TCM_2003.xls*** to guide you in formatting your data, available from: http://eea.eionet.eu.int:8980/Public/irc/eionet-circle/water/library?l=/eurowaternet/eurowaternet_2003/templates.

   These templates are summarised and explained in Annex 4 of these guidance notes. You can submit your data in Excel (.xls), tab-delimited ASCII text (.txt) or Access database (.mdb) format.
8. Please upload your data files to your nominated repository – either your country's envelope in the Central Data Repository on CIRCA (http://cdr.eionet.eu.int) or your national EIONET server.

4 DELIVERY OF DATA FILES

Data files for the EUROWATERNET-Basic, Impact and Quantity data flows should be uploaded to the national data repository of your country. This is the delivery point for all national data requested under EIONET priority data flows.

The national repository is either your country's folder in the Central Data Repository (CDR) on the EIONET server or a designated Interest Group on your national EIONET server. This depends on the choice of your country for delivering EIONET priority data. Please see the result of the repository choice on the EIONET portal.

If your country has opted for the Central Data Repository (CDR), EUROWATERNET deliveries should be uploaded to the relevant country folder under "EEA Requests". The on-line help ("Help area" button) explains how to create new envelopes and how to upload the data files.

If your country has opted for delivering the EIONET priority data to a CIRCLE Interest Group on the national EIONET server, EUROWATERNET data deliveries should be uploaded to the relevant library sub-section using the file upload button.

File upload permissions to country folders on the CDR or to the national EIONET server for data deliveries are organised by the relevant National Focal Point. Please contact your National Focal Point should you have any questions or issues regarding access.

Annex 1: Priority Substances identified by the Water Framework Directive, Lists I and II of the Dangerous Substances Directive and by the Marine Conventions

The determinands listed below include those detailed as Water Framework Directive Priority Substances, Water Framework Directive Priority Hazardous Substances, Water Framework Directive Priority Substances under Review, List I and List II substances of the Dangerous Substances Directive and Priority Substances as listed by HELCOM and OSPAR.

CAS No	Substance
	Aliphatic Hydrocarbons
4904-61-4	1,5,9 cyclododecatriene
294-62-2	Cyclododecane
	Brominated diphenylethers
1163-19-5	Bis(pentabromophenyl) ether
32536-52-0	Diphenyl ether, octabromo deviate
32534-81-9	Diphenyl ether, pentabromo derivative
	Metallic Compounds
7440-43-9	Cadmium and its compounds
7440-47-3	Chromium and its compounds
7440-50-8	Copper and its compounds
7439-92-1	Lead and its compounds
7439-97-6	Mercury and its compounds
7440-02-0	Nickel and its compounds
7782-49-2	Selenium and its compounds
7440-66-6	Zinc and its compounds
	Organic Ester
51000-52-3	Neodecanoic acid, ethanyl ester
	Organic Nitrogen Compound
55525-54-7	3,3'-(ureylenedimethylene)bis(3,5,5-trimethylcyclohexyl) diisocyanate
793-24-8	4-(dimethylbutylamino) diphenylamin (6PPD)
	Organohalogens
79-94-7	Tetrabromobisphenol A (TBBP-A)
77-47-4	Hexachlorocyclopentadiene (HCCP)
87-61-6	(1,2,3-trichlorobenzene)
120-82-1	(1,2,4-trichlorobenzene)
108-70-3	(1,3,5-trichlorobenzene)
85535-84-8	$C_{10\text{-}13}$-Chloralkanes
67-66-3	Trichloromethane
85-22-3	Pentabromoethylbenzene
2440-02-0	Heptachloronorbornene
1825-21-4	Pentachloroanisole
36065-30-2	2,4,6-bromophenyl 1-2(2,3-dibromo-2-methylpropyl)
	Polychlorinated naphthalenes:
1321-65-9	Trichloronaphthalene
1335-88-2	Tetrachloronaphthalene
1321-64-8	Pentachloronaphthalene
1335-87-1	Hexachloronaphthalene
32241-08-0	Heptachloronaphthalene
2234-13-1	Octachloronaphthalene
70776-03-3	Naphthalene, chloro derivatives
	Organophosphate
603-35-0	Triphenyl phosphine
	Organosilicane
107-46-0	Hexamethyldisiloxane (HMDS)

CAS No	Substance
	Organotin Compounds
36643-28-4	(TBT-ion)
688-73-3	Tributyltin compounds
	Pesticides and Biocides
106-93-4	1,2-Dibromoethane
93-76-5	2,4,5-T
107-13-1	Acrylonitrile
309-00-2	Aldrin
140-57-8	Aramite
319-86-8	beta-HCH
57-74-9	Chlordane
1034-41-9	Chlordecone (Kepone)
6164-98-3	Chlordimeform
789-02-6	DDT, o,p'
50-29-3	DDT, p,p'
72-55-9	DDE, p, p'
72-54-8	DDD, p, p'
53-19-0	DDD, o, p'
60-57-1	Dieldrin
72-20-8	Endrin
144-49-0	Fluoroacetic acid and derivatives
608-73-1	Hexachlorocyclohexane
58-89-9	(gamma-isomer, Lindane)
76-44-8	Heptachlor
118-74-1	Hexachlorobenzene
297-78-9	Isobenzane
465-73-6	Isodrin
4234-79-1	Kelevan
2385-85-5	Mirex
4636-83-3	Morfamquat
1836-75-5	Nitrophen
87-86-5	Pentachlorophenol
82-68-8	Quintozene
8001-35-2	Toxaphene
115-32-2	Dicofol
115-29-7	Endosulfan
959-98-8	(alpha-Endosulfan)
72-43-5	Methoxychlor
1582-09-8	Trifluralin
2104-64-5	Ethyl O-(p-nitrophenyl) phenyl phosphonothionate (EPN)
70124-77-5	Flucythrinate
2227-13-6	Tetrasul
	Pharmaceutical
512-04-9	Diosgenin
23593-75-1	Clotrimazole
	Phenols
9016-45-9	Nonylphenolethoxylate & degradation/transformation products
84852-15-3	Nonylphenol, 4-
732-26-3	2,4,6-tri-tert-butylphenol
1806-26-4	Octylphenols
140-66-9	(para-tert-octylphenol)
25154-52-3	Nonylphenols
104-40-5	(4-(para)-nonylphenol)
8452-15-3	(4-nonylphenol, branched)
	Phthalate Esters
	Diethylhexylphthalate
84-74-2	Dibutylphthalate
117-81-7	Di (2-ethylhexyl) phthalate (DEHP)
84-66-2	Di-ethyl phthalate
84-69-5	Di-iso-butyl phthalate
85-68-7	Butyl benzyl phthalate (BBP)
	Polycyclic Aromatic Hydrocarbons
50-32-8	(benzo-a-pyrene)
205-99-2	(benzo-b-fluoranthene)

CAS No	Substance
191-24-2	(benzo-g,h,i-perylene)
207-08-9	(benzo-k-fluoranthene)
206-44-0	(fluoroanthene)
193-39-5	(indeno(1,2,3-cd) pyrene)
98-51-1	4-tert-butyltoluene
	Polycyclic Halogenated Aromatic Compounds
36355-01-8	Hexabromobiphenyl
1336-36-3	Polychlorinated biphenyls
7012-37-5	2,4,4'-trichlorobiphenyl (CB28)
35693-99-3	2,2',5,5'-tetrachlorobiphenyl (CB52)
32598-13-3	3,3',4,4'-tetrachlorobiphenyl (CB77)
37680-73-2	2,2',4,5,5'-pentachlorobiphenyl (CB101)
32598-14-4	2,3,3',4,4'-pentachlorobiphenyl (CB105)
31508-00-6	2,3',4,4',5-pentachlorobiphenyl (CB118)
35065-28-2	2,2',3,4,4',5'-hexachlorobiphenyl (CB138)
35065-27-1	2,2',4,4',5,5'-hexachlorobiphenyl (CB153)
38380-08-4	2,3,3',4,4',5-hexachlorobiphenyl (CB156)
32774-16-6	3,3',4,4',5,5' HexCB (PCB169)
35065-29-3	2,2',3,4,4',5,5'-heptachlorobiphenyl (CB180)
2051-24-3	5,5',6,6'-decachlorobiphenyl (CB209)
106-43-4	PCT (mixtures)
1746-01-6	TCDD (dioxins & furans)
	Brominated flame retardants
	Polychlorinated dibenzodioxins (PCDD)
136677-10-6	Polychlorinated dibenzofurans (PCDF)
	Synthetic Musk
81-15-2	Musk xylene
15972-60-8	Alachlor
120-12-7	Anthracene
1912-24-9	Atrazine
71-43-2	Benzene
470-90-6	Chlorfenvinphos
2921-88-2	Chlorpyrifos
107-06-2	1,2-Dichloroethane
75-09-2	Dichloromethane
919-86-8	Demeton-S-methyl
62-73-7	Dichlorvos
60-51-5	Dimethoate
330-54-1	Diuron
87-68-3	Hexachlorobutadiene
34123-59-6	Isoproturon
330-55-2	Linuron
608-93-5	Pentachlorobenzene
122-34-9	Simazine
12002-48-1	Trichlorobenzenes

Annex 2: Physico-chemical determinands required for chemical quality

Determinand	Abbreviation	Unit	Water Body[1]
BOD5	BOD5	mg/l O_2	T
BOD7	BOD7	mg/l O_2	T
Chlorophyll a	Chl-a	µg/l	T, C, M
COD	COD	mg/l O_2	T
Dissolved Oxygen[2]	O_2	mg/l O_2	T, C, M
Nitrate	NO_3-N	µMol N	T, C, M
Nitrate to Orthophosphate ratio	NO_3/PO_4	Molar ratio	T, C, M
Organic Nitrogen	mg/l N	µMol N	T, C, M
Orthophosphate	PO_4 –P	µMol P	T, C, M
Oxygen Saturation[2]	O_2-SAT	%	T, C, M
Silicate	SiO_3-Si	µMol Si	T, C, M
Total Ammonium	NH_4-N	µMol N	T, C, M
Total Nitrogen	TOT-N	µMol N	T, C, M
Total Nitrogen to Total Phosphorus ratio	TOT-N/TOT-P	Molar ratio	T, C, M
Total Organic Carbon	TOC	µMol C	T
Total Oxidised Nitrogen	NO_3-N+NO_2 –N or TON	µMol N	T, C, M
Total Phosphorus	TOT-P	µMol P	T, C, M

Abbreviations should be used in data tables.

[1] **Water Body:**
T = Transitional water
C = Coastal water
M = Marine water

[2] Particularly in relation to measuring and detecting low oxygen concentrations in bottom layers of water.

Annex 3: Determinands required for riverine and direct load assessments by Marine Conventions

The determinands listed below include those detailed in OSPAR's Comprehensive Study on Riverine Inputs and Direct Discharges (RID), HELCOM's Pollution Load Compilation 1995 (PLC) and the Survey of pollutants from land-based sources in the Mediterranean (MAP).

Determinand	Units
Nitrate (as N)	tonnes/yr N
Nitrite (as N)	tonnes/yr N
Orthophosphate (as P)	tonnes/yr P
Total nitrogen (as N)	tonnes/yr N
Total phosphorus (as P)	tonnes/yr P
Ammonia (as N)	tonnes/yr N
Total mercury	kg/yr
Total cadmium	kg/yr
Total zinc	kg/yr
Total lead	kg/yr
Copper	kg/yr
Nickel	kg/yr
Chromium	kg/yr
Gamma-HCH	kg/yr
Suspended particulate matter	tonnes/yr
Salinity (in saline waters)	psu
Average Riverine Flow for Year	m^3/sec
Volume	million m^3
Phenols	tonnes/yr
Detergents	tonnes/yr
Hydrocarbons	tonnes/yr
PCBs (the following congeners: IUPAC Nos 28, 52, 101, 118, 153, 138, 180);	tonnes/yr
Other hazardous substances (particularly organohalogen compounds)	kg/yr
BOD-7	tonnes/yr
BOD-5	tonnes/yr
COD-Mn	tonnes/yr
COD-Cr	tonnes/yr
TOC	tonnes/yr
AOX	tonnes/yr
Tritium	Becquerels/yr
Radionuclides	Becquerels/yr

Annex 4: EUROWATERNET-Transitional, Coastal and Marine Waters templates

The following tables detail the structure required for the submission of EUROWATERNET data on the physical characteristics of the quality and flux (load) monitoring stations, the proxy pressure data, the biota, seawater and sediment quality data, the riverine input load and direct discharge data.

Each template has been included as a separate worksheet in the Excel file **EWN_TCM_2003.xls** which can be downloaded from:

http://eea.eionet.eu.int:8980/Public/irc/eionet-circle/water/library?l=/eurowaternet/eurowaternet_2003/templates

Please deliver data in Excel (.xls), tab-separated ASCII text (.txt) or Access database (.mdb) format.

1. PHYSICAL CHARACTERISTICS OF QUALITY MONITORING STATIONS:

WATER_TYPE	TYPE_DESC	SOURCE	STN_ID	STN_NAME	STN_REPORTING	CRY_CD	WATER_NAME	SEA_AREA_NAME_ID

SEA_REGION_NAME	SEA_CONVENTION_AREA	CATCH_NAME	COAST_MAIN	COAST_CLOSE	REGION	LONG	LAT	STN_TYPE

MATRIX	SALINITY_MEAN	SALINITY_MIN	SALINITY_MAX	TEMPERATURE	TIDAL_MEAN	DEPTH	RESIDENCE	MIXING	REMARKS

Field Name	Description	Data Type
WATER_TYPE	**Water Body Type** As defined by the WFD: T = Transitional water C = Coastal water M = Marine water.	varchar(2)
TYPE_DESC	**Water Body Type Description** Additional water body description, e.g. Estuary, Coastal Lagoon, Embayment.	varchar(50)
SOURCE	**Data Source** Source of data.Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level.This should be the same ID as previously supplied.A station may be a geographically fixed location.A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
STN_ NAME	**National Station Name**	nvarchar(200)
STN_REPORTING	**Station Reporting Purpose** The monitoring station is used for the following reporting purposes: N = National purposes MC = Marine Conventions EC = European Commission Multiple entries separated by commas allowed (e.g. N,EC).	varchar(10)

Field Name	Description	Data Type
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
WATER_NAME	**Water Body Name** As defined for the Water Framework Directive.	nvarchar(50)
SEA_AREA_NAME_ID	**Sea Area Name or ID** Name of local sea area in which station is located, e.g. The Wash, Golfe de Gascogne. WATER_NAME and SEA_AREA_NAME_ID may be the same.	nvarchar(50)
SEA_REGION_NAME	**Regional Sea Name** Of which sea area is a part, e.g. North Sea, Bay of Biscay.	nvarchar(50)
SEA_CONVENTION_AREA	**Marine Convention Sea Area Name** Of which regional sea is a part, e.g. OSPAR.	nvarchar(50)
CATCH_NAME	**Catchment Name** Major river catchment/basin draining into transitional or coastal water.	nvarchar(100)
COAST_MAIN	**Mainland Coast** Distance from nearest mainland coast expressed in kilometres (km).	float(8)
COAST_CLOSE	**Closest Coast** Distance from closest coast expressed in kilometres (km). (If different from COAST_MAIN)	float(8)
REGION	**Region** Region where the transitional or coastal water is located.	varchar(100)
LONG	**Longitude (X)** International geographical co-ordinates of the monitoring station/area in decimal degrees format.	float(8)
LAT	**Latitude (Y)** International geographical co-ordinates of the monitoring station/area in decimal degrees format.	float(8)
STN_TYPE	**EUROWATERNET Station Type** B = Reference station R(PHYS) = Station representative of general conditions in terms of physico-chemical quality elements (e.g nutrients, organic matter) I(PHYS) = Station impacted directly by discharges affecting physico-chemical conditions R(HZ) = Station representative of general conditions in terms of hazardous substances I(HZ) = Station impacted directly by specific discharges containing hazardous substances Station can be of more than one type – separate entries with commas, e.g. B,R(PHYS).	nvarchar(30)
MATRIX	**Matrix** Environmental compartments measured at station. Any combination of codes: W = Water Column B = Biota S = Sediment Separate entries with commas (e.g. W,B,S).	varchar(3)
SALINITY_MEAN	**Mean Annual Salinity** Expressed in practical salinity units (psu).	float(8)
SALINITY_MIN	**Minimum Annual Salinity** Expressed in practical salinity units (psu).	float(8)
SALINITY_MAX	**Maximum Annual Salinity** Expressed in practical salinity units (psu).	float(8)
TEMPERATURE	**Mean Annual Temperature** Expressed in degrees Celsius (^{o}C).	float(8)
TIDAL_MEAN	**Mean Tidal Range** At the transitional or coastal station expressed in metres (m).	float(8)
DEPTH	**Mean Annual Depth** Expressed in metres (m).	float(8)

Field Name	Description	Data Type
RESIDENCE	**Residence Time** Of transitional or coastal water body, expressed in number of days.	int(3)
MIXING	**Mixing Characteristics** At transitional water monitoring station: FM = Fully Mixed PM = Partially Mixed VS = Vertically Stratified	varchar(2)
REMARKS	**Remarks** Additional comments.	nvarchar(200)

2. PHYSICAL CHARACTERISTICS OF FLUX STATIONS (LOADS):

CRY_CD	SOURCE	STN_ID	STN_NAME	LONG	LAT	RIVER_NAME	CATCH_NAME

WATER_NAME	SEA_AREA_NAME_ID	SEA_REGION_NAME	SEA_CONVENTION_AREA	REMARKS

Field Name	Description	Data Type
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level. This should be the same ID as previously supplied. A station may be a geographically fixed location. A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
STN_ NAME	**National Station Name**	nvarchar(200)
LONG	**Longitude (X)** International geographical co-ordinates of the monitoring station/area in decimal degrees format.	float(8)
LAT	**Latitude (Y)** International geographical co-ordinates of the monitoring station/area in decimal degrees format.	float(8)
RIVER_NAME	**River Name** In which loads are measured.	nvarchar(50)
CATCH_NAME	**Catchment Name** Major river catchment/basin draining into transitional or coastal water.	nvarchar(100)
WATER_NAME	**Water Body Name** Into which the river flows as defined for the Water Framework Directive.	nvarchar(50)
SEA_AREA_NAME_ID	**Sea Area Name or ID** Adjacent or local nearshore waters into which the river flows or direct discharge enters, e.g. The Wash, Golfe de Gascogne. WATER_NAME and SEA_AREA_NAME_ID may be the same.	nvarchar(50)
SEA_REGION_NAME	**Regional Sea Name** Of which sea area is a part, e.g. North Sea, Bay of Biscay.	nvarchar(50)
SEA_CONVENTION_AREA	**Marine Convention Sea Area Name** Of which regional sea is a part, e.g. OSPAR, HELCOM, UNEP/MAP, BSC.	nvarchar(50)
REMARKS	**Remarks** Additional comments.	nvarchar(200)

3. PRESSURES:

SOURCE	STN_ ID	CRY_CD	POPULATION	URBAN	WETLAND	NATURE	FOREST	AGRI_TOT	AGRI_OTHER

ARABLE	PASTURE	OTHER	SEWAGE_DISCHARGE	INDUST_DISCHARGE	OIL_EXTRACT	GAS_EXTRACT

SPOIL	WASTE	LANDFILL	MARICULTURE	FISHING	MARINA	PORT	OTHER_ACTIVITIES	REMARKS

Field Name	Definition	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level. This should be the same ID as previously supplied. A station may be a geographically fixed location. A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
POPULATION	**Population Density** Population density (capita/km^2) in the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
URBAN	**Urban** Urban land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
WETLAND	**Wetland** Wetland land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
NATURE	**Nature** Natural land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
FOREST	**Forest** Forested land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
AGRI_TOT	**Total Agriculture** Total agricultural land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
AGRI_OTHER	**Other Agriculture** Other agricultural land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
ARABLE	**Arable** Arable land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
PASTURE	**Pasture** Pastural land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the coastal water has been assigned.	float(8)
OTHER	**Other** Other land use as % of the catchment or drainage basin upstream of the transitional water, or within the River Basin District to which the	float(8)

Field Name	Definition	Data Type
	coastal water has been assigned.	
SEWAGE_DISCHARGE	**Sewage Discharge** Direct discharges* from sewage treatment works to the transitional, coastal and marine water body. U = UWWT, NU = non-UWWT, BU = both.	varchar(2)
INDUST_DISCHARGE	**Industrial Discharge** Direct discharges* from industry to the transitional, coastal and marine water body. E = EPER, NE = non-EPER, BE = both.	varchar(2)
OTHER_DISCHARGE	**Other Discharge** Direct discharges* from industry to the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
OIL_EXTRACT	**Oil Extraction** Exploration for or extraction of oil in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
GAS_EXTRACT	**Gas Extraction** Exploration for or extraction of gas in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
SPOIL	**Spoil** Dredged spoil disposal ground in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
WASTE	**Waste** Waste disposal ground in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
LANDFILL	**Landfill** Transitional, coastal and marine water body directly impacted by leachate from landfill disposal sites.. Y = yes, N = no.	varchar(1)
MARICULTURE	**Mariculture** Fish and shellfish farming in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
FISHING	**Fishing** Commercial fishing activity in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
MARINA	**Marina** Presence of a marina in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
PORT	**Port** Presence of port facilities in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
OTHER_ACTIVITIES	**Other Activities** Any other activities in the transitional, coastal and marine water body. Y = yes, N = no.	varchar(1)
REMARKS	**Remarks** Additional comments.	nvarchar(200)

4. BIOTA QUALITY:

SOURCE	STN_ ID	CRY_CD	YEAR	MONTH	DAY	SPECIES	TISSUE	SAMPLE_ID	CAS_NO

DETERMINAND	UNIT	BASIS	CONC	<LOD	LOD	DTR_LMT	DRY_FRESH_RATIO	FAT_PRC	REMARKS

Field Name	Definition	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level. This should be the same ID as previously supplied. A station may be a geographically fixed location. A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
YEAR	**Year** Calendar year when sample taken in format YYYY.	int(4)
MONTH	**Month** Month when sample taken in format MM from 01-12.	int(2)
DAY	**Day** Day when sample taken in format DD from 01-31.	int(2)
SPECIES	**Species** Code of species monitored as detailed in Annex 5.	varchar(8)
TISSUE	**Tissue** Code of tissue element of species monitored as detailed in Annex 6.	varchar(2)
SAMPLE_ID	**Sample ID** Unique number required if multiple samples taken within station-country-year-month-day-species-tissue.	varchar(8)
CASNo	**CAS Number** Chemical Abstract Service number of hazardous substance listed in Annex 1.	nvarchar(20)
DETERMINAND	**Determinand** Determinand name as defined in Annex 1 (hazardous substances) or Annex 2 (organic matter and nutrients).	nvarchar(30)
UNIT	**Unit** Unit of measurement as defined in Annex 1 or 2.	nvarchar(30)
BASIS	**Basis** Basis of measurement flag: D = dry, L = lipid (fat), W = wet.	nvarchar(20)
CONC	**Concentration** Of determinand in sample.	float(8)
<LoD	**Less than Limit of Detection Flag** Flag to indicate sample below analytical limit of detection in format -999.	int(3)
LoD	**Limit of detection** That concentration for which there is a desirably small probability that the determinand will not be detected (usually detected with 95% confidence). Expressed in same units as CONC.	float(8)
DTR_LMT	**Limit of determination** The smallest concentration that can be distinguished from the analytical blank at a chosen level of statistical confidence (usually 95%). Expressed in same units as CONC.	float(8)
DRY_FRESH_RATIO	**Dry Fresh Ratio** Ratio of dry weight to fresh weight of biota monitored expressed as %.	float(8)
FAT_PRC	**Fat** Fat content of biota expressed as % of fresh weight.	float(8)
REMARKS	**Remarks** Additional comments.	nvarchar(200)

5. SEAWATER QUALITY:

SOURCE	STN_ ID	CRY_CD	YEAR	MONTH	DAY	DEPTH	THERM_POS	HALO_POS	SAMPLE_ID

CAS_NO	DETERMINAND	UNIT	CONC	SALINITY	<LOD	LOD	DTR_LMT	REMARKS

Field Name	Description	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level. This should be the same ID as previously supplied. A station may be a geographically fixed location. A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
YEAR	**Year** Calendar year when sample was taken in format YYYY.	int(4)
MONTH	**Month** Month when sample was taken in format MM from 01-12.	int(2)
DAY	**Day** Day of month when sample was taken in format DD from 01-31.	int(2)
DEPTH	**Sampling depth** Expressed in metres (m).	float(8)
THERM_POS	**Vertical Position Relative to Thermocline** AT = Above Thermocline IT = In Thermocline BT = Below Thermocline	varchar(2)
HALO_POS	**Vertical Position Relative to Halocline** AH = Above Halocline IH = In Halocline BH = Below Halocline	varchar(2)
SAMPLE_ID	**Sample Identifier** Unique number required if multiple samples taken within station-country-year-month-day-depth.	varchar(8)
CAS_NO	**Chemical Abstract Service Number** Of hazardous substance listed in Annex 1.	nvarchar(20)
DETERMINAND	**Determinand** Name of element or chemical component analysed in format as detailed in Annexes 1 and 2.	nvarchar(30)
UNIT	**Unit of Measurement** Hazardous substances listed in Annex 1 expressed in microgrammes per litre (µg/l) or nanogrammes per litre (ng/l) as appropriate. Only one unit of measurement should be used for individual substances, not both. Physico-chemical substances expressed in format as detailed in Annex 2.	nvarchar(30)
CONC	**Concentration** Of determinand in sample.	float(8)
SALINITY	**Salinity** Of sample or salinity to which sample concentration is normalised, expressed in practical salinity units (psu).	float(8)
<LoD	**Less than Limit of Detection Flag** Flag to indicate sample below analytical limit of detection in format -999.	int(3)
LoD	**Limit of detection** That concentration for which there is a desirably small probability that the determinand will not be detected (usually detected with 95% confidence). Expressed in same units as CONC.	float(8)

Field Name	Description	Data Type
DTR_LMT	**Limit of determination** The smallest concentration that can be distinguished from the analytical blank at a chosen level of statistical confidence (usually 95%). Expressed in same units as CONC.	float(8)
REMARKS	**Remarks** Any additional comments.	nvarchar(200)

6. SEDIMENT QUALITY:

SOURCE	STN_ ID	CRY_CD	YEAR	MONTH	DAY	SAMPLE_ID	CAS_NO	DETERMINAND	UNIT

CONC	<LOD	LOD	DTR_LMT	BOTTOM_DEPTH	SAMPLER	SED_DEPTH_TOP

SED_DEPTH_BOTTOM	ORG_C	GRAIN_TYPE	FRACTION	DRY_WET_RATIO	BASIS	REMARKS

Field Name	Description	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
STN_ID	**National Station ID** Station/sampling area identifier unique at national level. This should be the same ID as previously supplied. A station may be a geographically fixed location. A station may also be a broader area in which actual sampling locations may vary from survey-to-survey. A station may also be an area with a defined salinity range within which samples have to be taken. Areas will however be recorded and reported as a discrete sampling location.	nvarchar(50)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
YEAR	**Year** Calendar year when sample was taken in format YYYY.	int(4)
MONTH	**Month** Month when sample was taken in format MM from 01-12.	int(2)
DAY	**Day** Day of month when sample was taken in format DD from 01-31.	int(2)
SAMPLE_ID	**Sample Identifier** Unique number required if multiple samples taken within station-country-year-month-day-depth.	varchar(8)
CAS_NO	**Chemical Abstract Service Number** Of hazardous substance listed in Annex 1.	nvarchar(20)
DETERMINAND	**Determinand** Name of element or chemical component analysed in format as detailed in Annexes 1 and 2.	nvarchar(30)
UNIT	**Unit of Measurement** Hazardous substances listed in Annex 1 expressed in microgrammes per litre (µg/l) or nanogrammes per litre (ng/l) as appropriate. Only one unit of measurement should be used for individual substances, not both. Physico-chemical substances expressed in format as detailed in Annex 2.	nvarchar(30)
CONC	**Concentration** Of determinand in sample.	float(8)
<LoD	**Less than Limit of Detection Flag** Flag to indicate sample below analytical limit of detection in format -999.	int(3)
LoD	**Limit of detection** That concentration for which there is a desirably small probability that the determinand will not be detected (usually detected with 95% confidence). Expressed in same units as CONC.	float(8)
DTR_LMT	**Limit of determination** The smallest concentration that can be distinguished from the analytical blank at a chosen level of statistical confidence (usually 95%). Expressed in same units as CONC.	float(8)

Field Name	Description	Data Type
BOTTOM_DEPTH	**Bottom Depth** At sampled site expressed in metres (m).	float(8)
SAMPLER	**Sampling Equipment Used**	nvarchar(50)
SED_DEPTH_TOP	**Top of Analysed Sediment Layer** Measured from the sediment surface, expressed in centimetres (cm). Value will be zero if sediment surface.	float(8)
SED_DEPTH_BOTTOM	**Bottom of Analysed Sediment Layer** Measured from the sediment surface, expressed in centimetres (cm).	float(8)
ORG_C	**Organic Carbon** Expressed as percentage (%) of total dry weight.	float(8)
GRAIN_TYPE	**Sediment Type** Sediment type description if no analysis of grain size. M = Mud FS = Fine Sand MS = Middle Sand CS = Coarse Sand G = Gravel	varchar(2)
FRACTION	**Size Fraction Analysed** Upper limit of particle size in analysed fraction, expressed in micrometres (µm).	float(8)
DRY_WET_RATIO	**Dry Fresh Ratio** Ratio of dry weight to fresh weight of biota monitored expressed as %.	float(8)
BASIS	**Basis** Basis of measurement flag: D = dry, L = lipid (fat), W = wet.	nvarchar(20)
REMARKS	**Remarks** Any additional comments.	nvarchar(200)

7. RIVERINE INPUT LOADS:

SOURCE	CRY_CD	STN_ ID	YEAR	DETERMINAND	CAS_NO	ESTIMATE	METHOD	VALUE	UNIT	REMARKS

Field Name	Description	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
STN_ID	**National Station ID** River station identifier unique at national level. This should be the same ID as previously supplied under EUROWATERNET-Rivers. A station will usually be at a geographically fixed location.	nvarchar(50)
YEAR	**Year** Calendar year in format YYYY.	int(4)
DETERMINAND	**Determinand** Name of element or chemical component analysed in format as detailed in Annex 3 (including river flow).	nvarchar(30)
CAS_NO	**Chemical Abstract Service Number** Of hazardous substance.	nvarchar(20)
ESTIMATE	**Estimate Type** **Select from:** L = Lower estimate based on treating determinand values that are less than the limits of detection as zero. U = Upper estimate based on treating determinand values that are less than the limits of detection as equivalent to limit of detection value.	nvarchar(1)
METHOD	**Method of Estimation** Select from: OutY = Calculations including outlier values. OutN = Calculations excluding outlier values. FloodY = Calculations accounting for flood events. FloodN = Calculations not accounting for flood events. XSS = Loads calculated by extrapolation from concentrations (of micropollutants) in suspended sediment. Other = Please provide description of method in Remarks field.	nvarchar(20)
VALUE	**Load Value** Annual value of determinand e.g. loads of nutrients and micropollutants and river flow.	float(8)
UNIT	**Unit of Measurement** Unit of measurement as detailed in Annex 3.	nvarchar(30)
REMARKS	**Remarks** Any additional comments.	nvarchar(200)

8. DIRECT DISCHARGES:

SOURCE	CRY_CD	WATER_NAME	SEA_AREA_NAME_ID	SEA_REGION_NAME	SEA_CONVENTION_AREA

YEAR	DISCHARGE_TYPE	DETERMINAND	CAS_NO	ESTIMATE	METHOD	VALUE	UNIT	REMARKS

Field Name	Description	Data Type
SOURCE	**Data Source** Source of data. Select from: ICES, OSPAR, HELCOM, UNEP/MAP, BSC, Country.	varchar(10)
CRY_CD	**Country Code** ISO3166 two digit country code.	varchar(2)
WATER_NAME	**Water Body Name** Into which the discharge enters as defined for the Water Framework Directive.	nvarchar(50)
SEA_AREA_NAME_ID	**Sea Area Name or ID** Adjacent or local nearshore waters into which the river flows or direct discharge enters, e.g. The Wash, Golfe de Gascogne. WATER_NAME and SEA_AREA_NAME_ID may be the same.	nvarchar(50)
SEA_REGION_NAME	**Regional Sea Name** Of which sea area is a part, e.g. North Sea, Bay of Biscay.	nvarchar(50)
SEA_CONVENTION_AREA	**Marine Convention Sea Area Name** Of which regional sea is a part, e.g. OSPAR.	nvarchar(50)
YEAR	**Year** Calendar year in format YYYY.	int(4)
DISCHARGE_TYPE	**Discharge Type** Select from: I = Industrial, M = Municipal, T = Total.	nvarchar(10)
DETERMINAND	**Determinand** Name of element or chemical component analysed in format as detailed in Annex 3 (including discharge volume).	nvarchar(30)
CAS_NO	**Chemical Abstract Service Number** Of hazardous substance.	nvarchar(20)
ESTIMATE	**Estimate Type** L = Lower estimate based on treating determinand values that are less than the limits of detection as zero. U = Upper estimate based on treating determinand values that are less than the limits of detection as equivalent to limit of detection value.	nvarchar(1)
METHOD	**Method of Estimation** Select from: OutY = Calculations including outlier values. OutN = Calculations excluding outlier values. FloodY = Calculations accounting for flood events. FloodN = Calculations not accounting for flood events. XSS = Loads calculated by extrapolation from concentrations (of micropollutants) in suspended sediment. Other = Please provide description of method in Remarks field.	nvarchar(20)
VALUE	**Load Value** Annual value of determinand e.g. load of nutrients and micropollutants and discharge volume.	float(8)
UNIT	**Unit of Measurement** Unit of measurement as detailed in Annex 3.	nvarchar(30)
REMARKS	**Remarks** Any additional comments.	nvarchar(200)

Annex 5: Species Codes used in sampling of biota

Biota data should use the Species Codes detailed in this list, based on the ICES coding method of the first four characters of the genus name followed by a space and the first three characters of the species name. The primary list is based on the recommended species for the different Marine Conventions. Please also include data for other species that are included in long-term monitoring programmes, using the same coding convention as detailed above.

Species Code	Systematic Name	English Name	MC[1]
ARIS ANT	Aristeus antennatus	Blue and red shrimp	M
BOOP BOO	Boops boops	Bogue	M
CLUP HAR	Clupea harengus	Atlantic herring	B
CRAS GIG	Crassostrea gigas	Giant cupped oyster	O
GADU MOR	Gadus morhua	Atlantic cod	B, O
FUCU VES	Fucus vesiculosis	Bladder wrack	B
LIMA LIM	Limanda limanda	Common dab	O
MACO BAL	Macoma balthica	Baltic tellin	B
MERL MCC	Merluccius merluccius	European hake	M, O
MERL MNG	Merlangius merlangus	Whiting	O
MULL BAR	Mullus barbatus	Red mullet	M
MULL SUR	Mullus surmuletus	Striped red mullet	M
MYTI EDU	Mytilus edulis	Common mussel	B, O
MYTI GAL	Mytilus galloprovincialis	Mediterranean mussel	M
NEPH NOR	Nephrops norvegicus	Norway lobster	M, O
PERC FLU	Perca fluviatilis	Perch	B
PLAT FLE	Platichthys flesus	European flounder	B, O
SADU ENT	Saduria entomon		B
THUN THY	Thunnus thynnus	Northern bluefin tuna	M
ZOAR VIV	Zoarces viviparus	Vivparous blenny	B

[1] **MC** **Marine Convention**
B = Baltic, HELCOM Combine programme
M =Mediterranean MAP
O = OSPAR, JAMP

Annex 6: Tissue Codes used in sampling of biota

Biota data should be reported using the Tissue Codes in this list.

Tissue Code	English Name
LI	Liver
MU	Muscle
SB	Soft parts (homogenised whole body without carapace or shell)
WO	Whole body