

Marine Strategy Framework Directive reporting

A user guide for electronic
reporting

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Contents

Section	Page
1. Introduction	5
1.1 Overview	5
1.2 Summary of support for reporting	5
1.3 Other supporting document	6
1.4 Getting help	7
2. The reporting workflow	8
2.1 Step 1: Understand the reporting requirements	8
2.2 Step 2: Fill out the information in the database or in the web forms	8
2.3 Step 3: Create the XML file (only relevant for MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)	8
2.4 Step 4: Validate the XML file in desktop tool (only relevant for MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)	9
2.5 Step 5: Upload the XML file to EEA Reportnet portal	9
3. Information to be reported	10
3.1 2014 reporting	10
3.2 2012 reporting	11
3.3 Competent Authorities (was to be reported in 2011)	12
4. Documents and links	13
Appendix A – Linkages between reporting sheets, database and schemas	14
Appendix B - Access Database	16
Appendix C – XML Schemas	20
Appendix D - Creation of XML files DB-to-XML conversion tool	24
Appendix E – Validation of schemas	27
Appendix F - Uploading XML files onto Reportnet	38
Appendix G – MSFD database table overview	45
Appendix H - Complex validation checks	51
Appendix I – WebForms	56

Glossary of Terms

Term	Meaning / Definition
CA	Competent Authorities
DB	Database
EEA	European Environment Agency
EC	European Commission
GES	Good Environmental Status
MS	Member State
MSCA	Member State Competent Authority
MSFD	Marine Strategy Framework Directive
WFD	Water Framework Directive
WISE	Water Information System for Europe
WISE-Marine	Water Information System for Europe - Marine
XML	Extensible Markup Language

1. Introduction

1.1 Overview

The Marine Strategy Framework Directive (MSFD¹) requires Member States to periodically submit information (reports) to the European Commission (EC) relating to their implementation of the Directive, including their marine strategies and progress towards achieving Good Environmental Status (GES). The EC, in collaboration with the European Environment Agency (EEA), has developed the Water Information System for Europe (WISE) to accommodate similar reporting information for the Water Framework Directive (WFD) and Floods Directive. MSFD reporting will be handled in an extension to WISE known as WISE-Marine, which will facilitate reporting by Member States and access and visualisation of the information (such as via the WISE interactive map viewer²).

This document describes the electronic-based reporting process and tools for the Marine Strategy Framework Directive to be used from January 2011. The reporting process follows the procedures established under the existing WISE.

Reporting is based upon the electronic submission of information described in a XML schema. Schemas state the scope and format of the information to be provided. The contents of the schemas are derived from the direct requirements of the MSFD and the interpretation of the requirements of the MSFD described in Reporting Sheets. Reporting Sheets are developed in collaboration with Member States to agree a common reporting format which is suitable for the relevant reporting requirement of the Directive.

The Reporting Sheets for the 2012 reporting have after a test phase in May 2012 been streamlined to one spreadsheet covering all the Reporting Sheets and designed so it fit the Access database table design.

The reporting of monitoring programmes (MSFD, Art 11) have followed a slightly different reporting procedure. Relevant information is to be reported directly in web forms as part of the Reportnet procedure and hence no database was developed to support this reporting.

1.2 Summary of support for reporting

To support the countries in submitting information, the following tools are provided:

In general

- A platform for the submission of the schema to the Commission

<http://cdr.eionet.europa.eu/>

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

- A database which follows the schema structure to facilitate the collection and organisation of the information

<http://icm.eionet.europa.eu/schemas/dir200856ec/resources/database>

- A tool which takes the information from the database and creates the schema

<http://icm.eionet.europa.eu/schemas/dir200856ec/resources/conversion>

- A tool to validate the schema to avoid errors in the reporting

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF>

² <http://www.eea.europa.eu/themes/water/interactive/water-live-maps>

<http://icm.eionet.europa.eu/schemas/dir200060ec/resources/validationtool>

The following have been developed to help understand the steps in the reporting process and how to use the tools:

In general

1. This document – describes the workflow, individual tools installation and operation, data model, specific support in terms of QA/QC of submissions
2. Reporting Sheets – excel spreadsheets/word document agreed between Commission and MS on the structure and content of reporting.
3. Reporting of spatial information in a separate document: MSFD reporting work flow - Technical guidance for provision of spatial data for MSFD reporting

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

4. Spreadsheet – excel spreadsheet with the same content as the Reporting Sheets – however structured so it fits closely the design of the Access database. The Access database closely follow the Spreadsheet in structure with the goal reporters can make use of the annotation text in understanding reporting.
5. MSFD Access Reporting Database Content – the implementation of the Spreadsheet into a relational data model. The reporting database is implemented in Access and this document provides the linkages between each worksheet in the Spreadsheet and the relevant tables in the database. The database also includes notes and guidance. When looking at the Access database it is important to view with reference to the Spreadsheet.
6. Schema HTML files

In specific relation to reporting of the monitoring programmes, MSFD Art.11 (2014)

7. The reporting is still structured around a reporting sheet and schemas. The MS can report the information through web forms which are part of the Reportnet workflow for this obligation or choose to create the XML files themselves.

1.3 Schemas, reporting tools and supporting documents

The following documents have been developed to support the different reporting obligations under the MSFD:

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

1. Marine Strategy Framework Directive reporting: A user guide for electronic reporting v4.2 (this document)
2. Guidance for 2012 reporting under the Marine Strategy Framework Directive, using the MSFD database tool
3. MSFD reporting: User Guide to reporting spatial data Tables for the MSFD database (Spreadsheet)

All schemas, tools and documents are available at the 2012 reporting resource page: <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/>

In specific relation to reporting of the monitoring programmes, MSFD Art.11 (2014)

1. Marine Strategy Framework Directive reporting: A user guide for electronic reporting v4.2 (this document)
2. Guidance for MSFD Article 11 reporting on monitoring programmes (included in the Reporting package for MSFD Article 11 on monitoring programmes)
3. MSFD reporting: User Guide to reporting spatial data

All schemas, tools and documents are available at the 2014 reporting resource page:

<http://icm.eionet.europa.eu/schemas/dir200856ec/resources2014/>

1.4 Getting help

If you need assistance on any issue please contact:

helpdeskWISEreporting@atkinsglobal.com

2. The reporting workflow

This section provides a step-by-step guide on using the provided tools to generate a XML file and submit it to the Commission, via the European Environment Agency's Reportnet. The Appendices provide more detailed information for each step.

2.1 Step 1: Understand the reporting requirements

Section 3 of this document describes the elements under this reporting, gives an understanding of what is required and relating that to the reporting formats. The understanding comes from the agreed reporting sheets. They are a critical reference to the reporting and are part of the reporting tools. All explanation for field meaning can be found in the reporting sheet. The database, web forms and schemas have been built to follow the requirements of the reporting sheets.

See **Appendix A**

2.2 Step 2: Fill out the information in the database or in the web forms

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011) the reporting are structured around schemas and an Access database. The database can be used to import and structure MS data into the required format for the generation of the XML files. It is not intended for the database to be the front end for the reporting. This is only the case for the reporting of the competent authorities. Understanding the information to be filled in should be done in conjunction with the reporting sheets and this document.

Download the Access DB and fill in the required information into the relevant tables from <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/database>

See **Appendix B and Appendix G** (relevant for MSFD Art 4/5, 8, 9 and 10 (2012))

In specific relation to reporting of the monitoring programmes Art 11 (2014) the reporting is still structured around reporting sheets and schemas. A database is not used. The MS can report the information through web forms which are part of the Reportnet workflow for this obligation or choose to create the XML files themselves.

See **Appendix I** – how to use web forms for MSFD, Art 11, or the document: "MSFD 2014 mini guide – how to use the web forms" also available from:

<http://icm.eionet.europa.eu/schemas/dir200856ec/resources2014/>

2.3 Step 3: Create the XML file (only relevant for MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011))

- Download and install the tool "**Marine Directive database to XML conversion tool**" from <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/conversion>
- The DB-to-xml conversion tool is started from the start menu (Programs→The European Commission → MSFD database to XML conversion tool).

- To generate a xml file, first select the relevant database for which you want to generate the xml (e.g. MSFD Directive Reporting Database.mdb). Then choose the schema from the 'Select schema*' drop down button. When the 'Build XML file' button is pressed, the application builds the file and then prompts the user to save the file.

See [Appendix D](#)

2.4 Step 4: Validate the XML file in desktop tool (only relevant for MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011))

The validation tool checks the consistency and structure of the data within the XML files generated. It uses the same rules as the validation tool within Reportnet (see section 3.5), and will detect and report any errors in the XML files at an early stage (rather than waiting until you have generated and uploaded onto Reportnet, only to have to go back to the start to correct errors). This tool can therefore save you a lot of time. This tool could be the starting point for those MS generating the XML files directly from their own systems.

- The validation tool is integrated into the conversion tool, allowing for the possibility for validation immediately on XML generation and also on already-generated XML files
- A standalone desktop validation tool can also be downloaded and installed via the internet from the URL below:
<http://icm.eionet.europa.eu/schemas/dir200856ec/resources/validationtool>
- Once installed, the desktop validation tool can be accessed through the Start menu on your desktop, simply go to Start → Programs → The European Commission → Reportnet desktop validation tool
- To validate a XML file, click the "Check XML file" button (see Appendix E on page 25), browse to the relevant XML file you wish to validate and the validation is run as soon as OK is clicked.
- The detailed validation reports can be seen by clicking the "Show details..." link. This will open a report describing the validation output.
- The trickiest part in the workflow is interpreting the validation messages on the XML and then finding the right table/row in the database to correct the information.

See [Appendix C](#) and [Appendix E](#) and [Appendix H](#)

2.5 Step 5: Upload the XML file to EEA Reportnet portal

The accepted platform for the submission of the reporting schemas is through EEA's Reportnet portal (CDR). Member States need to designate official reporters and identify the reporters roles for the relevant obligations under the MSFD. The EIONET helpdesk can assist in setting up the access rights to make the submissions (helpdesk@eionet.europa.eu).

There are 3 roles a reporter can be given depending on the needs within the Member States:

- Data collaborator: Can edit in data
- Reporter: Can edit and release data
- Auditor: Can only view data

To participate in the delivery process, you should first log in with your EIONET account in the Central Data Repository (link below). If your account hasn't been given the proper permission that

your job requires or you do not have an EIONET login, please contact the EIONET helpdesk (helpdesk@eionet.europa.eu).

Please note that for the reporting in web forms for article 11 (Appendix I) the member state must agree on an internal work flow as multiple reporters can't work on the same xml file in the web form. If this is done by accident only the latest version of the web form will be saved. It is therefore worth considering the amount of Data collaborator and Reporter roles given within a member state without any agreement of a working procedure. Please note that it is possible to work on web forms simultaneously as long as they are producing different XML (eg. it will be possible to work on two monitoring programmes web forms simultaneously as long as they are within two different regions/sub regions).

To upload the XML file to Reportnet:

- Enter the Central Data Repository (CDR) of Reportnet by going to <http://cdr.eionet.europa.eu>
- Click on the country for which you want to make the submission
- Go to: data collection → European Union (EU) → obligations
- Click on the relevant EU subcollection → add a new envelope called eg. 15 October 2013 to each relevant MS sub-collection
- Activate the task (upper right corner)
- Upload XML file into the envelope and name it [Sub_Collection_Code³][SCHEMA-CODE⁴][YYYYMMDD]. In addition the XML file for sub monitoring programmes (MSFD, Art 11) should be given an ID for the sub programme eg. [Sub_Collection_Code][MSFD11MonSub][unique identifier for the sub programme - eg. SubProgrammeID][YYYYMMDD]
- Release envelope to run the QA. A confirmation of receipt will automatically be generated once the envelope is set to complete. Make sure that the files meet the MS quality standards (check the QA's) before completing the envelope – once the envelope is set to complete it will not be possible to correct and re-upload data
- When envelope is set to complete the MS formally notifies the Commission they have reported via their Permanent Representative with a letter, attaching their Reportnet "Confirmation of receipt" (i.e. copying the text).

See [Appendix F](#)

3. Information to be reported

3.1 2014 reporting

MSFD Article 11 provides legally-binding requirements for Member States to establish and implement coordinated monitoring programmes for the ongoing assessment of the environmental status of marine waters. Member States are to notify the Commission of their monitoring programmes by 15 October 2014.

³ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

⁴ SCHEMA-CODE can be found in illustration on p. 19. eg. MSFD4Geo, MSFD8aFeatures

Based on the agreed 10 key questions in the Recommendation, a proposed structure, content and format for reporting has been developed as a Reporting Sheet through an informal process in the Working Group on Data, Information and Knowledge Exchange (WG DIKE).

A 'reporting package' was endorsed by the Marine Directors in December 2013, comprising the 'Reporting Sheet' which defines the structure and content of the information to be reported, associated guidance on completion of the reports and guidance on the reporting mechanisms.

Electronic reporting via Reportnet is done through XML schemas. The schemas are the technical implementation of the agreed reporting sheets. In order to help the collation of information by Member states web forms will be available in the Reportnet work flow. The web forms will in most cases mirror the reporting sheet and will create the XML file for the Member States.

The starting point for understanding this reporting is the document 'Reporting Sheet for MSFD Article 11'. See **Appendix I** for guidance on how to use the web forms for the reporting. See Appendix E for validation of the Schemas and Appendix F for how to upload files in Reportnet.

3.2 2012 reporting

The arrangements for the 2012 reporting under the Marine Strategy Framework Directive have been developed through an informal process in the Working Group on Data, Information and Knowledge Exchange (WG DIKE) under the guidance of the Marine Directors. A 'reporting package' was endorsed by the Marine Directors in June 2012, comprising the following:

- a. The reporting framework concept paper: 'Approach to reporting for the MSFD';
- b. A set of reporting sheets, addressing geographic aspects, regional cooperation and Articles 8, 9, and 10;
- c. As associated guidance document: 'Guidance for 2012 reporting under the MSFD'.

Both text-based 'paper'⁵ national reports and reporting sheet information are to be submitted via EEA's Reportnet system for inclusion in WISE-Marine, the marine module of the Water Information System for Europe (WISE), WISE-Marine has been adopted as the main platform for exchanging and sharing reported information and data under the MSFD.

Electronic reporting via Reportnet is done through XML schemas. The schemas are the technical implementation of the agreed reporting sheets. In order to help the collation of information by Member states an Access database is distributed which contains tables representing the reporting sheets and from which the XML can be generated.

The starting point for understand this reporting is the excel spreadsheet. See **Appendix A** for guidance on approaching the different documents and tools to report under the MSFD. All the tools and other documents follow on from these reporting sheets to define the reporting format.

Priority information

The requirements of the reporting under the MSFD has split the information into priority reporting for October 2012 and required information for April 2013. The implementation of this in the schemas has the priority fields marked as required and the fields for April marked as optional. The validation will therefore report errors where the information it sees marked as required is not provided. This is only a technical message because of the nature of the reporting under the MSFD does not define required information. Therefore in the eventuality a MS chooses not to provide priority information then such error messages can be ignored. If in doubt contact the helpdesk.

⁵ In pdf format

3.3 Competent Authorities (was to be reported in 2011)

The requirement to supply information on Competent Authorities is under Article 7(1) of the MSFD. The basis for the information to be reported is the existing WISE Reporting Sheet CA 1 concerning Competent Authorities for the WFD. Although the reporting of the Competent Authorities was due in 2011, MS may subsequently update the information and notify the Commission.

To report the Competent Authorities the following information is required (an * denotes the field is optional) – please note that it is possible to report multiple Competent Authorities in one schema, where the level 2 information below refers to the information needed for each Competent Authority reported by the Member State:

Level 1 attribute and general information (single entry per Member State):

- **CreationDate:** Date when this report (xml file) was created – e.g. 2011-01-01.
- **Creator:** Name of report creator.
- **Email:** Email address of report creator.
- **Description:** A description of the XML file – e.g. data have been created on the basis of information from the Ministry of Environment.
- **GeneratedBy:** Is the xml file generated from the database provided by the Commission or from a Member State (local) system.
- **Language:** Reporting language.
- **Country code (C_CD):** Two-letter ISO Country code – e.g. AT for Austria.
- **METADATA*:** Hyperlink or reference to associated metadata statement or file. This allows up to 2000 characters to be specified or alternatively may be used to provide a hyperlink or description of an associated metadata file. This should be used to define any restrictions on the data.
- **URL*:** URL for integration of your own internet-based information. This could be, for example: - A link to on-line relevant national methodology reports and statistics or a link to a feature/location in a web-based mapping system.

Level 2 information on each Competent Authority (separate entry for each one):

- **MSCACode:** A unique EU code for the Competent Authority, created by taking the two-letter ISO Country code followed by the Member State unique identification code⁶ (up to 42 characters in total) – e.g. ATMSCA1.
- **Auth_CD*:** Unique National code for the Competent Authority – e.g. MSCA1.
- **CompetentAuthorityName:** Official name of the Competent Authority in English.
- **CompetentAuthorityNameNL*:** Official name of the Competent Authority in national language.
- **Acronym*:** Acronym for the Competent Authority (if it exists).

⁶ This can be different to the Auth_CD code, as some MS have a national system with their own coding system. The Auth_CD gives the MS the opportunity to insert a national code if this exists. The MSCACode is the international code which shall follow a specific structure as explained.

- Address of the Competent Authority: **Street, City, Postcode, Country.**
- **CityNL***: Name of city (head office of the CA) in national language.
- **URL**: Website address of the Competent Authority.
- **LegalStatus**: Summary text (less than 5000 characters) of the legal status of each competent authority should be provided. This should include a brief description of the legal status of the competent authority, or authorities.
- **Reference**: Hyperlink (or reference) to statute, founding treaty or equivalent legal document.
- **Responsibilities**: Summary text (less than 5000 characters) of the institutional responsibilities of the Competent Authority with a brief description of the legal and administrative responsibilities of the competent authority or authorities and of its role in relation to the marine waters concerned. Where several Competent Authorities are designated, state clearly the particular responsibility of each, such as their geographical remit and/or responsibilities for particular aspects of the Directive.
- **Membership**: Summary text (less than 5000 characters) of the institutional membership, when the competent authority or authorities acts as a coordinating body for other component authorities, a list of these is required together with a summary of the institutional relationships established in order to ensure coordination.
- **RegionalCoordination**: Summary text (less than 5000 characters) for regional or sub-regional coordination with a summary of the mechanisms established in order to ensure coordination between Member States whose marine waters fall within the same marine region or sub-region.

The reporting of the Competent Authorities was due by 15 January 2011. However, MS may subsequently inform the Commission of any changes to the information provided then within 6 months of such a change coming into effect. For this purposed, MS will need to resubmit their Competent Authorities report (see details of the resubmission process in Appendix F).

4. Documents and links

- Marine Strategy Framework Directive: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF>
- Schema guides: <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/>
- Circa documents: <http://circa.europa.eu/Public/irc/env/marine/library>
- 'Reporting package' for 2012 reporting: http://ec.europa.eu/environment/marine/publications/index_en.htm

Appendix A – Linkages between reporting sheets, database and schemas

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012)

A.1 Overview

At first glance the reporting under the MSFD looks complex with multiple worksheets, tables in a database and schemas. The purpose of this section is to provide guidance on how to approach these different documents and tools in order to quickly become familiar with the approach and then be able to focus on collating and reporting the necessary information.

We start by taking a look at each component separately and then follow with the linkages in order to build up the workflow for information submissions.

Reporting Sheets

The Reporting Sheets are divided according to the different articles of the Directive which are being reported against. Each spreadsheet typically follows the same format of asking for metadata, a component against which the report is being made and then the information which can be high level descriptions or multiple lists. Each spreadsheet follows a similar column naming convention but the type and contents vary significantly.

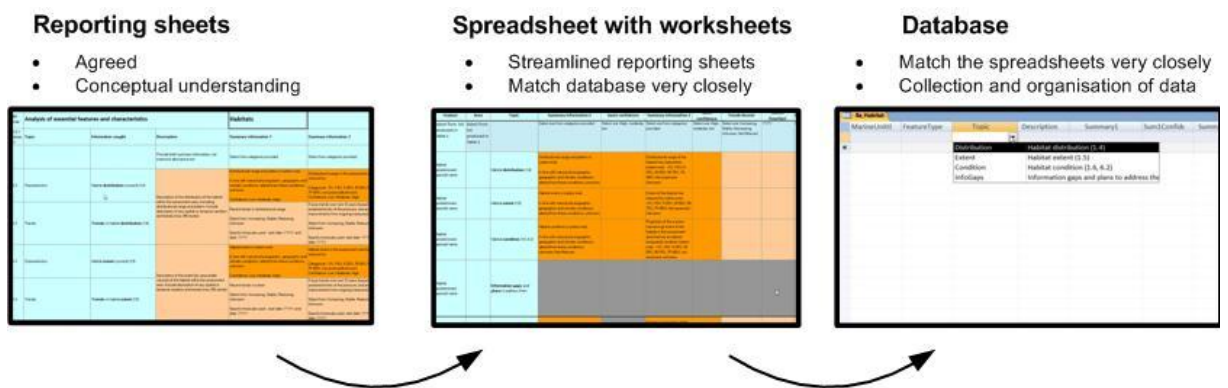
Spreadsheet

The spreadsheet contains a list of worksheets which holds the same information as the Reporting Sheets only structured differently.

The spreadsheet is streamlined Reporting Sheets and match the database design very closely. If you therefore will be using the spreadsheet as the data entry and then transfer the information into the database you should use the spreadsheet to do so. There is a lot of description information in the spreadsheet and, in the development of the tools, the spreadsheets are the primary source for explanation and understanding of what has been agreed to be reported. This approach means the database and schemas follow the same structure so that the spreadsheet should be used as part of the reporting for looking up the exact reporting requirements for a specific topic.

Access database

The database is a relational, tabular implementation of the reporting spreadsheets. The following document should be referred to see which tables are linked to which spreadsheets [MSFD Access Reporting Database Content]. In many cases more than one table are needed in the implementation in the database because the spreadsheets have fields which asks for lists and therefore have a one-to-many relationship. The tables are grouped by the article against which is being reported, represented by a two-letter code.

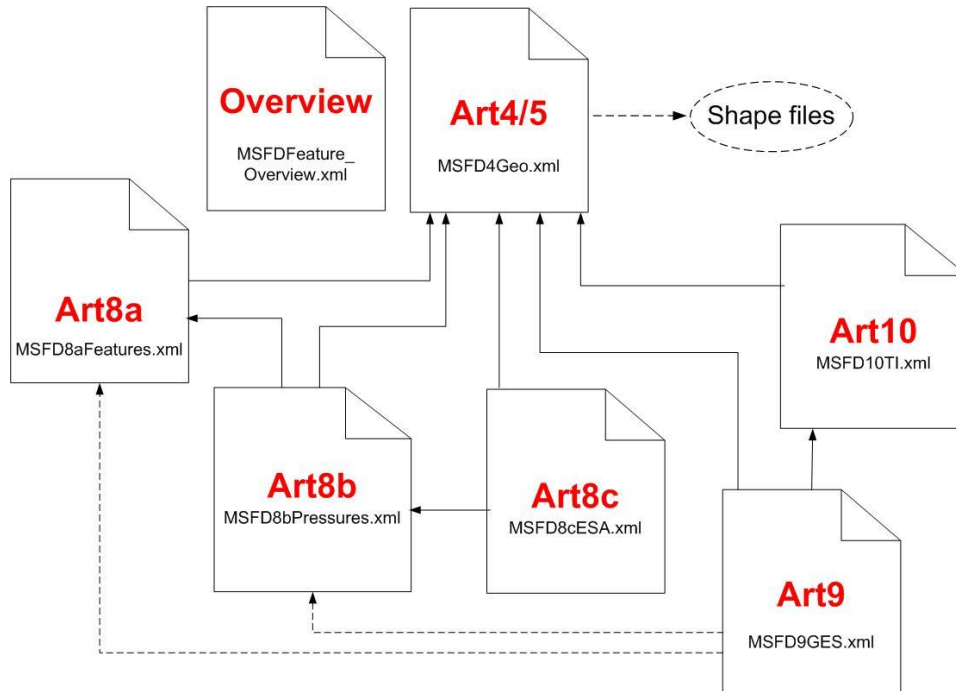


Schemas

There are seven schemas in the reporting – six corresponding to an Article in the Directive. The schemas are designed based upon the Spreadsheet and are structured in a very similar way. The diagram below shows the schemas and their relationship to one another.

It is intended to work on one schema at a time. This important linkage for all the schemas is to the Marine Unit (MarineUnitID). This could be the region, sub-region, sub-division or assessment area depending upon what has been reported and they are all listed in the one schema. Every other schema makes reference to these marine units and so valid codes need to be ensured (automatic validation rules will check this). All spatial information is attached to the MarineUnit schema.

The schemas are defined by enumeration lists and types.



Appendix B - Access Database

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

B.1 Download of Access database

The Access DB is available for download at <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/> and is available in Access 2000 version.

B.2 Database design

The database is a relational, tabular implementation of the Spreadsheet. The following document should be referred to see which database tables are linked to which schema. In many cases more than one table are needed in the implementation in the database because the spreadsheet has fields which asks for lists and therefore have a one-to-many relationship. The tables are grouped by the article against which is being reported, represented by a four-letter code and the article number.

Article	Database tablename prefix	Name	Schema
7	MS_Competent Authorities	Competent Authorities	MSCA
	Features_Overview		MSFD_ Features_Overview
4	MSFD4_	Geographic Boundaries	MSFD4Geo
8.1a	MSFD8a_	State	MSFD8aFeatures
8.1b	MSFD8b_	Pressures	MSFD8bPressures
8.1c	MSFD8c_	Activities	MSFD8cESA
9	MSFD9_	Good Environmental Status	MSFD9GES
10	MSFD10_	Targets and Indicators	MSFD10TI

Therefore, the database contains a long list of tables, but these are grouped and sub-grouped around a certain aspect of the reporting so it is only necessary to focus on one smaller set of tables at a time – see Appendix G for a full list of database tables and how these are related to both the worksheets and the Reporting Sheets. Please also note that a form will open when opening the database. The form makes it possible to open relevant tables for a specific area of the MSFD.

The column names in each of the tables are very generic (summary1, summary2 etc). The reason being the spreadsheet is structured in this way but each row of the spreadsheet contains very different pieces of information. So the naming of the columns is preserved to facilitate linking back to the spreadsheet. One difficulty in this approach is that a row in the spreadsheet does not

necessarily require information to be reported for each column. So in filing out database tables it is necessary to refer to the spreadsheet. However, in the field descriptions for each row there is some indication to which columns are relevant to which Topic. The Topic column in each of the tables is used to identify which row in the spreadsheet. It is an enumeration list and subsequent quality checks are dependent upon what is entered in this field.

In the reporting there is a differentiation between the primary and secondary information. In the database this differentiation has been mapped into the schemas as mandatory and optional fields.

There is no quality checking in the database (except for dates), this comes from the schema generation. The reason being a schema can be developed to contain implicit constraints in the way it is designed, but with a database this makes filling in the information a more difficult process and requires significant development.

B.2.1 Required data

The requirements of the reporting under the MSFD has split the information into priority reporting for October 2012 and required information for April 2013. The implementation of this in the schemas has the priority fields marked as required and the fields for April marked as optional. The validation will therefore through errors where the information it sees marked as required is not provided. This is only a technical message because of the nature of the reporting under the MSFD does not define required information. Therefore in the eventuality a MS chooses not to provide priority information then such error messages can be ignored. If in doubt contact the helpdesk.

B.2.2 Field descriptions

Every table within the database contains detail on what each field means (Description), The field descriptions provide information on which rows are required for which Topic on a table and highlights specific formats for fields. All descriptions for fields can be seen by opening the table in Access and then clicking on the design button in the top left.



Field Name	Data Type	Description
MarineUnitID	Text	REQUIRED. Link to table MSFD4_GeographicalAreasID - see MarineUnitID used in this table (Unique EU code for the geoc)
Topic	Text	REQUIRED. Choose from enumeration list
Description	Memo	All topics
SumInfo1	Text	Only for LevelPressure, ImpactPressureWater, ImpactPressureSeabed and ImpactPressureFunctionalGroup
SumInfo1Unit	Text	Only for ImpactPressureFunctionalGroup (total number of functional groups present in the area)
SumInfo1Confidence	Text	Only for LevelPressure, ImpactPressureWater, ImpactPressureSeabed and ImpactPressureFunctionalGroup
TrendsRecent	Text	Only for LevelPressure
RecentTimeStart	Text	yyyy. Only for LevelPressure
RecentTimeEnd	Text	yyyy. Only for LevelPressure
TrendsFuture	Text	Only for LevelPressure
FutureTimeStart	Text	yyyy. Only for LevelPressure
FutureTimeEnd	Text	yyyy. Only for LevelPressure
Limitations	Memo	For all topics if relevant

Alternatively the Description text can be seen in the status bar at the bottom left of the Access window, for the field which is selected:

Description	SumInfo1	SumInfo1Uni	SumInfo1Cor	TrendsRecen	RecentTimeS	RecentTimeE	Tre
*	lessthan1%						
	1-5%						
	5-25%						
	25-50%						
	50-75%						
	75-100%						
	Unknown_NotAssessed						
	Total number of functional groups present in the area. Only relevant for Im						

B.2.3 Text fields

Most of the fields within the DB are defined as text fields; an indication of the number of characters allowed can be found in either the spreadsheet, description field (table design view), in the general field settings or in the schema (XML) file (as illustrated below).

Field Name	Data Type	Description
C_CD	Text	Required. Link to table COUNTRY - see CountryCode used in that ta
MSCACode	Text	Required. Unique EU code for the Competent Authority. Add the T
Auth_CD	Text	Unique National code for the Competent Authority
CompetentAuthorityName	Text	Required. Official name of the Competent Authority in English
CompetentAuthorityNameNL	Text	Official name of the Competent Authority in National Language
Acronym	Text	Acronym for the Competent Authority (if it exists)
Street	Text	Required
City	Text	Required. Official name of city in English
CityNL	Text	Official name of city in National Language
Country	Text	Required
Postcode	Text	
URL	Text	Required. Website address of the Competent Authority
Legalstatus	Memo	Required. Sum text (<5000 char) of the legal status of each compet
Responsibilities	Memo	Required. Summary text (<5000 char) of the institutional responsib
Reference	Memo	Required. Hypertext (for reference) to statute, founding treaty or e
Membership	Memo	Required. Sum text (<5000 char) of the institutional membership, v
RegionalCoordination	Memo	Required. Sum text (<5000 char) for regional or sub-regional coordi

```

</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="Street" type="ms:String100Type"/>
<xs:element name="City" type="ms:String100Type"/>
<xs:element name="CityNL" type="ms:String100Type" minOccurs="0"/>
<xs:element name="Country" type="ms:String100Type"/>
<xs:element name="Postcode" type="ms:String50Type" minOccurs="0"/>
<xs:element name="URL"/>
<xs:annotation>
  <xs:documentation>Website address of the Competent Authority</xs:documentation>
</xs:annotation>
</xs:simpleType>
<xs:restriction base="xs:string">
  <xs:minLength value="0"/>
  <xs:maxLength value="250"/>

```

Field design, illustrated in both Access DB table and in schema file

If text fields in the DB are defined as “Memo” the information on how many characters allowed will be available in both the spreadsheet (in most cases) and the XML file.

B.2.4 Enumeration / Drop-Down Lists

All code lists defined in the schemas have already been incorporated into the DB, and are used to create drop-down lists where appropriate, e.g. country code (C_CD) list. This ensures that only valid codes are entered into the DB. Code lists are defined in the system schema MSCommon (for

an overview of the members of all code list visit the common schema documentation:
http://icm.eionet.europa.eu/schemas/dir200856ec/resources/HTML/MSCCommon_1p0.html).

B.2.5 Date and URL

Date format in the database is in yyyy for the year fields in the majority of cases, but there are also year-month fields where the expected format is yyyy-mm.

Links (URL) to relevant documentation (must be a valid URL format).

B.3 Order of populating the tables

Appendix G provides the explanation on which tables are relevant to which reporting sheet and also guidance on the order to fill information into the database tables.

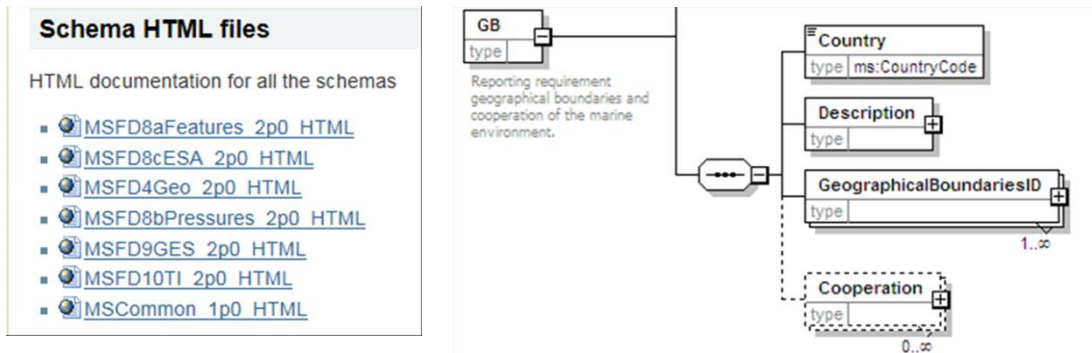
Appendix C – XML Schemas

C.1 Overview

The diagram below represents the schemas which are being used for the electronic reporting under the MSFD. All schemas are supported by a MSCommon schema which holds common complex types and the members of all the code list (enumeration lists).

The easiest way to view the schemas is through the clickable HTML diagrams available through the resources page.

<http://icm.eionet.europa.eu/schemas/dir200856ec/resources>

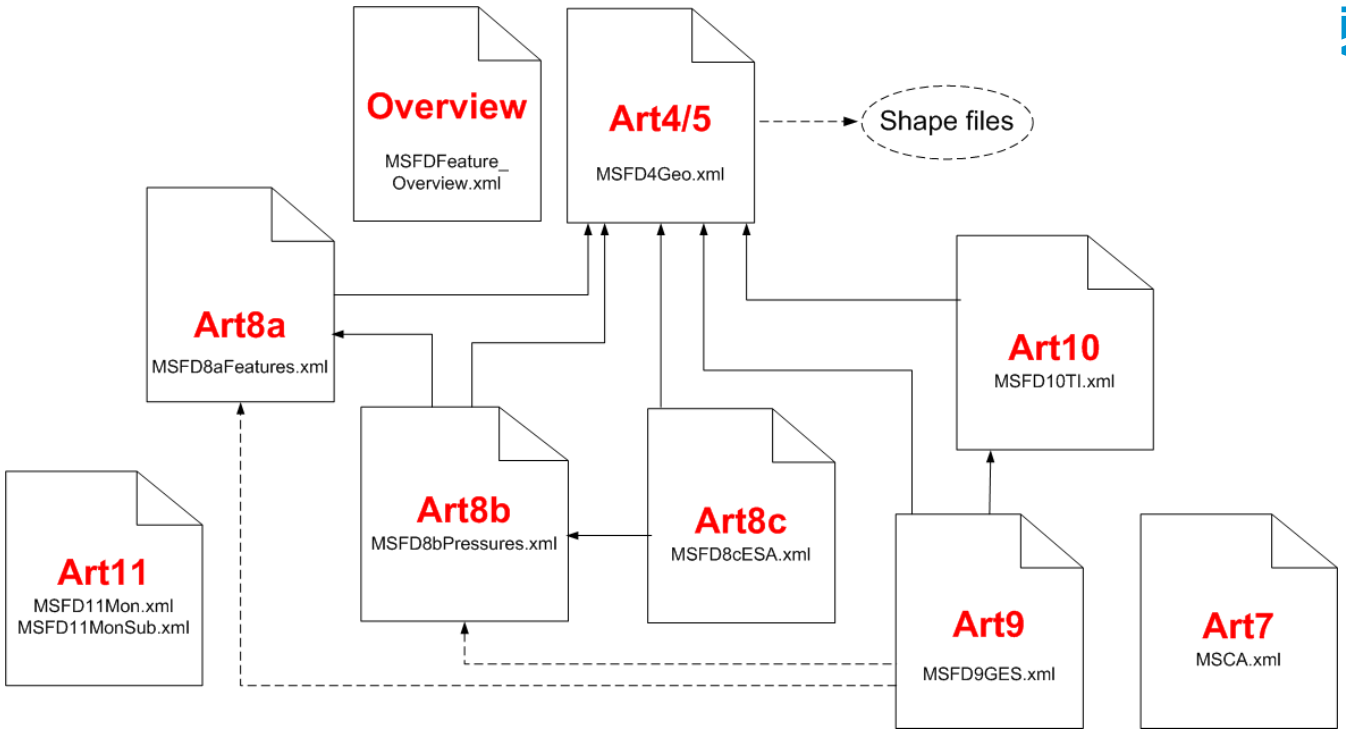


The grouping and structure of the nodes within each schema closely follows the structure of the reporting sheet.

The MSFDFeature_Overview schema holds information from the worksheet 1-Features and provides an overview of the features to be reported for the 2012 reporting. The worksheet 1-Features from the spreadsheet is also used as the entry form when opening the database.

For the 2012 reporting the main linkage between the schemas is the Marine Unit – this equates to the 'geographical boundary' but is used in the schemas as a neutral substitute terminology. The marine Unit is the level at which the reporting is being made depending on the spreadsheet. The marine unit can be at any scale from region through subdivisions down to a small assessment area.

All the schemas are available from the resources page in XSD format and in user-friendly HTML clickable diagrams.



C.1.1 Spatial information

Only in the MSFD4Geo schema is the exact type of the unit defined. In all the other schemas there is just the reference to the ID. In continuation from this, the only schema which has spatial information associated with it is the MSFD4Geo schema. The exact nature of the spatial reporting is described in the MSFD reporting work flow: Technical guidance for provision of spatial data for MSFD reporting, which can be found on the resource page.

C.2 Common schema structure elements

A schema is a structured way of delivering information electronically. A structure is made up of a number of building block and restrictions.

C.2.1 Element types and maximum and minimum limits

Submitted data needs to conform to the data types that have been used for each element in the schema. The data types are as follows:

- String: all characters allowed. The maximum and minimum settings define the maximum number and minimum number of characters that are allowed.
- URL: must be a valid URL format.

C.2.2 Required / Optional / Conditional elements

The data within the schemas may be Required or Optional for the purposes of automatic validation.

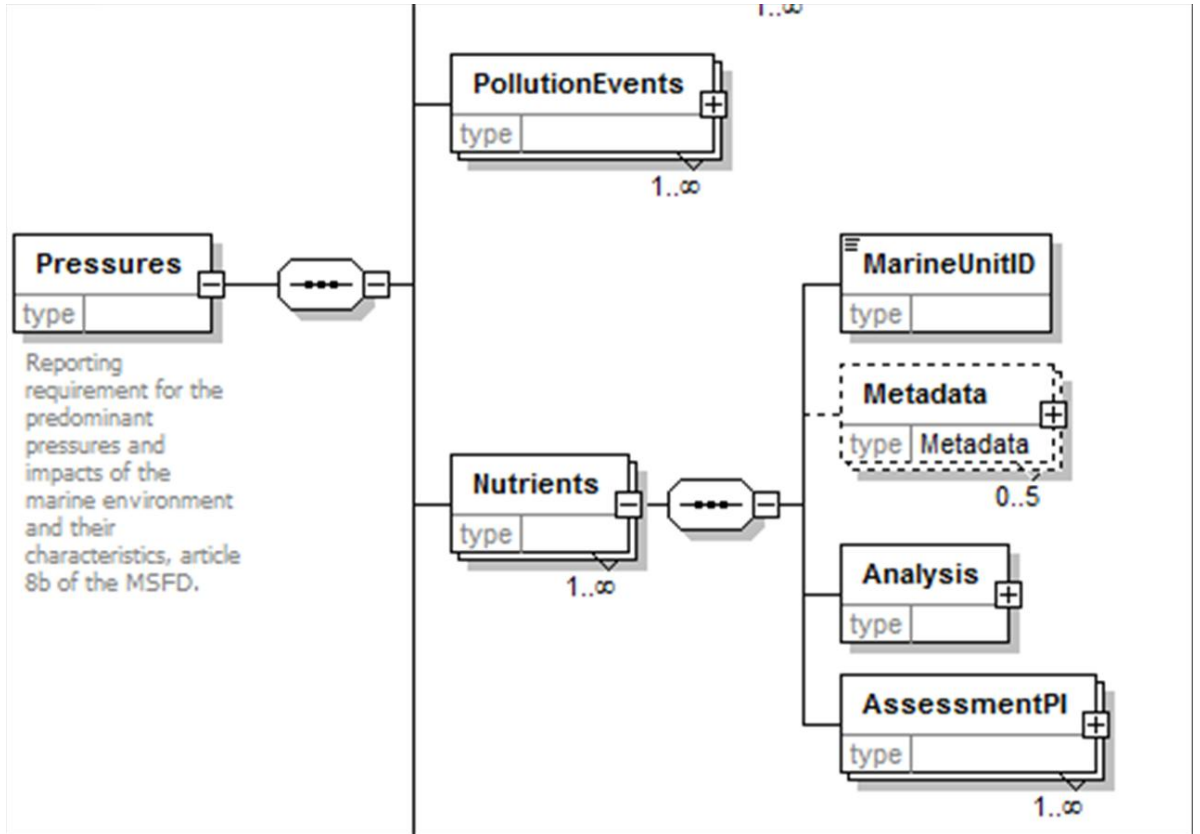
The logic for determining from a schema whether an element is considered to be Required or Optional (which has been decided in the drawing up of the reporting sheets) is based on the MINIMUM number of occurrences defined for that element.

The logic used is as follows:

- Required: minimum occurrence is set to 1 or more.

- Optional: minimum occurrence is set to 0, therefore this element need not be supplied in the submission (note: there is no conditional check described in the table in Appendix B).
- Conditional: minimum occurrence is set to 0 and there is a conditional check as described in Appendix H.

In the schema design this is also indicated by either a solid line (fields to be completed as a priority) or dashed line (fields to be completed). If information is missing in a solid line element then the validation tool will give an error message. See Appendix E for more information about the validation rules.



Solid line: Fields to be completed as a priority

Dashed line: Fields to be completed

C.2.3 Multiple occurrences

There are instances when multiple occurrences of elements are required. These are identified when the MAXIMUM occurrence set for an element is > 1. The maximum is commonly seen as unbounded, but in some cases a specific number of elements are expected.

The following options exist in the schemas:

- Minimum occurrence = 1, maximum occurrence = n: there must be at least 1 occurrence of the element (or sequence of elements) and that element (or sequence of elements) can be repeated up to a maximum of n times.

C.2.4 Code check

The Code check is the most common validation check and is required to ensure that, where relevant, valid codes are selected from the attached code list defined in the MS Common schema, and that, in almost all cases, only one occurrence of the selected code exists in the data submission, avoiding the creation of duplicates. For example, element C_CD must be populated with a valid country code defined in the code list 'CountryCodeType' within the MS Common schema. (for an overview of the members of all code list visit the common schema documentation:

http://icm.eionet.europa.eu/schemas/dir200856ec/resources/HTML/MSCCommon_1p0.html).

C.2.5 NotReported/Not relevant

Please notice that if a priority field where an enumeration list is available is left blank – the conversion tool will automatically give the code 'NotReported' or in the case for art 11 web forms the 'Not relevant' to those fields. These will only appear when converting the database/web form information into a specific xml schema and will also be visible when viewing the xml file in the HTML format.

Appendix D - Creation of XML files DB-to-XML conversion tool

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

D.1 Concept

The purpose of the DB-to-XML conversion tool is to allow Member States to generate the required XML files from their own data without any prior knowledge of XML formats and standards. However, database knowledge (including MS Access) and advanced data transformation skills are still needed to use the conversion tool.

The tool extracts the data from the tables in the Access database (back-end), described in Appendix B and generates the schema.

Please note that the XML conversion tool will only function with the database structure which has been built specifically in the MSFD Access reporting database as supplied.

D.2 Computer Requirements

The DB-to-XML conversion tool requires the following;

- Windows XP or newer, 30 MB of free hard disk space and an 800x600 monitor (minimum).
- Microsoft .NET Framework 3.5 SP1 or higher. If .NET 3.5 SP1 is not already present, it will automatically be installed during the installation process. However the installation program itself requires at least Microsoft .NET Framework 2.0, see section D3.

Important: Running the Database to XML conversion tool requires a connection to the internet.

D.3 Installation / un-installation

D.3.1 Installation

The Database to XML conversion tool is installed through the internet from the URL below:

<http://water.eionet.europa.eu/schemas/dir200856ec/resources/conversion> It should be noted that the installation is only supported from Internet Explorer, not from other browsers (e.g. FireFox, googleCrome).

As described in section 4.2 the installation will automatically include the Microsoft .NET Framework 3.5 SP1, if this is not already present. However, it should also be noted that installation of .NET requires local administrator access.

In order to run the installation program itself, you must have Microsoft .NET Framework 2.0 (at least) already installed. To determine what versions of the Microsoft .NET Framework is installed have a look in the folder C:\Windows\Microsoft.NET\Framework. Versions of the .NET framework will be in numbered folders.

If you do not already have .NET 2.0 or higher, it is recommended that you install the latest version of .NET, which at the time of writing is 3.5 SP1. This is available from the URL below:

<http://www.microsoft.com/downloads/details.aspx?familyid=ab99342f-5d1a-413d-8319-81da479ab0d7>

Each time the Database to XML conversion tool is started an automatic check for new versions will be performed. If an update is found, but installation is skipped, it can be installed manually later on.

Running the installation as well as the DB-to-XML conversion tool through a proxy server might cause problems. In this case your administrator must change the network configuration in order to remove the proxy for the following websites:

- <http://icm.eionet.europa.eu/schemas/dir200856ec/resources/conversion>
- <http://eionet.europa.eu>

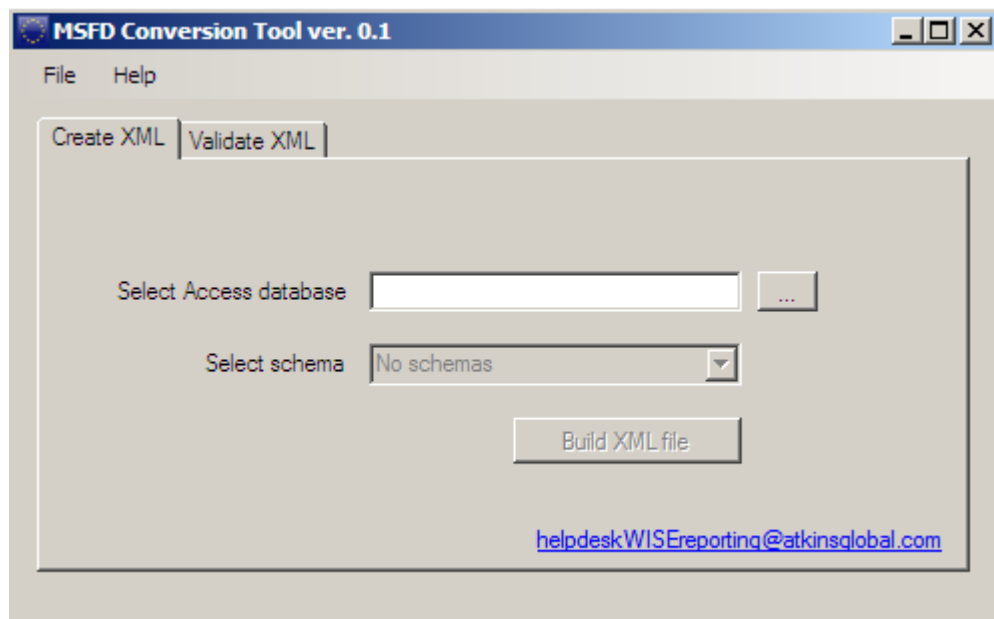
D.3.2 Un-installation

The DB-to-XML conversion tool has to be un-installed from the Control Panel.

D.4 Using the conversion tool

The DB-to-XML conversion tool is started from the start menu (Programs→The European Commission → MSFD database to XML conversion tool).

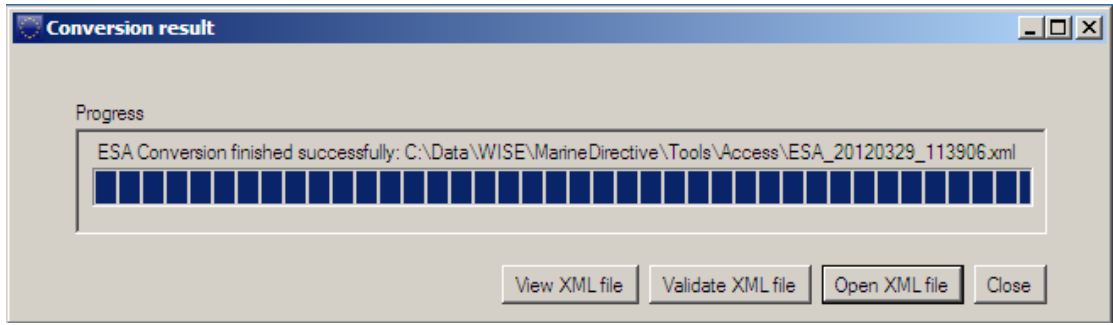
To generate an XML file, first select the Access database for which you want to generate the XML. When the 'Build XML file' button is pressed - the application first prompts the user to choose the XML file location and name for the new file. By default the application provides a file name based on the schema name and timestamp. The application then builds the file.



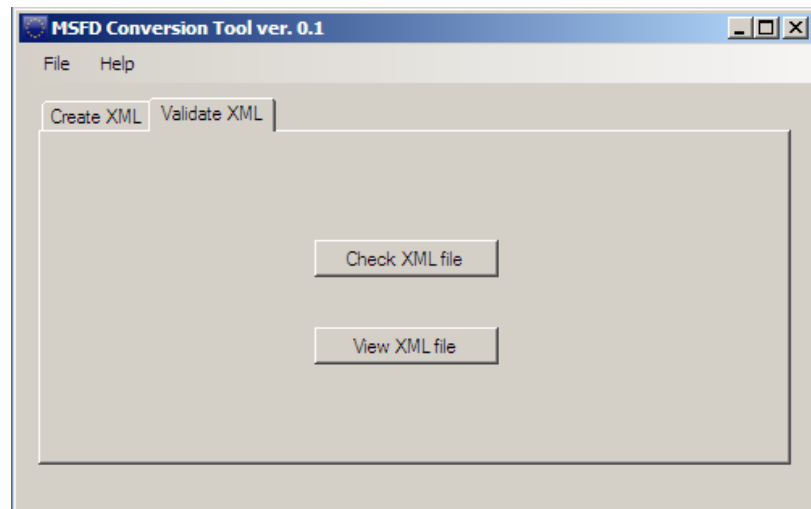
Note: The generation of XML files can take a long time if there is a lot of information to map between the database and the XML file.

D.5 Integration with validation tools

When an XML file is first generated there are buttons on the result window which perform the validation and view functionalities. There is also a View file button which opens the generated XML file using the program associated with the .xml type on the users machine.



For validation and view of files already generated, there is a second tab on the main window which gives access to the Check and View XML buttons which can be used to perform checks on any XML file already generated.



The validation functionality requires internet access and a check is made a startup. If offline, a warning dialog is given and the validation buttons are disabled.

The validation tool retrieves the schema definition, scripts and style sheets from Reportnet. The purpose of the validation tool is to allow Member States to validate their XML prior to upload to Reportnet CDR (where another similar level of validation is performed, based on the same rules). By undertaking this task prior to uploading your XML files onto Reportnet, you can correct any validation errors earlier on in the process and therefore avoid repeating the task later on (it will save you time).

The standalone validation tool described in the next Appendix is optional and provides the same functionality as described above.

The following errors were found in XML file P:\DP12\EEA_ETC-ICM\2012\1.5.1a\Milestone1_MSFDreporting\Reporting Sheets\COM_20120518_140151.xml:

Line	Error
127	The element 'ChemicalFeatures' in namespace 'http://water.eionet.europa.eu/schemas/dir200856ec' has invalid child element 'Chemical' in namespace 'http://water.eionet.europa.eu/schemas/dir200856ec'. List of possible elements expected: 'MarineUnitID' in namespace 'http://water.eionet.europa.eu/schemas/dir200856ec'.

Appendix E – Validation of schemas

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012) and Art 7 (2011)

E.1 Concept

The purpose of the desktop validation tool is to allow Member States to validate their XML prior to upload to Reportnet CDR (where another similar level of validation is performed, based on the same rules). By undertaking this task prior to uploading your XML files onto Reportnet, you can correct any validation errors earlier on in the process and therefore repeating the task later on (it will save you time).

This section is relevant to the validation functionality available in the conversion tool and the functionality from the standalone desktop validation tool.

E.2 Desktop validation tool

The standalone desktop validation tool is optional when the conversion tool has been installed.

E.2.1 Computer Requirements

The desktop validation tool requires;

- Windows XP or newer
- 30 MB of free hard disk space
- an 800x600 monitor (minimum)
- Microsoft .NET Framework 3.5 SP1 or higher. If .NET 3.5 SP1 is not already present, it will automatically be installed during the installation process. However the installation program itself requires at least Microsoft .NET Framework 2.0, see section D3 on page 22.

Important: Running the Reportnet desktop validation tool requires access to the internet.

E.2.2 Installation

The Reportnet desktop validation tool can be installed via the internet from the URL below:

<http://icm.eionet.europa.eu/schemas/dir200060ec/resources/validationtool>

Please note that the installation will only run from Internet Explorer, not from other browsers (e.g. FireFox, googleChrome).

As described in section E.2 the installation will automatically include the Microsoft .NET Framework 3.5 SP1, if this is not already present. However, it should be noted that installation of .NET requires local administrator access and you may therefore need to contact your system administrator.

In order to run the installation program itself Microsoft .NET Framework 2.0 (or later) must be installed. To determine what versions of the Microsoft .NET Framework is installed have a look in the folder C:\Windows\Microsoft.NET\Framework, and if present, the versions of the .NET framework will be in numbered folders.

If you do not already have .NET 2.0 or higher, you are recommended to install the latest version of .NET, which at the time of writing is 3.5 SP1. This is available from the URL below:

<http://www.microsoft.com/downloads/details.aspx?familyid=ab99342f-5d1a-413d-8319-81da479ab0d7>

Each time the desktop validation tool is started an automatic check for new versions will be performed. If an update is found, but installation is skipped, it can be installed manually later on.

The desktop validation tool can be accessed through the Start menu on your desktop, simply go to Start → Programs → The European Commission → Reportnet desktop validation tool

Running the installation of the desktop validation tool (as well as running the tool itself) through a proxy server might cause problems. In this case your administrator must change the network configuration in order to remove the proxy for the following websites:

- <http://icm.eionet.europa.eu/schemas/dir200060ec/resources/validationtool>
- <http://eionet.europa.eu>

E.2.3 Uninstallation

The Reportnet desktop validation tool has to be uninstalled from the Control Panel.

E.3 Principles of validation

The purpose of the validation of an XML file is to check that it is complying with required XML schema form. It checks that the XML is well formed and the technical validation is met.

The first validation carried out checks that the XML is well formed (and adheres to the common structure rules outlined in the schema).

The second validation carried out checks that XML adheres to the complex structure as outlined in Appendix E.6.

The desktop validation tool only works if you have a connection to the internet, because the tool pulls down the latest version of the relevant schema directly from Reportnet. This ensures that any validation is always consistent with the latest version of the MSFD schema.

E.3.1 Schema definition (schemaLocation)

The XML file should contain a reference to the schema definition file so that the validation can be undertaken. The reference is an attribute to the root element and consists of two parts – namespace and location

e.g. `xsi:schemaLocation="http://water.eionet.europa.eu/schemas/dir200856ec
http://water.eionet.europa.eu/schemas/dir200856ec/MSCA_1p0.xsd"`

For the validation tool to successfully retrieve the other validation rules from Reportnet then the schema definition needs to point at the schema held on Reportnet. The urls to the latest schema versions can be found at this location (Description='MSFD'):

<http://converterstest.eionet.europa.eu/do/uplSchemas>

The first validation, described below, checks this definition.

E.4 Using the validation tool

E.4.1 Validating an XML file

To validate an XML file, click the “Check XML file” button (see page 24), either immediately after generation or by browsing to the relevant XML file you wish to validate and the validation is run as soon as OK is clicked.

The main output from the validation tool is presented as shown in Figure D.5.2.

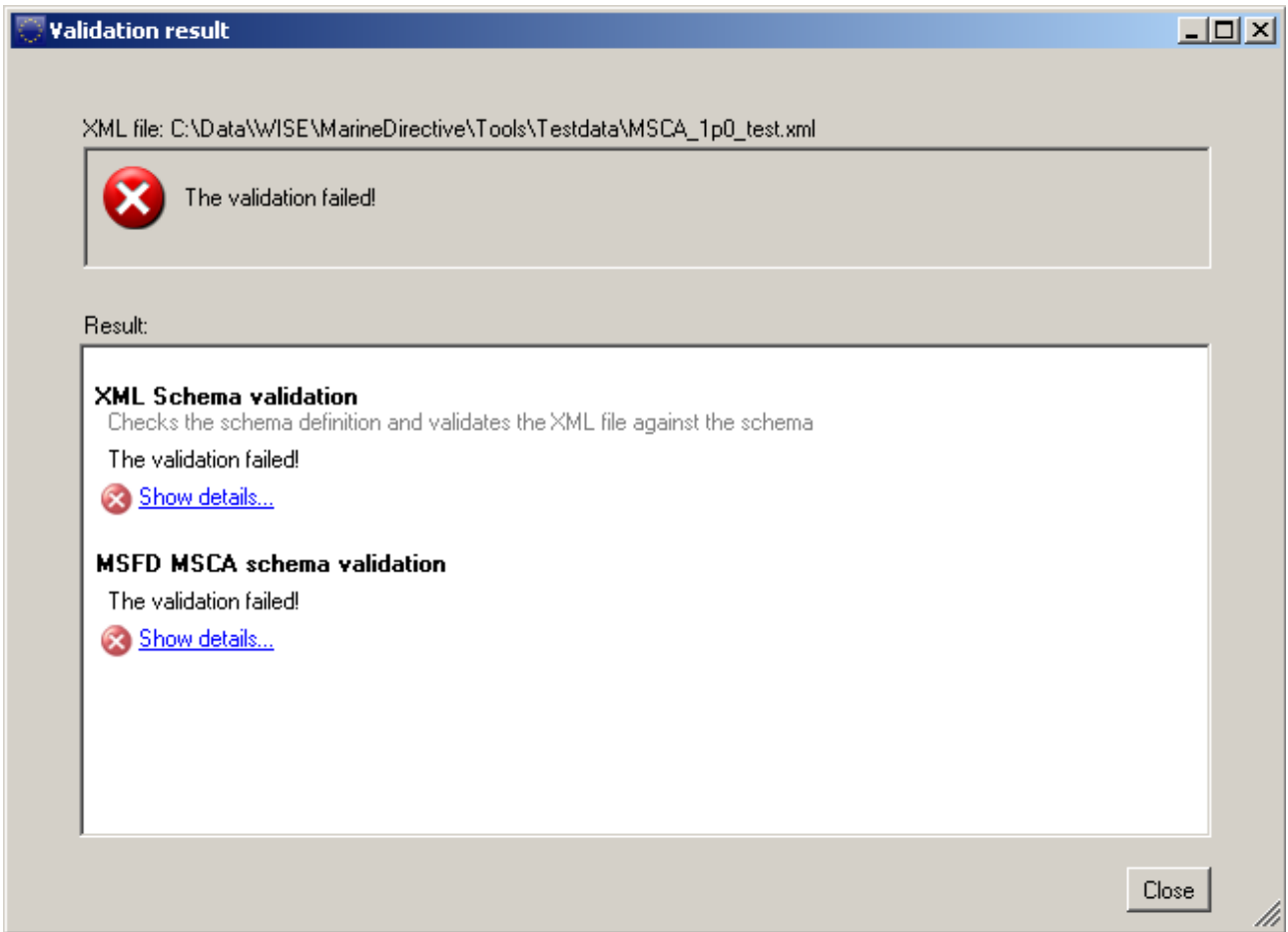





Figure D.5.2 Result of validations

For each of the validations run the result is shown. The detailed reports are marked with the symbols below.

-  The validation was not passed. The detailed report contains information about the validation including the errors found.
-  The validation was passed with warnings. The detailed report contains information about the validation including the warnings (not shown).
-  The validation was passed successfully. The detailed report contains additional information about the validation.

The detailed reports can be seen by clicking the “Show details...” link. This will open the report as shown below.

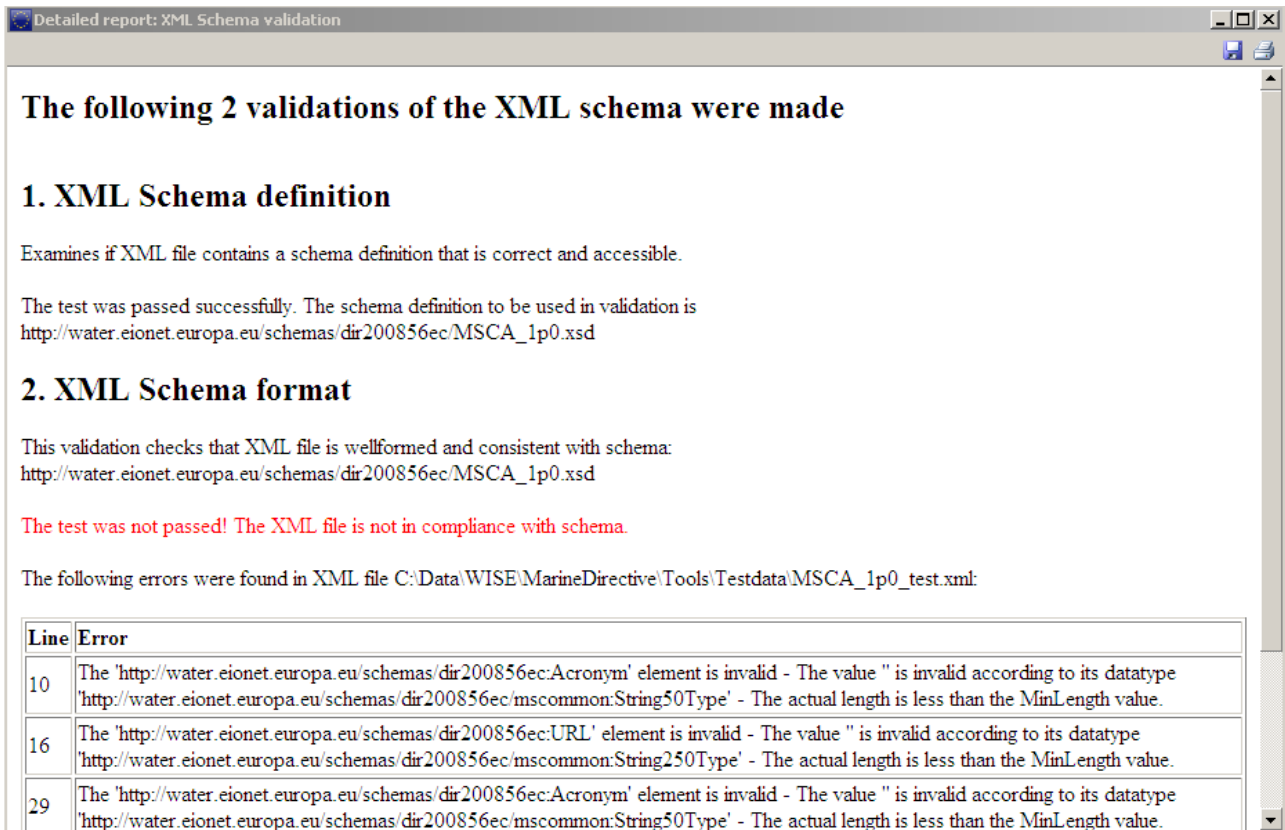


Figure D.5.3 Example of desktop validation output (high level)

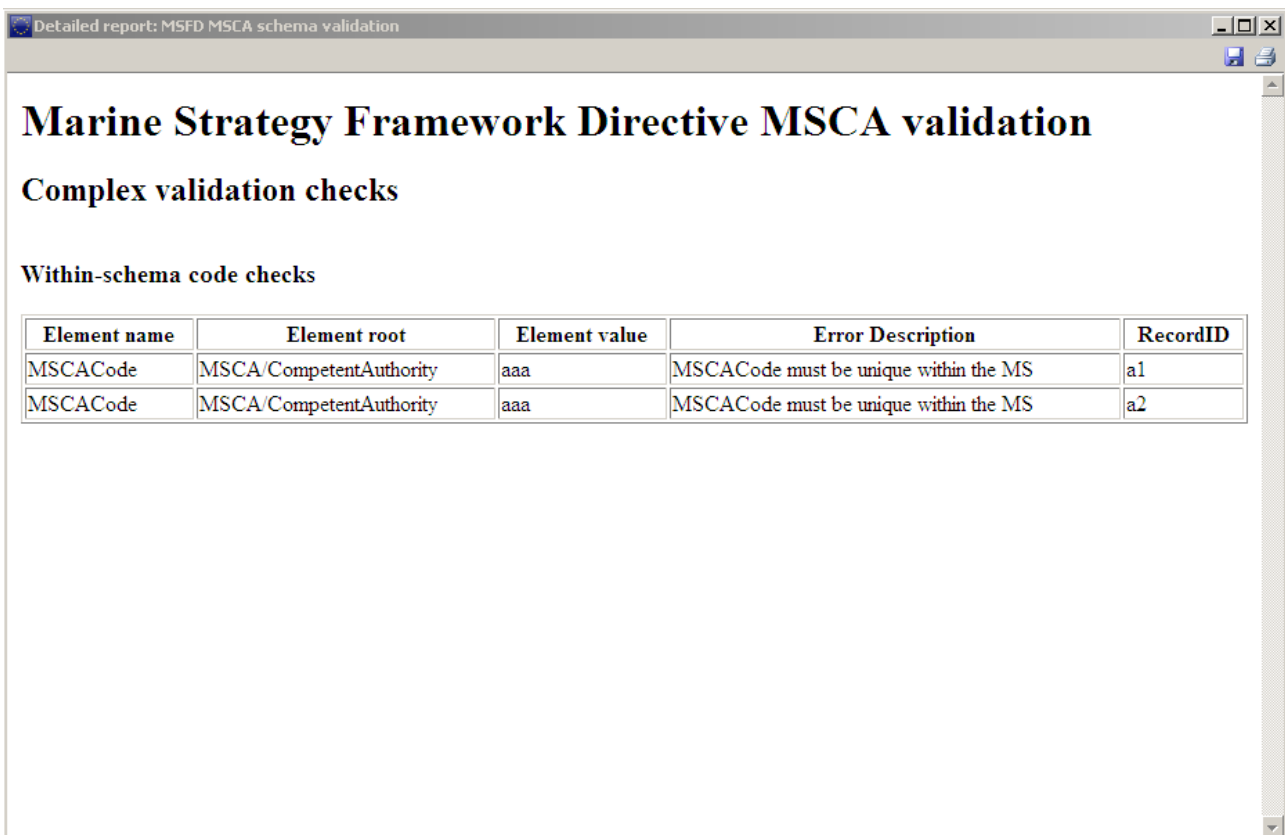


Figure D.5.4 Example of desktop validation output (detailed)

The results of the validation can be saved or printed from the tool bar in the upper right corner.

E.4.2 Viewing an XML file

To view an XML file, click the “View XML file” button and browse to the relevant XML file you wish to view. When OK is clicked the tool will use the valid schema definition to retrieve the possible conversions which have been set up for this schema in Reportnet.

The conversions listed (see figure D.5.5) with hyperlinks to View the files (if the size of the XML is less than 250kb) or to Save the files, from where they can be opened using the appropriate application by the user.

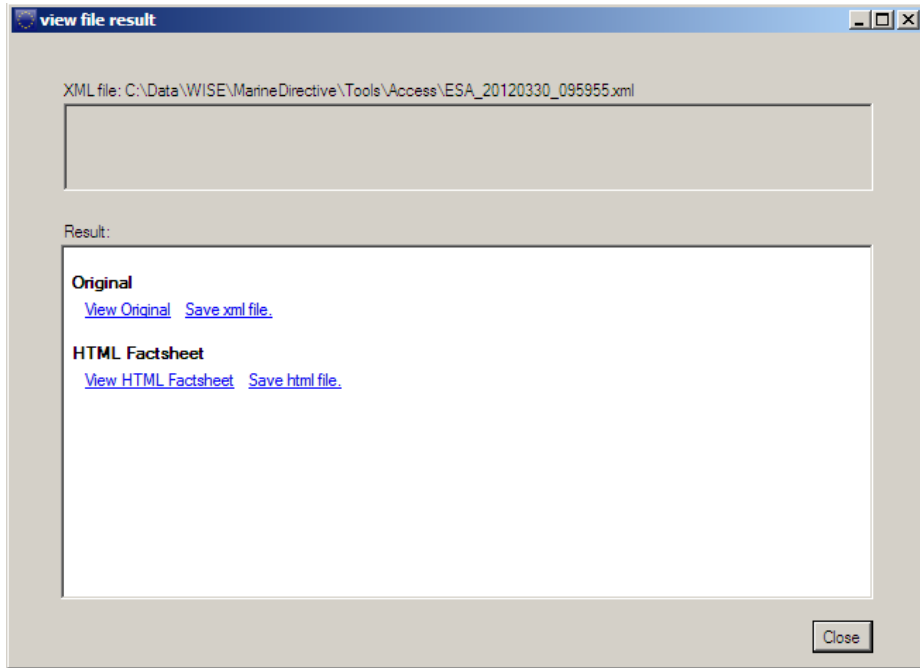


Figure D.5.5 Example of desktop translation output

The most interesting output is the HTML factsheet because this takes the XML and presents it in a readable format in HTML. The style sheet has been developed to represent the spreadsheet as closely as possible and is a means for comparing the information to be submitted against the reporting agreements.

The screenshot shows a window titled "ViewFileForm" displaying a table. The table has columns: ReportingFeature, Name, Contact, Organisation, ReportingDate, Description, SumInfo1, SumInfo1_confidence, SumInfo2, Trends Recent, Recent TimeStart, Recent TimeEnd, Trends Future, Future TimeStart, Future TimeEnd, and Limitations. The table content is as follows:

ReportingFeature	Name	Contact	Organisation	ReportingDate	Description	SumInfo1	SumInfo1_confidence	SumInfo2	Trends Recent	Recent TimeStart	Recent TimeEnd	Trends Future	Future TimeStart	Future TimeEnd	Limitations
1. Uses/activity - ATBSAssess1															
1.1: Marine-based renewable energy generation (wind, wave & tidal power)															
Characteristics of activity (/use/sector) in assessment area	gerger	lessthan1%	Low	hgj	Increasing	1456	6547	BeStable	1456	6547					
Production value	gerg	12	Mod												czxczsd
Value added	gwegwger	234	High												
Employment	grrwgwr	NotReported	NotReported												
Cost of degradation	ghtrherre	4567													2323
Information gaps and plans to address them															

4-1 Example output from the 'View XML' functionality where the XML is presented in a readable format

The tool also allows for the user to View the XML form in a simple text editor. However, this is not intended for more than light inspection of the XML file. To analyse the XML file, particularly where error messages are giving a line number, either use proprietary software just as Altova XMLSpy or an advanced text editor such as Notepad++ (free).

E.5 Understanding desktop validation output

If errors are reported under the first schema check – XML schema validation – the line number in the schema where the error was found and a description of the error itself are provided. The checks are typically those described in Appendix F. You should use a text editor (or similar viewer which gives line numbers - e.g. Notepad++) to display the XML schema and systematically work through the error list correcting as you go. Some examples of errors are:

Line	Error
13	The 'http://water.eionet.europa.eu/schemas/dir200060ec:LAT' element is invalid - The value '15N' is invalid according to its datatype 'http://water.eionet.europa.eu/schemas/dir200060ec/wfdcommon:CoordinateType' - The Pattern constraint failed.
14	The 'http://water.eionet.europa.eu/schemas/dir200060ec:LON' element is invalid - The value '43562656' is invalid according to its datatype 'http://water.eionet.europa.eu/schemas/dir200060ec/wfdcommon:CoordinateType' - The Pattern constraint failed.
16	The 'http://water.eionet.europa.eu/schemas/dir200060ec:Natural' element is invalid - The value 'ArtificialArtificialArtificialArtificialA' is invalid according to its datatype 'String' - The Enumeration constraint failed.
27	The 'http://water.eionet.europa.eu/schemas/dir200060ec:YesNo' element is invalid - The value 'B' is invalid according to its datatype 'http://water.eionet.europa.eu/schemas/dir200060ec/wfdcommon:YesNoCode' - The Enumeration constraint failed.

Figure D.6.1 - example of validation error message

You will typically find the first list of errors is not the full list, but as you fix things fresh errors are thrown. This is because as you fix things, more content is added which hasn't been checked previously.

Fixing errors requires a lot of detective work, but with experience recognition of the cause of errors becomes easier. A good practice is not to approach the error list sequentially, but to address simple errors causing multiple messages in order to reduce the size of the list.

E.5.1 Being the detective

The validation tool gives the following error message:

1363	The element 'Analysis' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec ' has invalid child element 'Activities' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '. List of possible elements expected: 'ImpactPressure' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '.
------	---

Open the generated schema in your test editor and go to line 1363


```

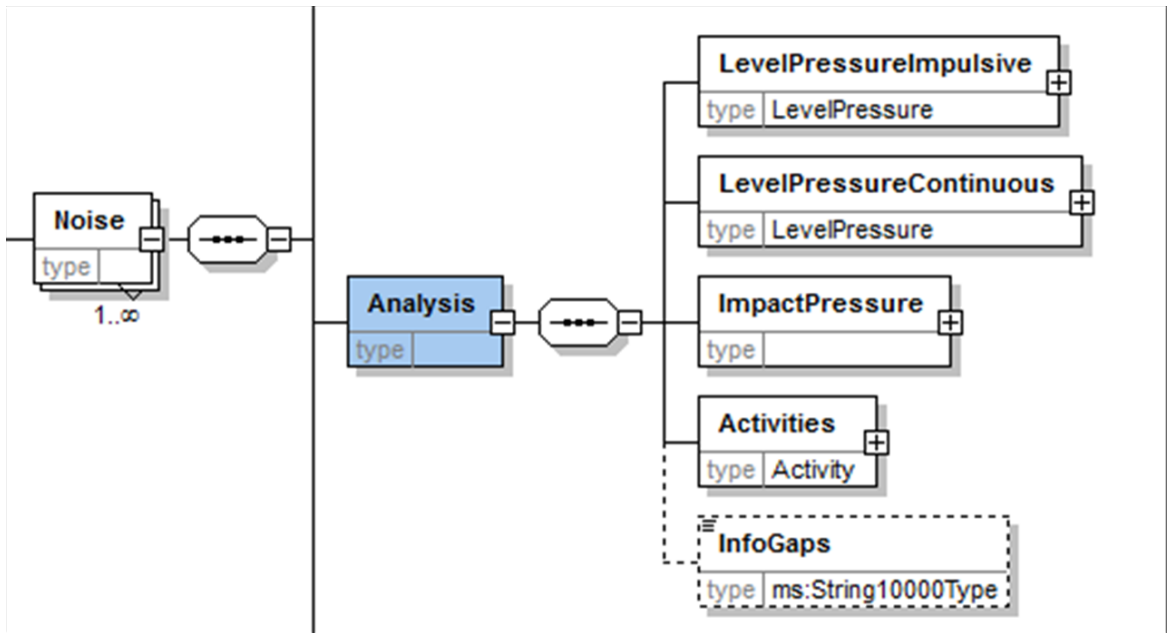
1329 <Noise>
1330   <MarineUnitID>aaa</MarineUnitID>
1331   <Metadata>
1338     <Analysis>
1339     <LevelPressureImpulsive>
1351     <LevelPressureContinuous>
1352       <Description>a</Description>
1353       <SumInfo1>lessthan1%</SumInfo1>
1354       <SumInfo1Confidence>Low</SumInfo1Confidence>
1355       <TrendsRecent>Increasing</TrendsRecent>
1356       <RecentTimeStart>1000</RecentTimeStart>
1357       <RecentTimeEnd>1000</RecentTimeEnd>
1358       <TrendsFuture>Increase</TrendsFuture>
1359       <FutureTimeStart>1000</FutureTimeStart>
1360       <FutureTimeEnd>1000</FutureTimeEnd>
1361       <Limitations>a</Limitations>
1362     </LevelPressureContinuous>
1363   <Activities>
1364     <Description>a</Description>
1365     <Activity>
1366       <ActivityType>EP1</ActivityType>
1367       <Rank>0</Rank>
1368     </Activity>
1369     <Activity>
1370       <ActivityType>EP1</ActivityType>
1371       <Rank>0</Rank>
1372     </Activity>
1373     <Activity>

```

The error message says it was expecting content at line 1363 which wasn't there and it also says which elements it was expecting to find.

Part of the detective work is finding in which section of the schema the error has been raised because this tells us which table in the database to look at. Above we work up the schema from the error and we can see we are in the Noise part. It is also important to find out which MarineUnit has thrown the error as this is the key in many tables.

We can look at the schema to see what structure is expected there. The schema diagrams are available as clickable HTML from the resources page. From this diagram we can see the expected structure



So this agrees with the error message that there should be a ImpactPressure node here (in this hypothetical case).

So we now know we need to look in the database under the MSFD8b_Noise tables. If in doubt we can use MSFD Access Reporting Database Content document to review the guidance on filling out the information under this category.

But if we go to the MSFD8b_Noise table then we can see that there is a row missing in the table for this particular marine Unit.

MarineUnitID	Topic	Description	SumInfo1	SumInfo1Confidence	TrendsRecent	RecentTimeS	Rec
MU1	LevelPressureImpulsive	test	lessthan1%	High	Increasing		
MU1	LevelPressureContinuous	test	5-25%	Low	Stable		
MU1	InfoGaps	test					
*							

LevelPressureImpulsive	Level of pressure in environment from loud, low and mid frequency impulsive sounds (11.1)
LevelPressureContinuous	Level of pressure in environment from continuous low frequency sound (11.2)
ImpactPressure	Impacts of pressure on functional groups
InfoGaps	Information gaps and plans to address them

Add the required information and then regenerate the XML file for validation again.

Address each error until the validation tool reports no errors. Or reports errors for which you know the reason and intend to report in this way.

E.5.2 Typical validation errors

Invalid child element can apply to a whole node missing which could be either a row missing in a table or a whole table has not been filled in:

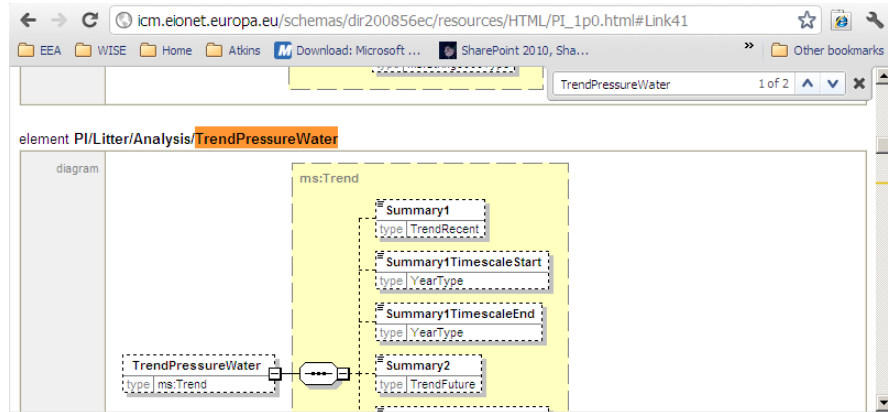
1363	The element 'Analysis' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec ' has invalid child element 'Activities' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '. List of possible elements expected: 'ImpactPressure' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '.
------	---

Invalid child element on just one field means typically a field has not been filled in for a row in a table. So you need to find which table and which row and check which field is missing some information:

403	The element 'LevelPressureImpulsive' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec ' has invalid child element 'Summary2' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '. List of possible elements expected: 'RecentTimeStart' in namespace ' http://icm.eionet.europa.eu/schemas/dir200856ec '.
-----	---

Remember for the above errors, the program has said it expects a certain element. if you correct this error, the validation will throw another error in the same place because 'Summary1TimescaleEnd' is also a required field at this point.

If you have an item then you can also do a search on the schema HTML page



4-2 Searching for elements in the HTML page

Pattern constraint failed. Other typical errors include invalid element types – for example where a date has not been entered in the correct format

Line	Error
509	The ' http://icm.eionet.europa.eu/schemas/dir200856ec/mscommon:RecentTimeStart ' element is invalid - The value '1990-1991' is invalid according to its datatype ' http://icm.eionet.europa.eu/schemas/dir200856ec/mscommon:YearType ' - The Pattern constraint failed .

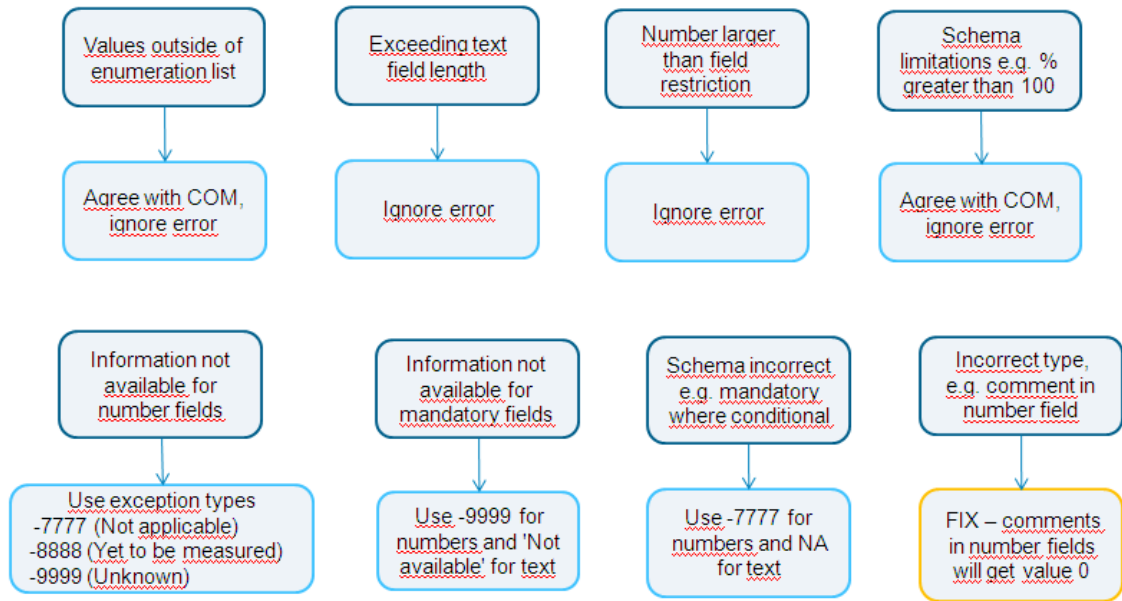
[There are many typical errors and it is intended this section will be expanded during and after the test phase of the reporting]

E.5.3 Correction of validation errors

If the validation results in errors, these must be corrected before uploading the XML file to Reportnet. **It is very important that the data are corrected in the database or original source date, not just in the XML file.** See Appendix D.6 for an explanation on interpreting the error reports.

E.5.4 Exceptions to error rules

In some cases an error generated is legitimate and can be ignored. If in doubt, contact the helpdesk. Some general guidelines:



E.6 Complex validation checks by element

The table in Appendix H contains full details of the complex checks that are carried out on elements within the schemas in addition to the technical (first) validation checks described in the previous section. Note: Cross-schema checks are run as part of a manual process after MS has completed submission. The cross-schema check will check if eg. the MarineUnitID's used in all the schemas are defined in the MSFD4Geo schema.

E.6.1 Validation check output

The example below shows the validation error output and the information that is given to help determine where the error is:

Element name	Element root	Element value	Error Description	RecordID
PrimeCompetentAuthority	RBDSUCA/RiverBasinDistrict	CAbbbc	Must be a valid EUCACode in RBDSUCA/CompetentAuthority	DKRBD111

- Element name: The name of the element (tag) within the schema which has caused the error
- Element root: Where this element is found within the schema
- Element value: The value which has caused the error (if there is one)
- Error description: Why the error occurred
- RecordID: An ID of the record within which the error was thrown

To find the error requires some detective work because this type of validation does not provide line numbers. If the element value is provided then searching for that value in the XML would be the quickest approach.

E.6.2 Correction of validation errors

If the validation results in errors, these must be corrected.

It is very important that the data are corrected in the source data, not just in the XML file.

Appendix F - Uploading XML files onto Reportnet

F.1 A quick guide

This quick guide outlines the Central Data Repository (CDR) delivery procedure in quick steps for the experienced Reportnet User. Further details on each step are given in the following sections.

1. Download the XML schemas and use your chosen method of generating the information to report against them (i.e. the Access reporting tool supplied, or another).
2. Use the desktop validation tool to check your data and correct any errors found.
3. Enter the Central Data Repository (CDR) by going to <http://cdr.eionet.europa.eu>
4. Click on the country for which you want to make the delivery
5. Go to: data collection → European Union (EU) → obligations
6. Click on the relevant subcollection
7. Click on the relevant MS sub-collection to upload information into – eg. the Region/Sub-region folder to upload the relevant xml files
8. Add a new envelope called eg. 15 October 2013
9. Activate the task (upper right corner)
10. Upload XML file into the envelope and name it [Sub_Collection_Code⁷][SCHEMA-CODE⁸][YYYYMMDD] in addition XML file for sub monitoring programmes (MSFD, Art 11) should be given an ID for the sub programme eg. [Sub_Collection_Code][MSFD11MonSub][unique identifier for the sub programme - eg. SubProgrammeID][YYYYMMDD]

If the Member State uses the web form for the reporting of MSFD, Art 11 – the XML will be generated directly in the envelope created for the sub collection.
11. Release envelope and QA and cover letter will automatically be generated.
12. Make sure that the files meet the MS quality standards (check the QA's) before completing the envelope – once the envelope is set to complete it will not be possible to correct and re-upload data
13. When the envelope is set to complete the MS formally notifies the Commission they have reported via their Permanent Representative with a letter, attaching their Reportnet “Confirmation of receipt” (i.e. copying the text).

F.2 Overview

To participate in the upload process, you need to first log in with your Eionet username and password by going to <http://cdr.eionet.europa.eu/> and clicking on the top-right Login button.

If you do not have an Eionet username and password then please contact helpdesk@eionet.europa.eu

⁷ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

⁸ SCHEMA-CODE can be found in illustration on p. 19. eg. MSFD4Geo, MSFD8aFeatures

There are 3 roles a reporter can be given depending on the needs within the Member States:

- Data collaborator: Can edit in data
- Reporter: Can edit and release data
- Auditor: Can only view data

If you already started this work and you want to be reminded of the URL of the envelope you are working on, or if you want to see what you can do next, consult the Global Worklist linked from the left-side grey button available from every page starting with 'You are here:....'.

Whether your job implies drafting the delivery, inspecting the result or finalising the work, the way to start it, and also inform other users that you are executing that action, is to activate a task (e.g. Draft for creating/updating the delivery).

Activation reserves the envelope for you and prevents your colleagues from inadvertently corrupting the data. If you want to transfer the task to someone else, you can deactivate the envelope.

F.3 Creating the envelope

First you should login. Please notice that you can only create envelopes if you have a 'Data Collaborator' or 'Reporter' role.

There is a grey button on the right side of the page saying "New envelope". Click on it to create a delivery envelope. Most of the necessary metadata is already filled out. You need to enter a title for the envelope (eg. Name: 15 October 2013) and the date, which is the reference date⁹ of the data you are reporting.

Then click on "Add". You now have an envelope that you must activate by pressing the 'Activate task' button and uploading files.

F.4 Managing the envelope

When you have activated a task, you will notice a new tab in the envelope. The system will automatically place you there. This is the activity tab. It contains the information and guidance necessary for you to carry out your task.

After activation, you have reserved the envelope for yourself to work on. Other users will not be able to intervene until you:

- release the task - in which case the system will move forward to the next step in the reporting process where the QA's will be available or
- deactivate the task - from the corresponding right-side blue button which keeps the work already done and makes it possible for someone else to take over the task or
- finalise the task which will set the envelope status to complete and a confirmation of receipt will be available

It is possible to see if anyone else is working on a particular task by consulting the *Status* of the envelope:

⁹ This is a rule set-up for obligations where, for example, there are annual reportings. This rule is retained here so as to be in line with the basic rules in ReportNet – the date in the folder name will also help to provide a quick overview of the newest files uploaded. Experience from WFD reporting is that many Member States will re-upload data many times.

Status	Task(s) in progress: Draft (user: bulanmir)
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To track progress of the upload task, take a look at the History tab of that envelope.

F.5 Uploading data onto Reportnet

To fulfil the reporting obligations you are required to upload the XML file (into the envelope in the appropriate sub-collection. The upload facility enables you to upload the XML file. For the MSFD, Art 11 reporting the XML can be created directly in Reportnet using the web form please see Appendix I for more information.

For the 2014 reporting obligations, regarding the MSFD Articles 11, the following subfolders (sub-collections) within each country's folder are available to upload:

- One sub-collection folder for any text-based national 'paper' reports for Article 11 (to be submitted in pdf format) and if applicable the copy (snapshot) of information held in a web-based data system or other website (if linked to in the tabular data).
- One sub-collection folder for **each** Marine region and/or Marine sub-region relevant for a MS, for uploading tabular data (i.e. corresponding to the xml schemas on Art. 8, 9 and 10).
- One sub-collection folder for geographic data if required¹⁰ (i.e. an updated MSFD4Geo ML file and the associated geographic data (spatial data in grid or non-grid polygon format).

For the 2012 reporting obligations, regarding the MSFD Articles 8, 9 and 10 & geographic areas and regional cooperation reporting, the following subfolders (sub-collections) within each country's folder are available to upload:

- One sub-collection folder for any text-based national 'paper' reports for Articles 8, 9 and 10 (in pdf format).
- One sub-collection folder for **each** Marine region and/or Marine sub-region relevant for a MS, for uploading tabular data (i.e. corresponding to the xml schemas on Art. 8, 9 and 10).
- One sub-collection folder for geographical data (i.e. corresponding to the MSFD4Geo schema and the MSFD4GeographicalAreasID database table). *Geographical data* includes spatial data in vector or GRID format.

For the reporting of the Competent Authorities (the MSFD report on Marine Region or Subregion competent authority or authorities obligations) the MS are required to upload the MSCA xml file directly under the obligation in an envelope named with the data for uploading the file in Reportnet.

¹⁰ Note: this is only required if the reporting areas (MarineUnitIDs and GIS polygons) are different to those reported in 2012 for MSFD Art. 8, 9 and 10.

F.5.1 Naming convention for the XML to be uploaded

For the 2014 reporting obligations (MSFD, Art 11), the monitoring programme files should be named according to the following format:

[Sub_Collection_Code¹¹][SCHEMA-CODE¹²][YYYYMMDD].XML
e.g. BALDK_MSFD11Mon_20121015

and the sub programme should be given an ID for the sub programme according to the following format:

[Sub_Collection_Code¹³][SCHEMA-CODE¹⁴][unique identifier for the subprogramme - eg. SubProgrammeID][YYYYMMDD].XML
e.g. BALDK_MSFD11MonSub_ID1a_20121015

For the 2012 reporting obligations, the files should be named according to the following format:

[Sub_Collection_Code¹⁵][SCHEMA-CODE¹⁶][YYYYMMDD].XML
e.g. BALDK_MSFD8bPressures_20121015

For the reporting of the Competent Authorities (the MSFD report on Marine Region or Subregion competent authority or authorities obligations), the files should be named according to the following format:

[SCHEMA-CODE][YYYYMMDD].XML
e.g. MSCA_201061015

F.5.2 Use of EU Languages

You may use any of the official EU languages to report in the free text fields. You are, however, requested to use only one language for the information within any single schema. It is not necessary to use the same language for all the schemas. However, **reporting the content of the reporting sheets in English is strongly encouraged** to facilitate the Commission’s assessment of the MS reporting (namely on regional coherence). It will also support its further use in aggregation of the information to regional, European and global scales for ongoing State of the Environment reporting.

¹¹ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

¹² SCHEMA-CODE can be found in illustration on p. 19. (MSFD4Geo, MSFDFeature_Overview, MSFD8aFeatures, MSFD8bPressures, MSFD8cESA, MSFD9GES, MSFD10TI)

¹³ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

¹⁴ SCHEMA-CODE can be found in illustration on p. 19. (MSFD4Geo, MSFDFeature_Overview, MSFD8aFeatures, MSFD8bPressures, MSFD8cESA, MSFD9GES, MSFD10TI)

¹⁵ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

¹⁶ SCHEMA-CODE can be found in illustration on p. 19. (MSFD4Geo, MSFDFeature_Overview, MSFD8aFeatures, MSFD8bPressures, MSFD8cESA, MSFD9GES, MSFD10TI)

F.6 Checking data quality

Once you have uploaded your XML file – or created it through web forms for MSFD, Art 11, you need to check the quality of your data within Reportnet.

The quality assessment (QA) consists of a set of rules checked against each individual report. It happens in two ways:

- During the drafting of the report into the envelope, QA is manually triggered by the user in order to fix possible errors at that stage; it is done by clicking the corresponding “QA” button next to each XML file. During drafting, the QA result is not stored in the envelope, but is just displayed to the user on a web page. You can save it on your own PC if you wish for your records.
- After the data reporter completes the envelope, QA is automatically triggered by the system on all reports; in this case, the result is stored in the envelope as “Feedback” object; the rules checked are the same as in the case of manual QA.

Hint: the QA rules are available at <http://converters.eionet.europa.eu/queriesindex.jsp>

To start the QA, click on the ‘Run QA’ links next to your uploaded files. This will run a collection of quality assessment scripts and produce a report describing the specific tests carried out and the results. It can typically detect syntax issues, but won't know if your information makes sense in terms of the other schemas uploaded or not.

More detail on the specific QA function is also provided in Appendix E (desk top validation) of this document.

F.7 Understanding validation output in Reportnet

Validation in Reportnet can be run at two points. Firstly manually, after an XML file has been uploaded. (Buttons will appear next to the filename in the envelope “QA1” and “QA2”). Output from a manual validation is not saved anywhere, just displayed on-screen. Secondly, when an envelope is released all the validations are run on the sub missed XML file in that envelope and the output is saved.

XML Schema validation checks “QA1”

The first schema check (QA1) is the XML schema validation which carries out checks that the XML file is well formed and simple validation checks as described in section C2.

Errors detected in this validation will be returned as a table within a text editor file. The errors within the table will be labelled with the corresponding line and column numbers from the XML so you can easily find and correct the error within your XML files (example below).

Type	Position	Error message
ERROR	Line: 7, Col: 30	cvc-datatype-valid.1.2.1: 'this is not a url' is not a valid value for 'anyURI'.
ERROR	Line: 7, Col: 30	cvc-type.3.1.3: The value 'this is not a url' of element 'URL' is not valid.
ERROR	Line: 13, Col: 17	cvc-pattern-valid: Value '15N' is not facet-valid with respect to pattern '\-{0,1}[0-9]{1,2}\.[0-9]{1,5}' for type 'CoordinateType'.
ERROR	Line: 13, Col: 17	cvc-type.3.1.3: The value '15N' of element 'LAT' is not valid.
ERROR	Line: 14, Col: 22	cvc-pattern-valid: Value '43562656' is not facet-valid with respect to pattern '\-{0,1}[0-9]{1,2}\.[0-9]{1,5}' for type 'CoordinateType'.
ERROR	Line: 14, Col: 22	cvc-type.3.1.3: The value '43562656' of element 'LON' is not valid.
ERROR	Line: 27, Col: 21	cvc-enumeration-valid: Value 'B' is not facet-valid with respect to enumeration '[Y, N, J]'. It must be a value from the enumeration.
ERROR	Line: 27, Col: 21	cvc-type.3.1.3: The value 'B' of element 'YesNo' is not valid.

Although QA1 performs the same checks as the desktop validation tool the error messages generated in Reportnet validation are not written the same way as those in the desktop validation tool. (This is because they use a different engine. Schema validation follows the W3C XML specification <http://www.w3.org/TR/XMLschema-1/#concepts-schemaConstraints>.)

These error messages are XML specified validation rules or constraints. Constraints have unique names and numbered parts. At the following link <http://www.w3.org/TR/XMLschema-1/#concepts-schemaConstraints> there is a reference in which any error messages can be looked up. As all errors relate to one of the following general rules <https://svn.eionet.europa.eu/projects/Reportnet/wiki/SchemaValTec>, it is easier to examine the element and if it is throwing an error, go through each criteria to see if that would throw a specific error. Reference to the original schema can also help pinpoint where the error is coming from.

Complex validation checks “QA2”

The second validation that is carried out is the business rules as described in Appendix H.

F.8 Completing the envelope

After you have released your files you can click on 'Finish' to submit your reported information to EEA.

You will not be able to modify any files in the envelope after you click this button.

The full automated QA process will run on your delivery when activating the 'Release' button and a feedback report will be posted to the envelope. When the 'Finish' button is activated the completion process also automatically generates a confirmation of receipt acknowledging receipt of the data uploaded to CDR, including a list of all files uploaded and their precise location within the CDR.

Overview
Finish or go back to drafting?
Edit properties
History
Deactivate task

Finish or go back to drafting?

The envelope is currently released and the requester may have uploaded some feedback to it. If you want to change your delivery as a result to the feedback, then you must click on "Back to drafting" to revoke the release. If you are sure you will never need to revoke then you click "Finish".

Back to drafting
Finish
Rerun automatic QA

Feedback for this envelope

- [AutomaticQA result for file MSFD11Mon DE ANS.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)
- [AutomaticQA result for file MSFD11Sub DE ANS 1a.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)
- [AutomaticQA result for file MSFD11Sub DE ANS 1b.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)

F.8.1 Restricted or confidential data

The Reportnet approach means that submitted data is made available for the public to see. However you can specifically restrict individual files from public view if this is your national policy.

To restrict viewing of a file, click on the filename in the envelope. This will lead you to a page showing you the metadata of the file. There you will see a check box which allows you to restrict public access to the file after the envelope has been completed. EEA and the team responsible for the expert manual review can still access all files.

F.9 Resubmissions

If you wish to make an amendment to any data already submitted (i.e. envelope completed), you must upload the whole schema again. This means that e.g. if a MS corrects some information the MS has to upload/add the full xml file again, including all the information in the schema, not just those corrected. This file will replace the previous version. However this will not be possible once the envelope is set to complete. In this case the MS will have to create a new envelope with a new reporting date and upload/add the corrected xml files here. Within the relevant folder (country sub-collection) create a new envelope for the re-submission – an example of this structure is shown below from the Water Framework Directive.

The screenshot shows a web interface for a predefined folder named "AT1000 - Danube". Below the folder name, there is a breadcrumb trail: "Obligations WFD River Basin Management Plan including programme of measures". A section titled "Envelopes and subcollections" contains a list of folders with their respective dates. The "March 20 2012" folder is highlighted with a red box and labeled "Envelope defined by MS".

Envelope/Subcollection	Date
March 20 2012	20 Mar 2012
March 20 2012 - GIS	20 Mar 2012
December 20 2011	16 Jan 2012
October 15 2010 - GIS unzipped	27 Oct 2010
October 15 2010	15 Oct 2010
September 7 2010	07 Sep 2010
March 22 2010	16 Jul 2010

Appendix G – MSFD database table overview

In specific relation to reporting of MSFD Art 4/5, 8, 9 and 10 (2012)

The below table describes the linkage between the Reporting sheets, the worksheets within the spreadsheet and the database tables for MSFD Art 4/5, 8, 9 and 10 (2012). The table also provides an overview of the order to fill information into the database tables.

The highlighted database tables illustrate common tables which are used for more than one feature.

Reporting sheet	Worksheets from Spreadsheet	Relevant database tables	Level to fill in data
	0-Features	Features_Overview	0
	Reporter	ReportingInformation	NA
0401: Geographical boundaries	4b-GeogArealDs	MSFD4_GeographicalAreasID	1
	4a-GeogAreasDesc	MSFD4_GeographicalAreasDescription	1
0601: Regional Cooperation	05_6-Coop	MSFD4_RegionalCooperation	1
		MSFD4_RegionalCooperationMS	2
8A01: Physical features	8Aa-Eco_Analysis	MSFD8a_Physical	2
	Metadata	MSFD8a_PhysicalMetadata	3
8A02: Habitats	8Aa-Eco_Analysis	MSFD8a_Habitat	2
	8Ab-Eco_CharImpact	MSFD8a_HabitatFeature	3
	Metadata	MSFD8a_HabitatMetadata	3
	8Ac-Eco_PressuresImpacts	MSFD8a_PressuresImpacts	3
	8Ad-Eco_AssessStatus	MSFD8a_StatusAssessment	3
	8Ae-Eco_AssessCritInd	MSFD8a_StatusCriteria	3
		MSFD8a_StatusIndicator	3
8A03: Functional Groups	8Aa-Eco_Analysis	MSFD8a_Functional	2
	8Ab-Eco_CharImpact	MSFD8a_FunctionalFeature	3
	Metadata	MSFD8a_FunctionalMetadata	3
	8Ac-Eco_PressuresImpacts	MSFD8a_PressuresImpacts	3
	8Ad-Eco_AssessStatus	MSFD8a_StatusAssessment	3
	8Ae-Eco_AssessCritInd	MSFD8a_StatusCriteria	3
		MSFD8a_StatusIndicator	3
8A04: Species	8Aa-Eco_Analysis	MSFD8a_Species	2
	Metadata	MSFD8a_SpeciesMetadata	3
	8Ac-Eco_PressuresImpacts	MSFD8a_PressuresImpacts	3
	8Ad-Eco_AssessStatus	MSFD8a_StatusAssessment	3
	8Ae-Eco_AssessCritInd	MSFD8a_StatusCriteria	3
		MSFD8a_StatusIndicator	3
8A05: Ecosystems	8Aa-Eco_Analysis	MSFD8a_Ecosystem	2
	8Ab-Eco_CharImpact	MSFD8a_EcosystemFeature	3
		MSFD8a_Ecosystem_Summary2	3
	Metadata	MSFD8a_EcosystemMetadata	3
	8Ac-Eco_PressuresImpacts	MSFD8a_PressuresImpacts	3
	8Ad-Eco_AssessStatus	MSFD8a_StatusAssessment	3

Reporting sheet	Worksheets from Spreadsheet	Relevant database tables	Level to fill in data
	8Ae-Eco_AssessCritInd	MSFD8a_StatusCriteria	3
		MSFD8a_StatusIndicator	3
8A06: Non-indigenous species inventory	8Aa-Eco_Analysis	MSFD8a_NISInventory	2
	Metadata	MSFD8a_NISInventoryMetadata	3
8A07: Other features	8Aa-Eco_Analysis	MSFD8a_Other	2
	Metadata	MSFD8a_OtherMetadata	3
	8Ad-Eco_AssessStatus	MSFD8a_StatusAssessment	3
	8Ae-Eco_AssessCritInd	MSFD8a_StatusCriteria	3
		MSFD8a_StatusIndicator	3
8B01: Physical loss	8Ba-PI_Analysis	MSFD8b_PhysicalLoss	2
	Metadata	MSFD8b_PhysicalLossMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B02: Physical damage	8Ba-PI_Analysis	MSFD8b_PhysicalDamage	2
	Metadata	MSFD8b_PhysicalDamageMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B03: Underwater noise	8Ba-PI_Analysis	MSFD8b_Noise	2
	Metadata	MSFD8b_NoiseMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
MSFD8b_AssessmentIndicator		3	
8B04: Marine litter	8Ba-PI_Analysis	MSFD8b_Litter	2
	Metadata	MSFD8b_LitterMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3

Reporting sheet	Worksheets from Spreadsheet	Relevant database tables	Level to fill in data
		MSFD8b_AssessmentIndicator	3
8B05: Interference with hydrological processes	8Ba-PI_Analysis	MSFD8b_HydrologicalProcesses	2
	Metadata	MSFD8b_HydrologicalProcessesMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B06: Contaminants	8Ba-PI_Analysis	MSFD8b_HazardousSubstances	2
	Metadata	MSFD8b_HazardousSubstancesMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B07: Significant pollution events	8Ba-PI_Analysis	MSFD8b_PollutantEvents	2
	Metadata	MSFD8b_PollutantEventsMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B08: Nutrients	8Ba-PI_Analysis	MSFD8b_Nutrients	2
	Metadata	MSFD8b_NutrientsMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3
8B09: Microbial pathogens	8Ba-PI_Analysis	MSFD8b_MicrobialPathogens	2
	Metadata	MSFD8b_MicrobialPathogensMetadata	3
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2
	8Bd-PI_Activities	MSFD8b_Activity	2
	8Be-PI_AssessStatus	MSFD8b_Assessment	2
	8Bf_PI_AssessCritInd	MSFD8b_AssessmentCriteria	3
		MSFD8b_AssessmentIndicator	3

Reporting sheet	Worksheets from Spreadsheet	Relevant database tables	Level to fill in data	
8B10: Non-indigenous species	8Ba-PI_Analysis	MSFD8b_NIS	2	
	Metadata	MSFD8b_NISMetadata	3	
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2	
	8Bd-PI_Activities	MSFD8b_Activity	2	
	8Be-PI_AssessStatus	MSFD8b_Assessment	2	
	8Bf-PI_AssessCritInd	MSFD8b_AssessmentCriteria	3	
		MSFD8b_AssessmentIndicator	3	
8B11: Selective extraction of species	8Ba-PI_Analysis	MSFD8b_ExtractionFishShellfish	2	
	8Bb-PI_Analysis_Fisheries			
	Metadata	MSFD8b_ExtractionFishShellfishMetadata	3	
	8Ba-PI_Analysis	MSFD8b_ExtractionSeaweedMaerlOther	2	
	Metadata	MSFD8b_ExtractionSeaweedMaerlOtherMetadata	3	
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2	
	8Bd-PI_Activities	MSFD8b_Activity	2	
	8Be-PI_AssessStatus	MSFD8b_Assessment	2	
	8Bf-PI_AssessCritInd	MSFD8b_AssessmentCriteria	3	
MSFD8b_AssessmentIndicator		3		
8B12: Chemical features (marine acidification)	8Ba-PI_Analysis	MSFD8b_Acidification	2	
	Metadata	MSFD8b_AcidificationMetadata	3	
	8Bc-PI_FeatureImpacts	MSFD8b_SumInfo2_ImpactedElements	2	
	8Bd-PI_Activities	MSFD8b_Activity	2	
	8Be-PI_AssessStatus	MSFD8b_Assessment	2	
	8Bf-PI_AssessCritInd	MSFD8b_AssessmentCriteria	3	
		MSFD8b_AssessmentIndicator	3	
8C01: Human Activities	8Ca_ESA_Uses	MSFD8c_Uses	2	
	8C02: Ecosystem services and Other Approaches	8Cc_ESA_Depend	MSFD8c_Depend	3
		8Cb_ESA_Pressures	MSFD8c_Pressures	3
	8C03: Cost of degradation	Metadata	MSFD8c_Metadata	3
0901: Characteristics of GES	09a_GES	MSFD9_Descriptors	2	
		MSFD9_AssessmentAreas	3	
	09b_GES_Features	MSFD9_FeaturesPressuresImpacts	3	
	Metadata	MSFD9_Metadata	3	
1001: Environmental Targets and	10a_TI_Gen	MSFD10_GeneralInfomration	2	

Reporting sheet	Worksheets from Spreadsheet	Relevant database tables	Level to fill in data
Associated Indicators	10b_TI_Targets	MSFD10_Targets	2
		MSFD10_TargetAssesmentArea	3
	10c_TI_DesCrit	MSFD10_DESCrit	3
		MSFD10_FeaturesPressures	3
	Metadata	MSFD10_Metadata	3

Appendix H - Complex validation checks

The table below describes the conditional validation checks which are performed on the schemas.

Key to Type of Check:

1 = Conditional check

Element name	Element root	Type of Check	Description/Error message
Schema: CA_UOM			
MSCACode	MSCA	1	MSCACode must be unique within the MS.
Schema: MSFD4Geo			
MarineUnitID	GB/GeographicalBoundariesID/	1	MarineUnitID must be unique within the MS.
Schema: MSFD8aFeatures			
Other (EcosystemFeatures)	Features/EcosystemFeature/Ecosystems/EcosystemFeatures	1	Must be reported if 'HabitatOther' is reported under HabitatFuncGroupSpeciesType
Other (EcosystemFeatures)	Features/EcosystemFeature/Ecosystems/EcosystemFeatures	1	Must be reported if 'FunctionalGroupOther' is reported under HabitatFuncGroupSpeciesType
Other (Summary2)	Features/ EcosystemFeature/Ecosystems/Ecosystem*/	1	Must be reported if 'HabitatOther' and/or 'FunctionalGroupOther' is reported under Summary2
StatusDescription	Features/* /* /Status/ AssessmentStatus	1	Must be reported if 'OtherStatus' is reported under Status
StatusDescription	Features/* /* /Status/ AssessmentStatus	1	Must be reported if 'NotAssessed' is reported under Status
StatusDescription	Features/* /* /Status/AssessmentStatus	1	Must be reported if 'Description' is reported under Status
StatusTrend	Features/* /* /Status/AssessmentStatus	1	StatusTrend must be reported when Status is set to 'Good' or 'Not good' or 'Other status class' or 'Descriptive status provided'
Criteria/Indicator	Features/* /* /Status/AssessmentStatus	1	Criteria or Indicator must be reported when Status is set to 'Good' or 'Not good' or 'Other status class' or 'Descriptive status provided'
CriteriaOther	Features/* /* /Status/AssessmentStatus/Criterias/Criteria/	1	Must be reported if 'GESOther' is reported under CriteriaType

IndicatorOther	Features/* /* /Status/AssessmentStatus/Indicators	1	Must be reported if 'GESOther' is reported under Indicator
CriteriaType	Features/* /Status/AssessmentStatus/Criterias/Criteria/	1	Incorrect CriteriaType used – please see allowed criterias in spreadsheet
Indicator	Features/* /Status/AssessmentStatus/Indicators	1	Incorrect Indicator used – please see allowed indicators in spreadsheet
Schema: MSFD8bPressures			
Other (SumInfo2)	Pressures /* /Analysis/* /SumInformation2/	1	Must be reported if 'FunctionalOther' and/or 'HabitatsOther' is reported under SumInfo2
StatusTrend	Pressures/* /* /Status/AssessmentStatus	1	StatusTrend must be reported when Status is set to 'Good' or 'Not good' or 'Other status class' or 'Descriptive status provided'
Criteria/Indicator	Pressures/* /* /Status/AssessmentStatus	1	Criteria or Indicator must be reported when Status is set to 'Good' or 'Not good' or 'Other status class' or 'Descriptive status provided'
StatusDescription	Pressures /* /AssessmentPI/Assessment/	1	Must be reported if 'OtherStatus' is reported under Status
StatusDescription	Pressures /* /AssessmentPI/Assessment/	1	Must be reported if 'NotAssessed' is reported under Status
StatusDescription	Pressures /* /AssessmentPI/Assessment/	1	Must be reported if 'Description' is reported under Status
CriteriaType	Pressures /* /AssessmentPI/Assessment/Criterias/Criteria/	1	Incorrect CriteriaType used – please see allowed criterias in spreadsheet
CriteriaOther	Pressures /* /AssessmentPI/Assessment/Criterias/Criteria/	1	Must be reported if 'Other' is reported under CriteriaType
Indicator	Pressures /* /AssessmentPI/Assessment/Indicators	1	Incorrect Indicator used – please see allowed indicators in spreadsheet
IndicatorOther	Pressures /* /AssessmentPI/Assessment/Indicators	1	Must be reported if 'Other' is reported under Indicator
Schema: MSFD8cESA			
Other (Dependency)	ESA/ESAUses/UsesActivity/UseActivity/Dependencies	1	Must be reported if 'Other' is reported under Dependency
Other (Dependency)	ESA/ESAUses/EcosystemServices/EcosystemService/Dependencies	1	Must be reported if 'Other' is reported under Dependency
Other (Dependency)	ESA/ESAUses/Themes/Theme/Dependencies	1	Must be reported if 'Other' is reported under Dependency

Schema: MSFD10TI			
SupportingTextY	TI/TargetsIndicators/GeneralInformation	1	Must be reported if 'Y' is reported under YNCategory
SupportingTextN	TI/TargetsIndicators/GeneralInformation	1	Must be reported if 'N' is reported under YNCategory
SupportingTextU	TI/TargetsIndicators/GeneralInformation	1	Must be reported if 'U' is reported under YNCategory
Type	TI/TargetsIndicators/Targets	1	If an environmental target is reported then the 'Type' is required
TimeScale	TI/TargetsIndicators/Targets	1	If an environmental target is reported then the 'TimeScale' is required
InterimGESTarget	TI/TargetsIndicators/Targets	1	If an environmental target is reported then the 'InterimGESTarget' is required
OtherDescriptorCriterionIndicator	TI/TargetsIndicators/Targets/DescriptorCriterionIndicators	1	Must be reported if 'Other' is reported under DescriptorCriterionIndicator
OtherFeaturesPressures	TI/TargetsIndicators/Targets/FeaturesPressures	1	Must be reported if 'Other' is reported under PhysicalChemicalHabitatsFunctionalPressures
Schema: MSFD11MON			
MonitoringProgrammes	MON/MonitoringProgrammes	1	At least one monitoring programme should be reported
Reference programmes and subprogrammes or reporting a monitoring programme are missing	MON/MonitoringProgrammes/*	1	At least one of ReferenceExistingProgramme, ReferenceSubProgramme or/and MonitoringProgramme should be reported
Q4f RelationshipToCA	MON/MonitoringProgrammes/* / MonitoringProgramme	1	If 4e is reported then 4f should be reported
DescriptionOther (Q5a)	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5a_RelevantGESCriteria	1	If GESOther is reported then the Description of Other should be reported
DescriptionOther (Q5b)	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5b_RelevantGESIndicators	1	If GESOther is reported then the Description of Other should be reported
Q5c_RelevantFeaturesPressuresImpacts	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5c_RelevantFeaturesPressuresImpacts	1	At least one entry of relevant features, pressures, impacts should be reported

HabitatsOther	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5c_RelevantFeaturesPressuresImpacts/Habitats	1	If Other is reported then the Description of Other should be reported
SpeciesOther	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5c_RelevantFeaturesPressuresImpacts/SpeciesList	1	If Other is reported then the Description of Other should be reported
PressureOther	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5c_RelevantFeaturesPressuresImpacts/Pressures	1	If Pressure Other is reported then the Description of Other should be reported
Q5e_Other	MON/MonitoringProgrammes/*/MonitoringProgramme/Q5e_NaturalVariability	1	If Other is reported then the Description of Other should be reported
UsesActivitiesOther	MON/MonitoringProgrammes/*/MonitoringProgramme/Q7a_RelevantActivities	1	If Uses Activities Other is reported then the Description of Other should be reported
Q8a_Other	MON/MonitoringProgrammes/*/MonitoringProgramme/Q8a_LinksExistingMonitoringProgrammes	1	If Other is reported then the Description of Other should be reported
Schema: MSFD11MONSub			
Q4I_LinksProgrammesDirectivesConventions	MONSub/SubProgrammes/SubProgramme	1	At least Q4I or Q9 should be reported
Q9e_Other	MONSub/SubProgrammes/SubProgramme/Q9e_QualityAssurance	1	If a National standard or Other standard is reported then a Description should be reported
Q9f_Other	MONSub/SubProgrammes/SubProgramme/Q9f_QualityControl	1	If Other is reported then the Description of Other should be reported
Q9h_Other	MONSub/SubProgrammes/SubProgramme/Q9h_TemporalResolutionSampling	1	If Other is reported then the Description of Other should be reported
Q10a_Other	MONSub/SubProgrammes/SubProgramme/Q10a_AggregationData	1	If Other is reported then the Description of Other should be reported
Q10c_Other	MONSub/SubProgrammes/SubProgramme/Q10c_AccessData/Q10c_DataAFrequency	1	If Other is reported then the Description of Other should be reported

Appendix I – WebForms

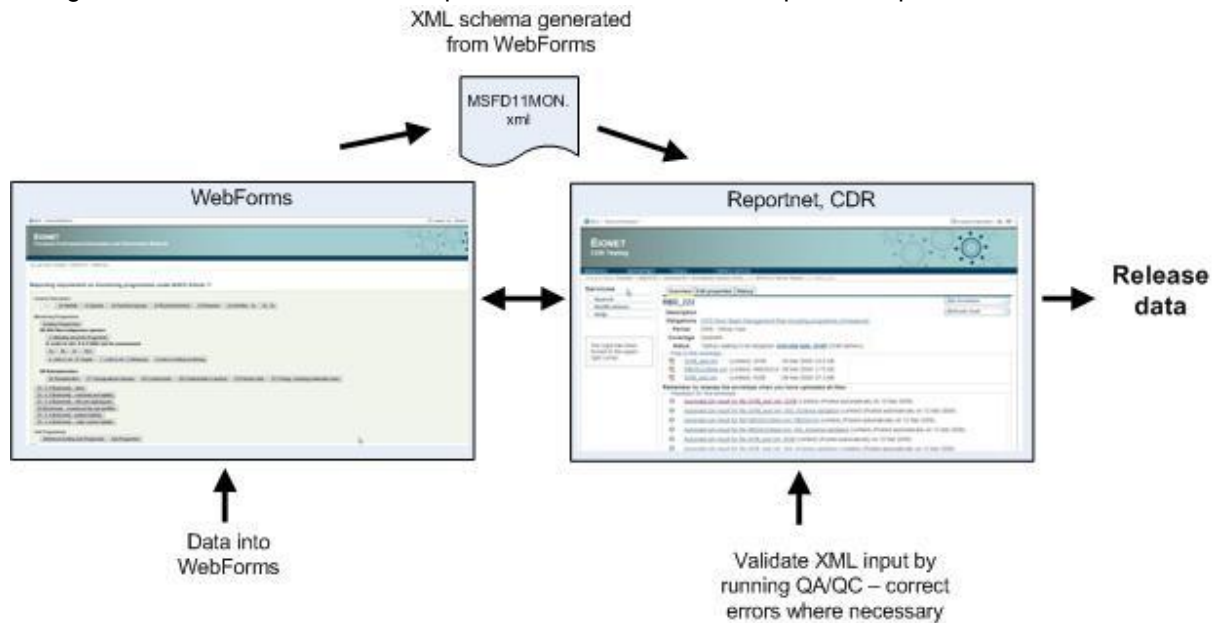
In specific relation to reporting of MSFD Art 11

I.1 Concept

The WebForms is a service option for delivering XML data into the central data repository (CDR) in Reportnet. After information is reported in the WebForms, the required XML file will automatically be produced and delivered into the Member State's relevant CDR envelope.

For a quick guide, please refer to [MSFD 2014 Mini-guide - how to use web forms.pdf](http://icm.eionet.europa.eu/schemas/dir200856ec/resources2014/) available at <http://icm.eionet.europa.eu/schemas/dir200856ec/resources2014/>

The principle of WebForms is a simple webbrowser where information is entered and then stored in a XML structure and delivered in the relevant CDR envelope. There a QA process is run and an auto-generated 'Confirmation of receipt' delivered once the envelope is complete.



Two WebForms are available within the relevant CDR envelope for MSFD, Art 11 reporting. The two WebForms are based on the two XML schemas Monitoring Programmes (MSFD11Mon.xml) and Monitoring SubProgrammes (MSFD11MonSub.xml). When typing information in the WebForm it will automatically write the information into the XML structure which is generated 'behind the scenes' while using the WebForms

Please notice that the WebForms while reporting data in them will create an XML file on the basis of the data in the background – this reflects the response time of the WebForms which will not response as fast as a 'normal' website. In addition will the WebForm be querying specific enumeration list from the member states which will also affect the performance of the form. When activating a new tab is should therefore be expected to wait a few seconds before it is displayed.

Please refer to the loading icon of your web browser to see if a new page is loading in the WebForm.

XML

```

<Q5d_AdequacyForAssessmentGES>
  <Q5d_AdequateData>N</Q5d_AdequateData>
  <Q5d_EstablishedMethods>NotReported</Q5d_EstablishedMethods>
  <Q5d_AdequateUnderstandingGES>N</Q5d_AdequateUnderstandingGES>
  <Q5d_AdequateCapacity>Y</Q5d_AdequateCapacity>
</Q5d_AdequacyForAssessmentGES>

```

I.2 Start-up in CDR

For a general introduction in how to report in CDR please refer to Appendix F.

For the art 11 obligation in CDR there will be a set of predefined envelopes corresponding to the relevant regions/sub regions for the member state. Within one region/sub region one monitoring programme xml covering all relevant monitoring programmes is expected and a set of relevant sub-programmes.

When a new envelope under the region/sub region with today's date for the reporting is added and activated in CDR – the following two WebForms will be available. One covering all the monitoring programmes and one covering a sub programme.

I.2.1 Naming XML files

When a WebForm is saved – the generated XML file will automatically appear in the list of files – it will have a default name – however it is recommended to rename the file to the below structure in order to keep an overview of created XML files for all resources working on the reporting.

XML default name	Name structure	Example
questionnaire_msfdmonitoring.xml	llection_Code ¹⁸][MSFD11Mon][YYYYMMDD]	ABIFR_MSFD11Mon_20140715
questionnaire_msfdsubprogrammes.xml	[Sub_Collection_Code][MSFD11MonSub][unique identifier for the subprogramme - eg. SubProgrammeID][YYYYMMDD]	ABIFR_MSFD11MonSub_ID1a_20140715

Draft delivery

This dataflow can be delivered with webforms. Either follow the steps below and fill in the webform(s) or upload regular files using the right side buttons.


Modify the [MSFD monitoring programmes questionnaire](#)

Add and edit a [MSFD monitoring SUB-programmes questionnaire](#)

1) Your first step is to [upload](#) one or more files into this envelope. You can always interrupt your work and continue your contribution at a later time without losing data.

2) Once you are satisfied with the contribution, you choose [Release envelope](#) and your delivery will be released to the public.

Files in this envelope

<input type="checkbox"/>		questionnaire_msfdmonitoring.xml	02 Oct 2013	51.7 KB		⌵
--------------------------	---	--	-------------	---------	--	---

Rename Cut Copy Delete

Add file
Add hyperlink
Upload zipfile
Release envelope
Deactivate task

1.2.2 Managing XML files in CDR

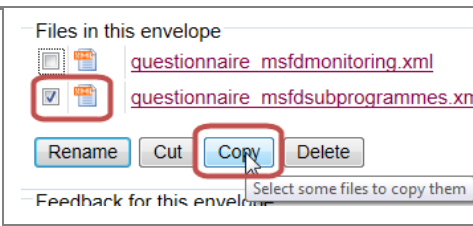
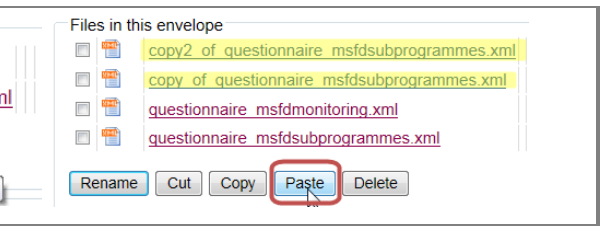
The WebForm **MSFD monitoring programmes** holds all the monitoring programmes available within a region/subregion. The **MSFD monitoring SUB-programmes** only represents one sub programme. One WebForm should therefore be filled for each relevant sub programme within the region/subregion.

In the WebForms it is possible to re-use data from one region/sub-region for another region/subregion and subsequently update it to reflect regional variations in the programmes or just start with an empty WebForm. This is done by copying the XML files within an region/subregion and across regions/subregions

It is recommended before starting to add and edit the WebForms to answer below questions in order to get an overview of what is needed for each region/subregion and within the member state. It is in addition also recommended to get familiar with section 1.3.3 on how the reference sub programmes before starting.

Level	Question	Action
Within a region/subregion	How many sub programmes will there be within the region/subregion?	Make a list of all sub programmes – eg. 1a,1b, 1c, 1d Hint: It is also possible to just report all the sub programmes available for the entire member state within one region and then link to them in the WebForm – see section 1.3.3 on how to reference programmes/sub programmes
	Will the sub programmes be completely different with no reused information between sub programmes?	If 'yes' then click on the WebForm link and when the WebForm opens press the 'Save&Close' button in the WebForm. Now an empty XML is saved which can be copied as many times as you have sub programmes. If 'no' then see next question

¹⁷ Sub Collection Codes can be found on Reportnet under the obligation for the relevant Member State

		
	<p>Will some of the sub programmes have information that could be reused in other sub programmes?</p>	<p>If 'yes' then type in the reusable information in the WebForm and press the 'Save&Close' button. Now a XML will be available with the reusable information in it. The XML can then be copied as many times as the information should be reused in other sub programmes</p>
<p>On MS level</p>	<p>Will programmes be identical between regions/subregions?</p>	<p>If 'yes' then the programmes can be referenced between regions. Eg. if monitoring programme D2 is reported for one region/subregion then it is only necessary to reference this programme in the other region/subregion</p>
	<div style="border: 1px solid green; padding: 5px;"> <p>Existing Programmes</p> <p>If you have already reported this programme under one of your other (sub)regions, you can refer to</p> <p>Provide a unique identifier for a programme already reported under another Region/Subregion</p> <p>BALDE_D2</p> <p>List all the MarineUnitIDs where the monitoring programme applies within the Region/Subregion</p> </div>	
	<p>Will some information in the programmes be reused in other regions/subregions?</p>	<p>If 'yes' then type in the reusable information for the programmes in the WebForm and press the 'Save&Close' button. Now a XML will be available with the reusable information in it. The XML can then be copied between regions/subregions – copy the XML in one region/subregion and go to another region/subregion and paste the XML. Please note that this is only possible if the envelopes are in draft mode</p>

1.2.3 Editing XML files in CDR

When several XML files for the sub programmes exists in Reportnet it will be possible to chose which one to edit

Draft delivery

This dataflow can be delivered with webforms. Either follow the steps below and fill in the w regular files using the right side buttons.

[Modify the MSFD monitoring programmes questionnaire](#)

[Modify the MSFD monitoring SUB-programmes questionnaire](#)

1) Your first step is to **upload** one or more files into this envelope. You can always interrupt time without losing data.

2) Once you are satisfied with the contribution, you choose **Release e**

Files in this envelope

	MSFD11Mon_DE_ANS.xml	02 Oct 2013	51.7 KB
	MSFDSub_DE_ANS_1a.xml	02 Oct 2013	1.46 KB
	MSFDSub_DE_ANS_1b.xml	02 Oct 2013	1.46 KB

[Rename](#) [Cut](#) [Copy](#) [Paste](#) [Delete](#)

Edit file with WebForms

The following web forms are available

1. MSFD11MonSub_1p0.xsd (http://dd.eionet.europa.eu/schemas/MSFD11Mon/MSFD11MonSub_1p0).

Existing data files in this envelope:

- MSFDSub_DE_ANS_1a.xml (MSFDSub_DE_ANS_1a.xml) [Edit](#)
- MSFDSub_DE_ANS_1b.xml (MSFDSub_DE_ANS_1b.xml) [Edit](#)

1.2.4 Managing resubmissions

If some of the data needs to be corrected/updated it is possible to re-use the already reported XML in CDR as a starting point for correcting/updating data. The envelope will be complete and therefore will the copy/paste buttons not be available. Instead the files can be zipped and saved locally on your PC. From here it will be possible to create a new folder within the relevant subcollection by using the 'add file' button. The XML files can then be renamed and edited/viewed through the WebForm

1.2.5 Not using WebForms to create XML

If a member state is creating the XML files using their own set-up it will be necessary to set the namespace manually to the following:

```
xsi:noNamespaceSchemaLocation="http://dd.eionet.europa.eu/schemas/MSFD11Mon/MSFD11Mon_1p1.xsd">
```

before uploading the files in CDR. If the namespace is incorrect the possibility to view the XML through the WebForm will not be present nor will the QA procedure be able to run.

1.3 Guide to use WebForms in Reportnet

The WebForms will have an overall design where all the monitoring programmes can be chosen in predefined tabs. The middle highlighted section will change depending on the 'General Description' tap or one of the monitoring programme tabs are chosen. The last section will change depending on the tab chosen in the middle section.

EEA | EnviroWindows

EIONET

European Environment Information and Observation Network

You are here: Eionet» CDRTEST» WebForm

Reporting requirement on monitoring programmes under MSFD Article 11

Sections

General: General Description

Monitoring Programmes: D2 NIS Non-indigenous species | D3 Biodiversity - commercial fish and shellfish | D5 Eutrophication | D11 Energy, including underwater noise | D1, 4, 6 Biodiversity - birds | D1, 4, 6 Biodiversity - mammals | D1, 4, 6 Biodiversity - water column habitats

General Description

1a-b | 1c | 1d Habitats | 1d Species & Functional groups | 1d Physical/chemical | 1d Pressures | 1d Activities - 1e | 2a - 3e

Save | Save & Close | Cancel

Reporter

* Reporter Name

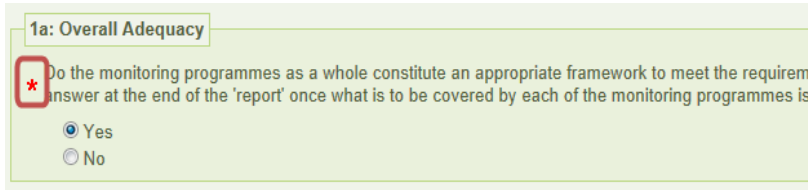
* Contact Email

Please notice that the WebForms while reporting data in them will create an XML file on the basis of the data in the background – this reflects the response time of the WebForms which will not response as fast as a 'normal' website. In addition will the WebForm be querying specific

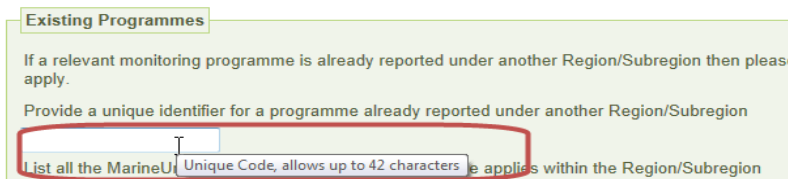
enumeration list from the member states which will also affect the performance of the form. When activating a new tab is should therefore be expected to wait a few seconds before it is displayed. Please refer to the loading icon of your web browser to see if the a new page is loading in the WebForm.

I.3.1 Tips and trick

Asterix indicates that information is required – if this field is not reported an error will be present in the QA ('XML schema validation')



If the cursor is moved to the field where to enter data – the definition for the field will be shown if such is present



In other cases the structure of information is indicated in the text as illustrated for the dates. If it is a free text field – the limit is 100.000 characters



Where several values can be picked from a defined list this done by using a tick box to pick relevant features as illustrated below – 'not relevant' will be the default

1d: Coverage: Annex III elements (art 8)		
* Which elements from MSFD Annex III relevant for your marine waters (as reported in your MS report for Art. 8) are not yet adequately covered by your Monitoring Programmes?		
	Select all relevant habitat elements (from MS Art. 8 report - features present)	Indicate by when each will be addressed by you • By 2014 • In time for the next assessment due in 2018 • In time
SeabedHabitatsAll	Seabed habitats - all	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
LitRock	Littoral rock and biogenic reef	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
LitSed	Littoral sediment	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
ShallRock	Shallow sublittoral rock and biogenic reef	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
ShallSed	Shallow sublittoral sediment (coarse)	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
ShelfRock	Shelf sublittoral rock and biogenic reef	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
ShelfSed	Shelf sublittoral sediment (coarse)	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
BathAbys	Bathyal and abyssal rock and sediment	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant
WaterColumnHabitatsAll	Water column habitats - all	<input type="radio"/> By 2014 <input type="radio"/> By 2018 <input type="radio"/> By 2020 <input type="radio"/> After 2020 <input checked="" type="radio"/> Not relevant

Drop down lists are used in cases where one value should be entered based on a pre-defined list this

* Select one from list

Baltic Sea

Greater North Sea

North-east Atlantic Ocean: Celtic Seas

North-east Atlantic Ocean: Bay of Biscay and Iberian Coast

North-east Atlantic Ocean: Macaronesia

Mediterranean Sea: Western Mediterranean Sea

Mediterranean Sea: Adriatic Sea

Mediterranean Sea: Ionian Sea and Central Mediterranean Sea

Mediterranean Sea: Aegean-Levantine Sea

Black Sea

In other cases the lists will be based on previously reported information in CDR (eg. information from the Art 8, 9 10 reporting) which is illustrated in below example from Germany. In addition it will also be possible to add targets to the list

6a: Relevant targets (from Art. 10)

* Which targets are addressed by your programme (Art. 10)?

Select relevant environmental targets (from the MS report on Art. 10)

- UZO1
- UZO2
- UZO3
- UZO4
- UZO5
- UZO6
- UZO7

Select relevant associated indicator targets (from the MS report on Art. 10)

- UZO1_IND_1.1.1
- UZO1_IND_1.2.1
- UZO1_IND_1.2.2
- UZO1_IND_1.3.1
- UZO1_IND_1.3.2
- UZO2_IND_2.1.1
- UZO2_IND_2.2.1
- UZO2_IND_2.2.2
- UZO2_IND_2.3.1
- UZO2_IND_2.4.1

Add relevant targets (from the MS report on Art. 10)

Save data can be done with buttons in all tabs and both at the top and the bottom of the webpage. Please notice that data will be kept while moving around between different tabs – but will be lost if the 'Cancel' button is hit or if the browser is closed

I.3.2 Review data in web forms

The information entered in the WebForms can be reviewed by relevant resources within the member state. The member state can give different roles to relevant resources of this reporting where this is needed

There are 3 roles a reporter can be given depending on the needs within the member states:

- Data collaborator: Can edit in data
- Reporter: Can edit and release data
- Auditor: Can only view data

If a member state has created XML from their own system the XML can be reviewed using the user-friendly output of the WebForms where the only requirement is a web browser. If there is a special need to print the XML in a view friendly format this can be done by printing each of the WebForm pages.

Please note that for the reporting in web forms for article 11 (Appendix I) the member state must agree on an internal work flow as multiple reporters can't work on the same xml file in the web form. If this is done by accident only the latest version of the web form will be saved. It is therefore worth considering the amount of Data collaborator and Reporter roles given within a member state without any agreement of a working procedure. Please note that it is possible to work on web forms simultaneously as long as they are producing different XML (eg. it will be possible to work on two monitoring programmes web forms simultaneously as long as they are within two different regions/sub regions).

I.3.3 How to reference programmes/sub programmes

Sub programmes needs to be linked to the programme. This is done in the 'Reference Sub Programme' box by adding the unique identifier for the sub programme (SubProgrammeID). It is possible to add as many sub programmes as relevant for this programme.

Reference Sub Programme

Provide a unique identifier for a subprogramme.

If a programme is identical between regions/subregions then it is possible just to refer to the programme – eg. if programme D2 is reported in region A then it can just be referenced in region B by adding the Programme ID code used in region A. And then add the relevant MarineUnits where the programme applies within region/subregion B.

Sections

General:

Monitoring Programmes:

D2 NIS Non-indigenous species

Existing Programmes

If you have already reported this programme under one of your other (sub)regions, you can refer to this programme by adding the Programme ID code for the first (sub)region here. And then add the relevant MarineUnits where the programme applies within this Region/Subregion.

Provide a unique identifier for a programme already reported under another Region/Subregion

List all the MarineUnitIDs where the monitoring programme applies within the Region/Subregion

MarineUnitID

Existing Sub Programmes

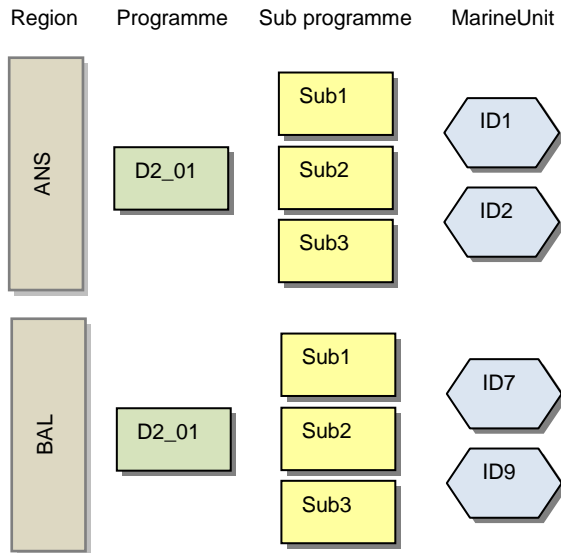
If you have referenced a monitoring programme then please indicate if the same subprogramme(s) are implemented within this region/subregion with 'Y'. If additional subprogramme(s) are relevant for this region/subregion then report the SubProgrammeID under reference Sub Programme. If the list of sub programmes are not identical with the referenced monitoring programme then report all the relevant sub programmes for the monitoring programme within this region/subregion.

Yes
 No

A 'Yes' in the box 'Existing Sub Programmes' should therefore only be reported if the exact same sub programmes are relevant between the regions/subregions. The below listed scenarios can be reported in the following way.

Scenario 1

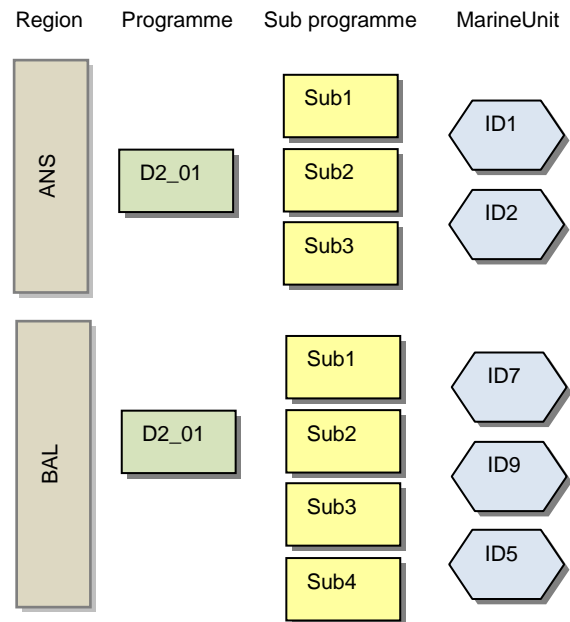
Same programmes and sub-programmes in regions – however related to different MarineUnits



1. Use 'Existing Programmes' for the region BAL and reference D2_01
2. Indicate relevant MarineUnits for BAL
3. Tick 'Yes' in the box 'Existing Sub Programmes'

Scenario 2

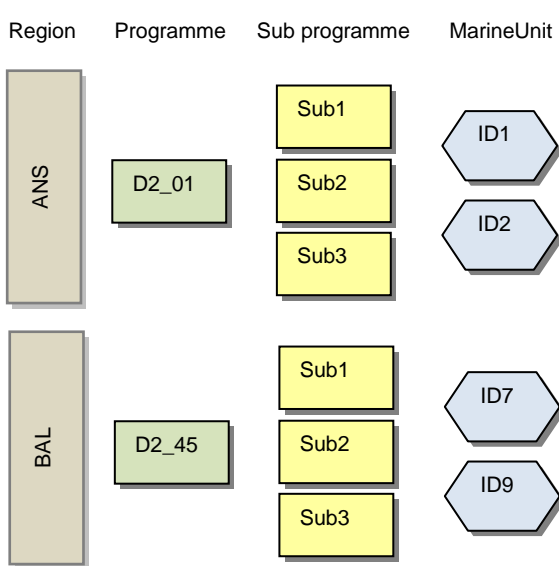
Same programmes and sub-programmes in regions – however related to different MarineUnits and one additional sub-programme is related to BAL (Sub4)



1. Use 'Existing Programmes' for the region BAL and reference D2_01
2. Indicate relevant MarineUnits for BAL
3. Tick 'Yes' in the box 'Existing Sub Programmes' for BAL
4. Link to sub programme Sub4 in 'Reference sub programme' for BAL

Scenario 3

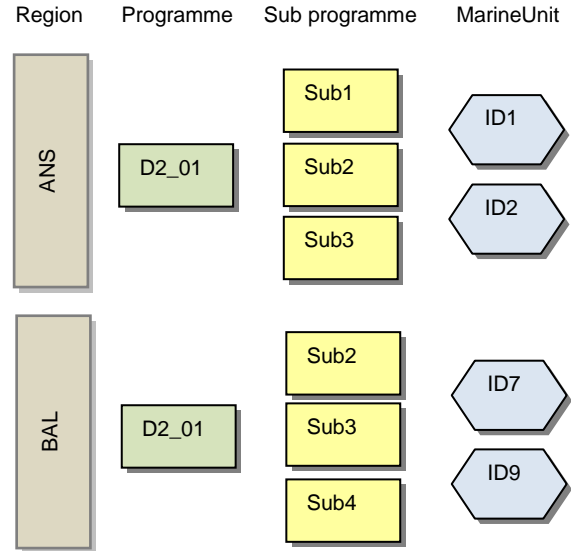
Same sub-programmes – however different programmes and related to different MarineUnits



1. Link to sub programmes Sub1, Sub2 and Sub3 in 'Reference sub programme'
2. Report programme D2_45 in Q4b (ProgrammeID in the web form) and report relevant data for the programme

Scenario 4

Same programmes – however not an identical set of sub programmes used in the 2 regions and related to different MarineUnits.



1. Use 'Existing Programmes' for the region BAL and reference D2_01
2. Indicate relevant MarineUnits for BAL
3. Link to sub programmes Sub2, Sub3 and Sub4 in 'Reference sub programme' for BAL

1.4 CDR workflow

The process when XML files are created and considered ready in the file list then the CDR workflow are identical with previous reporting processes under the MSFD. When releasing the files a set of QA's will automatically be generated. Please notice that this might take some time depending on the size of the XML files.

The screenshot displays the EIONET CDR Testing interface for an envelope named 'test1'. The interface includes a navigation menu on the left with options like 'Search', 'Notifications', 'Help', 'Account Services', and 'Note'. The main content area shows the envelope's details, including its description, obligations, period, coverage, and reported date. The status is 'Automatic quality assessment' (highlighted with a red box). Below the details, there is a 'Files in this envelope' section with a table listing three XML files: MSFD11Mon_DE_ANS.xml (51.7 KB), MSFD11Sub_DE_ANS_1a.xml (1.48 KB), and MSFD11Sub_DE_ANS_1b.xml (1.48 KB). A 'Feedback for this envelope' section is also visible, containing three entries for automatic QA results for XML schema validation, each posted on 03 Oct 2013 (highlighted with a red box). The interface also includes a 'Zip Envelope' button and an 'Activate task' button.

Document last modified 2013/10/03. [Validate HTML]

The QA results can then be assessed and issues corrected where needed. Please notice that the QA output will refer to a line number in the XML file – however inspecting the error text will in most cases give the question number which will be easy to find in the WebForm.

Type	Position	Error message
ERROR	Line: 5, Col: 26	cvc-enumeration-valid: Value " is not facet-valid with respect to enumeration '[Y, N, NotReported]'. It must be a value from the enumeration.
ERROR	Line: 5, Col: 26	cvc-type.3.1.3: The value " of element ' <u>Q1a_Overall_adequacy</u> ' is not valid.
ERROR	Line: 6, Col: 20	cvc-complex-type.2.4.a: Invalid content was found starting with element ' <u>Q1b_CoverageGES</u> '. One of '{Q1b_GapsGES}' is expected.

Once the data has been assessed and is ready to be reported to the Commission the envelope should be set to complete. This is done by activating the 'Finish' button which will then release the 'Confirmation of receipt'. This receipt will be the member state proof of the reporting.

Overview
Finish or go back to drafting?
Edit properties
History

Finish or go back to drafting?

Deactivate task

The envelope is currently released and the requester may have uploaded some feedback to it. If you want to change your delivery as a result of the feedback, then you must click on "Back to drafting" to revoke the release. If you are sure you will never need to revoke then you click "Finish".

Back to drafting
Finish
Rerun automatic QA

Feedback for this envelope

- [AutomaticQA result for file MSFD11Mon_DE_ANS.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)
- [AutomaticQA result for file MSFD11Sub_DE_ANS_1a.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)
- [AutomaticQA result for file MSFD11Sub_DE_ANS_1b.xml: XML Schema validation](#) (Posted automatically on 03 Oct 2013)

Please notice that once the envelope is complete the data will be locked.