

*Introduction paper*

# Reportnet for beginners

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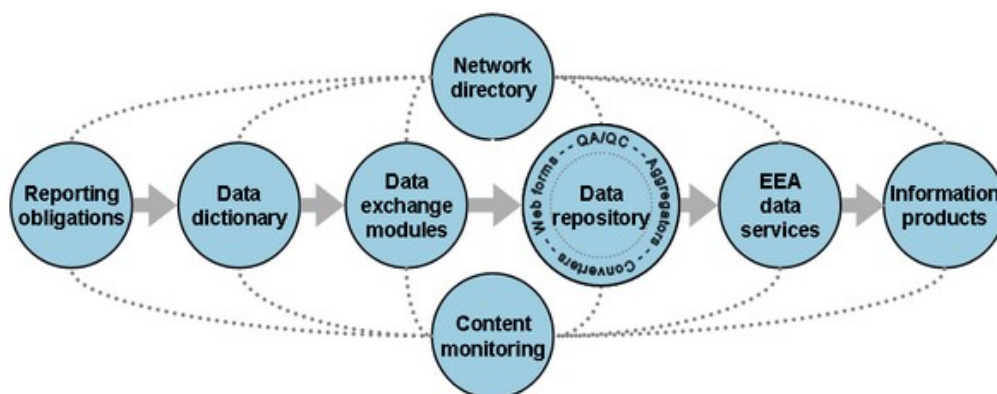
European Environment Agency 

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# 1. Introduction

The reporting of environmental data and information, agreed between EU or international bodies and countries, has a history of more than 30 years. Already back in the 1970's, it was agreed that bathing water quality should be monitored and tested in order to protect bathers from health risks and to preserve the environment from pollution. This resulted in 1976 in one of the first pieces of European environmental legislation, the [Council Directive 76/160/EEC](#) on Bathing Water Quality, which defines in Article 13: "Member States shall, four years following the notification of this Directive and at regular intervals thereafter, submit a comprehensive report to the Commission on their bathing water and the most significant characteristics thereof."

In the following years, numerous reporting obligations have been established involving a great variety of national and international institutions. The related reporting procedures are usually complex, making it difficult for both countries and institutions to know exactly what the obligations are, when the deadlines fall and in which formats the data should be submitted. It became more and more difficult to have an up-to-date overview on the requirements and the deliveries. In some cases duplicate work was being carried out to satisfy similar obligations.

In order to assist member countries in their data reporting task, the European Environment Agency (EEA) has been developing an infrastructure for supporting and improving the environmental data and information flows. This reporting infrastructure and the related suite of web-based tools and applications are referred to as **Reportnet**.

This document presents a general introduction to Reportnet, describing the background, the basic functions and showing how Reportnet tools support the complete reporting cycle in the context of Eionet data flows. Furthermore, a number of useful links are given, pointing to public resources for further reading.

## 1.1. Who should read this document

This document will help people meeting Reportnet for the first time. Some of these people will be newcomers to Eionet whether as National Focal Points (NFPs), National Reference Centres (NRCs), new staff at EEA or at European Topic Centres. However other users maybe experienced EEA or Eionet hands, now having to manage or deliver to data flows

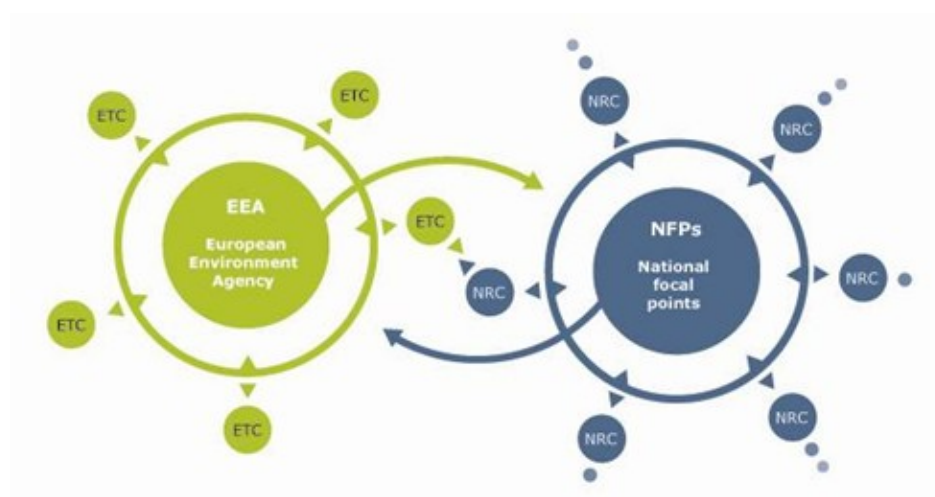
which use Reportnet tools. The document should also be useful for the international institutions and committees designing or reviewing reporting obligations.

## 1.2. What this document is not about

This document been written for a defined scope:

- it is not a strategic vision following up on the Strategic Planning for Application Development ([SPADE](#));
- it is not a part of the Shared Environmental Information System (SEIS) implementation plan;
- it is not an overview of all IT systems at EEA;
- it is not a replacement for the help pages related to individual Reportnet tools;
- it is not a technical documentation for programmers.

## 1.3. Eionet



Eionet is the EEA’s network which consists of administrative and scientific institutions at national level in more than 32 countries. It consists of the EEA itself, currently 5 European Topic Centres and a network of more than 900 experts from 37 countries in over 300 national environment agencies and other bodies dealing with environmental information.

The roles and functions of the network’s main nodes can be described as follows:

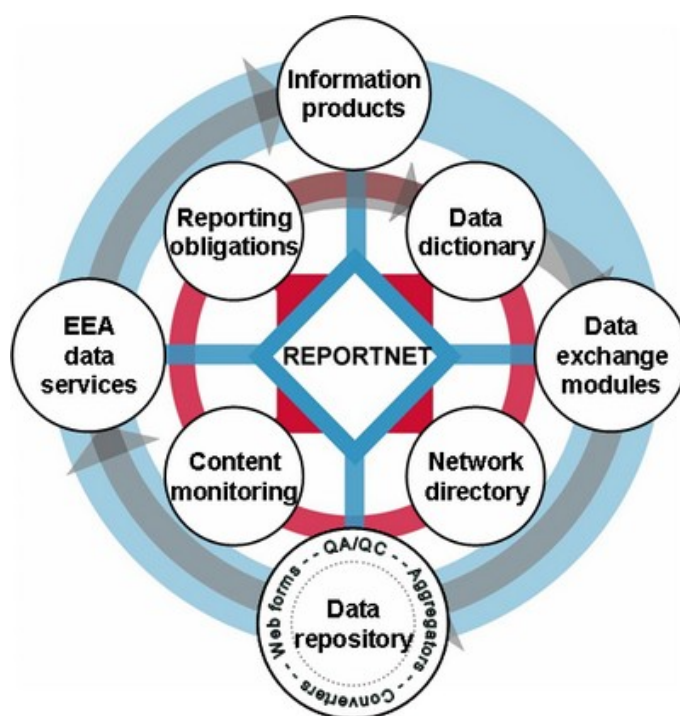
The **European Environment Agency (EEA)** is the leading public body in Europe dedicated to providing timely, targeted, relevant and reliable information to policy-making agents and the public, to support sustainable development and to help achieve significant and measurable improvements in Europe’s environment. Reportnet was established by EEA to support its member countries in delivering high quality data under their reporting obligations. EEA continues to further develop the infrastructure to ensure that the data it disseminates to policy-making agents and the public is quality assured at each step of the processing chain.

The **European Topic Centres (ETCs)** are centres of thematic expertise contracted by the EEA to undertake specific tasks identified in the EEA work programme. From a Reportnet perspective, ETCs are the processors of the data delivered by countries. They are carrying out an in-depth quality analysis of all delivered data. This task may require bilateral consultations with the data provider. After quality assurance and quality control (QA/QC), the processed data are delivered to EEA for dissemination.

The **National Focal Points (NFPs)** are the main contact points for the EEA in the member countries. They are in charge of cooperation with the EEA and the ETCs and organise the national coordination of activities. NFPs maintain and develop the national network and coordinate requests and deliveries between the national and the EU level. In terms of Eionet data flows, NFPs sometimes submit the requested data, acting hence as as the national data provider. However, the actual delivery of data is often delegated to the National Reference Centres (NRCs), see below.

In the Reportnet context, **National Reference Centres (NRCs)** are nationally appointed experts which are providers of environmental data to the European and international level. Like NFPs, the activities of NRCs are funded by member countries. NRCs are established in specific environmental areas. Currently there are 24 thematic areas defined in Eionet, such as air quality, climate change, water quality, biodiversity etc.

## 2. Reportnet



Reportnet is Eionet's infrastructure for supporting and improving data and information flows. Reportnet is based on a set of inter-related tools and processes which all build on the active use of the World Wide Web. Reportnet has been developed since 2000 and has been in operational use since 2002. Substantial funding for software development came through

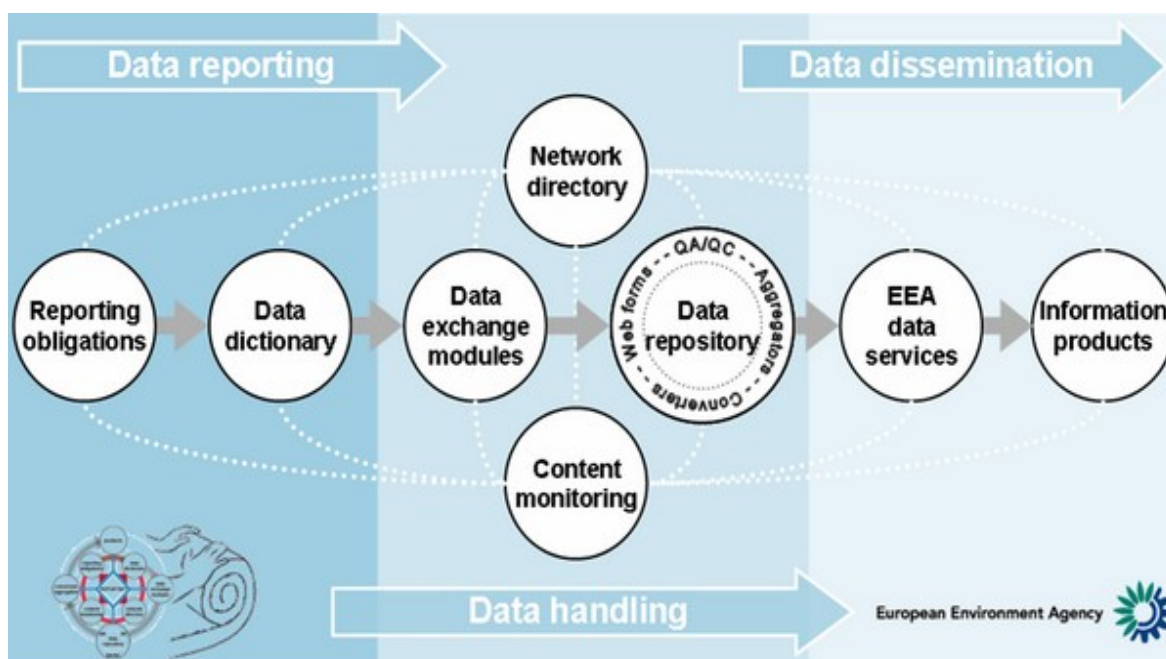
the European Commission's [Interchange of Data between Administrations \(IDA\)](#) programme.

The system integrates different web services and allows for distributed responsibilities. Reportnet was initially used for reporting environmental data to EEA, but is now also hosting some of DG Environment's reporting tasks. The open system permits deliveries to other national and international organisations in a very transparent way.

The Reportnet tools aim to improve the harmonisation and standardisation of all Eionet data flows, by covering all activities inside them, from the detailed definition of the requested data to the generation of the final information products such as reports or environmental indicators published by the EEA.

## 2.1. A more linear view of Reportnet processes

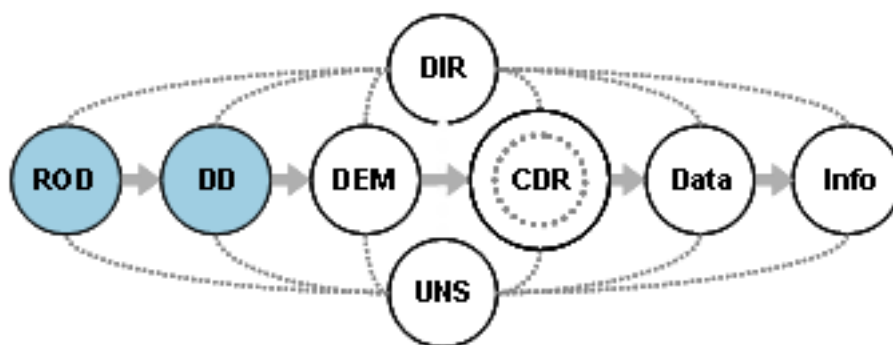
An *unrolled* i.e. linear view of the Reportnet tools shows how they interact in order to support the full data delivery process. The individual Reportnet modules are as follows:



- Reporting obligations (ROD): a web-enabled database with all relevant reporting obligations and deadlines: <http://rod.eionet.europa.eu>
- Data dictionary (DD): Reportnet service providing detailed data definitions, templates and schemas for reporting: <http://dd.eionet.europa.eu>
- Data exchange modules (DEM): customised software for data gathering, importing and exporting. Link to an example DEM: [http://air-climate.eionet.europa.eu/country\\_tools/aq/aq-dem](http://air-climate.eionet.europa.eu/country_tools/aq/aq-dem)
- Data repository (CDR): in Reportnet currently implemented in form of the Central Data Repository (CDR) with built-in modules for automated data quality assessment, conversion and aggregation: <http://cdr.eionet.europa.eu>

- Network directory (also known as Eionet directory): Eionet’s central user database: [http://eea.eionet.europa.eu/Public/irc/eionet-circle/Home/central\\_dir\\_admin?fn=roles&v=eionet&rd=1&ud=1](http://eea.eionet.europa.eu/Public/irc/eionet-circle/Home/central_dir_admin?fn=roles&v=eionet&rd=1&ud=1)
- Content monitoring: search and notification services across all Reportnet modules: <http://uns.eionet.europa.eu>, <http://cr.eionet.europa.eu> and <http://search.eionet.europa.eu>
- EEA data services: the platform for publishing final data sets: <http://dataservice.eea.europa.eu>
- Information products: reports, indicators, maps, graphs, etc. with relevant information for end-users: <http://www.eea.europa.eu/products>

## 2.2. Data reporting tools



### 2.2.1. Reporting Obligation Database

The [Reporting Obligation Database](#) (ROD) is the EEA’s database which contains records describing environmental reporting obligations that countries have towards international organizations, such as DG Environment, marine conventions, Eurostat, OECD, UN, UNECE, as well as the EEA itself. The ROD record of a reporting obligation also contains links to the official documents describing how the obligations are to be fulfilled (in the Data Dictionary or in other formats and places).

## What is ROD?

ROD is the EEA's reporting obligations database. It contains records describing environmental reporting obligations that countries have towards international organisations. ROD is part of Reportnet. Reportnet is group of web applications and processes developed by the EEA to support international environmental reporting.

## What are reporting obligations?

Reporting obligations are requirements to provide information agreed between countries and international bodies such as the EEA or international conventions. Reporting obligations provide the basis for most environmental information flows.

## What does ROD cover?

ROD includes all environmental reporting obligations that EEA member countries have towards DG environment, European marine conventions, Eurostat, OECD, UN, UNECE, as well as the EEA itself. To learn more about ROD, the status of the contents and the intended users, please check out the [general help](#) section.

Show reporting obligations		
Country	<input type="text" value="Any country"/> ▾	GO
Issue	<input type="text" value="All issues"/> ▾	
Organisation	<input type="text" value="Any organisation"/> ▾	
<input type="checkbox"/> Include terminated obligations		

Search ROD website: <input type="text"/>	GO
--	----

The core of the Reporting Obligation Database are about 400 records on environmental data reporting with the following information:

- Who needs to report what?
- What are the deadlines?
- To whom should it be reported?

Further reading:

- [ROD On-line Help](#)
- [NMC Helpdesk FAQ](#)
- [Other presentation material and process documents](#)

## 2.2.2. Data Dictionary

The [Data Dictionary](#) (DD) is the EEA's database containing detailed specifications concerning the format of the data that should be submitted. The Data Dictionary provides definitions of data elements and data types and makes data reporting templates, schemas and guidelines available. This Reportnet module focuses hence on data harmonisation and ensuring the comparability of data from the countries.

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EIONET» Data Dictionary

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### Latest released data definitions

<a href="#">Common Database on Designated Areas (CDDA)</a>	09 March 2006	
<a href="#">Eionet-Water: Water Quantity</a>	31 July 2006	
<a href="#">Eionet-Water: Groundwater</a>	01 August 2006	
<a href="#">Eionet-Water: Lakes</a>	31 July 2006	
<a href="#">Eionet-Water: Transitional, Coastal and Marine Waters</a>	31 July 2006	
<a href="#">Monthly ozone exceedances (2002/3/EC)</a>	28 April 2006	
<a href="#">Eionet-Water: Rivers</a>	31 July 2006	
<a href="#">Summer ozone exceedances (2002/3/EC)</a>	04 May 2006	

[\[More...\]](#)

Documentation	Support
<a href="#">Data Dictionary - functions, services and users</a>	If you experience any problem using data dictionary, please let the Eionet Helpdesk know immediately. The Helpdesk can be reached by phone on +32 2 714 87 87 from Monday through Friday 9:00 to 17:00 CET.  You can also email the helpdesk at any time: <a href="mailto:helpdesk@eionet.eu.int">helpdesk@eionet.eu.int</a> .  Do not hesitate, we are here to help!
<a href="#">Concepts &amp; terms - datasets, tables, data elements, code lists</a>	
<a href="#">Data Dictionary - administrative tools - login mode</a>	
<a href="#">Data Dictionary userguide (Eionet login required)</a>	

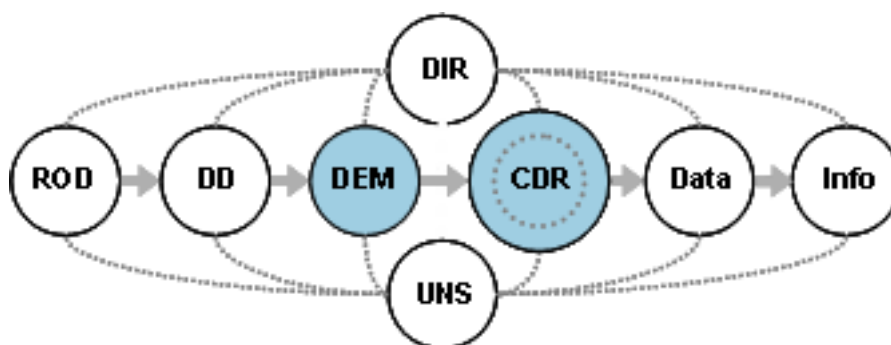
The Data Dictionary is structured to match what is needed in a relational database, i.e. databases containing tables containing columns. In some cases this is an inconvenient format for data reporting, because what logically belongs together must be split into many tables. XML with its more flexible tree structure can handle these needs. Therefore, in

some cases, the usage of the Data Dictionary is inadequate, and we must model the data structure in form of an XMLSchema.

Further reading:

- [Documentation on the DD home page](#)
- [NMC Helpdesk FAQ](#)
- [Presentation material and process documents](#)

## 2.3. Data handling tools



### 2.3.1. Data Exchange Modules

Data comes in many different formats and flavours: text files, spreadsheets, database formats, etc. Since the EEA has chosen the XML format for storing all the reported data in their Central Data Repository (CDR), this means all data which Data Reporters upload into CDR needs to be converted to this common XML format. Data which is available on CDR can also be downloaded again in different formats: the Data Exchange Modules (DEMs) are also used for this format conversion. Furthermore, DEM's also check if the reported data complies with the XML format.

For some workflows, there are specific DEMs available which can be run locally: typically these consist of customised MS Access databases or spreadsheets which include quality checks e.g. In most cases, however, DEMs are built in Reportnet tools and will start a conversion and quality check of data in the background: in this respect, the DEM tools differ with the other Reportnet tools which all have an individual interface or home page.

### 2.3.2. Central data repository

The [Central Data Dictionary](#) (CDR) is the EEA's main repository for delivered data or reports. It contains a folder structure for each country where the data or reports can be uploaded on-line and made available to others. If the data is stored in another location, links pointing to this data can be used as well.

The Central Data Repository is part of the ReportNet architecture. The Central Data Repository is like a bookshelf, with data reports on the environment as submitted to international clients.

Each country either has a collection (📁) for its deliveries or a referral (👉) to a different preferred repository. The data reports within each country collection are arranged under the relevant reporting obligations or agreements.

[Global worklist](#)
[Search](#)
[Search XML files](#)
[Recent uploads](#)

#### EEA Member countries

<a href="#">Austria</a>	<a href="#">Belgium</a>	<a href="#">Bulgaria</a>
<a href="#">Cyprus</a>	<a href="#">Czech Republic</a>	<a href="#">Denmark</a>
<a href="#">Estonia</a>	<a href="#">Finland</a>	<a href="#">France</a>
<a href="#">Germany</a>	<a href="#">Greece</a>	<a href="#">Hungary</a>
<a href="#">Iceland</a>	<a href="#">Ireland</a>	<a href="#">Italy</a>
<a href="#">Latvia</a>	<a href="#">Liechtenstein</a>	<a href="#">Lithuania</a>
<a href="#">Luxembourg</a>	<a href="#">Malta</a>	<a href="#">Netherlands</a>
<a href="#">Norway</a>	<a href="#">Poland</a>	<a href="#">Portugal</a>
<a href="#">Romania</a>	<a href="#">Slovakia</a>	<a href="#">Slovenia</a>
<a href="#">Spain</a>	<a href="#">Sweden</a>	<a href="#">Switzerland</a>
<a href="#">Turkey</a>	<a href="#">United Kingdom</a>	

#### Other countries

<a href="#">Albania</a>	<a href="#">Andorra</a>	<a href="#">Armenia</a>
<a href="#">Azerbaijan</a>	<a href="#">Belarus</a>	<a href="#">Bosnia and Herzegovina</a>
<a href="#">Croatia</a>	<a href="#">European Community</a>	<a href="#">Georgia</a>
<a href="#">Gibraltar</a>	<a href="#">Kazakhstan</a>	<a href="#">Kyrgyzstan</a>
<a href="#">Macedonia (FYR)</a>	<a href="#">Moldova</a>	<a href="#">Monaco</a>
<a href="#">Montenegro</a>	<a href="#">Russia</a>	<a href="#">Serbia</a>
<a href="#">Tajikistan</a>	<a href="#">Turkmenistan</a>	<a href="#">Ukraine</a>
<a href="#">Uzbekistan</a>		

[LU: LU GHG Report 1990 to 2004: submission 29 December 2006](#)

[LU: Monthly Ozone Exceedances 2006](#)

[SE: Xml file of Swedish submission\\_delivery 2007](#)

[PT: 2007 submission on NEC](#)

[GB: NECD 2001 to 2005](#)

[CY: NEC Pollutants Emission Inventory](#)

[HU: Submission xml file for draft2 005 inventory](#)

[FR: Annual reporting on ambient air quality limit values plans and programmes\(2004/224/t 2006](#)

CDR is the place where:

- Data or reports are uploaded
- Reports are made available to the Data Requestor and the public
- Data can be converted in other formats

CDR also includes a search interface where you can select Reporting Obligations from a list and search for the data or reports that have been submitted on CDR by specific countries or during specific years and periods.

### **2.3.3. Data conversion, merging and aggregation**

The data exchange module functions can be summarised as:

- Conversion
- Quality Assessment
- Web Form Service.

Most of the functions built into the Central Data Repository (QA/QC, Aggregators, Converters and Web forms) are performed by these DEM's in the background.

Once data is made available on the Central Data Repository, it can be used for several reporting purposes by the Data Processors. Such reports often require data which is available in separate parts of a repository to be merged or aggregated into one common database. This part of the Reportnet tools is being developed to match the reporting requirements. Currently, one of the standalone aggregation tools which are available is the Data Merging Module.

The Data Merging Module (DMM) tool is not accessible through a web browser, but it is a client application which has to be installed on a local workstation.

This tool is typically used by Data Processors who want to get Member States deliveries for an entire obligation from CDR and merge that data in files or databases which are stored locally for reporting purposes, in other words it is a data aggregation tool. DMM makes it possible to easily retrieve obligations in a local database or in a file with XML or HTML format and has the option to compare a new extraction with previously extracted data on the basis of uploaded time.

On the left, a picture showing what the DMM client looks like when it is installed on a PC. The figure displays the available obligations for which reports from several countries can be downloaded and merged into one database or folder on your PC in various formats (XML, HTML, SQL etc). When the obligation is selected, the tool will download the available reports from Member countries from which you can select the ones you are interested in.

On the right, a figure showing the report of the merge or aggregation action: how many envelopes and files were merged, were there any errors...

The results of the merge in this case is that all the reports of the selected countries for River quality are now merged into one folder on the local workstation in XML format.

This aggregated data can now be re-used for specific reporting purposes

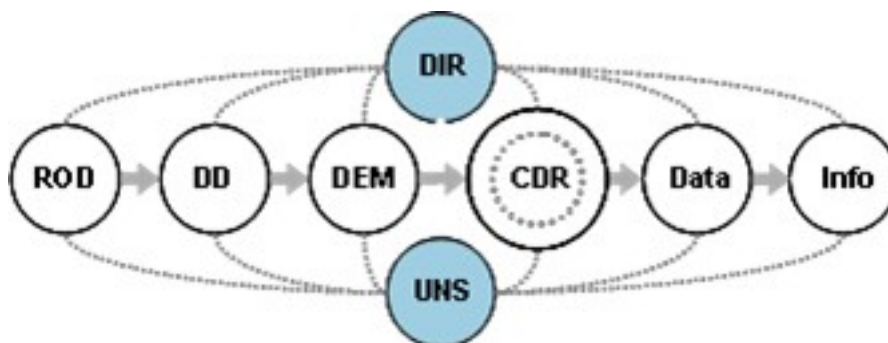
In order to obtain the Data Merging Module installation files, contact the [Eionet NMC helpdesk](#).

Further reading:

- [On-line Help](#)

- [NMC Helpdesk FAQ](#)

### 3. Who are the people and how they stay informed



#### 3.1. Network directory

The [Network directory](#) (or Eionet directory) is a database with user accounts. A user account contains personal information (such as first name, surname, email address, username and password) and is used for communication and authentication purposes. If you are new to Eionet, all you have to do is to send a request to the Eionet helpdesk with a cc to your NFP or ETC Data Manager.

**Reportnet services**

- » **ROD Obligations**
- » **CDR Repository**
- » **Content Registry**
- » **Data Dictionary**
- » **Directory**
- » **IMS Indicators**

**Not logged in**

- » **Login**

With this one Eionet username and password, you can be granted access to several Reportnet tools such as CDR, ROD, DD etc. You should notify the Eionet Helpdesk (again with a cc to your NFP or ETC Data Manager) if you are responsible for delivering national data to CDR, for maintaining ROD or DD or processing national deliveries. The required additional permissions for fulfilling this responsibility will be added to your EIONET account, e.g. if you need to upload data on CDR for Belgium, the needed upload permissions will be given to your account for this specific country and folder only.

For each of the Reportnet tools, you will always see a "Log in" button on the left hand side where you can fill in your EIONET username and password.

The Network directory can also be used for finding other registered persons through a search interface on the EEA Portal. Furthermore, the Directory maps the organisational structure of Eionet by linking national organisations with user accounts and by using the concept of "Roles". These Roles allow you to have an overview of the nominated persons for the Member States. There is a Role called Eionet, e.g., which contains all official nominated persons in Eionet groups such as NFPs, NRCs, ETCs etc. Each of these "subroles" are divided in smaller units.

The Roles contain user accounts and are used for granting grouped access to certain applications and they also function as mailing lists. Each Role has his own email address: when sending a mail to a Role, all users who are in that Role or one of its subroles will receive the mail.

## **3.2. Content Monitoring**

The EEA also provides tools that allow persons involved with reporting and dataflows to monitor everything that is going on in Reportnet: the Unified Notification System (UNS) and the Content Registry (CR).

### **3.2.1. Unified notification system**

The [Unified Notification System](#) (UNS) is the EEA's mechanism to notify you of new content. You can subscribe to this system and define for which items you want to receive a notification. If you log on to the UNS Homepage with your Eionet account, and click on the "Subscriptions" button on the left hand side, the following tabs will be available to you:

[My subscriptions](#)

[Subscribe](#)

[My preferences](#)

## Existing subscriptions list

Title <sup>▲</sup>	Description
<a href="#">CDR Notifications</a>	Instant notifications on release and revoke of envelopes
<a href="#">DD Notifications</a>	Notification from DD about changes in the database
<a href="#">IMS general news</a>	News and updates from Indicator Management Service (part of Reportnet/Eionet). New items a couple of times per month.
<a href="#">ROD Notifications</a>	Notifications on approaching deadlines, changes etc.

- **My subscriptions:** gives an overview of your current notifications
- **Subscribe:** gives an overview of the available subscriptions. Currently, the following subscriptions are available within Eionet:
  - ROD notifications on approaching deadlines, changes etc.
  - CDR notifications on release and revoke of envelopes
  - Notifications about changes in the DD database
  - Eionet headlines
  - News from the Eionet topic centres
  - News from the Indicator Management System
  - News and announcements
- **My preferences:** allows you to set preferences for your UNS account. You can be notified by UNS in various ways:
  - **Email**
  - **Jabber** notifications through [jabber](#) account
  - **Web Dashboard** graphical view on the UNS portal
  - **RSS** viewing new content through a local RSS reader

### 3.2.2. Content registry

The EEA has developed a search interface called Content Registry (CR) which is linked to the main Reportnet tools. It allows you to search for deliveries in CDR, obligations in ROD and DD entries from one central point.

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[EIONET](#) » Content Registry

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## What is Content Registry?

Content Registry (CR) is a place where you can search for the content of services in EIONET, based on their metadata. Not all of the EIONET services are included, only those that have been specified by the administrators of this site. CR uses the [DublinCore Metadata Element Set](#) to describe the content, but it also keeps track of EIONET specific metadata elements.

### Simple search

To quickly find content by text in any metadata element, you can start right here by using the text input below. You can choose between free text search, exact search and substring search. For free text search, the words have to be at least 3 letters in length. Note that substring search is usually the slowest of the three.

Expression:

Free text search    Exact search    Substring search

### Further searches and login

On the left of the screen you can choose between different search cases:

- [Dataflow search](#)
- [Advanced search](#)
- [Simple search](#)
- [Recent deliveries, obligations, reports and news](#)

CDR offers a interface with simple or advanced search options.

In the simple search, you can choose between free text search, exact search and substring search.

The advanced search lets you search in the metadata elements (such a title, creator, subject, publisher, date etc.) using predefined fields.

In addition to the simple and advanced searches, there are also two predefined searches available: "Dataflow searches" and "New Uploads". Generally, Dataflow search is meant for Dataflow Managers to observe specific dataflows in the dimensions of country and year.

The New Uploads or recent additions is a canned query which lists the 20 most recent deliveries, obligations, reports or news items from the Reportnet tools, depending on the tab you select on the results page.

Finally, there is a more general [search interface](#) powered by [Nutch](#) which allows broader full-text searches through all Reportnet as well as other Web services and pages hosted by the EEA.

## 4. Data Workflows

### 4.1. Introduction

Whereas the previous chapters gave a concise and general overview of the available tools and the reporting context, the following part contains more detailed explanations on the actual "Data Workflow".

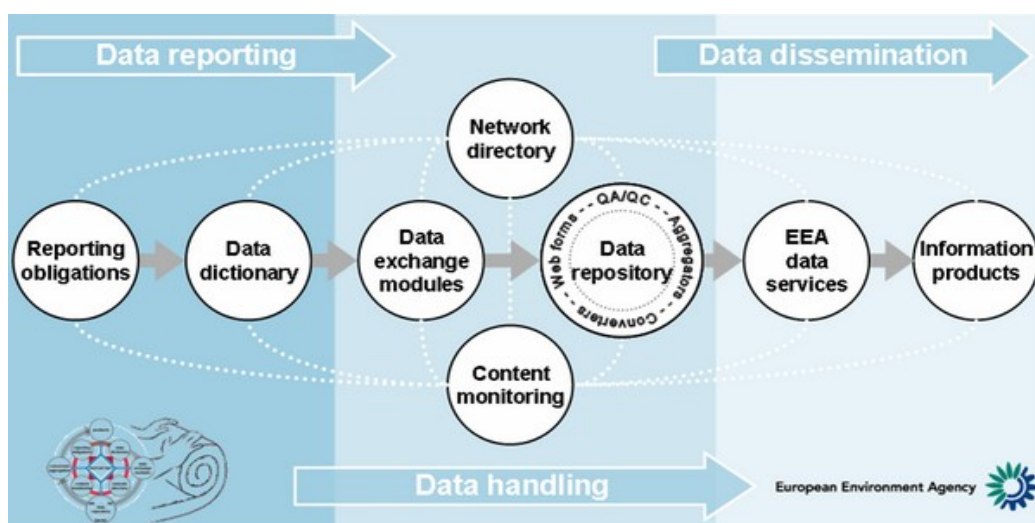
In practice, the Data Definers of the EEA will make sure relevant European laws on Environmental Reporting are transformed into obligations stored in the Reporting Obligation Database (ROD), which also contains links to the official documents describing how the obligations are to be fulfilled (in the Data Dictionary or in other formats and places).

There are three main phases which can be distinguished in the Workflow: **Data Reporting**, **Data Handling** and **Data Dissemination**.

**Data reporting** is all about gathering the data and preparing the delivery of the report. This stage only involves the Data Provider who in an Eionet context is assigned by the NRCs or NFPs to generate and upload the report.

**Data handling** concerns all actions that take place when the data is actually uploaded or made available in the CDR repository: Data Providers will upload data in CDR, Data Processors will validate it and deliver feedback. During this phase, the Data Providers and Processors will work together in order to assure the quality of the delivered data.

**Data dissemination** only involves the Data Processor: once the delivery is approved and available on the Central Data Repository, the Data Processor can start the analysis and assessment during which he can export or convert delivered data through aggregation and conversion tools (such as DMM) to finally making it available to the public and re-using it for various reporting purposes or publish it through information products such as statistics, on-line through websites, detailed reports etc.



We will now have a closer look at the Data Reporting and mainly Data Handling phase, focussing on the different steps and actions of a standard or **Default Workflow** to then finally give an idea on what a **Customised Workflow** may include and offer.

## 4.2. Default Workflow

The default workflow is the simplest workflow from an application point of view: the user collects and prepares his data or report locally and then uploads it (in any format) on the Central Data Repository (CDR). No validation, format conversion or quality checks are performed by the tool. These more advanced functionalities will be discussed in the next chapter as they are only used by customised workflows that rely on the same Reportnet tools (DD, ROD, CDR...), but with a certain level of automation. The steps described in this chapter are the basis of any workflow.

### 4.2.1. Finding details on the Reporting Obligation

The reporting cycle or dataflow starts with a Data Reporter who needs to know what he has report and what the deadlines are. If he does not know this, he can search in the Reporting Obligation Database (ROD). This database is updated by the Data Definers and is publicly available: no username or password is needed for accessing the tool. In order to get an overview of all obligations for one specific theme or country, ROD offers 3 predefined fields in the search interface which can be used to filter out only the relevant obligations: “Country”, “Issue” and “Organisation”.

The following picture gives an idea on what a Reporting Obligation entry looks like. Many of the fields contain hyperlinked information: just clicking on the value in the field will take you directly to the relevant information.

The fields **Next report due** and **Reporting guidelines** are of special interest:

- The “**Next report due**” field indicates when the report should be submitted latest.
- The “**Reporting guidelines**” field provides a link to the available guidelines. The location, format and nature of this documentation may differ depending on the Reporting Obligation: sometimes it is a URL to a document which can be issued

and hosted by any institution or Agency. In other cases, it will point to another EEA Reportnet tool: the Data Dictionary (DD).

Entries in DD contain more information on the Reporting Obligation and the formal requirements of the report to be submitted: templates to be used, the methodology to be followed, units of measurements, explanations on the parameters and general guidelines. It is linked with other Reportnet tools

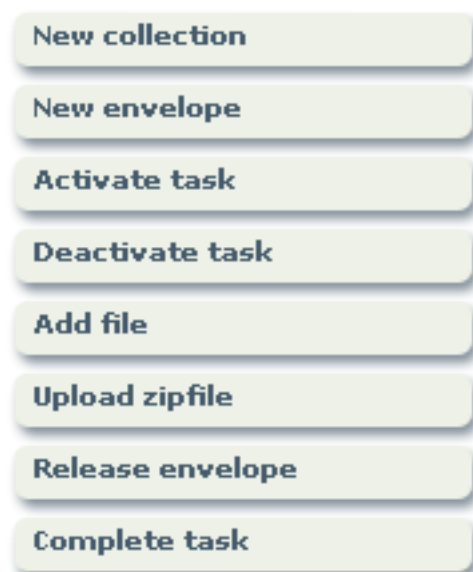
#### 4.2.2. Submitting data

In many cases, the Data Reporter will already know what the obligation is about. If he is also aware of the formal requirements, he can prepare his data locally and upload it to the Central Data Repository (CDR). If he has notifications set through the Unified Notification System (UNS), he will receive a mail whenever a reporting deadline is approaching. These are the most important steps in the Workflow:

- Navigating to the correct CDR collection

On the CDR Home page, there is a folder structure for each country you can navigate through by clicking on the correct country name. Under each of the country folders, there is a set of folders or "collections". You can navigate to the correct collection where your report should be submitted by clicking on the corresponding titles.

- Logging on



To submit or upload your report, you will need a username and password to log on to the application so you have the necessary permissions and options for uploading. In case you do not have a username or the rights to the folder you need to upload your delivery, you can contact the [Eionet Helpdesk](#), who will provide the needed permissions. You should put your NFP or ETC Data Manager in cc of this request.

When you are in the correct collection, you click on the “**Login**” button on the left hand side of the page. You will be prompted for your Eionet username and password. Depending on the permissions assigned to your user account for a specific collection, you will see

buttons with the options available to you: the most common buttons and examples are shown on the right.

- Creating a new Envelope

The principle underlying CDR is that in a reporting "collection", you can create an "envelope" which will actually contain the files for one delivery in response to a Reporting Obligation. Depending on the requirements of the Reporting Obligation, sometimes there will only be one file in the envelope and on other occasions there will be many. The envelope provides transparency and traceability for a particular delivery. The envelope is the unit processed by the Data Processors when merging national data into the European data set.

Once in the corresponding collection in CDR, you have to create such an envelope in which you can upload or submit all file(s) or data for your report. You can do this by clicking on the “**New envelope**” button on the right hand side of the page.

If you can't see the “New envelope” button, your account does not have permission to create an envelope. You should contact Eionet helpdesk with a cc to your NFP and explain for which obligation you need to deliver data. When confirmation is received from the NFP, permissions will be granted.

A new window will open, asking you update the following fields for your Envelope: Title, Description, Relating to which year, Coverage and Coverage note. If you update these fields and click on the “**Add**” button, your new envelope will be available.

- Activating the task

When the new envelope is created, go into the envelope by clicking on its title and click on the button “**Activate task**” on the right hand side. When you have activated a task, this means you have reserved this envelope and task for you to work on and nobody else will be able to work on it simultaneously. If someone else needs to take over your task, you can deactivate your task by clicking on the button “Deactivate task” All changes you have made will be saved, and other persons can now start working on the delivery.

- Uploading your data

The next step is to submit your data or report. This is done by clicking on the button “**Add file**” on the right. A new interface will open, allowing you to browse to the file you have prepared and saved locally on your PC. You can also define if you want your files not to be publicly available by checking the “Restricted from Public view” button. Your data will only be available to persons who log on and have specific permissions to do so. To upload, you then click on “**Add**”

Note: When you have multiple files stored locally on your PC, you can add them in one go by clicking on the button “**Upload zipfile**”. CDR will automatically unzip your file, unpack the files and add them to the report.

- Releasing your envelope

When you have uploaded your report, you will see a new button appear on the right called “**Release envelope**”. This will make your report available for others to comment and give feedback (e.g. the EEA). Changes can still be made afterwards if required.

- Revoking or finishing your envelope after feedback

CDR operates with "revocable" releases and "permanent" releases. The purpose is to wait for information from the Data Requester on the correctness of the data. When you have this information, you should activate the "Revoke" or "Finish" activity by clicking on "**Activate task: Revoke or Finish**" in the Envelope. The system will give you two choices:

If your delivery is not correct or you have to make changes according to the received feedback, you can upload a new version by clicking on the "**Back to drafting**" button. If the delivery is OK, you make the release permanent by clicking on "**Finish**"

Note: Once an envelope is finished, it can not be changed or updated anymore!

### **4.3. Customised workflow**

Some dataflows have customisations built in, either to facilitate the task of the Data Provider, to assure the quality of the provided data or to better match the reporting requirements. The customisations are defined on collection level and depend on the Reporting Obligation you are responding to. In other words, when you create a new envelope in a collection, these customisations will be inherited and implemented automatically if they are available.

The basic steps of the Default Workflow described in the previous chapter also apply to these Customised Workflows, but there may be some more built-in features and options. Since these options depend on the Workflows and may differ, there are no generic instructions or examples, but often specific instructions are available and the steps to follow are intuitive.

The most common customisations are listed below.

- On-line questionnaires

Some of the Workflows allow you to enter your data on-line in a questionnaire format, rather than having to prepare your data locally and uploading it in the form of a database or spreadsheet e.g.

When creating an envelope where such customisations are available and activating your task, you will see a button leading to a new page with a questionnaire. An example is the Article 17 reporting, which has a high level of customisation. These questionnaires can be complemented with other customisations such as an automatic quality check on the data that was filled out.

Overview

Art17: Draft the delivery

Edit properties

History

## Art17: Draft the delivery

To deliver data select one of the following options:

Save as Zip

Statistics

1 Add an empty report and start filling it online with webforms.

General

Habitat

Species

2 Upload XML files generated from your local databases and (optionally) further edit them online with webforms. For information on the format see the [XML Format description](#) document.

Add Zip file

Add XML file

Add GIS file

3 Upload additional files (optional).

Add other file

- Automatic Quality Assurance

If there is a template available for reporting in the Data Dictionary, automatic quality checks can be included in CDR. This will trigger the assessment of your data quality against some of the basic parameters specified in the Data Dictionary templates, such as checking that mandatory fields have been populated, that no duplicate station identifiers have been provided, that codes exist within defined lists and that numeric values are within specified ranges.

These checks are run automatically when the data is uploaded to CDR (in the form of files or when saving a questionnaire e.g.). Sometimes, there will be a possibility to check the quality before uploading through a "validate" button.

The output of the quality will be logged so it can be reviewed. In most cases the result will be informative and does not require a resubmission of data.

## 2. Duplicates

This rule checks that all data are uniquely identified by a combination of CountryCode, NationalStationID, Year, AggregationPeriod and Determinand\_Nutrients. There should be no duplicate records within this combination.

The test was not passed. Duplicate records have been identified.

CountryCode	NationalStationID	Year	AggregationPeriod	Determinand_Nutrients
CZ	202	2005	Annual	CODCr
CZ	202	2005	Annual	CODCr

## 3. Valid Codes

This rule checks that the codes provided in the CountryCode, AggregationPeriod, Determinand\_Nutrients and Unit\_Nutrients fields exist in the relevant code list.

The test was not passed. Codes provided in the CountryCode, AggregationPeriod, Determinand\_Nutrients or Unit\_Nutrients fields that do not exist in the relevant code lists have been identified.

CountryCode	NationalStationID	Year	AggregationPeriod	Determinand_Nutrients	Unit_Nutrients
CZ	202	2005	Annual	Total Organic Carbon	kg/l C

## 4. Numeric Precision

This rule checks that the Year values are an integer in the range 1800 to 2005.

The test was not passed. Year values outside of the specified range have been identified.

NationalStationID	Year	AggregationPeriod	Determinand_Nutrients
202	2006	Annual	Dissolved Oxygen

## 5. Accuracy

This rule checks the accuracy of the Minimum, Mean and Maximum values - the Minimum value should be less than or equal to the Mean value which should in turn be less than or equal to the Maximum value.

The test was not passed. Minimum, Mean or Maximum values that may be incorrect have been identified.

NationalStationID	Year	AggregationPeriod	Determinand_Nutrients	Minimum	Mean	Maximum
202	2005	Annual	Nitrate	6.7	3.2462	1.1
202	2005	Annual	Oxygen Saturation	88.7	62.7	106.8

- Conversions

With a "Default Workflow", the data is stored on CDR in whatever format that it was uploaded in, e.g. text, spreadsheet, database etc. For some workflows, the DEM modules convert the format of the data you uploaded so it is stored in one common format, in most cases XML. This allows the data to be converted again and downloaded afterwards in various formats: the original format, XML, HTML, spreadsheet format, database etc.

- Automatic uploads through local Data Exchange Modules

For some workflows there are specific Data Exchange Modules or DEMs which are used to collect and prepare data on a local workstation. Typically, these are customised databases, sometimes also including data quality checks. For some workflows, these DEMs are customised to such a degree that they automatically connect to CDR and "push" or upload the data to CDR on regular time intervals. In such cases, CDR will contain data with names such as "dem.mdb". The Data Provider only need to keep his local Database up to date and no longer has to worry about accessing CDR and uploading it there.