

**UWWTD DATA EXCHANGE AND MANAGEMENT TOOL
(DEM-TOOL):
MANUAL AND GUIDANCE FOR REPORTING
UNDER THE URBAN WASTE WATER TREATMENT DIRECTIVE
(91/271/EEC)**

umweltbundesamt^U

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DISCLAIMER:

The informal document was drafted and compiled by the consultant working with the Commission services for DG Environment. This document serves as a technical guidance for reporting under the UWWTD Questionnaire-2009. However the document does not necessarily represent the views of the European Commission.

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ABBREVIATIONS

BOD	Biochemical Oxygen Demand
BWD	Bathing Water Directive (76/160/EEC)
CDR	Central Data Repository (ReportNet)
COD	Chemical Oxygen Demand
CSA	Catchment Area of Sensitive Area
DEM-tool	Data exchange and management tool
DD	Data dictionary
DP	Discharge Point
DS	Dry Solids
DWD	Drinking Water Directive (98/83/EC)
EC	European Commission
EEA	European Environment Agency
EIONET	European Environment Information and Observation Network
EPER	European Pollutant Emission Register
E-PRTR	European Pollutants Release and Transfer Register
ESTAT	Eurostat
EUWI	EU Water Initiative
GIS	Geographical Information System
GISCO	Geographic Information System of the Commission of the European Communities
GPS	Global Positioning System
IAS	Individual and other appropriate systems
ID	Identification number
IPPC	Directive 96/61/EC concerning integrated pollution prevention and control
JRC	Joint Research Centre
LSA	Less Sensitive Area
MS	Member State
NiD	Nitrates Directive (91/676/EEC)
NUTs	Nomenclature of Territorial Units for Statistics
ODBC	Open DataBase Connectivity
OECD/ESTAT-JQ	OECD/ EUROSTAT Joint Questionnaire on Inland Waters
RA	Receiving Area
RBD	River Basin District
RWB	Receiving Water Body
SA	Sensitive Area
SEIS	Shared Environmental Information System
SoE	State of the Environment (reporting)
TOC	Total Organic Carbon
TSS	Total Suspended Solids
UTM	Universal Transverse Mercator
UV	Ultra violet
UWWTD	Urban Waste Water Treatment Directive (91/271/EEC)
UWWTP	Urban Waste Water Treatment Plant
WFD	Water Framework Directive (2000/60/EC)
WISE	Water Information System for Europe

1 INTRODUCTION

1.1 *Urban Waste Water Treatment Directive (91/271/EEC)*

The Urban Waste Water Treatment Directive (UWWTD) is a key part of EU water policy and forms a minimum background for the programme of measures and river basin management plans for the implementation of the Water Framework Directive (2000/60/EC, also WFD)¹. Efficient protection of rivers, lakes and the coastal and marine waters against pollution and eutrophication as required by the WFD can only be achieved by collection and treatment of urban waste water as laid down in the UWWTD. UWWTD sets a clear timetable by which Member States (MS) are required to ensure that agglomerations are provided with systems for collecting urban waste water and for treating it to required standards. For EU-15 the deadline for complying with all aspects of the Directive was the end of 2005. For the new Member States transition periods for full implementation were negotiated case by case as part of the accession process.

UWWTD does not only require collection and treatment of urban waste water, but also imposes different reporting obligations (Situation report according to Article 16 and implementation programme according to Article 17). In addition, Article 15 of the Directive stipulates that discharges of waste water from urban waste water treatment plants must be subject to prior regulations and/ or specific authorisation and that such discharge must also be monitored in accordance with the specific provisions of the Directive. Information collected by the Member States shall be retained in the Member State and made available for the Commission within six months of receipt after request. Referring the EC Treaty article 10 the Commission may additionally ask more extensive information in order to obtain a more comprehensive picture of specific situations.

The data reported to the European Commission under this Directive serves multiple purposes. This includes the legal compliance check as well as the generation of a data set that can be used by other European Agencies (like Eurostat, JRC or the European Environment Agency) for statistical purposes, the assessment of the state of the environment or for research purposes. The data is also used for information of the public (e.g. via the WISE viewer). However, the main driver for data collection is the UWWTD and the structure of reporting follows clearly its principles.

1.2 *Principles of UWWTD*

The **basic elements for the implementation of the Directive** are

- i) the designation of receiving areas
- ii) the delineation of the agglomeration.

The size of an agglomeration and the sensitivity and type of water body (and its receiving area), which receives waste water discharges, define the treatment level requirements for the treatment plant(s) serving this agglomeration.

When legally and technically implementing the Directive one has to take into consideration the above mentioned criteria.

The reporting structure (and finally the legal compliance check) follows therefore a logical sequence starting from the agglomeration size to the receiving water body/ receiving area (see Figure 1 for the schematic presentation of this system).

¹ Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

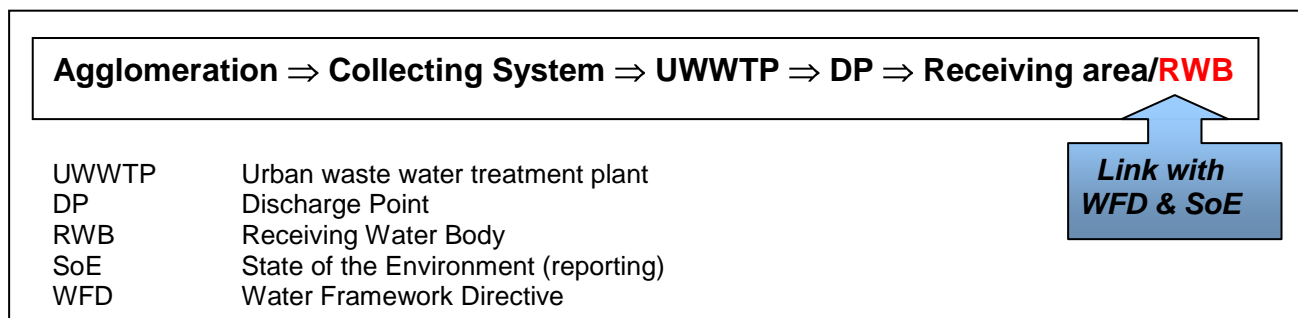


Figure 1: Principal pathway of urban waste water as foreseen by UWWTD

1.3 Purpose and structure of the manual

This manual deals with the following issues of the regular reporting exercise:

- Data model (following the logical structure of the Directive)
- Demonstration of links to other European regulations and reporting frameworks (following WISE and SEIS principles)
- The reporting process from the responsible national authority to the European Commission via Reportnet
- The use of the Data Exchange and Management Tool (DEM)

The overall objective of this manual is to support those involved in the collection and processing of data related to UWWTD – reporting and to facilitate and streamline data provision under UWWTD-reporting obligations.

The manual is based on the description of reporting data blocks (answering basic questions WHAT-WHY-HOW) followed by the list of parameters described in Annexes 1 and 2. It delivers a comprehensive description of the background and the principles of reporting under the UWWTD, explains the concepts, data model and structure of UWWTD reporting under Article 15 and includes guidance on the generation of the required GIS- and XML-files and the use of the UWWTD DEM-tool. A comprehensive data dictionary (Annex 7), focusing on data fields and the coding of parameters will help users to provide data in the required format; the glossary (Annex 11) provides explanations on terms and definitions.

1.4 Information requested by the UWWTD reporting exercise

In order to consider both, the need to harmonise comprehensive data collection for different EU-institutions, Directives and EU environmental policy in principle, a three-module approach was chosen for the UWWTD reporting exercises, starting from reporting year 2007 onwards.

The **first module** comprises the UWWTD core parameter blocks clearly representing the five main principles of implementation of the UWWTD. As already illustrated in chapter 1.2 the five main principles are:

- Inventory of receiving areas (GIS-data and tabular data)
- Inventory of and link between agglomerations, UWWTPs and discharge points. Via provision of geo-referenced data (coordinates) of the discharge points it is possible to allocate the waste water discharge to a receiving area. Based on the established link between receiving areas and waste water discharge it is furthermore possible to define the treatment requirements for each agglomeration.
- Basic information on collecting systems

- Treatment standards and treatment performance in UWWTPs serving agglomerations. Comparing the treatment standard in place with the one required by the receiving area and the size of the agglomeration allows the assessment of implementation of the UWWT Directive
- aggregated information at MS level (sewage sludge, waste water reuse)

The **second module** covers parameter blocks, which are either required in exceptional cases under Article 15 or which can be provided as additional information on voluntary basis by the Member States. The idea of this module is, to give Member States the possibility to provide additional information on UWWTD-issues, which are also required by several other institutions, e.g. discharged loads and volumes (principle of “report once, use many”). Parameters required in exceptional cases under Article 15 cover information on individual and appropriate systems (IAS) in case more than 5% of the generated load of an agglomeration is addressed through IAS.

The **third module** covers reporting under UWWTD Article 16 and UWWTD Article 17, giving Member States the opportunity to upload reports elaborated under Article 16 and/or Article 17 or to provide the link to the web-site, where these reports are published.

Figure 2 gives an overview of the structure of reporting under UWWTD. For a common understanding the parameters of the reporting system are grouped into nine data blocks.

Table 1 to Table 3 explain the needs of reporting blocks (and parameters) and reported information to be used by the various Services of the European Commission and other institutions.

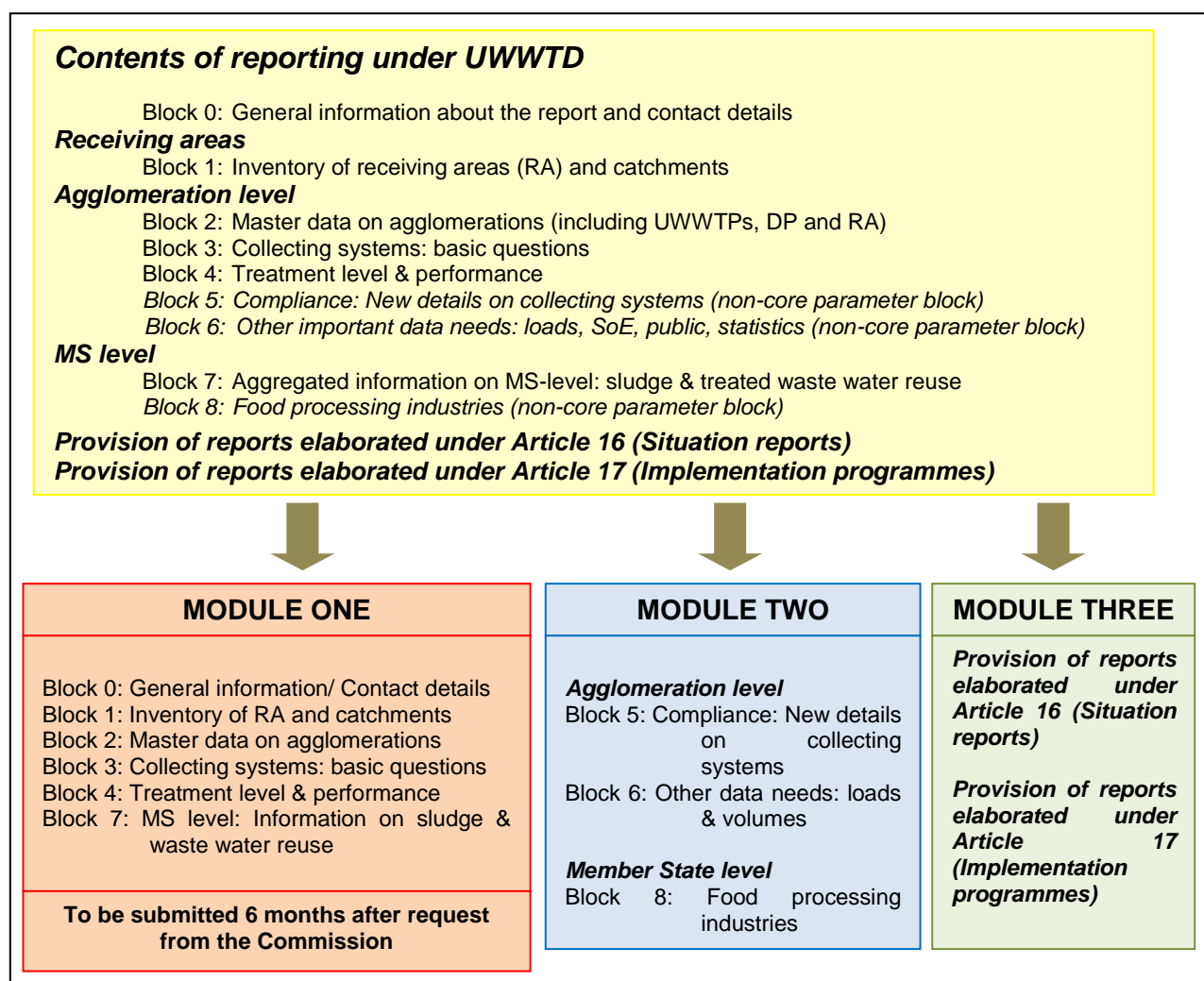


Figure 2. Structure of reporting under UWWTD

Table 1: Parameters of reporting under UWWTD, needed for other EU-institutions and/or for EU-Directives

Block	Title	Needs besides UWWTD (draft indication)
Block 0	General information about the report and contact details	UWWTD reporting
Block 1	Inventory of receiving areas and Art.5(4) areas	EEA/SoE, WFD-protected areas, GIS mapping for WISE, and link with other Directives (e.g., NiD, BWD, DWD, etc.)
Block 2	Master data on agglomerations (chain from agglomerations to receiving area and water body)	EEA /SoE, GIS mapping for WISE, WFD-pressures, IT-automatic processing
Block 3	Collecting systems	OECD/ESTAT-JQ, EEA/SoE, WFD-pressures (direct discharges),
Block 4	Treatment level & performance	OECD/ESTAT-JQ, WFD-pressures, EEA/SoE
Block 7	MS level: Information on sludge & waste water reuse	OECD/ESTAT-JQ, EEA/SoE, EUWI-water scarcity&reuse

Table 2: Indicated needs / overlapping issues from other EU - institutions

EU - Institution	Needs/ overlapping issues from other EU institutions
EEA	<ul style="list-style-type: none"> • Loads (all) - (see block 6) • Info on receiving areas + GIS layers (block 1) • Position (co-ordinates) of all objects and link/chain (block 2) • Detailed info on collecting systems and UWWTPs (blocks 3-5) • All info on MS level (blocks 7-8)
ESTAT	<p>OECD/ESTAT JQ: Biannual reporting frequency; data collection is based on voluntary basis Differences between UWWTD and OECD/ESTAT JQ (Tables 4-7) is the territorial coverage: UWWTD in principle covers >2,000 p.e., but not complete information on agglomerations <2,000 p.e.</p> <p>Potential for use of data reported via UWWTD questionnaire:</p> <ul style="list-style-type: none"> • All information needed at MS level (or NUTS2 – level for Regional Questionnaire) • agglomeration level data could be aggregated to the MS scale for agglomeration load, collection of waste water and discharged loads • use of NUTS codes to link with statistical data • pre-fill JQ with data reported under UWWTD before launching JQ

Table 3: Indicated needs / overlapping issues from other policies

EU – Policies	Needs/ overlapping issues from other EU – Policies
IPPC – Directive /ePRTR (information to the public)	<p>Reporting year 2007, deadline to report June 2008; frequency – once/year; Commission REGULATION (166/2006), All parameters are mandatory, except few optional</p> <p>Overlapping issues:</p> <ul style="list-style-type: none"> • UWWTPs >100,000 p.e. + Discharge loads of three parameters: N_{tot}, P_{tot} and TOC (i.e. $TOC=COD/3$) • Overlapping areas ~ 3-4% concerning number of facilities/plants and number of parameters • The only possible solution: To have the same ID for each facility (e.g. UWWTP) in Europe To introduce ID rules through WISE
Sewage Sludge Directive	<ul style="list-style-type: none"> • Art. 2: sludge from all sewage plants treating domestic or urban waste water + from septic tanks + from other sources² • Commission Decision 94/741/EC • Reporting period 3-year cycle, to report yearly values, the last period 2004-2006, deadline to report – 9 months after reporting period • Reporting through EIONET. • Partly overlapping areas – two parameters at MS level: quantities of sludge produced (t DS/yr) and quantities of sludge used in agriculture at national level (t DS/yr)
WFD	<ul style="list-style-type: none"> • In some sense all reporting issues under UWWTD could be used as a background information for programme of measures and river basin management plans for WFD especially preparing reports for WFD internally in the country

1.5 Ways of reporting under UWWTD in the context of WISE

The Water Information System for Europe (WISE)³ is a joint initiative of DG Environment, the European Environment Agency (EEA), Eurostat (ESTAT) and the Joint Research Centre (JRC) aiming at streamlining the collection and dissemination of information related to European water policy. The main data entry point for water-related information into WISE is provided by the EEA in terms of ReportNet (<http://www.eionet.europa.eu/rn>).

In brief, ReportNet provides Member States with:

- **Reporting obligation database (ROD):** explaining all environmental reporting requirements of different countries to different institutions

² this is wider than sludge generated in urban waste water treatment plants

³ Reporting for water Concept Document: Towards a shared water information system for Europe (WISE), Rome/ Brussels, 2003

- **Central Data Repository (CDR):** a folder for each country, where information on different environmental reporting can be up-loaded.
- **Data dictionaries:** explain in detail which parameters need to be reported and in which format
- **DEM – tools (Data exchange and management tools):** support countries to compile the requested data

From the year 2009 onwards reporting under UWWTD is elaborated by uploading data into ReportNet. All relevant documents supporting the reporting process under UWWTD will be available in CIRCA (EEA Circa interest group “[WISE Water Directives reporting](#)“, subfolder [UWWTD data request 2009](#)) (e.g. data dictionary, Excel lists, description of the xml-interface for data up-load,). The reporting process is planned in a way that Member States up-load their UWWTD-files (GIS-files, tabular data in terms of xml-files, additional documents and reports) into a CDR. After the up-load, several automatised QA/QC-processes are applied to the tabular data compiled in the xml-file. The results of QA/QC-processes are transmitted to the Member States, who can correct/ up-date their data accordingly and up-load the corrected xml-files again into the CDR.

Reporting under the UWWTD in the reference year 2007 was based on provision of GIS-files and tabular data in terms of csv-files (txt – data). From the reporting 2009 onwards the data exchange format for tabular data changes to xml. **Please note, that in the CDR, data is only accepted, when provided in the required xml-format.**

In order to create the required xml-files, the Member States have different possibilities:

- In case a Member State has national water information systems and/ or a central database on UWWTD – data, the Member States can elaborate queries in a way, to compile the data directly into the required xml-format. The generated xml-format can then be up-loaded to the CDR
- In case a Member State has national water information systems or a central database on UWWTD – data and the Member States has already elaborated queries, which compile data in the csv-format as required for UWWTD reporting 2007, then the csv-files can be imported into the UWWTD DEM–Tool. In the second step, data is exported from the DEM-Tool as xml-file.
- In case a Member State compiles data in Excel – files and/ or adds data manually via forms of the DEM-tool, the Excel-files need to be saved as csv-data. After up-load of csv-data into the DEM-tool, information can be manually added. In the last step the data is exported from the DEM-tool in terms of the required xml-format

Figure 3 summarizes the possibilities to create xml-files.

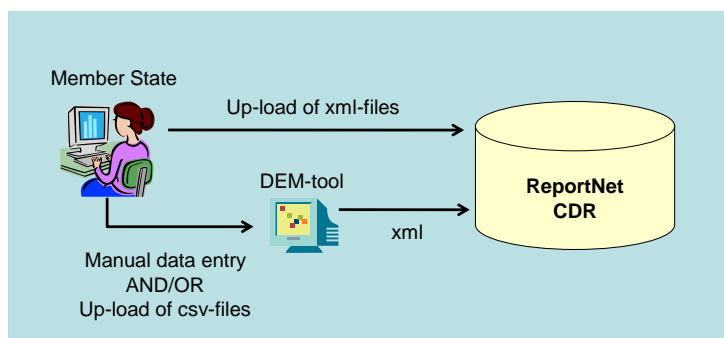


Figure 3. Different possibilities to create xml-files and to up-load them into ReportNet

2 DATA MODEL/ STRUCTURE OF THE DEM-TOOL AND PRINCIPLES OF DATA PROVISION

2.1 Conceptual Data Model behind the DEM-tool

There are several ways to implement the UWWTD as concerns two issues: (a) designation of sensitive areas, and (b) implementing the chain/link starting from agglomeration – urban waste water treatment plant(s) – discharge point(s) – receiving area(s).



The prerequisite for provision of data on agglomerations, UWWTPs and discharge points is that the inventory and mapping of receiving areas has been done BEFORE!

2.1.1 Designation of sensitive areas (UWWTD Art. 5 and Art. 6)

Concerning the implementation of Art. 5 and/or Art. 6 of UWWTD a Member State has the possibility to:

- a. Designate sensitive areas and catchment areas of sensitive areas and apply Art. 5(2-3) in these areas
- b. Designate sensitive areas and catchment areas of sensitive areas and apply Art. 5(4) in these areas
- c. Apply Art.5(8) + Art. 5(2-3): Implementation of treatment established under Art. 5(2-3) over all territory of the Member State
- d. Apply Art.5(8) + Art. 5(4): Implementation of treatment established under Art. 5(4) over all territory of the Member State
- e. Designation of Less Sensitive Areas (Art. 6)
- f. No designation of Sensitive or Less Sensitive Areas (all territory is Normal Area)

The reporting system takes all possibilities to implement Art.5 and/ or Art.6 of the UWWTD into account by providing:

- one form to indicate the method used for implementation of Art.(5)/ Art. (6) → Form 5 (chapter 9.5)
- one form each for the for data entry according to the different possibilities of implementation → Form 5a – 5e (chapter 9.5.1 - 9.5.5)

In the database of the reporting system, all the information concerning the receiving areas is stored in one table – “ReceivingAreas”. Depending on the methodology for implementation of Art. 5 and/ or Art. 6, different parameters are requested in the forms of the reporting system and accordingly, different parameter fields in the database are addressed by data input. Example 1 to Example 3 reflect how to provide information in case of different application of Art. 5 (and Art. 6).

Example 1: A Member State designated one lake and one river stretch as sensitive area (MSLK01, MSRI01) and one coastal area as less sensitive area (MSLS01). This approach refers to application of Art. 5(2,3) and Art. 6 (1) of the UWWTD-Directive. For the two sensitive areas catchment areas were designated (MSCM01 and MSCM02). Under the UWWTD the lake (MSLK01) was designated sensitive according to designation criterion a) – phosphorus. At the same time the lake had been designated under Directive 75/440/CEE. The river stretch (MSRI01) was designated as sensitive area applying Article 5(4). For the less sensitive area the Member State provided evidence, that the discharge of waste water does not adversely affect the environment as a result of morphology and hydrology. Table 4 gives an example, how the relevant parameters for this situation need to be provided. Please note that only data for designated sensitive areas, catchment areas of sensitive areas and less sensitive areas need to be provided. No information is required for normal area, as the entire area of a Member State, which is not covered by SA, CSA or LSA is automatically considered as normal area.

Table 4. Example on providing information in the template “Receiving Areas“ in case a Member State designated sensitive areas, catchment areas of sensitive areas and less sensitive areas

repCode	rcaState	rcaCode	rcaName	rcaType	rcaSensitiveArea	rcaDateArt58	rcaParameterN	rcaParameterP	rcaParameterOther	rcaDateDesignation	rcaANitro	rcaAPhos	rcaB	rcaC	rcaRelevantDirective	rcaMorphology	rcaHydrologie	rcaHydraulic	rcaAbsenceRisk	rcaDateArt54	rcaPlants	rcaPlantsCapacity	rcaNIncomingMeasured	rcaNIncomingCalculated	rcaNIncomingEstimated	rcaPIncomingMeasured	rcaPIncomingCalculated	rcaPIncomingEstimated	rcaNDischargedMeasured	rcaNDischargedCalculated	rcaNDischargedEstimated	rcaPDischargedMeasured	rcaPDischargedCalculated	rcaPDischargedEstimated	rcaGIS	rcaCIDOtherDirective	rcaCDateOtherDirective	rcaRemarks	rcaArt54Applied	rcaDateexported
MSR1	1	MSLK01	Area1	SA			N	N	N	22.06.94	N	Y	N	Y	75/440/CEE	N	N	N	N															MS_SA1	31.05.97		N	29.05.08		
MSR1	1	MSRI01	Area2	SA			N	N	N	30.06.98	Y	Y	N	N		N	N	N	N	31.12.01	75	800000	4000			970			880					MS_SA2			Y	29.05.08		
MSR1	1	MSCM01	Area3	CSA	MSLK01		N	N	N	22.06.94	N	Y	N	N		N	N	N	N														MS_CSA1			N	29.05.08			
MSR1	1	MSCM02	Area4	CSA	MSRI01		N	N	N	30.06.98	Y	Y	N	N		N	N	N	N	31.12.01	62	195000	1270			1360			2540					MS_CSA2			Y	29.05.08		
MSR1	1	MSLS01	Area5	LSA			N	N	N	31.12.02	N	N	N	N		Y	Y	N	N														MS_LS01			N	29.05.08			

Example 2: A Member State applies Art. 5(8) and Art. 5(4). Table 5 gives an example, how the relevant parameters for this situation need to be provided.

Table 5. Example on providing information in the template “Receiving Areas“ in case a Member State applies Art. 5(8) and 5(4)

repCode	rcaState	rcaCode	rcaName	rcaType	rcaSensitiveArea	rcaDateArt58	rcaParameterN	rcaParameterP	rcaParameterOther	rcaDateDesignation	rcaANitro	rcaAPhos	rcaB	rcaC	rcaRelevantDirective	rcaMorphology	rcaHydrologie	rcaHydraulic	rcaAbsenceRisk	rcaDateArt54	rcaPlants	rcaPlantsCapacity	rcaNIncomingMeasured	rcaNIncomingCalculated	rcaNIncomingEstimated	rcaPIncomingMeasured	rcaPIncomingCalculated	rcaPIncomingEstimated	rcaNDischargedMeasured	rcaNDischargedCalculated	rcaNDischargedEstimated	rcaPDischargedMeasured	rcaPDischargedCalculated	rcaPDischargedEstimated	rcaGIS	rcaCIDOtherDirective	rcaCDateOtherDirective	rcaRemarks	rcaArt54Applied	rcaDateexported
MSR2	1	MSArea01	Name	A54		17.06.93	N	N	N		N	N	N	N		N	N	N	N	12.06.94	370	2298500	8492			1442			2174			265							N	29.05.08

Example 3: A Member State applies Art. 5(8) and Art. 5(2,3). Table 6 gives an example, how the relevant parameters for this situation need to be provided.

Table 6. Example on providing information in the template “Receiving Areas“ in case a Member State applies Art. 5(8) and 5(2,3)

repCode	rcaState	rcaCode	rcaName	rcaType	rcaSensitiveArea	rcaDateArt58	rcaParameterN	rcaParameterP	rcaParameterOther	rcaDateDesignation	rcaANitro	rcaAPhos	rcaB	rcaC	rcaRelevantDirective	rcaMorphology	rcaHydrologie	rcaHydraulic	rcaAbsenceRisk	rcaDateArt54	rcaPlants	rcaPlantsCapacity	rcaNIncomingMeasured	rcaNIncomingCalculated	rcaNIncomingEstimated	rcaPIncomingMeasured	rcaPIncomingCalculated	rcaPIncomingEstimated	rcaNDischargedMeasured	rcaNDischargedCalculated	rcaNDischargedEstimated	rcaPDischargedMeasured	rcaPDischargedCalculated	rcaPDischargedEstimated	rcaGIS	rcaCIDOtherDirective	rcaCDateOtherDirective	rcaRemarks	rcaArt54Applied	rcaDateexported
MSR3	1	MSArea02	Name	A58		01.05.04	Y	Y	N	01.05.04	N	N	N	N		N	N	N	N																			N	29.05.08	

2.1.2 Implementation of the link agglomeration – UWWTP(s) – discharge point(s) – receiving area(s)

The second variance in implementing the directive originates from the organisation and management of treatment within the agglomerations. There are several options to implement treatment requirements and establish possible relations between agglomerations and UWWTPs, which are presented in the guidance document⁴. The main relationships include:

- **One agglomeration** is served by **one or no UWWTP** (relation 1:1)
- **One agglomeration** is served by **several UWWTPs** (relation 1:n)
- **Several agglomerations** are connected to **one UWWTP** (relation m:1)

The different situations are taken into account in the UWWTD DEM-tool by a clear and step-wise approach of linking agglomerations and UWWTPs.

In addition, the data model of the questionnaire meets the following requirements for linking the basic issues of UWWTD (agglomeration, UWWTP, DP, receiving area) and the issue “receiving water body” according to WFD:

- **One UWWTP** discharges waste water by **one** (relation 1:1) **or several discharge points** (relation 1:n)
- **Several discharge points** are located in **one receiving area** (relation n:1)
- **Several discharge points** are located in **one receiving water body** (relation n:1)

An overview of the possible links in UWWTD reporting is given in Figure 4.

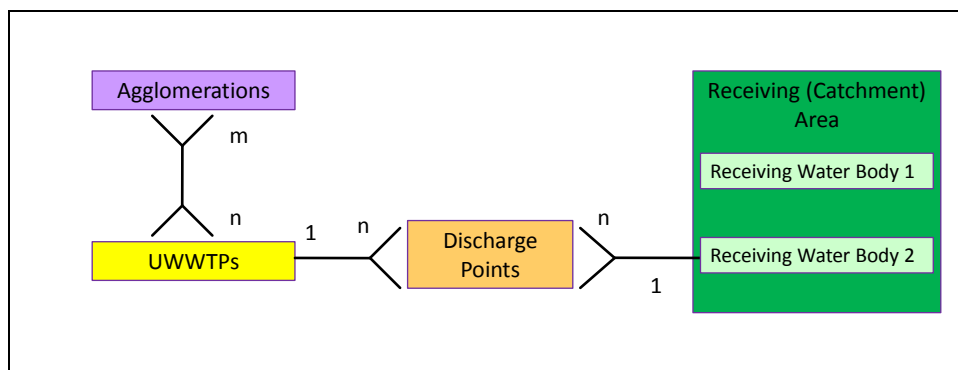


Figure 4: Conceptual data model for linking agglomeration – treatment plant(s) – discharge point(s) and receiving areas/water bodies in UWWTD reporting

For the purpose of the database in UWWTD Questionnaire information on agglomerations, UWWTPs and discharge points is stored in different tables, with one additional table to identify and store explicitly the m:n-relation between agglomerations and UWWTPs. In addition, for each agglomeration an indication is given concerning the fraction of the generated load (in %) entering the different waste water pathways/ UWWTPs/ Collecting systems without treatment.

Figure 5 gives an example for the complexity of the link between agglomeration, UWWTP and discharge point. Based on the example of Figure 5, Table 7 to Table 10 show, how the relevant parameters need to be provided in the different templates, in case the MS Excel template are used for data compilation:

⁴ Terms and definitions of the Urban Waste Water Treatment Directive (91/271/EEC), Brussels, 2007 available at the CIRCA:
http://forum.europa.eu.int/Members/irc/env/wfd/library?!=working_groups/u-uwatd-rep&vm=detailed&sb=Title-

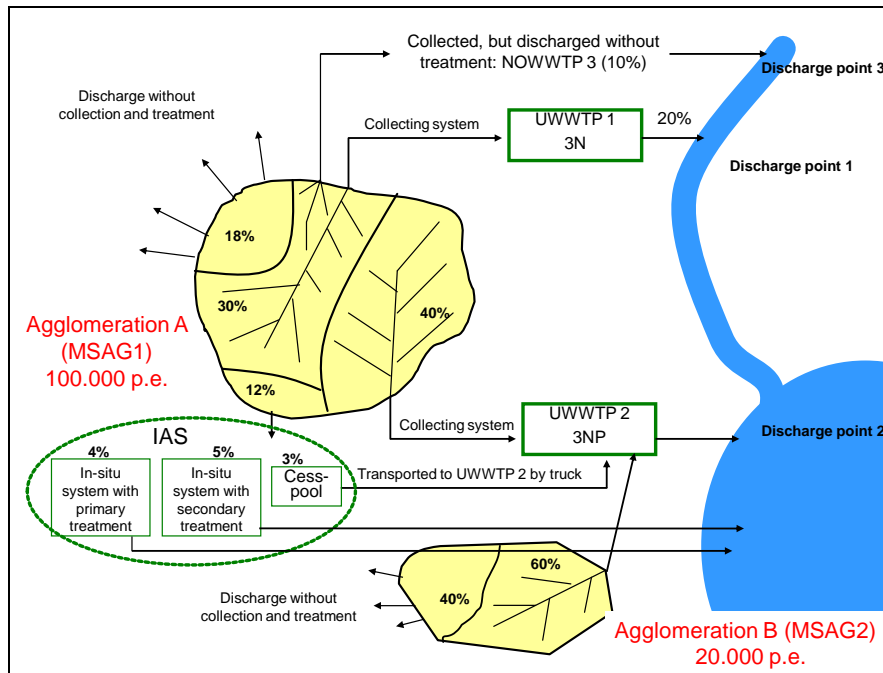


Figure 5: Example of the situation of wastewater treatment in two agglomerations

Information on agglomerations, the different wastewater pathways, connected UWWTPs and discharge points has to be provided in the following way:

Table 7: Template Agglomerations

aggState	repCode	aggCode	aggName	aggNUTS	aggLatitude	aggLongitude	aggGenerated	bigID	aggCalculation	aggChanges	aggChangesComment	aggPeriodOver	aggC1	aggMethodC1	aggC2	aggMethodC2	aggPercWithoutTreatment	aggMethodWithoutTreatment	aggPercPrimTreatment	aggPercSecTreatment	aggPercStringentTreatment
1	MSR3	MSAG1	Aggl A	MS	59,3	25,3	100000		meth. A	1	Expl.	31.12.05	70	C	12	C	18	C	4	5	
1	MSR3	MSAG2	AgglB	MS	59,5	25,7	20000		meth. A	0		31.12.05	60	C			40	C			

In the template *Agglomerations* each agglomeration is listed with its specific wastewater pathways: parameter *aggC1* indicates the fraction (in % of the total generated load of the agglomeration) collected in collecting system, parameter *aggC2* indicates the fraction addressed through IAS and parameter *aggPercWithoutTreatment* indicates the fraction not collected in collecting system and not addressed through IAS. These three parameters always have to add-up to 100%.

In case the fraction of the generated load of the agglomeration addressed through IAS exceeds 5%, the further pathways of IAS have to be indicated. If the IAS refer to in-situ systems with primary/ secondary/ more stringent treatment, the fraction entering these in-situ systems needs to be indicated in the template “Agglomerations” via parameter *aggPercPrimTreatment*, *aggPercSecTreatment* and/ or *aggPercStringentTreatment*.

Table 8: Template UWWTPs

uwwState	repCode	aggID	uwwCode	uwwName	uwwCollectingSystem	uwwDateClosing	uwwHistorie	uwwLatitude	uwwLongitude	uwwNUTS	uwwLoadEnteringUWWTP	uwwCapacity	uwwPrimaryTreatment	uwwSecondaryTreatment	uwwOtherTreatment	uwwNRemoval	uwwPRemoval	uwwUV	uwwChlorination
1	MSR3		MSUWWTP1	Name	ISCON			59,5	25,1	MS	80797	50000	Y	Y	Y	Y	N	N	N
1	MSR3		MSUWWTP2	Name	ISCON			59,3	24,0	MS	2275	60000	Y	Y	Y	Y	Y	N	N
1	MSR3	MSAG1	MSNOWWTP3	Name	NOTCON					MS			N	N	N	N	N	N	N

Template *UWWTPs* lists all “real” UWWTPs (indicated by “ISCON” in parameter field *uwwCollectingSystem*) and also IDs for collecting systems without treatment (indicated by “NOTCON” in parameter field *uwwCollectingSystem*). Please take into account that also a physically existing UWWTP, which is not yet in operation, should be counted as “NOTCON”. In the template the treatment type per UWWTP (parameters *uwwPrimaryTreatment*, *uwwSecondaryTreatment*,...) as well as the monitoring results (parameters not shown in Table 8: *uwwBOD5Perf*, *uwwCODPerf*, *uwwTSSPerf*, *uwwNTotPerf*, *uwwPTotPerf*, *uwwOtherPerf*) need to be given.

Please note also the difference between parameter *uwwLoadEnteringUWWTP* and parameter *aggC1* in template *Agglomeration*: Parameter *aggC1* is the % of generated load of an agglomeration collected in collecting system and connected to an UWWTP/ discharged without treatment. This value can differ from the actual (measured) incoming load (as requested by parameter *uwwLoadEnteringUWWTP*) to an UWWTP since Member States have the possibility (for practical reasons, see also chapter 1.1.3 of the concept paper) to overestimate the generated load of an agglomeration. The parameter in data block 3 indicates the connection ratio of the agglomeration to a particular UWWTP/ collecting system without treatment, whereas the load entering the UWWTP is the actual load (usually measured or calculated) in the reference year.

Table 9: Template UWWTPAgglo

repCode	aucUwwCode	aucUwwName	aucAggCode	aucAggName	aucPercEnteringUWWTP	aucMethodPercEnteringUWWTP	aucPercC2T	aucDateexported
MSR3	MSUWWTP1	Name	MSAG1	Name	20	C		29.05.08
MSR3	MSUWWTP2	Name	MSAG1	Name	40	C	3	29.05.08
MSR3	MSNOWWTP3	Name	MSAG1	Name	10	C		29.05.08
MSR3	MSUWWTP2	Name	MSAG2	Name	60	C		29.05.08

In template “UWWTPAgglo” the link between UWWTPs/ Collecting systems without treatment is established. Parameter *aucPercEnteringUWWTP* refers to the fraction of the generated load of an agglomeration (in %) collected in collecting system and entering the UWWTP/ Collecting system without treatment. Parameter *aucPercC2T* refers to the fraction

of the generated load (in %), which is addressed through IAS (e.g. cesspools) and which enters an UWWTP for instance via transport by trucks.

Table 10: Template Discharge points

dcpState	repID	uwwID	dcpCode	dcpName	dcpNuts	dcpLatitude	dcpLongitude	dcpWaterBodyType	dcpIrrigation	dcpTypeOfReceivingArea	rcaID	dcpSurfaceWaters	dcpWaterbodyID	dcpNotAffect	dcpMSPProvide	dcpCOM/Accept	dcpGroundWater	dcpReceivingWater	dcpWFDSUBUnit	dcpWFDRBD
1	MSR3	MSUWWTP1	MSDP1	Name	MS	59,5	25,6	FW		NA		1	A123458							
1	MSR3	MSUWWTP2	MSDP2	Name	MS	59,3	24,0	CW		SA	MSCA04	1	A128757							
1	MSR3	MSNOWWTP3	MSDP3	Name	MS	59,1	25,1	FW		SA	MSRI01	1	A125893							

In the template “Discharge points” one discharge point is connected to each UWWTP and to each collecting system without treatment. In addition the discharge points are linked to the receiving area via parameter rcaID.

In order to establish the link between UWWTD and WFD it is important to report at least one WFD-unit, the discharge point is located into (either parameter dcpWaterbodyID or dcpGroundWater or dcpReceivingWater or dcpWFDSUBUnit or dcpWFDRBD).

Please note that no discharge point has to be defined for the fraction of the generated load not collected in collecting system and not addressed through IAS.

2.2 Structure of the UWWTD DEM - Tool

Figure 6 reflects the schematic logical structure of the forms of the DEM-Tool. The schema depicts the topics of each form and the structural order of navigation. Continuous boxes and arrows represent the core parameter blocks, dotted boxes and arrows represent the non-core data blocks. They are provided in the DEM-Tool, but data input occurs on voluntary basis.

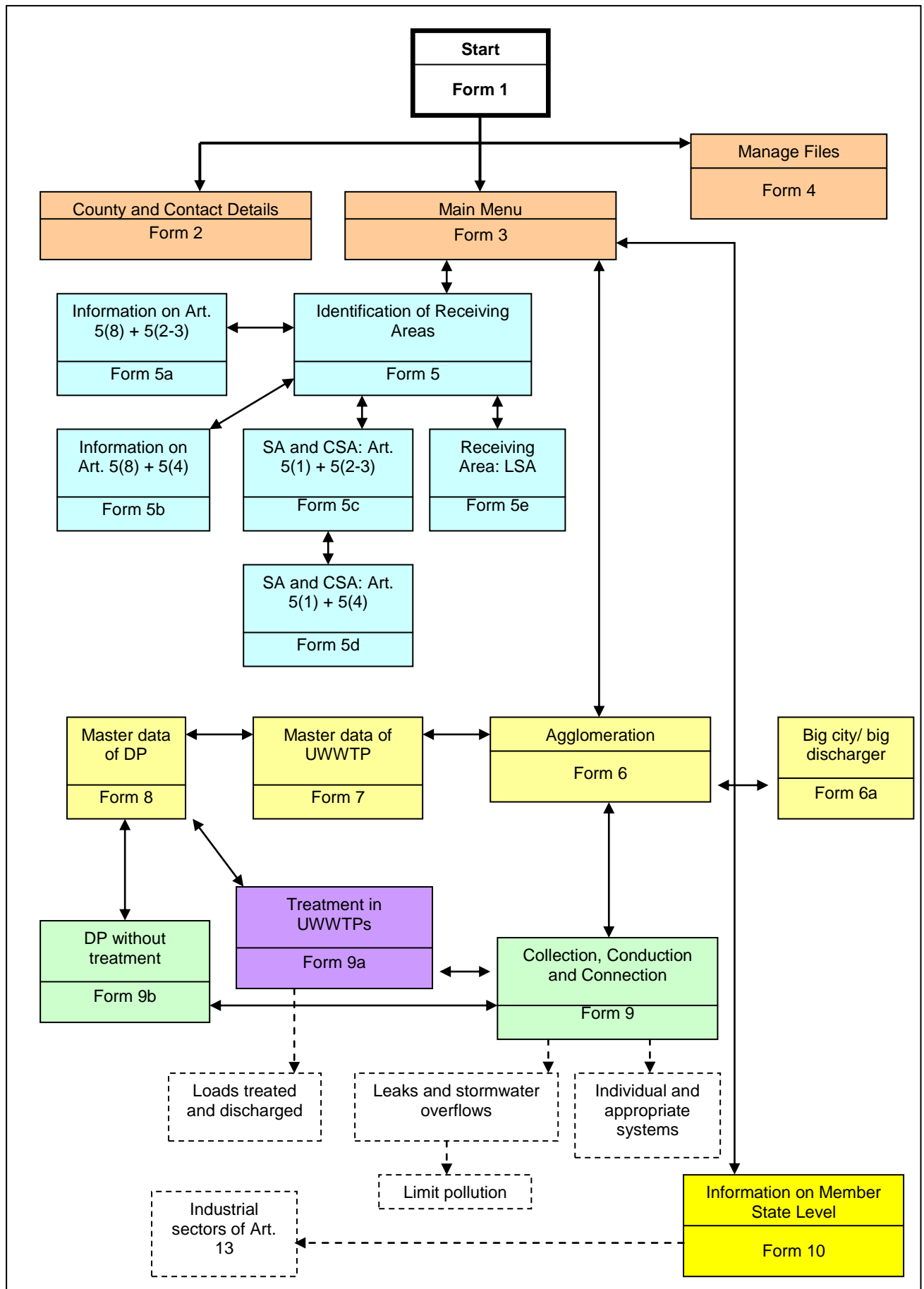


Figure 6: Navigation through the forms of the UWWTD DEM-Tool

3 USE OF THE UWWTD DEM-Tool

3.1 System requirements

- MS Access version 2000 (or higher) with standard VBA-libraries
- Windows XP SP2 and all further developments of these Windows versions

3.2 Download from EEA Circa and use with or without installation on the PC

The UWWTD DEM-Tool is available for download for Member States from EEA Circa interest group “[WISE Water Directives reporting](#)“, subfolder [UWWTD data request 2009](#):, folder IT reporting tool (data exchange and management tools). The files available are given in Figure 7.

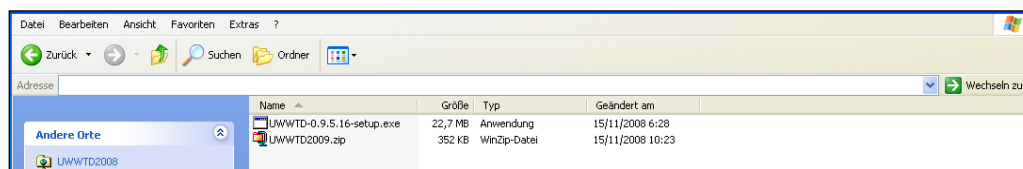


Figure 7. Files available for the UWWTD DEM-Tool in Circa

There are two different options to use the UWWTD DEM-Tool. In contrast to UWWTD Questionnaire 2007, no link between the application and the database has to be established manually in both cases.

3.2.1 Without installation

The UWWTD DEM-Tool can be used without installation of the programme on your PC. In this case it is required to download the zip.-file UWWTD2009.zip from Circa (see Figure 7).

As the UWWTD DEM-Tool requires the software Microsoft.NET Framework 2.0, use of the application without installation is only possible in case this software is already installed on your PC. If the software is not available on your PC, please install the UWWTD DEM-Tool on your PC (see chapter 3.2.2).

The **first step** to access the UWWTD DEM-Tool is to download the .zip – file to your PC and to store it in a local device. As the UWWTD DEM-Tool is a single user application, storage at a public device may cause severe problems in the execution of the application. The **second step** includes the extraction of the .zip – file. All documents needed for the correct operation of the UWWTD DEM-Tool are included in the zip-file. Figure 8 gives an overview of the zip-file and the included documents.

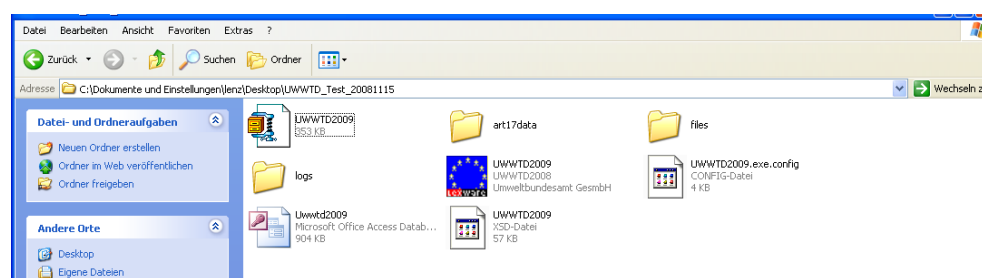


Figure 8. Documents required for the UWWTD DEM-Tool (extracted from the zip-file in the left upper corner)

Explanation of folders and documents:

- Folder **art17data**: folder to store reports elaborated under Art. 17 (Implementation programs)
- Folder **files**: Folder contains the manual file, annex1
- Folder **logs**: Folder to store the import and export error logs
- Button **UWWTD2009**: execution file: clicking on this document starts the application
- Document **UWWTD2009.exe.config**: configuration file
- Database **Uwwtd2009**: The database where the data is stored
- Document **UWWTD2009**: xsd – file, gives the xsd - schema of the data collection

Please take care that no documents compiled on the zip-file are deleted, as ALL components are required for correct operation of the application.

In order to start the application, please click on the button **UWWTD2009**. The data provided via the forms of the application are directly stored in the database UWWTD2009 and in the respective folders (e.g. folder **art17data**).

3.2.2 With installation

The installation of the application bears the advantage that a) the Microsoft.NET Framework 2.0 Service Pack is installed automatically during installation of the UWWTD DEM-Tool and b) important components of the UWWTD DEM-Tool cannot be deleted by mistake. For this reason the use of application after installation is more secure than without installation. Please take into account that Administrator rights are required to install any application on your PC!

In case of installation it is required to download the setup.exe – file from Circa (see Figure 7). When clicking on the button UWWTD Setup after the download, installation of the programme starts. Please select the designation folder (this has to be a local device!), where the application should be stored (see Figure 9).

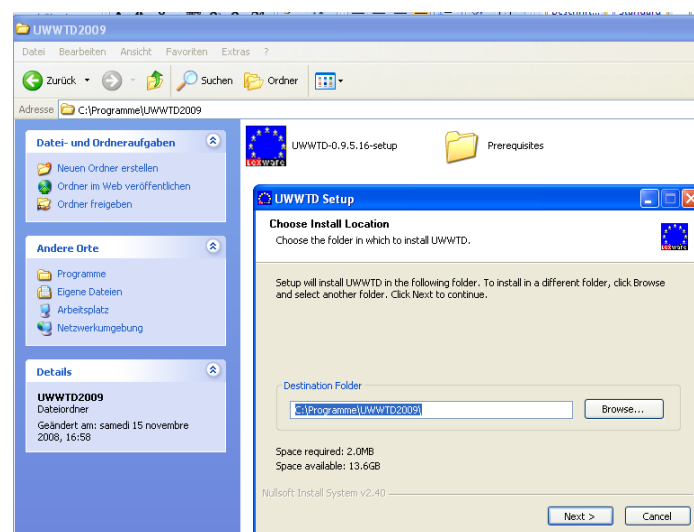


Figure 9: Installation procedure of the UWWTD DEM-Tool



Figure 10: Windows menu

After installation, the UWWTDD DEM-Tool is available in the windows – menu (Figure 10). The following components are available in the folder, where the programme was stored (Figure 11):

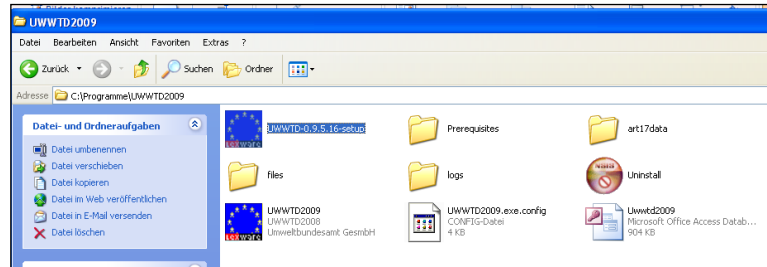


Figure 11: Components available after installation of the UWWTDD DEM-Tool

Explanation of folders and documents:

- Folder **Prerequisites**: comprises components required for the installation process
- Folder **art17data**: folder to store reports elaborated under Art. 17 (Implementation programs)
- Folder **files**: Folder includes the manual, the data dictionary and further supporting documents
- Folder **logs**: Folder to store the import and export error logs
- Button **Uninstall**: Clicking on this button de-installs all components except the database UWWTDD2009
- Button **UWWTDD2009**: execution file: clicking on this document starts the application
- Document **UWWTDD2009.exe.config**: configuration file
- Database **Uwwtdd2009**: The database where the data is stored

In case the UWWTDD DEM-Tool is installed on a PC, every user of the PC can work with the application – even when accessing the PC with a different Log-in than the person, who installed the application.

4 UP-LOAD OF REPORTS UNDER ARTICLE 16 AND ARTICLE 17

The DEM-Tool offers Member States the possibility to manage not only information requested under Article 15, but also reports elaborated under Article 16 (Situation report) and Article 17 (Implementation programmes). Via the form “Main menu” the relevant sections can be driven.

4.1 Management of Reports under Article 17 (Implementation programme)

The zip-file UWWTD2009 comprises one folder (*art17data*) providing an Excel - template to report data under Article 17 of UWWTD. This template was drafted according to the Commission Decision 93/481/EEC and clearly represents its structure. The template was only amended for the parameter “discharge on land” in order to reflect a common situation especially in southern EU Member States.

In order to report information under Article 17:

- click on the button **Get Forms for Art17 Data** to obtain the Excel-table for the Article 17 – report and save the template at any directory of your PC, **OR**
- Open the list directly from the network Directory and provide the data

Figure 12. Form in the DEM-Tool for provision of Article 17 - reports

Class of agglomeration	from 2 to 10 000 p.e.		from 10 to 10 000 p.e.		from 10 to 100 000 p.e.		More than 100 000 p.e.		Total for all classes	
	No. ¹⁾	t.p.e. ²⁾	No.	t.p.e.	No.	t.p.e.	No.	t.p.e.	No.	t.p.e.
Year										

Figure 13. One sheet of the Article 17 - template

After finalisation of data provision to the Excel-forms, please click on the button **Upload Art17 Data Document**. In addition, the possibility to provide a link to a web-site, where the Article 17 – report of your country is published, is provided.

4.2 Management of Reports under Article 16 (Situation report)

Figure 14. Form in the DEM-tool for provision of Article 16 – reports

In this section the Member States can either upload their reports as word- or pdf- files and/ or provide the link to a web-site, where the Article 16 – report is published.

5 DATA IMPORT AND VALIDATION

As mentioned in chapter 1.5 the UWWTD DEM-Tool allows to import both, csv-data (tab-delimited txt-files as required for UWWTD Questionnaire 2007) as well as xml – data (see Figure 15). The validation of data is identical for both formats and also identical to the QA/QC-checks elaborated for xml-upload into ReportNet.



Figure 15: Form of the DEM-Tool organizing csv- and xml- import/ export

5.1 Import of csv-data

The import of csv-data to the UWWTD DEM-tool is identical to the import to UWWTD Questionnaire 2007. **The Excel-files have to be saved as txt-files with TAB as field separator and CR as record delimiters.**

5.1.1 Preparation of files

In case of import of csv – data, the import-files are identical to those required for UWWTD Questionnaire 2007 (txt. – files, with TAB as field separator and CR as record delimiters). The names of the individual .txt-files have to be exactly as shown in the following:

- **Reporter.txt:** Data on the selected country. Only 1 dataset per country.
- **ReportPeriod.txt:** Data on the reporting period. Contains at least 1 data set.
- **Contact.txt:** Data on the contact person(s). Contains at least 1 data set
- **ReceivingAreas.txt:** List of receiving areas
- **Agglomerations.txt:** List of agglomerations, including data on collecting systems
- **UWWTPs.txt:** List of UWWTPs, including treatment data
- **UwwtpAgglo.txt:** Joins Agglomerations and UWWTPs and includes data on connection rates of agglomerations to UWWTPs
- **DischargePoints.txt:** Discharge point data
- **MSLevel.txt:** Data on sewage sludge and waste water reuse
- **Industries.txt:** Proposed data for future reporting: List of food processing industries

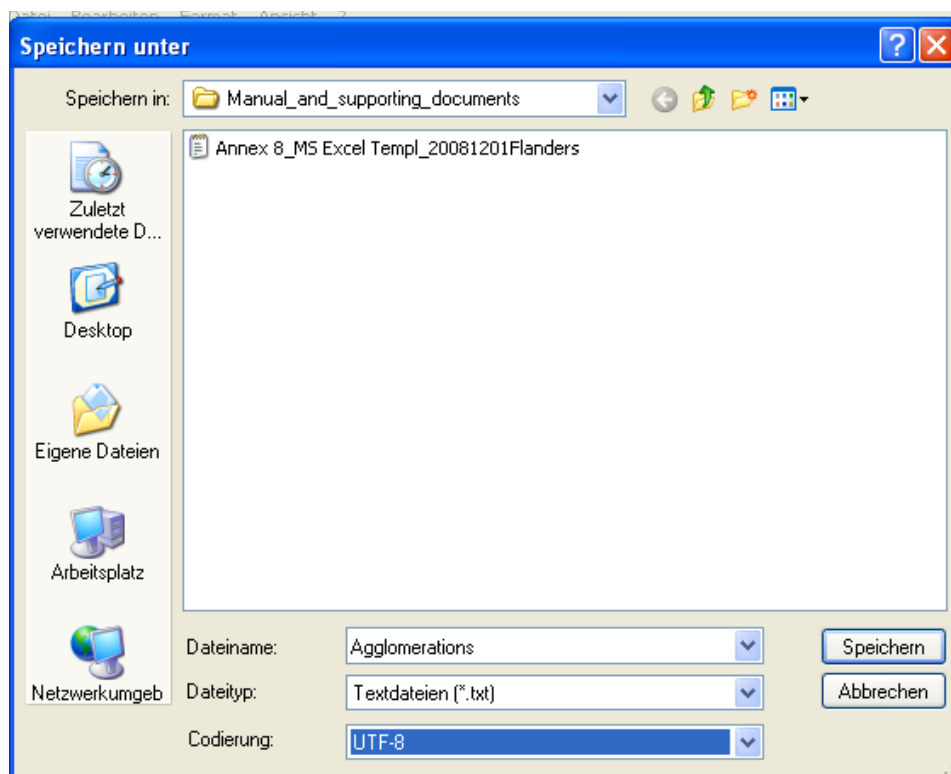
From the technical point of view the minimum data set for import comprises the files marked in bold. Missing information may be completed by manual input with the application.

5.1.2 Work steps (How to import csv - data)

First step: Data on receiving areas, agglomerations, etc. has to be organised and prepared in terms of .txt - import files. Annex 8 of the manual provides the MS Excel Template, which serves as support for preparing the relevant .txt-files. The MS Excel Template comprises ten work sheets, named according to the import files (see chapter 5.1.1) with all parameters related to the single issues. According to the Data Dictionary (field type, size,..) data has to be provided in the MS Excel template. The Data Dictionary (see Annex 6) gives guidance to MS to produce the import files out of their already existing databases or to edit them manually. For each of the import files a table in the data dictionary exists, which gives the correct order of fields and describes the field types.

Second step: the heading of each table (=first line of each table) in the work sheets has to be deleted.

Third step: Each work sheet of the MS Excel template has to be saved separately as TAB-delimited .txt-file and with the correct name (e.g. the MS Excel work sheet 'Agglomerations' has to be saved as file 'Agglomerations.txt'). To save .xls-files as .txt-files, please choose the type "TAB-delimited txt" as file type and the coding "UTF-8" during the saving procedure.



Fourth step: Import the data (Figure 16). In contrast to UWWTD Questionnaire 2007 information on Country and Contact details need not be filled manually before the import.

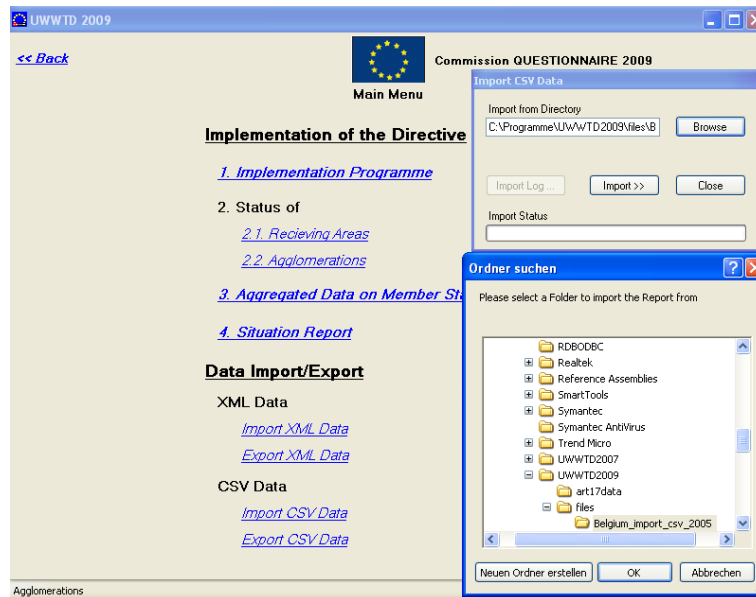
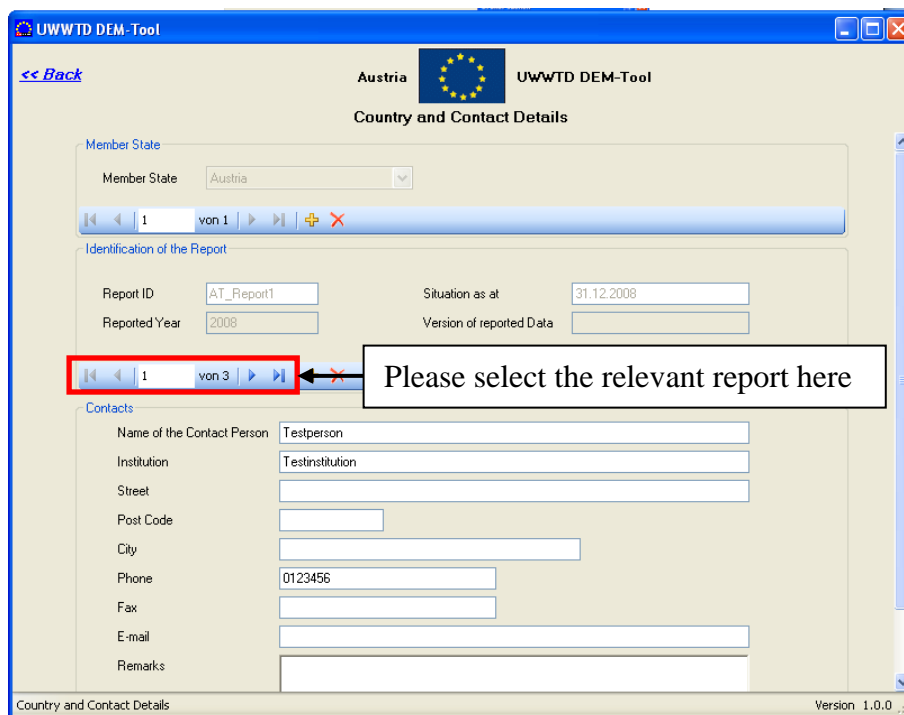


Figure 16: Select the relevant csv-files for data import from the directory

Fifth step: After successful data import, please do not directly access the imported data, but go back to the form *Country and Contact Details*. In case the database contains more than one dataset (= more than one report), please select the imported one and only then access the data on receiving areas, agglomerations,...

This work step is required to distinctly select the information to be displayed in the forms of the application.



5.2 Import of xml - data

5.2.1 Preparation of files

In case of import of xml – data, the import-file requires the structure of the xml – schema comprising data as described in the data dictionary.

Element	Value
rptDateexported	2008-11-10T16:28:17.8244507+01:00
Reporter	
ReportPeriod	
Contacts	
ReceivingAreas	
Agglomerations	
BigCityDischargers	
UWWTPs	
UwwtpAgglos	
DischargePoints	
Industries	
MSLevel	

Figure 17: xml – schema of the UWWTD DEM-Tool

Element	Value
rptDateexported	2008-11-10T16:28:17.8244507+01:00
Reporter	
rptMStateKey	PT
rptMStateValue	Portugal
rptCulture	de-AT
rptFormRA	6
ReportPeriod	
Contacts	
ReceivingAreas	
Agglomerations	
BigCityDischargers	
UWWTPs	
UwwtpAgglos	
DischargePoints	
Industries	
MSLevel	

Figure 18: xml – schema of the UWWTD DEM-Tool

5.3 (Import) Data validation

Validation of data during the Import – process (i.e. after clicking the *Import* – button) is elaborated as a two-phase approach. An overview of all automated QA/QC-processes is given in Table 11.

- The first check comprises a xml-schema validation, covering those parameters, which need to be provided by every Member State (no matter which way of implementing the Directive was chosen and whether transitional periods have expired or not). The validation checks, whether the parameter is provided at all and whether it conforms the required syntax (data type, field length) as indicated in the data dictionary. In Table 11 these data checks are indicated in column *xml-schema: required/ optional* as “required”

For the parameter block *Industries* and *BigCityDischargers* “required” in Table 11 does not mean that an industry or a big city/ big discharger needs to be provided. Instead, it has to be interpreted in that way, that – in case a the name of a big city or any parameter of an industry is reported, it is required to provide an ID to this big city/ big discharger or to the industry

- The second check covers additional data quality checks investigating whether the information conforms the data model (e.g. check that no double IDs are generated, check that the IDs start with the country-prefix, check whether parameters conform the list of values (LOV) in case required, check whether link between agglomerations/ UWWTPs and discharge points is provided). These data checks are summarized in the column “Additional automated QA/QC-checks”. They are not defined via the xml-format, but are additionally programmed in the UWWTD DEM-Tool.

Table 11. Automated QA/QC-processes elaborated during data import and export

UWWTD_Table	UWWTD_element	xml-schema: required/ optional	Additional automated QA/QC-checks
Reporter	rptMStateKey	required	LOV-check: Value has to be from LOV MS (i.e. AT or BE or BG or CY,...)
Reporter	rptMStateValue	optional	
Reporter	rptCulture	optional	Check, whether parameter is provided
Reporter	rptFormRA	optional	
ReportPeriod	repCode	required	Check whether the ReportCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
ReportPeriod	repVersion	optional	
ReportPeriod	repSituationAt	required	
ReportPeriod	repReportedPeriod	optional	
Contacts	conName	required	
Contacts	conInstitution	required	
Contacts	conStreet	optional	
Contacts	conZIP	optional	
Contacts	conCity	optional	
Contacts	conPhone	optional	Check, whether parameter is provided
Contacts	conFax	optional	
Contacts	conEmail	optional	
Contacts	conRemarks	optional	
ReceivingAreas	rcaState	required	LOV-check: value has to be from LOV STAT (i.e."0" or "1")
ReceivingAreas	rcaCode	required	- Check whether the rcaCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE) - Check whether the ID is double reported (i.e. whether the ID already exists for this report in this table, an error message occurs)
ReceivingAreas	rcaName	required	
ReceivingAreas	rcaType	required	LOV-check: value has to be from LOV RATTYP (i.e. A54 or A58 or CSA or LSA or NA or SA)
ReceivingAreas	rcaSensitiveArea	optional	In case parameter <i>rcaType</i> is CSA, check whether this parameter is provided
ReceivingAreas	rcaDateArt58	optional	
ReceivingAreas	rcaParameterN	optional	
ReceivingAreas	rcaParameterP	optional	
ReceivingAreas	rcaParameterOther	optional	
ReceivingAreas	rcaDateDesignation	optional	
ReceivingAreas	rcaANitro	optional	
ReceivingAreas	rcaAPhos	optional	
ReceivingAreas	rcaB	optional	
ReceivingAreas	rcaC	optional	
ReceivingAreas	rcaCRelevantDirective	optional	
ReceivingAreas	rcaMorphology	optional	
ReceivingAreas	rcaHydrologie	optional	
ReceivingAreas	rcaHydraulic	optional	
ReceivingAreas	rcaAbsenceRisk	optional	
ReceivingAreas	rcaDateArt54	optional	
ReceivingAreas	rcaPlants	optional	
ReceivingAreas	rcaPlantsCapacity	optional	
ReceivingAreas	rcaNIncomingMeasured	optional	
ReceivingAreas	rcaNIncomingCalculated	optional	
ReceivingAreas	rcaNIncomingEstimated	optional	
ReceivingAreas	rcaPIncomingMeasured	optional	
ReceivingAreas	rcaPIncomingCalculated	optional	
ReceivingAreas	rcaPIncomingEstimated	optional	
ReceivingAreas	rcaNDischargedMeasured	optional	
ReceivingAreas	rcaNDischargedCalculated	optional	
ReceivingAreas	rcaNDischargedEstimated	optional	
ReceivingAreas	rcaPDischargedMeasured	optional	
ReceivingAreas	rcaPDischargedCalculated	optional	
ReceivingAreas	rcaPDischargedEstimated	optional	
ReceivingAreas	rcaGIS	optional	
ReceivingAreas	rcaCIDOtherDirective	optional	

UWWTD_Table	UWWTD_element	xml-schema: required/ optional	Additional automated QA/QC-checks
ReceivingAreas	rcaCDateOtherDirective	optional	
ReceivingAreas	rcaRemarks	optional	
ReceivingAreas	rcaArt54Applied	optional	
Agglomerations	aggState	required	LOV-check: value has to be from LOV STAT (i.e."0" or "1")
Agglomerations	aggCode	required	<ul style="list-style-type: none"> - Check whether the aggCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE) - Check whether the ID is double reported (i.e. whether the ID already exists for this report in this table, an error message occurs) - Check whether the ID of the agglomeration is again listed in the template UWWTPAgglo (this is required to establish the link between agglomeration and UWWTP). In cases where 100% of the generated load of the agglomeration are not collected in collecting system and not addressed through IAS, it is ok that there is no link between agglomeration and UWWTP
Agglomerations	aggName	optional	Check, whether parameter is provided
Agglomerations	aggNUTS	optional	Check, whether parameter is provided
Agglomerations	aggLatitude	optional	Check, whether parameter is provided
Agglomerations	aggLongitude	optional	Check, whether parameter is provided
Agglomerations	aggGenerated	required	
Agglomerations	bigID	optional	
Agglomerations	aggCalculation	optional	Check, whether parameter is provided
Agglomerations	aggChanges	optional	Check, whether parameter is provided
Agglomerations	aggChangesComment	optional	Check, whether this parameter is provided in case parameter <i>aggChangesComment</i> is filled with "Yes"
Agglomerations	aggPeriodOver	required	
Agglomerations	aggC1	optional	
Agglomerations	aggMethodC1	optional	LOV-check: value has to be from LOV COLLDET (i.e. C or E)
Agglomerations	aggC2	optional	
Agglomerations	aggMethodC2	optional	LOV-check: value has to be from LOV COLLDET (i.e. C or E)
Agglomerations	aggPercWithoutTreatment	optional	
Agglomerations	aggMethodWithoutTreatment	optional	LOV-check: value has to be from LOV COLLDET (i.e. C or E)
Agglomerations	aggPercPrimTreatment	optional	
Agglomerations	aggPercSecTreatment	optional	
Agglomerations	aggPercStringentTreatment	optional	
Agglomerations	aggHaveRegistrationSystem	optional	
Agglomerations	aggExistMaintenancePlan	optional	
Agglomerations	aggPressureTest	optional	
Agglomerations	aggVideoInspections	optional	
Agglomerations	aggOtherMeasures	optional	
Agglomerations	aggExplanationOther	optional	
Agglomerations	aggSewageNetwork	optional	
Agglomerations	aggBestTechnicalKnowledge	optional	
Agglomerations	aggDilutionRates	optional	
Agglomerations	aggCapacity	optional	
Agglomerations	aggAccOverflows	optional	
Agglomerations	aggAccOverflowNumber	optional	
Agglomerations	aggSewerOverflows_m3	optional	
Agglomerations	aggSewerOverflows_pe	optional	
Agglomerations	aggRemarks	optional	
Agglomerations	aggForecast	optional	
BigCityDischargers	bigCityID	required	Check whether the bigCityID starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
BigCityDischargers	bigCountryCode	required	Check whether the value is identical to parameter "rptMStateKey"
BigCityDischargers	bigCity	required	

UWWTD_Table	UWWTD_element	xml-schema: required/ optional	Additional automated QA/QC-checks
UWWTPs	uwwState	required	LOV-check: value has to be from LOV STAT (i.e. "0" or "1")
UWWTPs	aggID	optional	
UWWTPs	uwwCode	required	<ul style="list-style-type: none"> - Check whether the uwwCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g. AT, BE) - Check whether the ID is double reported (i.e. whether the ID already exists for this report in this table, an error message occurs) - check whether the ID is again listed in the template "DischargePoints" (this is required in order to establish the link between UWWTPs and discharge points)
UWWTPs	uwwName	optional	
UWWTPs	uwwCollectingSystem	required	LOV-check: value has to be from LOV UWWTP (i.e. ISCON or NOTCON)
UWWTPs	uwwDateClosing	optional	
UWWTPs	uwwHistorie	optional	
UWWTPs	uwwLatitude	optional	Check, whether parameter is provided
UWWTPs	uwwLongitude	optional	Check, whether parameter is provided
UWWTPs	uwwNUTS	optional	
UWWTPs	uwwLoadEnteringUWWTP	optional	
UWWTPs	uwwCapacity	optional	
UWWTPs	uwwPrimaryTreatment	optional	
UWWTPs	uwwSecondaryTreatment	optional	
UWWTPs	uwwOtherTreatment	optional	
UWWTPs	uwwNRemoval	optional	
UWWTPs	uwwPRemoval	optional	
UWWTPs	uwwUV	optional	
UWWTPs	uwwChlorination	optional	
UWWTPs	uwwOzonation	optional	
UWWTPs	uwwSandFiltration	optional	
UWWTPs	uwwMicroFiltration	optional	
UWWTPs	uwwOther	optional	
UWWTPs	uwwSpecification	optional	
UWWTPs	uwwBOD5Perf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV BOD5 (i.e. P or F)
UWWTPs	uwwCODPerf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV PASS (i.e. P or F or NR)
UWWTPs	uwwTSSPerf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV PASS (i.e. P or F or NR)
UWWTPs	uwwNTotPerf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV PASS (i.e. P or F or NR)
UWWTPs	uwwPTotPerf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV PASS (i.e. P or F or NR)
UWWTPs	uwwOtherPerf	optional	LOV-check: In case the parameter was provided, the value has to be from LOV PASS (i.e. P or F or NR)
UWWTPs	uwwBadPerformance	optional	
UWWTPs	uwwAccidents	optional	
UWWTPs	uwwBadDesign	optional	
UWWTPs	uwwInformation	optional	
UWWTPs	uwwBODIncomingMeasured	optional	
UWWTPs	uwwBODIncomingCalculated	optional	
UWWTPs	uwwBODIncomingEstimated	optional	
UWWTPs	uwwCODIncomingMeasured	optional	
UWWTPs	uwwCODIncomingCalculated	optional	
UWWTPs	uwwCODIncomingEstimated	optional	
UWWTPs	uwwNIncomingMeasured	optional	
UWWTPs	uwwNIncomingCalculated	optional	
UWWTPs	uwwNIncomingEstimated	optional	
UWWTPs	uwwPIncomingMeasured	optional	
UWWTPs	uwwPIncomingCalculated	optional	

UWWTD_Table	UWWTD_element	xml-schema: required/ optional	Additional automated QA/QC-checks
UWWTPs	uwwPIncomingEstimated	optional	
UWWTPs	uwwBODDischargeMeasured	optional	
UWWTPs	uwwBODDischargeCalculated	optional	
UWWTPs	uwwBODDischargeEstimated	optional	
UWWTPs	uwwCODDischargeMeasured	optional	
UWWTPs	uwwCODDischargeCalculated	optional	
UWWTPs	uwwCODDischargeEstimated	optional	
UWWTPs	uwwNDischargeMeasured	optional	
UWWTPs	uwwNDischargeCalculated	optional	
UWWTPs	uwwNDischargeEstimated	optional	
UWWTPs	uwwPDischargeMeasured	optional	
UWWTPs	uwwPDischargeCalculated	optional	
UWWTPs	uwwPDischargeEstimated	optional	
UWWTPs	uwwWasteWaterTreated	optional	
UWWTPs	uwwMethodWasteWaterTreated	optional	
UWWTPs	uwwRemarks	optional	
UwwtpAgglos	aucUwwCode	required	Check whether the aucUwwCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
UwwtpAgglos	aucUwwName	optional	
UwwtpAgglos	aucAggCode	required	Check whether the aucAggCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
UwwtpAgglos	aucAggName	optional	
UwwtpAgglos	aucPercEnteringUWWTP	optional	
UwwtpAgglos	aucMethodPercEnteringUWWTP	optional	LOV-check: value has to be from LOV COLLDET (i.e. C or E)
UwwtpAgglos	aucPercC2T	optional	
DischargePoints	dcpState	required	LOV-check: value has to be from LOV STAT (i.e."0" or "1")
DischargePoints	uwwID	required	Check whether the uwwID starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
DischargePoints	dcpCode	required	- Check whether the dcpCode starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE) - Check whether the ID is double reported (i.e. whether the ID already exists for this report in this table, an error message occurs)
DischargePoints	dcpName	optional	
DischargePoints	dcpNUTS	optional	
DischargePoints	dcpLatitude	optional	Check, whether parameter is provided
DischargePoints	dcpLongitude	optional	Check, whether parameter is provided
DischargePoints	dcpWaterBodyType	required	LOV-check: value has to be from LOV WATTYPx (i.e. CW or ES or FW or LC or LF)
DischargePoints	dcpIrrigation	optional	LOV-check: value has to be from LOV LAND (i.e. IN or IR or OT)
DischargePoints	dcpTypeOfReceivingArea	optional	
DischargePoints	rcalID	optional	Check whether the rcalID starts with the same Member State abbreviation, as given in parameter "rptMStateKey" (e.g.AT, BE)
DischargePoints	dcpSurfaceWaters	optional	LOV-check: value has to be from LOV YN (i.e. 1 or 0)
DischargePoints	dcpWaterbodyID	optional	
DischargePoints	dcpWaterBodyReferenceDate	optional	
DischargePoints	dcpNotAffect	optional	
DischargePoints	dcpMSPProvide	optional	
DischargePoints	dcpCOMAccept	optional	
DischargePoints	dcpGroundWater	optional	
DischargePoints	dcpGroundWaterReferenceDate	optional	
DischargePoints	dcpReceivingWater	optional	
DischargePoints	dcpReceivingWaterReferenceDate	optional	
DischargePoints	dcpWFDSUBUnit	optional	
DischargePoints	dcpWFDSUBUnitReferenceDate	optional	

UWWTD_Table	UWWTD_element	xml-schema: required/ optional	Additional automated QA/QC-checks
DischargePoints	dcpWFDRBD	optional	
DischargePoints	dcpWFDRBDReferenceDate	optional	
DischargePoints	dcpRemarks	optional	
Industries	indState	required	LOV-check: value has to be from LOV STAT (i.e."0" or "1")
Industries	indCodePlant	required	
Industries	indNamePlant	optional	
Industries	indBranch	optional	LOV-check: value has to be from LOV BRANCH (i.e. ALC or BREW or DRINK or...)
Industries	indOrganicLoad	optional	
Industries	indConditions	optional	
Industries	indDateCompliance	optional	
MSLevel	mslSludgeProduction	optional	Check, whether parameter is provided
MSLevel	mslDischargePipelines	optional	
MSLevel	mslDischargeShips	optional	
MSLevel	mslDischargeOthers	optional	
MSLevel	mslReuseSoilAgriculture	optional	
MSLevel	mslReuseOthers	optional	
MSLevel	mslDisposalLandfill	optional	
MSLevel	mslDisposalIncineration	optional	
MSLevel	mslDisposalOthers	optional	
MSLevel	mslRemarks	optional	
MSLevel	mslWWReusePerc	optional	
MSLevel	mslWWReuseAgri	optional	
MSLevel	mslWWReuseInd	optional	
MSLevel	mslWWReuseOther	optional	
MSLevel	mslWWReuseExplain	optional	

The validation process is performed in that way that the software imports all the data available (in the order Reporter.txt, ReportPeriod.txt, ReceivingAreas.txt, Agglomerations.txt, UWWTPs.txt, UwwtpAgglo.txt, DischargePoints, MSLevel.txt and Industries.txt) and writes a validation report (error log) in case an error is identified. The Error log describes:

- date and time of the validation
- parameter, where the error occurred

After successful data import, a summary report on the data import is provided (see Figure 19), which describes the number of datasets per each parameter block, which passed the validation. When clicking to the button “View log”, a detailed Errorlog is given (Figure 20) which is automatically stored in the folder “Log” (see Figure 8)

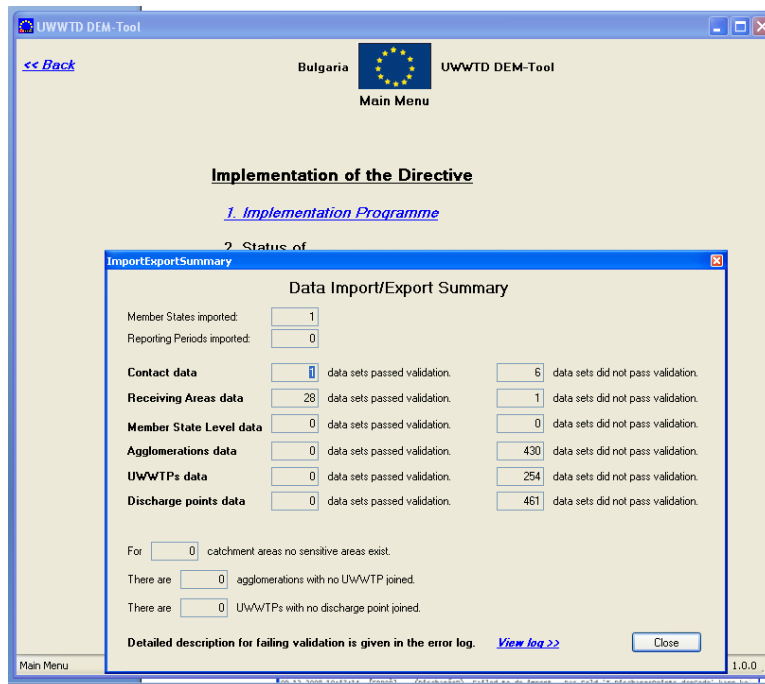


Figure 19. Summary report of data import/ data export

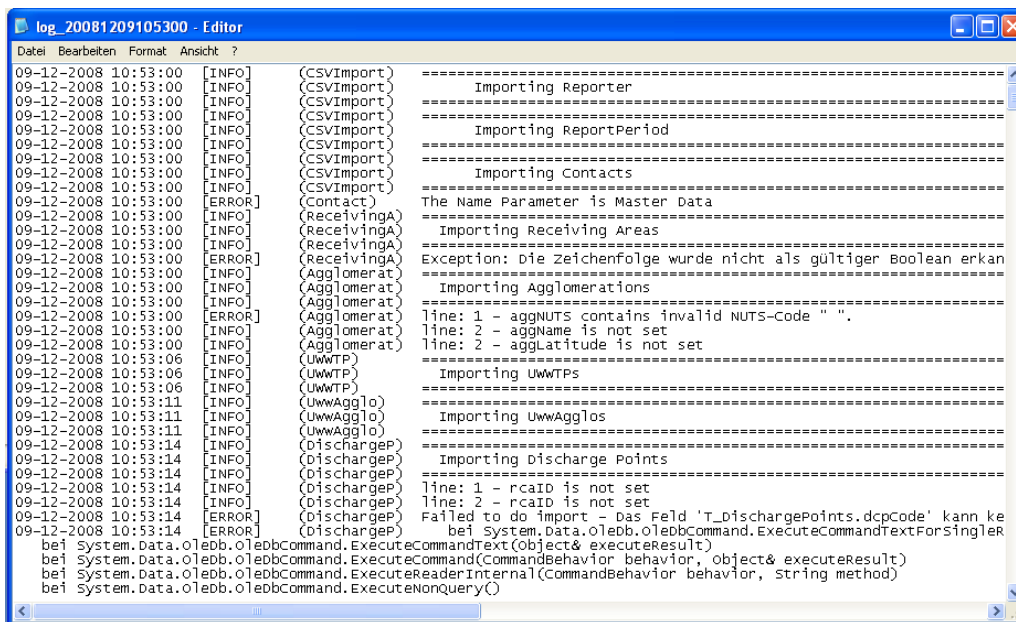
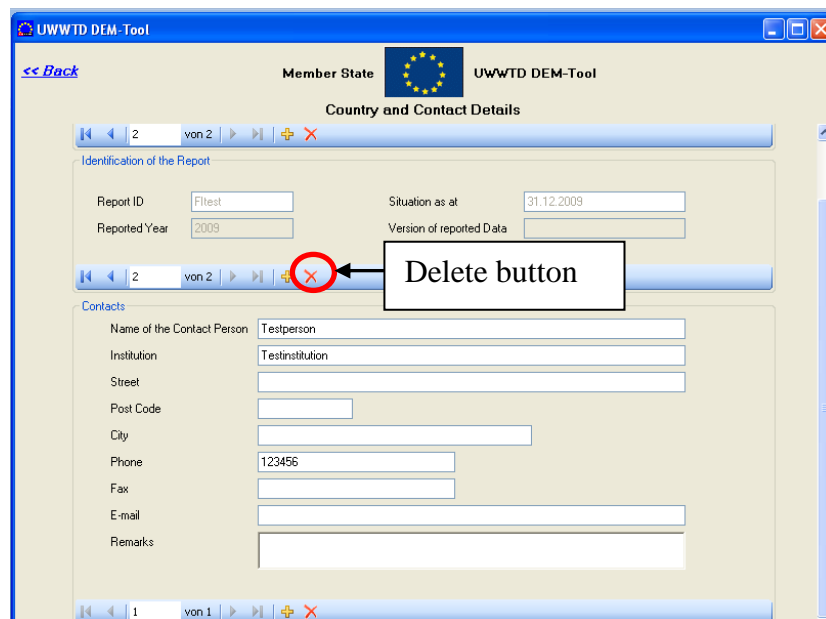


Figure 20. Example Import ErrorLog

5.4 How to delete an entire dataset for one Member State

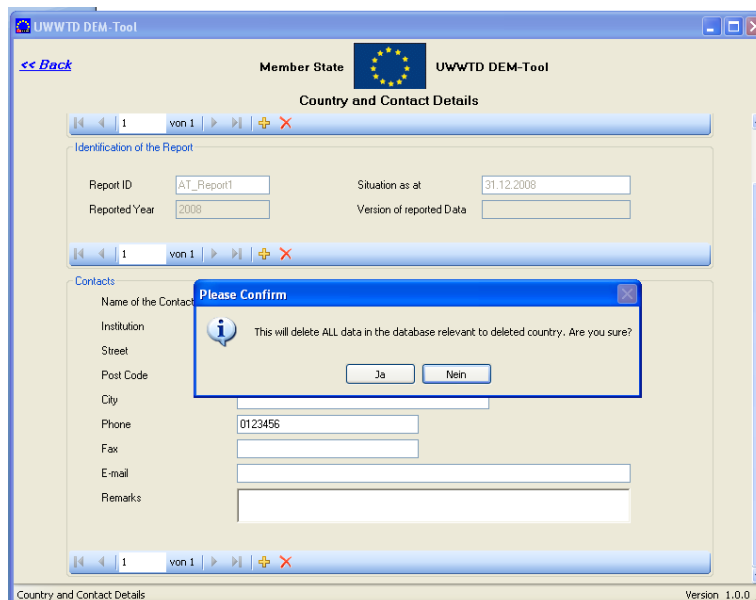
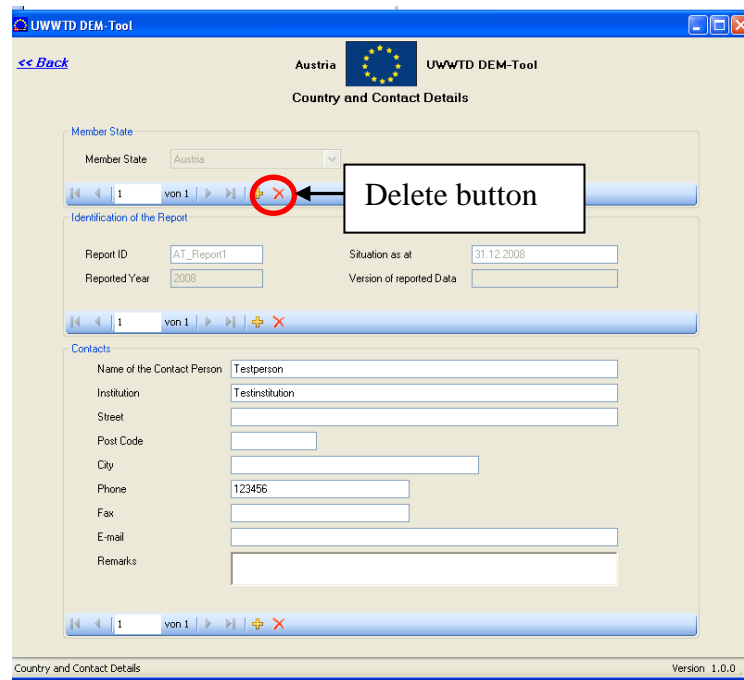
In case there are several reports (= datasets for different reference dates) for one Member State:

In case the entire dataset of one reference year of one Member State should be deleted (= one report, covering all data from one reference year for one Member State), please go to the form *Country and contact details*, select the report you want to delete and press the “Delete”-button. After clicking the “Delete”-button the warning message (“This will delete ALL data in the database...”) needs to be answered with “Yes”. All data attributed to this report will be deleted.



In case there is only one report for one Member State:

In this case please go to the form *Country and contact details*, select the Member State for which you want to delete data and press the “Delete”-button. After clicking the “Delete”-button the warning message (“This will delete ALL data in the database...”) needs to be answered with “Yes”. All data attributed to this report will be deleted. Please click on the “Back” - button and close the UWWTD DEM-Tool. After starting the UWWTD DEM-Tool again, the deleted data will not appear in the UWWTD DEM-Tool anymore.



5.5 Error messages, which can be neglected

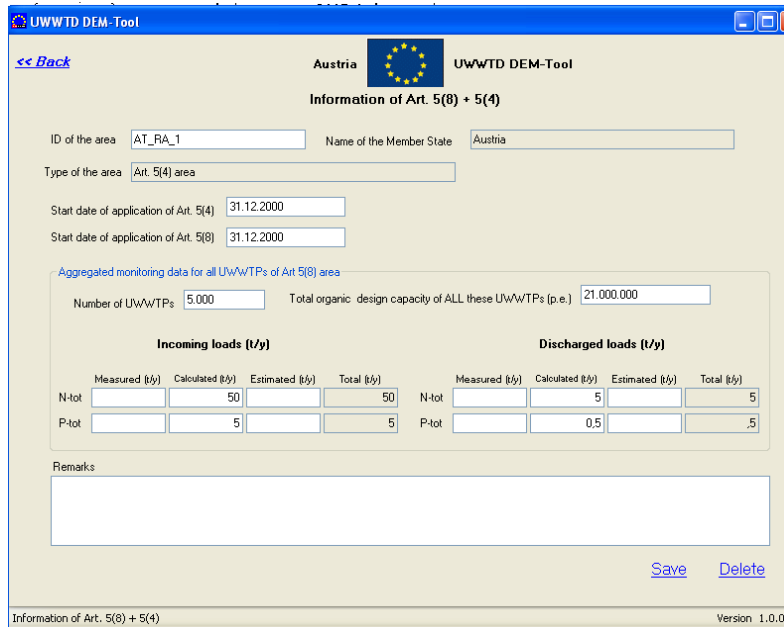
In the UWWTD DEM-Tool different validation routines were developed in order to ensure that all relevant information is reported in correct format. There are numerous possibilities to implement Directive 91/271/EEC and for some specific implementation cases, single parameters may be of no importance anymore. E.g. In case of application of Art. 5(8) + 5(2,3) it is important to indicate the parameters (N and/ or P) which are subject to more stringent treatment. In the specific case of application of Art. 5(8) + 5(4), the parameters subject to more stringent treatment need not be indicated, as the application of Art. 5(4) itself indicates the relevance of N and P.

The validation routines were programmed to cover most of these specific cases – however, there are several Error messages, which are not relevant in specific implementation cases. Hence, they can be neglected.

The following chapter summarizes these specific error messages.

- In case of application of Art. 5(8) + 5(4), the following Error message can be neglected:**

In case Art. 5(8) is applied, the validation procedure checks, whether the parameters which are subject to more stringent treatment are indicated (N and/ or P and/ or Other). In case of application of Art. 5(8) + 5(4), the indication of applied Articles already indicates the relevance of both, N and P. Hence, the following error message can be neglected:



```

15-05-2009 09:32:21 [INFO] (XMLImport) Importing ReportPeriod
15-05-2009 09:32:21 [INFO] (XMLImport) ReportPeriod AT_UWWTD_2007_1 imported
15-05-2009 09:32:21 [INFO] (XMLImport) Importing Contacts
15-05-2009 09:32:21 [INFO] (ReceivingA) Importing Receiving Areas
15-05-2009 09:32:21 [ERROR] (ReceivingA) RcaID AT_RA_1: No designation criteria specified
15-05-2009 09:32:21 [INFO] (BigCities) Importing BigCityDischargers for ReportPeriod AT_UWWTD_2007_1
15-05-2009 09:32:21 [INFO] (Agglomerat) Importing Agglomerations for ReportPeriod AT_UWWTD_2007_1
15-05-2009 09:32:21 [INFO] (UWWTP) Importing UWWTPs
15-05-2009 09:32:26 [INFO] (UWWAgglo) Importing UwwtpAgglos
15-05-2009 09:32:34 [INFO] (DischargeP) Importing Dischargepoints
15-05-2009 09:32:36 [INFO] (DischargeP)

```

Data Import/Export Summary

Member States imported:

Reporting Periods imported:

Contact data	<input type="text" value="1"/>	data sets passed validation.	<input type="text" value="0"/>	data sets did not pass validation.
Receiving Areas data	<input type="text" value="0"/>	data sets passed validation.	<input type="text" value="1"/>	data sets did not pass validation.
Member State Level data	<input type="text" value="1"/>	data sets passed validation.	<input type="text" value="0"/>	data sets did not pass validation.
Agglomerations data	<input type="text" value="641"/>	data sets passed validation.	<input type="text" value="0"/>	data sets did not pass validation.
UWWTPs data	<input type="text" value="641"/>	data sets passed validation.	<input type="text" value="0"/>	data sets did not pass validation.
Discharge points data	<input type="text" value="641"/>	data sets passed validation.	<input type="text" value="0"/>	data sets did not pass validation.

For catchment areas no sensitive areas exist.

There are agglomerations with no UWWTP joined.

There are UWWTPs with no discharge point joined.

Detailed description for failing validation is given in the error log. [View log >>](#)

- **Import of the receiving area-type “Normal Area”**

In the UWWTD DEM-Tool there is no need to identify normal areas, as the entire territory of a Member State, which is not designated sensitive, is automatically considered as normal area in the UWWTD-database. Accordingly, the UWWTD-database automatically generates one data entry for the normal area.

When exporting the dataset and then importing it again into the UWWTD DEM Tool, the data entry for the normal area passes the data validation routines foreseen for sensitive areas, their catchments and Art. 5(8) – areas. In case the following error message pops up for normal areas, it can be neglected:

```

15-05-2009 10:13:36 [INFO] (XMLImport) Importing Reporter
15-05-2009 10:13:36 [INFO] (XMLImport) =====
15-05-2009 10:13:36 [INFO] (XMLImport) New Reporter SI created
15-05-2009 10:13:36 [INFO] (XMLImport) =====
15-05-2009 10:13:36 [INFO] (XMLImport) Importing ReportPeriod
15-05-2009 10:13:36 [INFO] (XMLImport) =====
15-05-2009 10:13:36 [INFO] (XMLImport) ReportPeriod SI-0001 imported
15-05-2009 10:13:36 [INFO] (XMLImport) =====
15-05-2009 10:13:36 [INFO] (XMLImport) Importing Contacts
15-05-2009 10:13:36 [INFO] (XMLImport) =====
15-05-2009 10:13:36 [INFO] (ReceivingA) Importing Receiving Areas
15-05-2009 10:13:36 [INFO] (ReceivingA) =====
15-05-2009 10:13:36 [ERROR] (ReceivingA) RcaID SI-NA-2006: No designation criteria specified
15-05-2009 10:13:37 [INFO] (BigCities) =====
15-05-2009 10:13:37 [INFO] (BigCities) Importing BigcityDischargers for ReportPeriod SI-0001
15-05-2009 10:13:37 [INFO] (BigCities) =====
15-05-2009 10:13:37 [INFO] (BigCities) =====

```

- **Csv - import of a sensitive area/ catchment area of sensitive area, which is designated sensitive under criterion c**

Sensitive areas/ catchment areas of sensitive areas, designated under criterion c (areas where further treatment than that prescribed in Article 4 of the Directive is necessary to fulfill Council Directives) require the indication of the relevant EU-Directives, the indication of related parameters as well as the indication of the reference date of the area according to these Directives.

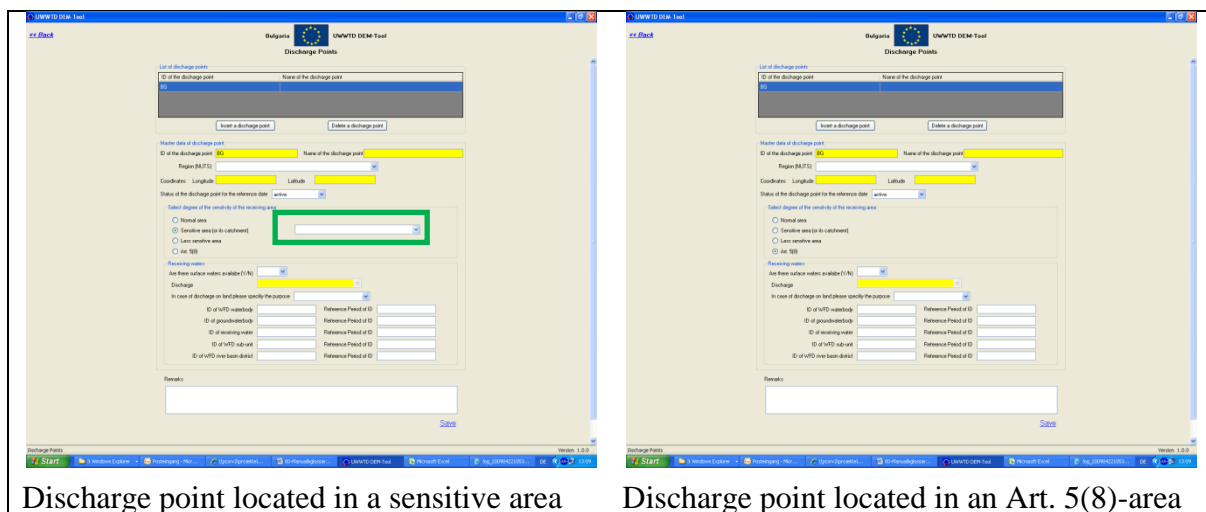
In the case of the csv-import, an error message may occur even in case the reference date of the area according to these other Directives (parameter *rcaCDateOtherDirective* in the template *Agglomerations*) is provided. Hence, this error message can be neglected. In the xml- data import, the error message correctly appears in case parameter *rcaCDateOtherDirective* is not provided.

```

log_20090612161756 - Editor
Datei Bearbeiten Format Ansicht ?
12-06-2009 16:17:56 [INFO] (CSVImport) =====
12-06-2009 16:17:56 [INFO] (CSVImport) Importing Reporter
12-06-2009 16:17:56 [INFO] (CSVImport) =====
12-06-2009 16:17:56 [INFO] (CSVImport) Importing ReportPeriod
12-06-2009 16:17:56 [INFO] (CSVImport) =====
12-06-2009 16:17:56 [INFO] (CSVImport) Importing contacts
12-06-2009 16:17:56 [INFO] (CSVImport) =====
12-06-2009 16:17:56 [INFO] (ReceivingA) Importing Receiving Areas
12-06-2009 16:17:56 [INFO] (ReceivingA) =====
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICA-SI5VT2: rcaDateOtherSpecified is Master Data - rcaC is Set
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICA-SI5VT3: rcaDateOtherSpecified is Master Data - rcaC is Set
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICA-SI5VT4: rcaDateOtherSpecified is Master Data - rcaC is Set
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICA-SI5VT5: rcaDateOtherSpecified is Master Data - rcaC is Set
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICM-SI1128VT: rcaDateOtherSpecified is Master Data - rcaC is Set
12-06-2009 16:17:56 [ERROR] (ReceivingA) RcaID SICM-SI112VT3: rcaDateOtherSpecified is Master Data - rcaC is Set
    
```

• **Import of discharge points located in normal area or Art. 5(8) – area**

For each discharge point the UWWTD DEM-Tool foresees that the type of sensitive area, where the discharge point is located, is indicated. In cases where the receiving area is a sensitive area, a catchment area of sensitive area or a less sensitive area, the ID of the receiving area needs to be indicated additionally. In case the discharge point is located in an Art. 5(8) – area, no ID of the receiving area needs to be given, as the Art. 5(8) – area refers to the entire Member State. Also in case the discharge point is located in normal area, no ID needs to be provided, as there is only one normal area in a Member State (= all territory, which is not designated as sensitive area, catchment of sensitive area or less sensitive area)



Discharge point located in a sensitive area

Discharge point located in an Art. 5(8)-area

The validation routine was programmed in such a way to check for every discharge point, whether the ID of the receiving area is provided, without differentiation, in which type of receiving area the discharge point is located.

Hence, in case a discharge point is located in an Art. 5(8)- area or in normal area, the error message *rcaID is not set* can be neglected.

```

22-04-2009 10:53:57 [INFO] (UwwAggIo) =====
22-04-2009 10:53:59 [INFO] (DischargeP) Importing Discharge Points
22-04-2009 10:53:59 [INFO] (DischargeP) =====
22-04-2009 10:53:59 [INFO] (DischargeP) line: 1 - rcaID is not set
22-04-2009 10:53:59 [INFO] (DischargeP) line: 2 - rcaID is not set
22-04-2009 10:53:59 [INFO] (DischargeP) line: 3 - rcaID is not set
22-04-2009 10:53:59 [INFO] (DischargeP) line: 4 - rcaID is not set
22-04-2009 10:53:59 [INFO] (DischargeP) line: 5 - rcaID is not set
22-04-2009 10:53:59 [INFO] (DischargeP) line: 6 - rcaID is not set
    
```

• **Import of an Art. 5(8 + 5(2,3))- area**

In case of import of an Art. 5(8) + 5(2,3) – area (and correct indication of the parameters subject to more stringent treatment) it may happen that the summary of the error log

reveals an error for the receiving area although no error is indicated for the receiving areas in the detailed error-log. In this case, the error message in the error-log summary can be neglected.

Data Import/Export Summary

Member States imported:

Reporting Periods imported:

Contact data data sets passed validation. data sets did not pass validation.

Receiving Areas data data sets passed validation. data sets did not pass validation.

Member State Level data data sets passed validation. data sets did not pass validation.

Agglomerations data data sets passed validation. data sets did not pass validation.

UWWTPs data data sets passed validation. data sets did not pass validation.

Discharge points data data sets passed validation. data sets did not pass validation.

For catchment areas no sensitive areas exist.

There are agglomerations with no UWWTP joined.

There are UWWTPs with no discharge point joined.

Detailed description for failing validation is given in the error log. [View log >>](#)

```

15-06-2009 09:22:17 [INFO] (XMLImport) report of big cities/ big dischargers using existing one
15-06-2009 09:22:17 [INFO] (XMLImport) (XMLImport) =====
15-06-2009 09:22:17 [INFO] (XMLImport) Importing Contacts
15-06-2009 09:22:17 [INFO] (ReceivingA) (ReceivingA) =====
15-06-2009 09:22:17 [INFO] (ReceivingA) Importing Receiving Areas
15-06-2009 09:22:17 [INFO] (BigCities) (BigCities) =====
15-06-2009 09:22:17 [INFO] (BigCities) Importing Bigcitydischargers for ReportPeriod #12005A
15-06-2009 09:22:17 [INFO] (BigCities) (BigCities) =====
15-06-2009 09:22:17 [INFO] (BigCities) (BigCities) =====

```

- **Form Big cities/ big dischargers**

When inserting a new big city/ big discharger and clicking the “Save”-button, the message appears that the “Save operation was completed successfully”. However, when clicking to the “Back”-button, the incorrect Error message “There are unsaved items on the form...” appears. This error message is incorrect and needs to be neglected. When closing the form of big cities/ big dischargers and re-opening it again, the inserted big city/ big discharger is available.

UWWTD DEM-Tool

<< Back

Netherlands UWWTD DEM-Tool

Big City/big Discharger

ID of Big City	Name of Big City
NLBG31003	AMSTERDAM
NLBG15005	'S-GRAVENHAGE
NLBG27003	EINDHOVEN
NLBG29002	OSS
NLBG25021	BERGEN OP ZOOM
NLBG17061	ROTTERDAM
NLBG32001	TILBURG

insert big city / big discharger delete big city / big discharger

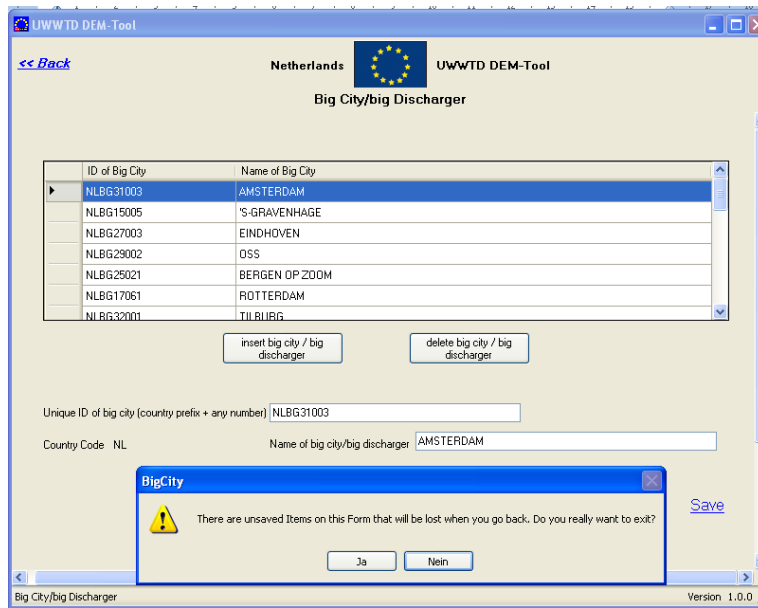
Unique ID of big city (country prefix + any number) NLBG31003

Country Code NL Name of big city/big discharger AMSTERDAM

Save

Save Operation completed successfully

OK



6 DATA EXPORT AND VALIDATION

The UWWTD DEM – Tool offers the possibility to export xml-data and csv-data. More than one dataset can be exported. Please select the folder, where the export-files shall be stored via the Browse-functionality (Figure 21)



Figure 21. Data export from the UWWTD DEM-Tool

The validation process during the export of data from the UWWTD DEM tool is identical to the mechanisms elaborated during the data import. Again, the Errorlog is stored in the folder “Log” (see Figure 8).

7 ORGANISATION OF UWWTD-REPORTING IN MEMBER STATES; WHERE DIFFERENT REGIONAL AUTHORITIES PROVIDE DATA

The UWWTD DEM-Tool was designed in a way that one single unique report is created per Member State per reference year. The reason for this approach was to have one single point of communication between the Commission and the Member State and to have one clear dataset for one entire country (e.g. to avoid double-reporting of agglomerations, UWWTPS, discharge points,... by different regions).

In many Member States different regions are responsible for the collection of UWWTD-data. In order to allow regional authorities to quality check their data by themselves, data compilation should be done in the following way:

1. The UWWTD DEM-Tool is provided to different regional authorities, which compile their data in the UWWTD DEM-Tool (by manual data input and/ or import of csv- or xml- files) and elaborate the data validation during data import/ export.
2. After finalization of data quality check, the regions export their datasets in terms of csv-files (=txt-files with TAB as field separator and CR as record delimitator) and send their datasets to the person/ institution, responsible for reporting one UWWTD-dataset to the Commission. Each of the “regional” datasets has its own report-ID.
3. The datasets from different regions have to be compiled into one dataset for the Member State. Please note that it is required that all “regional” datasets refer to the same reference date. For compilation of data all different regional datasets have to be copied into one single Excel-file (= all agglomerations from region A, B and C have to be compiled into one template *Agglomerations*, all UWWTPs from region A, B and C have to be compiled into one template *UWWTPs*, etc....). Afterwards, one report- ID needs to be provided for the report from the entire Member State and this report-ID needs to substitute the report-IDs within all datasets from the different regions.
4. The example from Belgium shall explain the work steps in more detail:
The regional authorities of Brussels, Flanders and Wallonia prepare their dataset (including data validation) and send their final datasets to the institution, which compiles the information for Belgium. Table 12 gives an overview, how these datasets look like (in terms of Excel-files). After compilation of the three datasets, there needs to be only one report-ID (instead of three) and all datasets in the templates receiving areas, agglomerations, UWWTPs, UWWTPAgglos, DischargePoints, and Industries have to refer to this single report-ID. For the template “MS-Level” the institution responsible for reporting to Brussels has to calculate the correct numbers and provide them in the Excel template.

After merging the three datasets into one single dataset for Belgium (Table 13), the Excel-files is saved as txt-files (see chapter 5.1) and imported into the UWWTD DEM-Tool in order to elaborate the final data validation. After successful validation, one dataset for Belgium can be exported in terms of an xml-file for final data up-load to ReportNet.

Table 12. Example of the templates *Reporter*, *ReportPeriod*, *Contacts* and *Agglomerations* for the regions Brussels, Flanders and Wallonia

Template	Brussels	Flanders	Wallonia																																																																		
Reporter	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> <tr> <th>rptMStateKey</th> <th>rptMStateValue</th> <th>rptCulture</th> <th>rptFormRA</th> <th>rptDateexported</th> </tr> </thead> <tbody> <tr> <td>BE</td> <td>Belgium</td> <td>de-AT</td> <td>4</td> <td>28.3.2008 17:41</td> </tr> </tbody> </table>	A	B	C	D	E	rptMStateKey	rptMStateValue	rptCulture	rptFormRA	rptDateexported	BE	Belgium	de-AT	4	28.3.2008 17:41	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> <tr> <th>rptMStateKey</th> <th>rptMStateValue</th> <th>rptCulture</th> <th>rptFormRA</th> <th>rptDateexported</th> </tr> </thead> <tbody> <tr> <td>BE</td> <td>Belgium</td> <td>de-AT</td> <td>4</td> <td>28.3.2008 17:46</td> </tr> </tbody> </table>	A	B	C	D	E	rptMStateKey	rptMStateValue	rptCulture	rptFormRA	rptDateexported	BE	Belgium	de-AT	4	28.3.2008 17:46	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> </tr> <tr> <th>rptMStateKey</th> <th>rptMStateValue</th> <th>rptCulture</th> <th>rptFormRA</th> <th>rptDateexported</th> </tr> </thead> <tbody> <tr> <td>BE</td> <td>Belgium</td> <td>de-AT</td> <td>4</td> <td>28.3.2008 17:41</td> </tr> </tbody> </table>	A	B	C	D	E	rptMStateKey	rptMStateValue	rptCulture	rptFormRA	rptDateexported	BE	Belgium	de-AT	4	28.3.2008 17:41																					
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8 HISTORICAL LINK BETWEEN DIFFERENT UWWTD REPORTING EXERCISES

One crucial aspect of reporting under all water related Directives is the establishment of links between different reporting exercises. The situation of e.g. an UWWTP, which was reported for reference year 2005, has to be also clear for the reference year 2007, no matter whether the agglomeration stayed the same or whether it is of no relevance anymore, as it was closed since the last reporting exercise.

As this aspect of data historisation covers elements of all water related reporting, a clear guidance was developed in the frame of the Appendix 9 of the WFD GIS-guidance⁵.

In brief, for reporting under the UWWTD it is essential, that the IDs of all sensitive areas, agglomerations, UWWTPs and discharge points, reported for the previous reporting exercise, are reported again. In case the element is not relevant anymore, because e.g. the UWWTP reported previously was closed and another one was built, then the status of the closed UWWTP has to be indicated to be 0 (= inactive) for the current reference period of reporting.

When an element was reported as inactive for one reference year, it does not have to be reported again in the following year.

Please always give an explanation (either in the remarks field or in a separate list), why the element became inactive for the reference date of reporting and – in case of a successor – please also indicate the successor.

Example: The UWWTP “Andau” was in operation in the reference year 2006. In 2007 it was closed as a new UWWTP “Andau WEST” was build. This situation has to be reported in the following way (example given with respect to MS Excel templates):

Reference date: 31 December 2006, Template *UWWTPs*

uwwState	repCode	aggID	uwwCode	uwwName	uwwCollectingSystem	uwwDateClosing	uwwHistorie	uwwRemarks
1	MSR3		MSUWWTP1	Andau	ISCON			

Reference date: 31 December 2008, Template *UWWTPs*

uwwState	repCode	aggID	uwwCode	uwwName	uwwCollectingSystem	uwwDateClosing	uwwHistorie	uwwRemarks
0	MSR15		MSUWWTP1	Andau	ISCON	31.07.2007		New UWWTP is built: MSUWWTP2
1	MSR15		MSUWWTP2	Andau WEST	ISCON			

Reference date: 31 December 2010, Template *UWWTPs*

uwwState	repCode	aggID	uwwCode	uwwName	uwwCollectingSystem	uwwDateClosing	uwwHistorie	uwwRemarks
1	MSR15		MSUWWTP2	Andau WEST	ISCON			

⁵ Available at: http://eea.eionet.europa.eu/Public/irc/eionet-circle/eionet-teleomatics/library?l=/technical_developments/wise_technical_group/guidance_document&vm=detailed&sb=Title

9 NAVIGATION THROUGH THE UWWTD DEM-TOOL – MANUAL DATA ENTRY

A comprehensive overview of the background of UWWTD reporting and the organisation in different parameter blocks is given in Annex 1. The detailed list of parameters as well as the link between the data blocks, the individual parameters and their allocation in UWWTD reporting forms is provided in Annex 2.

The logical structure/organisation of the reporting system through the forms is presented in Figure 6. The description of each individual form presented in Figure 6 is explained in this section. Examples for data entry in the various cases of implementation of UWWTD (see chapter 2) are described in Annex 12.

9.1 Form 1: Start



Figure 22: Form 1:Start

The application starts with **Form 1: Start**

- Button *Edit Reporter*: opens the form to provide information on country and contact details
- Button *Edit Data*: opens the form to manage and/ or provide the data under Article 15 (import, export, manual data entry) for Article 15 and up-load of reports for Article 16 and 17
- Button *Manage Files*: opens the form to up-load GIS-files, additional documents,...Via this form the supporting documents to the reporting exercise are available
- Button *Close*: application closes

9.2 Form 2: Edit reporter: Country and contact details

The screenshot shows the 'UWWTD DEM-Tool' window with the 'Country and Contact Details' form. The form is titled 'Country and Contact Details' and features a navigation bar at the top with a '<< Back' button and a 'Member State' dropdown menu currently set to 'Austria'. The form is divided into three main sections, each with a navigation panel below it:

- Member State:** A dropdown menu showing 'Austria'.
- Identification of the Report:** Fields for 'Report ID', 'Reported Year', 'Situation as at', and 'Version of reported Data'. A navigation panel below this section is labeled 'Navigation panel 2: for Report-ID and reference date'.
- Contacts:** Fields for 'Name of the Contact Person', 'Institution', 'Street', 'Post Code', 'City', 'Phone', 'Fax', 'E-mail', and 'Remarks'. A navigation panel below this section is labeled 'Navigation panel 3: to provide data on the contact person'.

Navigation panel 1 is located at the top of the form, below the Member State dropdown, and is labeled 'Navigation panel 1: Switch between MS and save one MS'. The form also includes a 'UWWTD DEM-Tool' logo and a 'Version 1.0.0' indicator at the bottom right.

Figure 23: Form 2: Country and contact details

The form 'Country and Contact Details' contains the following information

- Navigation panel 1: Information on the Member State
- Navigation panel 2: Information on the Report-ID and the reference date
- Navigation panel 3: Information on the contact person, contact institution, phone...

Please note that in this form, all parameters need to be provided!!

Work flow (see Figure 24)

(in case of first data input, database is empty, in the parameter field "Member State" Austria is prefilled as default value)

- Step 1: Indicate that you want to choose a Member State (click "+"-button in Navigation panel 1)
- Step 2: Choose country
- Step 3: Click *Save*-button in Navigation panel 1 → name of the chosen Member State appears automatically on the left side of the EU-flag – parameter *Member State* is fixed and becomes inactive
- Step 4: Indicate that you want to fill-in Report-ID and situation as at- date (click "+" button in Navigation panel 2)
- Step 5: A new report-ID is generated: the country-prefix is pre-filled (MS-specific) in the parameter *Report-ID*, the number of the report and the parameter *situation as at* should be indicated. The parameter block on contact details is inactive
- Step 6: Click *Save*-button in Navigation panel 2 → Report-ID is saved and becomes inactive
- Step 7: Indicate that you want to fill-in data on contact person (click "+" button in Navigation panel 3)
- Step 8: Insert information on contact details

Step 9: Click on the *Save*-button in Navigation panel 3

(Step 10: In order to insert further contact persons: repeat Step 7, 8 and 9)

Step 11: After finalisation of data-input → click *Back*-button → **Form 1: Start** opens

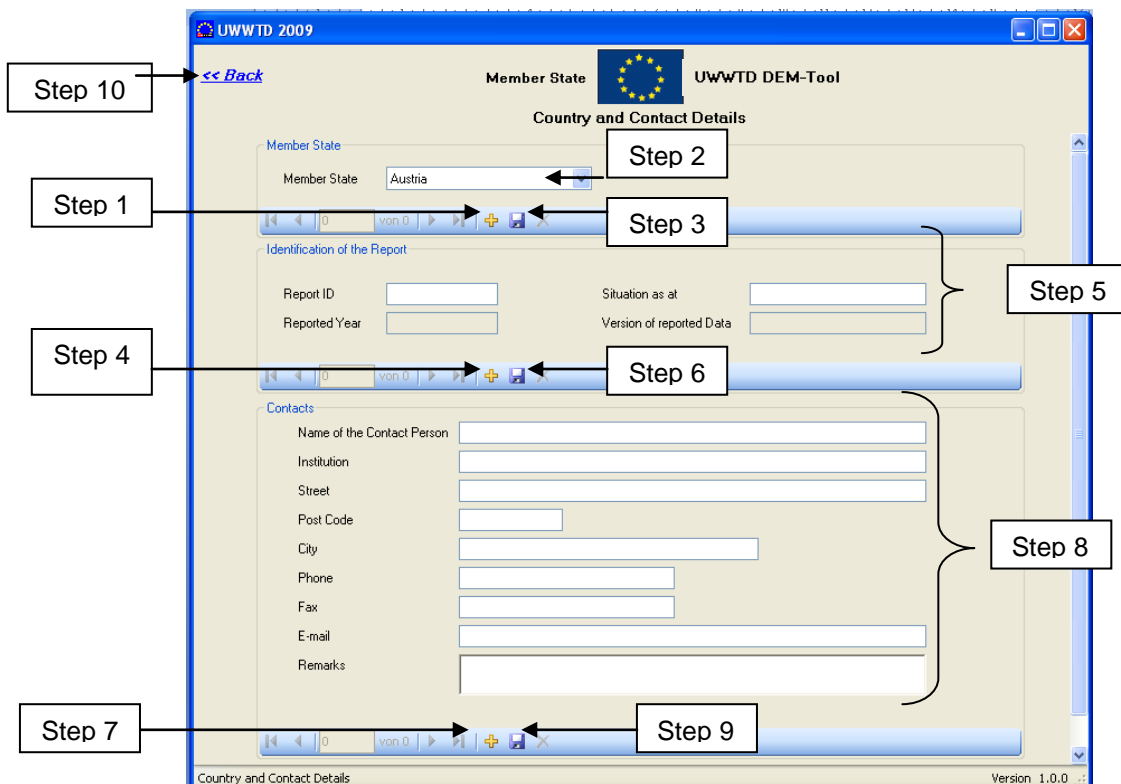


Figure 24. Work- flow for providing data in Form 2: Country and Contact

Explanations

In this Form the basic data for reporting are requested. All further provided information on agglomerations, UWWTPs, discharge points and receiving areas refer to the Member State, Report-ID, situation as at – date and the contact details given in this Form.

For each Member State only one data-set has to be reported to the Commission (this means it is not possible, that different administrative units of one Member State deliver their data separately to the Commission).

In principle the Form offers the possibility to choose more than one Member State (Navigation panel 1), to insert data for more than one situation as at – date (Navigation panel 2) and for more than one contact person (Navigation panel 3). However, to ensure consistency and comparability of the information and data Member States should **report information for only one requested reference year** on the status in all agglomerations for one Member State.

The parameters *Reported Year* and *Version of reported data* will be completed automatically by the reporting system and are hence inactive fields. The parameter *Reported Year* will be filled-in according to the *situation as at* – date and covers the time period of one year (e.g. if the *situation as at* - date is 31st December 2005, then the parameter *Reported Year* refers to the time period from 1 January 2005 – 31 December 2005). The parameter *Version of reported data* will be completed after data is successfully exported from the application before sending it to the Commission. Prior to the export validation of data (e.g. completeness

of data, linking of agglomerations, UWWTPs, discharge points and receiving areas) is performed. After validation and export, the date and time of export of validated data (“validation time stamp”) is given for the whole report (i.e. for one report-ID). This validation time stamp is saved as parameter in the database and will be displayed in the parameter field Version of reported data after a new import of the report data sets into the reporting system.

Rules for this Form

- Click on *Save* button:
 - If country selection is missing – warning message: “Please select a Member State. [o.k.]”
 - If situation as at is missing – warning message: “Situation as at missing”
 - If contact details are missing – warning message: “Please insert at least one contact person. [o.k.]”
 - If master data of contact details are missing (Name of Contact Person, Institution, Phone) – warning message: “The following data are missing [name of the master data] Please complete to fill-in these data.”
 - If Report ID is missing or does not start with correct country code (after country code at least 1 number or letter is necessary) – warning message: “Wrong Report ID. [o.k.]” – field Report ID becomes red
 - In case of existing country selection and correct Report ID: Fields Member State, Report ID and Situation as at will become inactive
- Click on *Delete* button
 - If no saving has been done so far – all fields will become blank, all existing contact details will be deleted without warning
 - If successful saving has been already done – warning message: “This will delete ALL data in the database. Are you sure? [yes] [no]”; in case of *yes*, all data entries of the entire database will be deleted, the form remains opened, fields to select a country, insert Report ID and Situation as at will be active; in case of *no*, the form remains as it is
- Click on *Back* button:
 - After successful saving or no changes done: form will close automatically
 - Without saving: Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close

9.3 Form 3: Main Menu



Figure 25: Form 3: Main Menu

The form 'Main Menu' contains the following information

- Up-load information for Article 17 – report (Implementation Programme)
- Status of Receiving Areas
- Status of Agglomerations
- Aggregated Data on Member State Level
- Up-load information for Article 16 – report (Situation Report)
- Data import (xml-data and csv-data)
- Data export (xml-data and csv-data)


Work flow (manual data entry or editing imported data)

- Step 1: Click button 2.i. – *Status of Receiving Areas* → **Form 5: Identification of Receiving Areas** opens: fill-in data on Receiving Areas
- Step 2: Click button 2.ii – *Status of Agglomerations* → **Form 6: Agglomeration** opens: fill-in data on Agglomerations, then on UWWTPs and on discharge points
- Step 3: Click button 3 – *Aggregated Data on Member State level* → **Form 10: Information on Member State level** opens: fill-in data on Member State level
- Step 4 (voluntary): Click button 1 to up-load reports under Article 17 (Implementation Programme) see chapter 4
- Step 5 (voluntary): Click button 4 to up-load reports under Article 16 (Situation Report) see chapter 4

Explanations

This Form presents the starting point for data input on receiving areas, agglomerations, UWWTPs and discharge points, as well as on aggregated data on Member State level. In case of **manual data input or modification of parameters after successful import**,

navigation through the questionnaire is done within issue 2 (Status of Receiving Areas and Agglomerations) and issue 3 (Aggregated Data on Member State Level).



It is essential that information on Status of Receiving Areas (button 2.i.) is provided as first step. Afterwards information on agglomerations (button 2.ii.) and aggregated data on Member State Level (button 3) should be provided. The link between agglomeration level and receiving areas is established via master data of the discharge point, which inter alia ask for the receiving area in the IT reporting tool.

In case of **automatic up-load of data** into the UWWTD DEM tool → click button *Import xml-data* or *button import csv-data* (see chapter 5). During data import data validation is performed (see chapter 5).

The button *export xml – data* or *export csv-data* has to be clicked after manual data entry to start both, the export and the validation procedure (a detailed description of data export is given in chapter 6.).

9.4 Form 4: Manage files

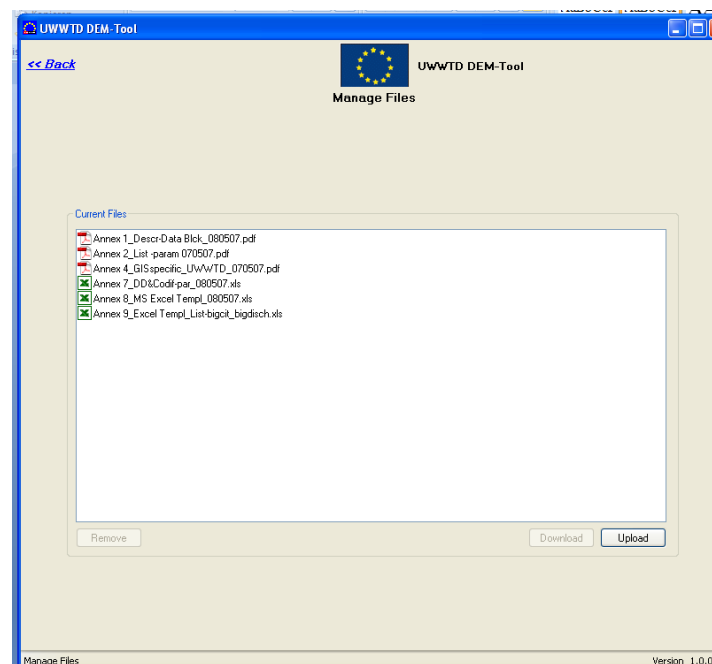


Figure 26. Form 4: Manage files

Explanations

In the field *Current Files* all documents related to reporting under UWWTD are listed (Data dictionary, List of parameters, Manual&glossary, Excel templates for data up-load/download). When clicking the available documents, the related files will open. Additionally, the field offers the opportunity to Member States to add documents (e.g. Reports, additional information) for UWWTD-reporting. In case a Member State wants to add documents, button *Upload* has to be clicked and the Explorer opens. The related document (pdf., doc. or xls.) is selected and opened, which results in automatical saving of the document in the file-folder “files” in the directory of the application (see Figure 8)

9.5 Form 5: Identification of Receiving Areas

Figure 27: Form 5: Identification of Receiving Areas

The form 'Identification of Receiving Areas' contains the following information

- Information which Article(s) of the UWWTD is (are) applied in a country (e.g. if there are Sensitive Areas according to Art. 5(2,3) of UWWTD or Less Sensitive Areas according to Art. 6).

Work flow (manual data entry or editing imported data)

Step 1: Select the relevant Article of the UWWTD, which is applied in the Member State

Step 2: Click button *Save* → the related button for further data entry becomes active

Step 3: Click button for further data entry on the Article(s) applied → related Forms (Form 5a or Form 5b or 5c and/or 5d and/ or 5e open)

Explanations

It is essential, that information on receiving areas is filled-in to the questionnaire before information on agglomerations, UWWTPs and discharge points is provided. The link between agglomeration level and receiving areas is established via master data of the discharge point, which inter alia ask for the receiving area.



After provision of information on agglomerations, UWWTPs and discharge points no changes of the application of Articles are allowed! This would lead to major errors, as the links in the UWWTD DEM-Tool

(automatically linking of discharge points and receiving areas) would be corrupted.



In the UWWTD DEM-tool the inventory of receiving area will be linked with the discharge points via the form “Master data of discharge point” (see chapter 9.9). In this form a scroll-down menu provides a list of all receiving areas, which were inserted during the first step of manual data input.

Rules for this Form

- If someone changes after the entry of the first receiving area something in this form → warning message: “This is a crucial change! All existing data entries on receiving areas and links to discharge points will be deleted. Are you sure? [yes]/ [no]”; in case of *yes*, all existing receiving areas will be deleted; in case *no*, nothing will change in this form
- In case of selection of one option: button related to this option becomes active
- Click on *Back* - button:
 - After successful saving or no changes done: form will close automatically
 - Without saving: Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.

9.5.1 Form 5a: Information on Art. 5(8) + 5(2-3)

Figure 28. Form 5a: Information on Article 5(8) +5(2-3)

The form 'Information on Art. 5(8) + 5(2-3)' contains the following information

- ID of the area
- Starting date of application of Art. 5(8) and 5(2-3)
- Parameters subject to more stringent treatment

Work flow

Insert all data in the order proposed in the form

Explanations

This Form is only relevant for Member States, which apply Art. 5(2-3) for the whole territory. Accordingly, the parameter *Name of the Member State* is pre-filled automatically by the reporting tool and is hence inactive.



After successful data input to this form, the receiving area will be used to establish the link agglomerations - UWWTP - discharge points – receiving area. In case information in this form is changed after data input on agglomerations, UWWTPs and discharge points, all these data will be corrupted!


Parameters subject to more stringent treatment can be *N* and/or *P* and/ or *Other parameters subject to more stringent treatment*. In case the parameter *Other parameters subject to more stringent treatment* is clicked, these parameters have to be described in the text field.

Rules for this form

- Opening of empty form:
 - All parameters are active, only the parameter *Name of the Member State* cannot be changed
- Opening of a form with existing data:
 - Parameter *ID of the area* and *Name of the Member State* are inactive
- Click on *Save* button:
 - If ID is missing or does not start with correct country code (after the country code at least one figure or letter is necessary) – warning message: “Wrong ID. [o.k.]” – field ID of the area becomes red
 - After successful saving: Parameter *ID of the Area* will be inactive
- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving before : form will close automatically
- Click on *Delete* button – warning message: “All existing links to discharge points will be lost, are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.

9.5.2 Form 5b: Information on Art. 5(8) + 5(4)

UWWTD DEM-Tool

Estonia  UWWTD DEM-Tool

Information of Art. 5(8) + 5(4)

ID of the area Name of the Member State

Type of the area

Start date of application of Art. 5(4)

Start date of application of Art. 5(8)

Aggregated monitoring data for all UWWTPs of Art. 5(8) area

Number of UWWTPs Total organic design capacity of ALL these UWWTPs (p.e.)

Incoming loads (t/y)				Discharged loads (t/y)					
	Measured (t/y)	Calculated (t/y)	Estimated (t/y)	Total (t/y)		Measured (t/y)	Calculated (t/y)	Estimated (t/y)	Total (t/y)
N-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	N-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
P-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	P-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Remarks

[Save](#) [Delete](#)

Information of Art. 5(8) + 5(4) Version: 1.0.0...

Figure 29: Form 5b: Information on Art. 5(8) + 5(4)

The form 'Information on Art. 5(8) + 5(4)' contains the following information

- ID of the area
- Starting date of application of Art. 5(8) and 5(4)
- Aggregated monitoring data for all UWWTPs of the Art. 5(8) area

Work flow

Insert all data in the order proposed in the form

Explanations

This Form is relevant for Member States, which apply Art. 5(4) for the whole territory. Accordingly, the parameter *Name of the Member State* is pre-filled automatically by the reporting tool and is hence inactive.



After successful data input in this form, the receiving area will be used to establish automatically in the IT tool the link agglomerations - UWWTP - discharge points – receiving area. In case information in this form is changed after data input on agglomerations, UWWTPs and discharge points, all these data will be corrupted!



In case aggregated information on incoming and discharged loads is given for ALL UWWTPs in an Art. 5(4) area, Member States still have to report information on Art. 3 and Art. 4 for each single agglomeration falling under the deadlines of the Directive and/ or Accession Treaty.

The number, the total organic design capacity (p.e.) as well as the incoming and discharged

loads of total nitrogen and total phosphorus (t/y) of ALL UWWTPs have to be given in this form. For the incoming and the discharged loads a subdivision into the parameters *Measured (t/y)*, *Calculated (t/y)*, and *Estimated (t/y)* is done. The Parameter *Total (t/y)* is calculated automatically by the reporting tool and is hence inactive.

In case the incoming or discharged load of one parameter is calculated and not measured or estimated, the fields `Measured (t/y)` and `Estimated (t/y)` have to be left blank. In case one part of the value is measured and another part calculated, the parameter fields `Measured (t/y)` and `Calculated (t/y)` have to be filled in.

According to the local settings used by the PC (check in the control panel) the figures inserted in this form are organised in those parameter field, which are calculated automatically by the IT-tool (e.g. in the English language version thousands/ millions/... are separated by a “,”, while the decimal is separated by a “.”.)

Rules for this Form

- Opening of empty form:
 - All parameters are active, only the parameter *Name of the Member State* cannot be changed
- Opening of a form with existing data:
 - Parameters *ID of the area* and *Name of the Member State* are inactive
- Click on *Save* button:
 - If ID is missing or does not start with correct country code (after the country code at least one figure or letter is necessary) – warning message: “Wrong ID. [o.k.]” – field ID of the area becomes red
 - After successful saving: Field ID of the Area will be inactive
- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close automatically
- Click on *Delete* button – warning message: “All existing links to discharge points will be lost, are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.

9.5.3 Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(2-3))

The screenshot shows the 'UWWTD DEM-Tool' interface for 'Sensitive Areas and Catchments of Sensitive Areas'. At the top, there is a navigation bar with 'Estonia', the EU flag, and 'UWWTD DEM-Tool'. Below this is a table with the following data:

ID of the area	Name of the Area	Type of the area	Status of the receiving area for the reference date
EE1	Sensitive area 1	Sensitive area	active

Below the table, there are input fields for:

- ID of the area: EE1
- Name of the Receiving Area: Sensitive area 1
- Type of the area: Sensitive area
- Status of the receiving area for the reference date: active

 The 'Description of the Sensitive Area' section includes:

- Last date of designation or revision: 01/01/2004
- Designation Criteria (a, b, c) (Annex II A):
 - a - Nitrogen
 - a - Phosphorus
 - b
 - c
- Radio buttons for Art. 5(2,3) and Art. 5(4). The Art. 5(4) option is selected.
- Text input fields for:
 - c - relevant EU - Directives and related parameters
 - c - ID applied to the area according to this Directive
 - c - reference date of the area according to this Directive
- Root of corresponding GIS-Data: [text input field]
- Remarks: [text input field]

 Annotations on the right side of the form indicate:

- Step 1:** Points to the 'Insert a Sensitive Area or Catchment of Sensitive Area' button.
- Step 2:** Points to the 'Description of the Sensitive Area' section.
- Step 3:** Points to the 'Save' button.
- Step 4:** Points to the 'For Art. 5(4) insert aggregated monitoring data' button, with a note: 'In case Art. 5(4) is selected: Step 4'.

Figure 30: Sensitive Area and Catchment Area of Sensitive Area (Information on Art. 5(1) + 5(2-3))

The form 'Sensitive Area and Catchment Area of Sensitive Area' contains the following information

- Inventory of all Sensitive Areas (SA) and Catchment Areas of Sensitive Areas (CSA) in a Member State
- For each SA or CSA: ID, name and type of the receiving area, in case the receiving area is a CSA: related SA, last date of designation/ revision, designation criteria, root of corresponding GIS-data-file



The parameter fields marked in yellow are **master data** and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported **in all cases** (i.e. independently whether deadlines have been expired or not). These parameters form the main inventory of all agglomerations covered by the Directive.

Work flow (in case of first data entry, database is empty)

Step 1: Insert a new SA or CSA → click button *Insert a Sensitive Area or Catchment of Sensitive Area* → An additional line is created automatically in the list of sensitive areas and catchments of sensitive areas

Step 2: Insert data of the receiving area (ID, name, type and description including option field Art. 5(2,3) or Art. 5(4) – in case Art. 5(4) is clicked, the button *For Art. 5(4) insert aggregated monitoring data* is activated → DO NOT CLICK to button *For Art. 5(4) insert aggregated monitoring data* NOW

Step 3: Click button *Save* → receiving area is saved and appears in the list of receiving areas

Step 4: In case Art. 5(4) had been selected: click button For Art. 5(4) insert aggregated monitoring data → **Form 5d: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(4))** opens

Step 5: Click button *Insert a sensitive area or catchment of sensitive area* to insert the next receiving area and repeat the process as long as all receiving areas are in the list

Explanations (please consider Annex 1: Description of Data-Blocks, Data Block 1 additionally)

This Form is relevant for Member States, which have designated sensitive areas in their country and which apply Art. 5(2-3). **All sensitive areas and the related catchment areas of the sensitive areas in a Member State** have to be inserted into this Form.



It is essential to indicate and to report for every designated sensitive area the related catchment area. This relevant catchment area usually may correspond to the hydrological catchment area of the sensitive area.



After successful data input in this form, the receiving area will be used to establish the link agglomerations - UWWTP - discharge points – receiving area. In case information in this form is changed after data input on agglomerations, UWWTPs and discharge points, all these data will be corrupted!

It is recommended to add first the sensitive area and afterwards the catchment area of the sensitive area. In case the receiving area is a catchment area of a sensitive area (parameter *Type of the area*), the additional parameter *Related Sensitive Area* becomes visible in this Form. This parameter provides a pull-down menu, listing all those sensitive areas, which have already been inserted. By selecting the related sensitive area, the link between sensitive area and catchment of the sensitive area is established.

Pairing of SA and CSA: In case a CSA is inserted in the list of receiving areas and linked to a SA via the parameter *Related Sensitive Area*, the name of the receiving area is automatically defined (“Catchment area of sensitive area XX”) and pre-filled in the parameter field *Name of the Receiving Area*. In addition, the designation criteria, selected for the related SA are pre-filled for the CSA.

It has to be indicated in the option field, whether Art. 5(2-3) or Art. 5(4) is applied for the selected sensitive area or catchment area of sensitive area. When inserting a new SA or CSA Art 5(2-3) is ticked as standard value. In case Art. 5(2-3) is applied, no further Form is linked to Form 5c. In case Art. 5(4) is applied, a further Form (Form 5d) is relevant for data providers.

In case Art. 5(4) is selected in the tick-box, the designation criteria a - N and a - P are automatically selected.

Rules for his form

- Opening of empty form:
 - All parameters are active and can be changed
 - Button *For Art. 5(4) insert aggregated monitoring data* is inactive
 - Parameter *Related Sensitive Area* is not visible
- Opening of a form with existing data:
 - All fields are active and can be changed
 - Button *For Art. 5(4) insert aggregated monitoring data* is inactive in case of a selected Art. 5(2-3) area
 - Button *For Art. 5(4) insert aggregated monitoring data* is active in case of a selected Art. 5(4) area
 - Parameter *Related Sensitive Area* is only visible in case an area indicated with “Catchment in the sense of Art. 5(5)” has been chosen in the parameter *Type of the area*
- Click on *Save* button:
 - If ID is missing or does not start with correct country code (after the country code at least one figure or letter is necessary) – warning message: “Wrong ID. [o.k.]” – field ID of the area becomes red
 - If master data of the Sensitive Area or Catchment of Sensitive Area re missing (Name, last date of designation, designation criteria and GIS-data file) – warning message: “The following data are missing: [name of the missing parameters]. Please complete to fill-in these data.” → then data supply can be continued without blocking
 - If Art. 5(4) has been chosen and designation criteria a – Nitrogen or a – Phosphorus is not ticked – warning message: “You did not choose designation criteria nitrogen and phosphorus. Are you sure? [yes] [no]”; in case of *yes*, data will be saved; in case of *no*, data remains in the form and will not be saved.
- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close automatically
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button – warning message: “You would like to delete an object and all associated data. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.”
- Button *For Art. 5(4) insert aggregated monitoring data* will be active, if option Art. 5(4) has been chosen (independent, whether the area is a sensitive area or catchment of sensitive area)
- Parameter *Related sensitive area*: This parameter will only appear in case of “Catchment in the sense of Art. 5(5)” has been selected from the parameter *Type of area*

9.5.4 Form 5d: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(4))

UWWTD DEM-Tool

Estonia UWWTD DEM-Tool

Application of Art5(4)

<< Back

N and P loads: Aggregated monitoring Data for all UWWTPs of the Art. 5(4)

ID of the area: Name of the Receiving Area:

Starting date of application of Art.5(4):

Number of UWWTPs: Total organic design capacity of ALL these UWWTPs (p.e.):

Incoming loads (t/y)				Discharged loads (t/y)					
	Measured (t/y)	Calculated (t/y)	Estimated (t/y)	Total (t/y)		Measured (t/y)	Calculated (t/y)	Estimated (t/y)	Total (t/y)
N-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	N-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
P-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	P-tot	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Remarks:

[Save](#) [Delete](#)

Application of Art5(4) Version: 1.0.0

Figure 31: Form 5d: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(4))

The form 'Application of Art. 5(4)' contains the following information

- ID of the area
- Starting date of application of Art. 5(4)
- Aggregated monitoring data for all UWWTPs of the Art. 5(4) area

Work flow

Insert all data in the order proposed in the form

Explanations (please consider Annex 1: Description of Data-Blocks, Data Block 1 additionally)

This Form is relevant for Member States, which have designated sensitive areas in their country and which apply Art. 5(4). The Form has to be filled-in for all sensitive areas and the related catchment areas of the sensitive areas in a Member State, where Art. 5(4) is applied.



After successful data input in this form, the receiving area will be used to establish the automatic link through the IT tool agglomerations - UWWTP - discharge points – receiving area. In case information in this form is changed after data input on agglomerations, UWWTPs and discharge points, all these data will be corrupted!



In case aggregated information on incoming and discharged loads is given for ALL UWWTPs in an Art. 5(4) area, Member States still have to report information on Art. 3 and Art. 4 for each single agglomeration falling under the deadlines of the Directive and/ or Accession Treaty.

As this Form is opened in accordance to one sensitive area (or catchments of a sensitive area) edited in Form 5c, the parameters ID of the area and Name of the Receiving area are pre-filled automatically by the reporting system.

The number, the total organic design capacity (p.e.) as well as the incoming and discharged loads of total nitrogen and total phosphorus (t/y) of ALL UWWTPs in the related sensitive area (or catchment of the sensitive area) have to be given in this Form. For the incoming and the discharged loads a subdivision into the parameters Measured (t/y), Calculated (t/y), and Estimated (t/y) is done. The Parameter Total (t/y) is calculated automatically by the reporting tool and is hence inactive.

In case the incoming or discharged load of one parameter is calculated and not measured or estimated, the fields `Measured (t/y)` and `Estimated (t/y)` have to be left blank. In case one part of the value is measured and another part calculated, the parameter fields `Measured (t/y)` and `Calculated (t/y)` have to be filled in.

According to the local settings used by the PC (check in the control panel) the figures inserted in this form are organised in those parameter field, which are calculated automatically by the IT-too (e.g. in the English language version thousands/ millions/... are separated by a “,”, while the decimal is separated by a “.”).

Rules for his form

Parameters ID of the Area and Name of the Receiving area are prefilled and cannot be changed

- Click on *Delete* button
 - If no saving has been done so far – all fields will become blank, all fields will be deleted without warning
 - If successful saving has been already done – warning message: “This will delete all data of this form. Are you sure? [yes] [no]”; in case of *yes*, all data entries will be deleted, the form remains opened
- Click on *Save* button: Data will be saved
- Click on *Back* button:
 - After successful saving or no changes done: form will close automatically
 - Without saving: Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.

9.5.5 Form 5e: Less Sensitive Area

The screenshot shows the 'UWWTD DEM-Tool' interface for 'Less Sensitive Area'. At the top, there is a header with 'Estonia' and the European Union flag. Below this is a table with the following data:

ID of the area	Name of the area	Status of the receiving area for the reference date
EE		active

Below the table, there are several input fields and buttons:

- Step 1:** Points to the 'Insert a Less Sensitive Area' button.
- Step 2:** Points to the form fields: 'ID of the area' (EE), 'Name of the Less Sensitive Area', 'Type of the area' (Less sensitive area), 'Status of the receiving area for the reference date' (active), 'Description of the Less Sensitive Area' (Last date of designation or revision, Designation Criteria checkboxes), and 'Root of corresponding GIS-Data File'.
- Step 3:** Points to the 'Save' button.

The form also includes a 'Delete a Less Sensitive Area' button and a 'Remarks' text area. The version number 'Version 1.0.0' is visible at the bottom right.

Figure 32: Form 5e: Less Sensitive Area

The form 'Less Sensitive Area' contains the following information

- ID and name of the Less Sensitive area
- Last date of designation/ revision and designation criteria
- Root of corresponding GIS – data file



The parameter fields marked in yellow are master data and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported in all cases (i.e. independently whether deadlines have been expired or not). These parameters form the main inventory of all agglomerations covered by the Directive.

Work flow

- Step 1: Insert a new LSA → click button *Insert a Less Sensitive Area* → An additional line is created automatically in the list of Less Sensitive Areas
- Step 2: Insert data of the Less Sensitive Area (ID, name, date and criteria of designation, GIS data file)
- Step 3: Click button *Save* → Less Sensitive Area is saved and appears in the list of receiving areas
- Step 4: Click button *Insert a Less Sensitive Area* to insert the next less sensitive area and repeat the process as long as all Less Sensitive Areas are in the list

Explanations

This Form is relevant for Member States, which have designated Less Sensitive Areas in their country. All Less Sensitive areas in a Member State have to be inserted into this Form.



After successful data input in this form, the receiving area will be used to establish the automatic link through the IT tool agglomerations - UWWTP - discharge points – receiving area. In case information in this form is changed after data input on agglomerations, UWWTPs and discharge points, all these data will be corrupted!

Rules for his form

- Click on *Insert* button:
 - Empty form opens
- Click on *Save* button:
 - If ID is missing or does not start with correct country code (after country code at least 1 number or letter is necessary) – warning message: “Wrong ID. [o.k.]” – field ID of the area becomes red
 - If master data of the Less Sensitive Area are missing (Name, last date of designation and GIS-data file) – warning message: “The following data are missing: [name of the missing parameters]. Please complete to fill-in these data.” → then data supply can be continued without blocking
- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close automatically
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button – warning message: “All existing links to discharge points will be lost, are you sure? [yes] [no]”; in case of *yes*, data will be deleted and form will close; in case of *no*, data remains in the form and form will not close.”



After data input on all receiving areas, go back to *Form 4: Main Menu* and click to the button *Status of agglomerations (2ii)*

9.6 Schematic link of agglomerations, UWWTPs and discharge points via the questionnaire forms

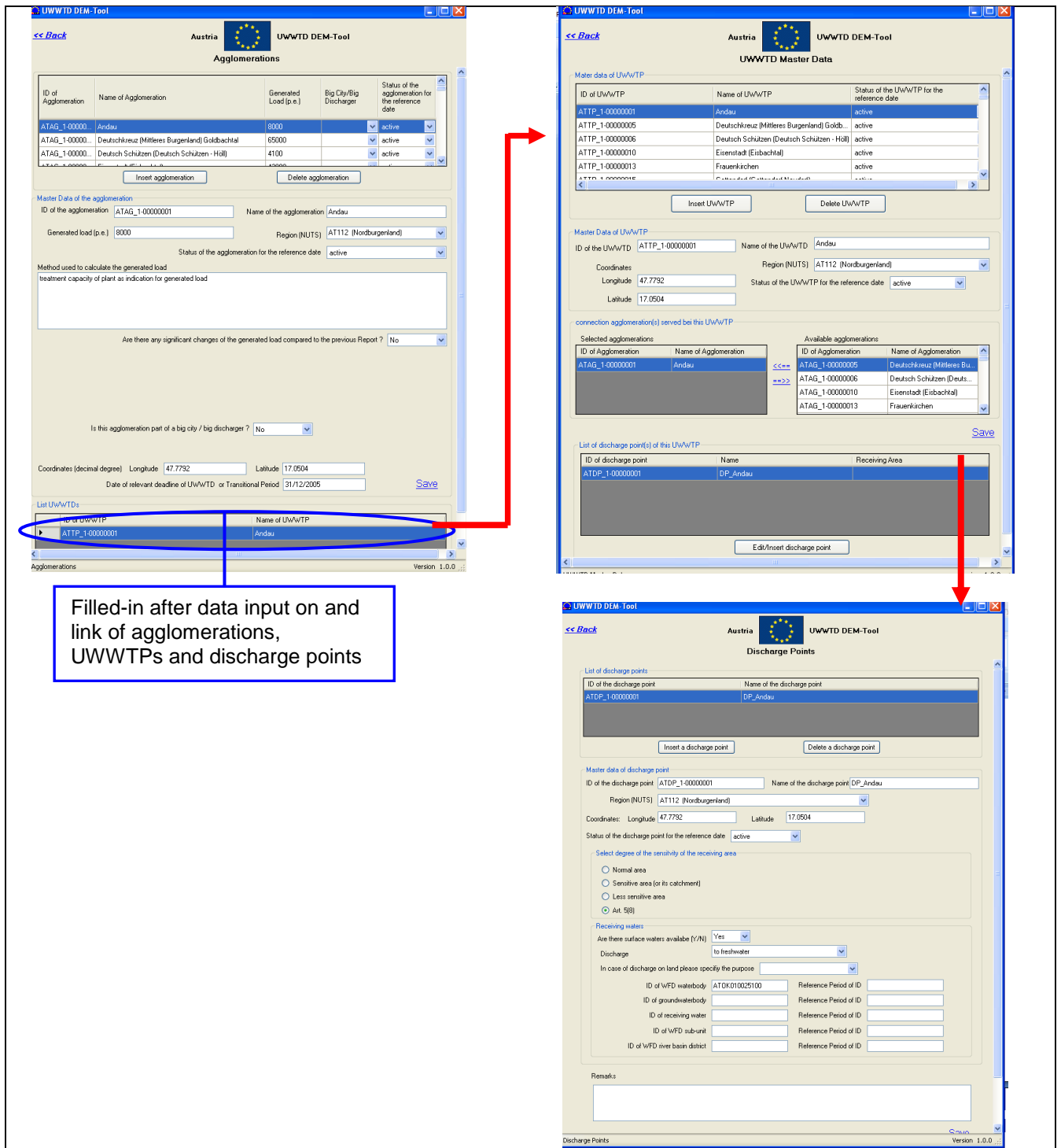


Figure 33: Schematic link of agglomerations, UWWTPs and discharge points via the questionnaire forms

Form 6: Agglomeration

Form "Agglomeration" is the starting point for data-input and linking of agglomerations, UWWTPs, discharge points and receiving areas

Data-input is only done for agglomerations, not for UWWTPs or DPs (UWWTPs are only depicted in this Form after successful linking of agglomerations and UWWTPs)

This Form comprises data on all agglomerations in a MS: ID, name and generated load of the agglomerations (and optionally the big city the agglomeration belongs to) are depicted in the table.

Form 7: Master data of UWWTP

In this Form data-input is only done for UWWTPs, not for agglomerations or DP. In addition, linking of agglomerations and UWWTPs is done in this Form.

This Form comprises data on all UWWTPs serving agglomerations in the Member State.

Form 8: Master data of DP and receiving area/ water body

In this Form data-input is only done for DPs and water bodies, not for agglomerations or UWWTPs

No data-input is done for receiving areas, but only linkage of DP with receiving areas. The linkage is done via the parameter *Receiving area*, which provides a scroll-down menu with all receiving areas if the Member State.

This Form comprises data on all DPs serving one UWWTP, which was selected in Form "Master data of UWWTP": ID and name of the DPs are depicted in the table

In the database of UWWTD Questionnaire 2009 the schematic link of agglomerations, UWWTPs and discharge points is presented by four tables storing the following information:

- T_Agglomerations: List of all agglomerations and master data on all agglomerations in one MS
- T_UWWTPS: List of all UWWTPs and master data on all UWWTPs in one MS
- T_Uwwtp_Agglo: Link between UWWTPs and agglomerations
- T_DischargePoints: List of all discharge Points and master data on all discharge points in one MS

These four tables of the database are represented in the following way in the forms of the UWWTD DEM-tool:



The link of the discharge point to the receiving area is given in the Form 'Master data of the discharge point' and the table 'T_DischargePoints', respectively. In the form 'Master data of the discharge point' a scroll-down menu provides a list of all receiving areas, which were inserted during the first step of manual data input.

9.7 Form 6: Agglomeration

The screenshot shows the 'UWWTD DEM-Tool' interface for managing 'Agglomerations'. At the top, there is a navigation bar with '<< Back', the Netherlands flag, and the tool name. Below this is a table of existing agglomerations:

ID of Agglomeration	Name of Agglomeration	Generated Load (p.e.)	Big City/Big Discharger	Status of the agglomeration for the reference date
NLA31003	AMSTERDAM	863253	AMSTERD...	active
NLA32001	TILBURG	254550	TILBURG	active
NL123	Testagglomeration	12000		active
NL				active

Below the table are two buttons: 'Insert agglomeration' and 'Delete agglomeration'. A callout box labeled 'Step 1' points to these buttons.

The 'Master Data of the agglomeration' section contains several input fields:

- ID of the agglomeration: NL
- Name of the agglomeration: [Yellow box]
- Generated load (p.e.): [Yellow box]
- Region (NUTS): [Dropdown menu]
- Status of the agglomeration for the reference date: active
- Method used to calculate the generated load: [Text area]
- Are there any significant changes of the generated load compared to the previous Report?: No
- Is this agglomeration part of a big city / big discharger?: No
- Coordinates (decimal degree) Longitude: [Yellow box], Latitude: [Yellow box]
- Date of relevant deadline of UWWTD or Transitional Period: [Yellow box]

A callout box labeled 'Step 2' encompasses the 'Generated load', 'Region', and 'Status' fields. Another callout box labeled 'Step 4' points to the 'Is this agglomeration part of a big city / big discharger?' dropdown menu.

The 'List UWWTDs' section at the bottom contains a table with columns 'ID of UWWTP' and 'Name of UWWTP'. A callout box labeled 'Step 5' points to this table.

A callout box labeled 'Step 3' points to the 'Save' button. A callout box labeled 'Step 1' also points to the 'Save' button.

At the bottom of the window, it says 'Agglomerations' on the left and 'Version 1.0.0' on the right.

The form 'Agglomeration' contains the following information

- Information on all agglomerations in a Member State
- IDs, names, region, generated load (p.e.), coordinates, date of relevant UWWTD deadline or UWWTD Transitional Period
- Changes of the generated load compared to the previous report
- Is the agglomeration part of a big city?



The parameter fields marked in yellow are **master data** and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported **in all cases** (i.e. independently whether deadlines have been expired or not). These parameters form the main inventory of all agglomerations covered by the Directive.

Work flow

(status: empty list of agglomerations)

Step 1: Click button *Insert agglomeration*

Step 2: Insert master data for this agglomeration (in case the agglomeration is part of a big city/ big discharger: DO NOT CLICK the button Edit/insert the big city/ big discharger NOW)

Step 3: Click button *Save* → Data for this agglomeration is saved and the agglomeration is depicted in the list in numerical order (e.g. AT1, AT2, AT3,...)

Step 4: In case an agglomeration is part of a big city/ big discharger and the big city/ big discharger is not already in the list of big cities/ big dischargers: a new big city/ big discharger has to be edited. Click button *Edit/insert the big city/ big discharger* → *Form 6a* opens

Step 5: Click button *Connect UWWTP* → *Form 7 opens*



Data on collection, conduction and connection will be filled in after data input on and linkage of agglomerations, UWWTPs and discharge points.

Explanations

In case linking of agglomerations and UWWTPs has already been performed (e.g. after electronic data import): list of UWWTP depicts only UWWTPs serving that agglomeration which is selected in the list of agglomerations

In case no linking of agglomerations and UWWTPs has been performed so far the list of UWWTPs is empty. The process to insert data and to provide the link is:

Click button *Connect UWWTP*

Form *Master data of UWWTP* opens

In case the agglomeration is part of a **big city/ big discharger**, the parameter *In case of yes, select a big city/ big discharger* becomes visible in the questionnaire. Via a scroll-down menu this parameter provides “real” big cities of the related Member State with more than 150,000 inhabitants and their IDs according to the Geographic Information System of the Commission of the European Communities (CISCO). In case a big city is already identified in the CISCO-list, then the ID according to CISCO will be used in UWWTD Questionnaire 2009 for the big city/ big discharger. In case a big city is not in this list, the MSs should design a new unique ID number for this particular big city (e.g. the 150,000 p.e. threshold is achieved due to an industrial part in the urban waste water collecting system). In case the big discharger/big city is identical to one single agglomeration with more than 150,000 p.e., then the ID of this agglomeration should be also used as ID for the big discharger/big city. Editing and inserting a big city/ big discharger can be done after clicking the button *Edit and insert the big city/ big discharger* (Form 6a).

In case one agglomeration belongs to several NUTs-regions (e.g. covers two different NUTs-regions) it is recommended to report that NUTs - region, which covers the biggest part of the agglomeration. In addition, the specific situation and the other NUTs-regions relevant for the agglomeration, should be explained in the *Remark*-field.

Rules for this form

- Opening of the form:
 - Selection list “List of agglomerations” will display all agglomerations which are already inserted
 - Button *Insert Agglomeration*: Block “Agglomeration” will provide empty field
 - Selection of an existing agglomeration from the list of agglomerations
 - Master Data will be displayed in block “Master data of the agglomeration”. These data can be changed
 - Button *Connect UWWTP* is inactive
 - Parameter *Are there any significant Changes of the generated Load compared to the previous Report* [yes] [no]”; in case of *yes*, the parameter *Comments on significant Changes of the generated Load compared to the previous Report* becomes visible
 - Adding a new agglomeration
 - Button *Insert Agglomeration* → a new empty row is generated in the list of agglomerations + a new set of master data is generated (MS-abbreviation is automatically given as pre-fix in the cell “ID of the Agglomeration”)
 - Fill-in master data of the agglomeration (ID, name, generated load, region (NUTS), Methods used for the Calculation of the generated Load)
 - After finishing input of master data for one agglomeration, click *Save*
 - If a new agglomeration is created, the field *Are there significant Changes of the generated Load compared to the previous Report* becomes invisible
 - Parameter *Is this Agglomeration part of a big City / big Discharger?* [yes] [no]”; in case of *yes*, the field “In case of yes, select a big city / big discharger” appears → scroll-down menu with big cities of the Member State
 - Button *Edit/ Insert the big city/ big discharger*
 - Click on *Save* button:
 - Warning message, if ID of UWWTP is incorrect:
 - ✓ If ID is missing – warning message: “Please correct form areas before save: Please specify a valid agglomeration code, please provide a name for this agglomeration”
 - ✓ If ID does not start with the correct country pre-fix: “Code for this agglomeration has to start with the country prefix.”
 - ✓ If ID already exists for another agglomeration: “Code for agglomeration already used”
 - It will be checked whether all master data (yellow) are provided. If anything is missing – warning message: “Parameter is master data.” [List of missing Master data] “Please correct form errors before save” → then data supply can be continued without blocking
 - if no problem – data will be saved and Button *ConnectUWWTP* will become active
 - Click on *Back* button:
 - Warning message if there was no saving after a change
 - Closing of the form if there was no change
 - UWWTPs
 - Case UWWTP is already in the selection list:
 1. ID and name of UWWTP are given in the list of UWWTPs
 - Case UWWTP is not in the selection list:
- Click on Button *Insert UWWTP* → new form “UWWTP Master Data” opens

9.8 Form 7: Master data of UWWTP

The screenshot shows the 'UWWTD Master Data' form in the 'UWWTD DEM-Tool' application. The form is divided into several sections, each highlighted by a callout box:

- Block: List of UWWTPs:** A table listing existing UWWTPs with columns for ID, Name, and Status.

ID of UWWTP	Name of UWWTP	Status of UWWTP for Reference Date
NL05001	UwWTP HAAKSBERGEN	active
NL05002	UwWTP ENSCHEDE-WEST	active
NL05003	UwWTP ENSCHEDE-GLANERBRUG	active
NL124	TestUwWTP	active
NL125	TestUwWTP2	active
NL		active
- Block: Master data of UWWTP:** A form for entering details for a specific UWWTP, including ID, Name, Coordinates (Longitude and Latitude), Region (NUTS), and Status.
- Block: Available agglomerations:** A list of potential agglomerations that can be associated with the UWWTP.

ID of Agglomeration	Name of Agglomeration
NLA01006	SIDDEBUREN
NLA01008	ALTEVEER
NLA01010	TER APEL
NLA01011	OOSTERNIELAND
- Block: Selected agglomerations:** A list of agglomerations currently selected for the UWWTP. This list is currently empty.
- Block: Discharge points:** A table for listing discharge points associated with the UWWTP.

ID of discharge point	Name	Receiving Area

Figure 34: Overview of the data sections in the form Master data of UWWTP

UWWTD DEM-Tool

Netherlands UWWTD DEM-Tool

UWWTD Master Data

Master data of UWWTP

ID of UWWTP	Name of UWWTP	Status of UWWTP for Reference Date
NL05001	UwWTP HAAKSBERGEN	active
NL05002	UwWTP ENSCHEDE-WEST	active
NL05003	UwWTP ENSCHEDE-GLANERBRUG	active
NL124	TestUwWTP	active
NL125	TestUwWTP2	active
NL		active

Insert UWWTP Delete UWWTP

Master Data of UWWTP

ID of the UWWTP: NL Name of the UWWTP: []

Coordinates: Longitude: [] Latitude: []

Region (NUTS): [] Status of the UWWTP for the reference date: active

connection agglomeration(s) served bei this UWWTP

Selected agglomerations		Available agglomerations	
ID of Agglomeration	Name of Agglomeration	ID of Agglomeration	Name of Agglomeration
		NLA01006	SIDDEBUREN
		NLA01008	ALTEVEER
		NLA01010	TER APEL
		NLA01011	DOOSTERNIELAND

Save

List of discharge point(s) of this UWWTP

ID of discharge point	Name	Receiving Area

Edit/Insert discharge point

UWWTD Master Data Version 1.0.0

Figure 35: Form 7: Master data of UWWTP

The form 'Master data of UWWTPs' contains the following information

- Information on all UWWTPs serving the agglomerations in a Member State
- IDs, names, region and coordinates of these UWWTPs
- Linkage between UWWTPs and agglomerations



The parameter fields marked in yellow are master data and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported in all cases (i.e. independently whether deadlines have been expired or not). These parameters form the main inventory of all agglomerations covered by the Directive.

Work flow

First process:

Insert master data of UWWTP (status: empty list of UWWTPs serving one agglomeration)

Step 1: Click button *Insert UWWTP*

Step 2: Insert master data for this UWWTP

Step 3: Click button *Save*

Second process: Link UWWTP with agglomeration (one UWWTP can be connected to one or more agglomerations)

The list “available agglomerations” depicts the list of ALL agglomerations, provided in Form “Agglomeration”

Select (=click) agglomerations connected to this UWWTP

click button “<” to confirm selection

click button *Save* → selected agglomerations are depicted in the list “selected agglomerations”

The list “selected agglomerations” depicts the list of ALL agglomerations, connected to the one UWWTP

In case linking of UWWTP and DPs has already been performed (e.g. after electronic data import): list of DP depicts only DPs serving that UWWTP which is selected in the list of UWWTPs

In case one UWWTP is deleted, the *Save*-button has to be clicked after deletion of the UWWTP, in order to additionally delete the connected discharge point.

Explanations (please consider Annex 1: Description of Data-Blocks, Data Block 2 additionally):

In case of an UWWTP >100,000 p.e., the ID of the UWWTP should be identical with the ID reported under the IPPC – Directive.

Rules for this form

- Opening of the form:
 - Selection list “Available UWWTPs” will display all UWWTPs which are already inserted
 - Button *Insert a discharge point* is inactive
- Selection of an existing UWWTP from the block “Available UWWTPs”:
 - Master data will be displayed in block “Master data of UWWTPs”
 - Button *Insert discharge point* is active
 - Connected Agglomerations will be displayed in block “Selected Agglomerations”
- Linking agglomerations with UWWTPs
 - Case UWWTP is already in the selection list:
 1. Select UWWTP from the list
 2. Block “Master data of UWWTPs” will display the existing master data. These data can be changed
 3. Block selected agglomerations will display all agglomerations which are already connected to this UWWTP
 4. Missing agglomeration has to be selected from “Available Agglomerations”
 5. Click on *Save* Button
 6. Return with *Back* button or add new agglomeration or UWWTP
 - Case UWWTP is not in the selection list:
 1. Click on Button *Insert UWWTP*
 2. Block “Master Date of UWWTPs” will display empty cells.
 3. Agglomeration has to be selected from “Available Agglomerations”
 4. Click on *Save* Button
 5. Return with *Back* button or add new agglomeration or UWWTP
- Click on button *Insert UWWTP*:
 - Button *Insert a discharge point* will become inactive
 - Block “Master data of UWWTPs” will provide empty fields
 - Block “Selected agglomerations” will be empty
- Click on *Save* button:
 - Warning message, if ID of UWWTP is incorrect:
 - ✓ If ID is missing – warning message: “Please correct form areas before save: Please specify a valid UWWTP code”
 - ✓ If ID does not start with the correct country pre-fix: “Code for this

- UWWTP has to start with the country prefix.”
 - ✓ If ID already exists for another UWWTP: “Code for UWWTP already used”
 - It will be checked whether all Master data (yellow) are provided. If anything is missing – warning message: “The following master data are missing:” [List of missing Master data] “Please complete to fill-in master data”→ then data supply can be continued without blocking
 - if no problem – data will be saved and Button *Insert a Discharge Point* will become active
 - Click on *Back* button:
 - Warning message if there was no saving after a change
- Closing of the form if there was no change.

9.9 Form 8: Master data of discharge point

Figure 36: Form 8: Master data of discharge point

The form 'Master data of discharge point' contains the following information

- Information on all discharge points of one UWWTP selected in the form 7: Master data of UWWTPs
- IDs, names, region and coordinates of these discharge points
- Degree of sensitivity and in case of SA, CSA or LSA the ID of the receiving area
- Information on receiving waters: ID of WFD waterbody, ground water body, receiving water, WFD sub-unit, WFD river basin district and the reference date of these IDs



The parameter fields marked in yellow are master data and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported in all cases (i.e. independently whether deadlines have been expired or not). These parameters form the main inventory of all agglomerations covered by the Directive.

Work flow

status: empty list of DPs

Step 1: Click button *Insert a discharge point*

Step 2: Insert master data for this discharge point

Step 3: Select degree of sensitivity of receiving area

Step 4: Link the discharge point to receiving area (parameter *Receiving area*)

Step 5: Insert data on receiving waters

Step 6: Click button *Save* → Data for this discharge point is saved depicted in the list



The linking of DP and receiving area is done by the field “Select degree of sensitivity of receiving area”, the parameter *Receiving area* and the coordinates of the discharge point

Rules for this form

- Opening of the form:
 - Selection list “Discharge Points” will display all Discharge Points which are already inserted
 - Button *Insert discharge point* and *Delete discharge point* is active
- Selection of an existing discharge point from the list “Discharge points”:
 - Master data will be displayed in block “Master data of the discharge point”
- Click on *Save* button:
 - Warning message, if ID of discharge point is incorrect
 - ✓ If ID is missing – warning message: “Please correct form areas before save: Please specify a valid discharge point code”
 - ✓ If ID does not start with the correct country pre-fix: “Code for this discharge point has to start with the country prefix.”
 - ✓ If ID already exists for another discharge point: “Code for discharge point already used”
 - It will be checked whether all master data (yellow) are provided. If anything is missing – warning message: “The following master data are missing:” [List of missing master data] “Please complete to fill-in master data” → then data supply can be continued without blocking
 - if no problem – data will be saved
- Click on *Back* button:
 - Warning message if there was no saving after a change
 - Closing of the form if there was no change

More detailed information on the link of UWWTD and WFD (via parameters as e.g. ID of WFD waterbody) is given in Annex 6 of the Manual.

9.10 Form 6a: Big city/ big discharger

ID of Big City	Name of Big City
AT006	GRAZ
AT007	INNSBRUCK
AT014	LINZ
AT016	SALZBURG
AT022	WIEN
ATAG_2-K1931629	Klagenfurt (Wörthersee Ost)
ATAG_2-K1939997	Villach

Figure 37: Form 6a: Big city/ big discharger

The form 'Big city/ big discharger' contains the following information

- Inventory of all big cities/ big dischargers in a Member State
- IDs and names of these big cities/ big dischargers

Work flow

- Step 1: press button “Insert big city/ big discharger” → A new row is generated in the list
- Step 2: Insert ID and name of the big city/ big discharger and the country code directly into this row
- Step 3: Click *Save*-button

Explanations

This Form is only relevant in cases an agglomeration is part of a big city/ big discharger. The recommendations for providing data on big cities/ big dischargers (especially IDs) is given in Annex 1: Description of Data-Blocks, Data Block 2.

When the agglomeration is part of a “real” big city according to CISCO, than the name of the big city is provided in **Form 6: Agglomeration** in the scroll-down menu. If Form 6a is opened, the list of all “real” big cities in the Member State is given in the Form, with the one chosen in the scroll-down menu, marked.

In case the agglomeration is part of a big city/big discharger, which is not provided in the scroll-down menu of **Form 6: Agglomerations**, than a new big city/ big discharger has to be added to the list.

In UWWTD Questionnaire 2007 Member States were invited to indicate whether there are additional big cities/ big dischargers, than those provided in the UWWTD DEM-Tool. Several Member States defined additional big cities/ big dischargers, which were included into the UWWTD-database of UWWTD Questionnaire 2009. For this reason the primary keys of big cities/ big dischargers in the UWWTD database were modified and are not identical to those of UWWTD Questionnaire 2007.



After data input on and linkage of all agglomerations, UWWTPs and discharge points, go back to *Format 6: Agglomerations* and click to button *Collection, conduction and connection*

9.11 Form 9: Collection, Conduction and Connection

Step 1

Step 3: check parameter, which is calculated automatically: In case parameter > 0, click button *Insert discharge point without treatment*

Step 2 + Step 4

Step 5

ID of UWWTP	Name of UWWTP	Insert rate of generated load of agglomeration entering the UWWTPs (% of p.e.)	Determination of %-value (calculated or estimated)
NL124	TestUWWTP	35,00	
NL125	TestUWWTP2	10,00	

Figure 38: Form 9: Collection, Conduction and Connection

The form 'Collection, Conduction and Connection' contains the following information
For each agglomeration:

- % of generated load collected in a collecting system
- % of generated load collected in a collecting system and treated in UWWTPs
- % of generated load collected in a collecting system but discharged without treatment
- % of generated load addressed through individual and appropriate systems (IAS)
- % of not collected load and not addressed through IAS

The values for

- % of generated load collected in a collecting system
- % of generated load addressed through individual and appropriate systems (IAS)
- % of not collected load and not addressed through IAS

have to add up to 100%.

Work flow (see Figure 38)

Before inserting the values for the % of the generated load entering the different waste water pathways, the relevant parameter fields are marked in red. After inserting all figures the parameter fields become white after clicking to the "Save"-button, in case the figures sum up to 100%

The screenshot shows the 'UWWTD DEM-Tool' interface. At the top, it displays 'Netherlands' and the EU flag. The main title is 'UWWTD DEM-Tool' and the section is 'Collection, Conduction and Connection'. The form contains the following elements:

- Fields for 'ID of the agglomeration' (NLI23) and 'Name of the agglomeration' (Testagglomeration).
- 'Collection and Connection' section:
 - 'Art. 3 Collecting System - general rule': A red bar for 'Rate of generated load of Agglomeration collected through collecting system (% of p.e.)' and a dropdown for 'Method used to obtain the %-value' (none).
 - 'Connected to UWWTPs': A table with columns 'ID of UWWTP', 'Name of UWWTP', 'Insert rate of generated load of agglomeration entering the UWWTPs (% of p.e.)', and 'Determination of %-value (calculated or estimated)'. The table lists 'TestUWWTP' (NLI24) and 'TestUWWTP2' (NLI25).
 - 'Not connected to UWWTPs': A text input for 'Rate of generated load of Agglomeration collected but discharged without treatment (% of p.e.)' (0,00) and a button 'Insert discharge points without treatment'.
 - 'Art. 3 exception: Individual and other Appropriate Systems (IAS)': A red bar for 'Rate of generated load of Agglomeration addressed through IAS (% of p.e.)' and a dropdown for 'Method used to obtain the %-value' (none).
 - 'NOT collected load': A red bar for 'Rate of generated load of Agglomeration not collected through collecting system and not addressed through IAS (% of p.e.)' and a dropdown for 'Method used to obtain the %-value' (none).
 - 'Remarks': A large text area.
 - A question: 'When will the total generated load of the agglomeration be collected through collecting systems or addressed through IAS?' with a text input.
 - Buttons: 'Treatment in UWWTPs', 'Delete', and 'Save'.

At the bottom, it shows 'Collection, Conduction and Connection' and 'Version 1.0.0'.

Step 1: Insert data on the rate of the generated load of the agglomeration collected in a collecting system, collected and connected to UWWTP(s), collected, but discharged without treatment, addressed through IAS and not collected (these rates have to add up to 100%)

Step 2: Click *Save*-button

Step 3: In case there are discharges without treatment, click button: *insert discharge point without treatment* → Form 9b opens → fill-in data → button *save* → go back to Form 9

Step 4: Click *Save*-button

Step 5: Click button: → *Treatment* → Form 9a opens → fill in data → go back to Form 9

At the bottom of this Form there are two buttons which lead to data blocks, required in specific cases/ to be provided on voluntary basis. Clicking button *Edit IAS data* opens **Form: Individual and appropriate systems**, clicking button *edit leaks and storm water overflows* leads to **Form: Leaks and storm water overflows**. Both Forms are described in detail in chapter 9.15.

Explanations

This Form gives information on collection, conduction and connection of the waste water from one agglomeration. As the Form is directly connected to **Form 6: Agglomeration**, it gives data on that agglomeration, which is selected in the list of agglomerations in **Form 6: Agglomeration**. Accordingly the parameters ID of the agglomeration and name of the agglomeration are pre-filled automatically by the reporting tool and are hence, inactive.

Based on linkage of agglomerations and UWWTPs in the previous working step, the list of UWWTPs (IDs and names) serving the selected agglomeration is provided automatically by the Reporting system. When using manual data entry the parameters Insert rate of generated load of agglomeration entering the UWWTPs (% of p.e.) and Determination of %-value (calculated or estimated) have to be filled in the list.

The parameter Rate of generated load of the agglomeration collected but discharged without treatment (% of p.e.) is calculated and pre-filled automatically by the Reporting system. It results from the rate of the generated load of the agglomeration collected through collecting system minus the generated load of the agglomeration entering UWWTPs.

In case a specific rate of the generated load of the agglomeration is collected, but discharged without treatment, information on the discharge point without treatment has to be provided. Clicking the button *insert discharge point without treatment* opens **Form 9b: Discharge point without treatment**

After the classification of the situation on collection, conduction and connection of waste water, data on the treatment in the UWWTP(s) should be indicated. After clicking the button *→ Treatment*, **Form 6a: Treatment in UWWTPs** will open automatically.

Rules for his form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button:
 - All fields (with exception of ID of the Agglomeration and Name of the Agglomeration) will become blank
- Click on *Save* button:
 - Rates of % of collecting system + IAS + not collected have to add up to 100%. If this is not the case, warning message: “Treatment percentage sum is incorrect” and the 3 fields will become red

9.12 Form 9b: Discharge Point without Treatment

Figure 39: Form 9b: Discharge point without treatment

The form 'Discharge point without treatment' contains the following information

- IDs and names of discharge points without treatment for one agglomeration each

Work flow

Step 1: Insert the ID (and the name) of the collecting system without treatment

Step 2: click button *Save*

Step 3: Click on the button: *Edit/ insert discharge point* → Form 8 Discharge point opens → fill-in data → save and go back to this form

Explanations

This form provides data on the waste water of an agglomeration which is discharged without treatment. As the Form is linked to **Form 9: Collection, Conduction and Connection**, which is linked to **Form 6: Agglomeration**, the parameters *ID of the agglomeration* and the *name of the agglomeration* are pre-filled automatically by the reporting tool and are hence, inactive.

In this Form the parameters *ID of the collecting system* and *Name of the collecting system* have to be provided. The purpose of this form is to consider the total amount of waste water, which is generated in an agglomeration and discharged and to link also those generated loads, not subject to waste water treatment, to receiving areas.

It is recommended to create the ID of the collecting system in the same way as the IDs for UWWTPs.

Master data concerning the discharge point has to be provided in the ***Form 7: Master data of the discharge point*** (see chapter 9.9). This form opens after clicking button *Edit/Insert discharge point*. After input and saving of master data in ***Form 7: Master data of the discharge point***, the discharge point becomes visible in the list of discharge points in Form 9b.

9.13 Form 9a: Treatment in UWWTPs

The screenshot shows the 'Treatment in UWWTPs' form. At the top, there is a header with 'Austria' and the European Union flag. Below the header, there is a table with one row: 'ATTP_9HKA-Simmering' and 'Hauptkläranlage Wien'. This table is labeled 'List I'. Below this table, there are several sections: 'Mater Data of the UWWTP' with fields for 'ID of the UWWTP' (ATTP_9HKA-Simmering) and 'Name of the UWWTP' (Hauptkläranlage Wien); 'Existing treatment' with checkboxes for 'primary', 'secondary', 'more stringent', 'N-removal', 'P-removal', 'UV', 'Chlorination', 'Ozonation', 'Sand filtration', 'Micro filtration', and 'Other'; 'Existing treatment Performance based on monitoring data' with dropdown menus for 'TSS', 'BOD5', 'COD', 'N-tot', 'P-tot', and 'Others'; 'Information in cause of failure' with checkboxes for 'Bad performance', 'Major accident', and 'Bad design / dimensioning'; and 'List of discharge points of this UWWTP' with a table containing one row: '642', 'ATDP_9HKA-Simmer...', 'DP_Hauptkläranlage Wien', and 'Art. 5(8) area (entire Memb...'. This table is labeled 'List II (no navigation, for information only)'. At the bottom, there are fields for 'Remarks', 'Date of closing of the UWWTP', and 'Explanation for closing of the UWWTP / what happened with the waste water since the last reporting exercise?'. There are also buttons for 'Delete' and 'Save'. The form is annotated with 'Step 1' pointing to the UWWTP selection table, 'Step 2' pointing to the 'Existing treatment' section, and 'Step 3' pointing to the 'Save' button.

Figure 40: Form 9a: Treatment in UWWTPs

The form 'Treatment in UWWTPs' contains the following information

Data per each UWWTP

- Load entering the UWWTP (p.e.), organic design capacity (p.e.)
- Existing treatment type, monitoring results
- Information in case of closing of the UWWTP since the last reporting
- List of discharge points for the each UWWTP selected

Work flow

- Step 1: Select one UWWTP from the list of UWWTPs serving the agglomeration (click to respective row)
- Step 2: Fill-in data for this UWWTP
- Step 3: Click button *Save*
- Step 4: Repeat this procedure as long as the treatment type of all UWWTPs is identified

Explanation (please consider Annex 1: Description of Data-Blocks, Data Block 3 additionally)

This form gives the list (**list I**) of **ALL UWWTPs** (IDs and names) **which serve the agglomeration**, selected in **Form 6: Agglomeration**. Furthermore, the form provides a list (**list II**) of **ALL discharge points of the UWWTP selected in list I**. The possibility to provide this information automatically in this form is based on the linking of agglomerations, UWWTPs and discharge points in previous working steps.

After selecting one UWWTP in this list (clicking to the UWWTP in the list), master data of this UWWTP can be inserted in this form. When clicking to the UWWTP in the list of UWWTPs, the parameters *ID of the UWWTP* and *name of the UWWTP* will be pre-filled automatically by the reporting tool and are hence, inactive.

The form provides the possibility to provide information in case an UWWTP was closed since the last reporting exercise. This information is very important for data consistency in different reporting periods.



It is essential that all the UWWTPs reported in the previous reporting exercise are also reported in present UWWTD reporting and that those which had been closed since the last reporting, are indicated.

Remarks: Please provide information on new treatment or planned treatment. An indication of the time schedule in dd/mm/yy for construction and operation and treatment level of new UWWTPs and/or collecting system coverage in % of the total generated load should also be done in the *Remark* - field.

At the bottom of this form there is one button, which leads to a data block which can be provided on voluntary basis. Clicking button *Edit loads treated and discharged data* opens *Form: Loads treated and discharged*.

Rules for this form

- Opening of the form:
 - Selection list of UWWTPs will display all UWWTPs which are serving the agglomeration (data input in previous form “UWWTP Master data”)
 - Select UWWTP in the list of UWWTPs: Master data will be displayed in the block “Master data of UWWTP”: changes are possible
- Adding information on the treatment type of the UWWTP
 - Rule: fields of treatment types falling under “more stringent treatment” (e.g. N-removal, P-removal become active, when “more stringent” are active, when field “more stringent” is ticked
- List of discharge points are prefilled based on data entry in previous form “UWWTP Master data”
- Click on *Save* button:
 - Warning message, if ID of UWWTP is incorrect; If ID is missing or does not start with correct country code (after country code at least 1 number or letter is necessary) – warning message: “Wrong ID. [o.k.]” – field ID of the area becomes red
 - if no problem – data will be saved
- Click on *Back* button:
 - Warning message if there was no saving after a change
 - Closing of the form if there was no change



After data input on status of receiving areas and agglomerations, go back to *Format 4: Main Menus* and click to button *Aggregated data on Member State level*

9.14 Form 10: Information on Member State level

The screenshot shows the 'UWWTD DEM-Tool' interface for Austria. The main title is 'Member State Level'. The form is titled 'Sewage Sludge' and contains the following fields:

- Yearly production of sewage sludge: 239,418 t DS/y
- Reported Year: 2006
- of which re-used: 105,249 t DS/y
- Soil and agriculture: 39,519 t DS/y
- Others: 65,730 t DS/y
- of which disposed: 134,316 t DS/y
- Landfill: 24,242 t DS/y
- Incineration: 89,238 t DS/y
- Others: 20,836 t DS/y
- of which discharged into surfacewater:
 - Pipeline: t DS/y
 - Ships: t DS/y
 - Others: t DS/y
- Rate of treated waste water re-used: t DS/y
- Rate of treated waste water re-used: t DS/y
- Agriculture Industry Other
- Please explain others: [Text area]
- Remarks: [Text area]

At the bottom of the form, there is a 'Save' button and a link 'Edit Art. 13 data'. A 'Step 1' callout points to the 'Sewage Sludge' section, and a 'Step 2' callout points to the 'Save' button.

Figure 41: Form 10: Information on Member State level

The form 'Information on Member State level' contains the following information

- Data on the yearly production of sewage sludge and the amounts re-used, disposed and discharged into surface waters
- Information on the rate of treated waste water re-used

Work flow

Step 1: Insert all data in the order proposed in the form

Step 2: Click on button *Save*

Explanations

Aggregated information on Member State level (sewage sludge and treated waste water re-used) should be reported in Form 10.

At the bottom of this form there is one button, which leads to a data block for voluntary reporting. Clicking button *Edit Art. 13 data* opens *Form: Industrial sectors of Art. 13*.

The values filled-in for the sewage sludge re-used, disposed and discharged into surface waters do not necessarily have to add-up to the value of the parameter “Yearly production of sewage sludge”, as a specific amount of sewage sludge might also be stored at UWWTPs or at sludge treatment plants.

Rules for this form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “There are unsaved items on this

form that will be lost when you go back. Do you really want to exit? [yes] [no]"; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.

- After successful saving: form will close
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button:
 - All fields with exception of *ID of Report* and *ID of Member State* become blank
- Click on *Save* button:
 - Data will be saved

9.15 Formats related to data blocks required in specific cases/ to be provided on voluntary basis

9.15.1 Data block 5: Details on collecting system

UWWTD DEM-Tool

<< Back

Austria UWWTD DEM-Tool

Management of leaks and storm water overflows

Art. 3: Management of Leaks

Is a maintenance plan (quality assurance) in place (Y/N)?

Is there a registration system for leaks in place (Y/N)?

What type of best technical knowledge/measures are used for building and maintenance of collecting system to prevent leaks?

Pressure test

Regular video inspection

Other measures, please explain

short explanation of measure

Art. 3: Management of storm water overflows

Type of collecting system

Delete Save

Management of leaks and storm water overflows Version 1.0.0

Step 1

Step 2

Step 6

Figure 42: Details on collecting system

LimitPollution

What are the measures based?

Dilution rates

Capacity in relation to dry weather flow

Acceptable number of overflows per year

Indicate number of overflows

Delete Save

Step 5

Step 3

Step 4

Figure 43: Details on measures to limit pollution

The form 'Management of leaks and storm water overflows' contains the following information

- Information on existence of a maintenance plan and on a registration system for leaks
- Information on best technical knowledge/measures to prevent leaks
- Type of collecting systems
- Raw sewage discharged via combined sewer overflows
- Information on best technical knowledge/measures to limit pollution

Work flow

Step 1: Insert data on the management of leaks and storm water overflows

Step 2: Click on button *Enter details*

Step 3: Enter details on the measures to limit pollution

Step 4: Click on the button *Save*

Step 5: Close the extra-window

Step 6: Click button *Save*

Explanations

In case a Member States provides data on this form, information on the management of leaks and on storm water overflows is required for all agglomerations with a generated load of more than 10,000 p.e.. Detailed information on the measures to limit pollution can be given after clicking the button *enter details* and opening of an additional format.

Rules for this form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button:
 - All fields will become blank
- Click on *Save* button
 - Data will be saved

9.15.2 Data block 5: Individual and Appropriate systems (IAS)

This form is required in case > 5% of the generated load of an agglomeration are addressed through individual and appropriate systems.

The screenshot shows the 'Individual and Appropriate Systems' form in the UWWTD DEM-Tool. At the top, there is a 'Back' button and the text 'Austria UWWTD DEM-Tool'. Below this, the form title 'Individual and Appropriate Systems' is displayed. There are two input fields: 'ID of the agglomeration' with the value 'ATA9_9HKA-Simm' and 'Name of the agglomeration' with the value 'Wien (HKA-Simmering)'. A section titled 'Transport to UWWTPs' contains a table with the following data:

ID of UWWTP	Name of UWWTP	Rate of generated load of the agglomeration transported by trucks [% of p.e.]
ATTP_9HKA-Simmer...	Hauptkieranlage Wien	

Below the table, there is a section titled 'Treated in-situ' with the text 'Rate of generated load of the agglomeration treated by individual in-situ systems [% of p.e.]'. It contains three input fields for different treatment levels: 'How much in % of generated load of agglomeration with primary treatment?', 'How much in % of generated load of agglomeration with secondary treatment?', and 'How much in % of generated load of agglomeration with more stringent treatment?'. At the bottom right, there are 'Delete' and 'Save' buttons. The footer of the form indicates 'Individual and Appropriate Systems' and 'Version 1.0.0'.

Figure 44:: Individual and Appropriate systems (IAS)

The form 'Individual and Appropriate Systems (IAS)' contains the following information

- % of the generated load of an agglomeration addressed by IAS and transported to UWWTPs
- % of the generated load of an agglomeration treated by individual in-situ systems

Explanations

There are no indicators described in the Directive for assessment of compliance of collecting systems with the requirements on best technical knowledge and IAS.

Detailed information on IAS is required in case the generated load addressed through IAS is more than 5% of the entire generated load of the agglomeration.

Rules for this form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button:
 - All fields (with exception of *ID of the Agglomeration* and *Name of the Agglomeration*) will become blank
- Click on *Save* button:
 - The sum of “Rate of the generated load of the agglomeration transport to UWWTPs” + “Treated in-situ” have to add up to same rate as indicated in

Form 9: Collection, Conduction and Connection in the parameter “Rate of generated load of agglomeration addressed through IAS”. If this is not the case, warning message: “Treatment percentage sum is incorrect”

9.15.3 Data block 6: loads treated and discharged for each UWWTP

Figure 45: loads treated and discharged for each UWWTP

The form 'Loads treated and discharged in the UWWTP' contains the following information

- Volume of waste water treated in the UWWTP
- Incoming and discharged loads for BOD, COD, Ntot and Ptot

Work flow

Fill-in data in the provided order

Explanations

As this form is directly linked to an UWWTP, the parameters *ID of the UWWTP* and *Name of the UWWTP* are pre-filled. For the incoming and the discharged loads of BOD-tot, COD-tot, N-tot and P-tot a subdivision into the parameters *Measured (t/y)*, *Calculated (t/y)*, and *Estimated (t/y)* is done. The Parameter *Total (t/y)* is calculated automatically by the reporting tool and is hence inactive.

In case the incoming or discharged load of one parameter is calculated and not measured or estimated, the fields 'Measured (t/y)' and 'Estimated (t/y)' have to be left blank. In case one part of the value is measured and another part calculated, the parameter fields 'Measured (t/y)' and 'Calculated (t/y)' have to be filled in.

In case a value was filled-in by mistake and the user wants to delete this value and leave the parameter field blank, than the following procedure should be used: Delete the value → enter "0" and use the tabulator on your keyboard to access the next parameter field.

Rules for this form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message "You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]"; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close automatically
- Click on *Back* button without any changes:

- Form will close
- Click on *Delete* button:
 - All fields (with exception of parameters ID of the UWWTP and Name of the UWWTP) will become blank
- Click on *Save* button:
 - Data will be saved

9.15.4 Data block 8: Food processing industry

The screenshot shows a web browser window titled 'UWWTD 2009'. The page header includes 'Austria' with the European Union flag and 'Commission QUESTIONNAIRE 2009'. The main heading is 'Information on Member State Level'. Below this is a table with the following columns: 'ID of the Plant', 'Name', 'Industrial Sector', 'Organic Load (p.e.)', 'Respecting conditions under Art. 13', and 'Date of Compliance'. The table body is currently empty. Below the table are two buttons: 'insert industry' and 'delete industry'. Further down are several input fields: 'ID of the plant', 'Name', 'Industrial sector' (a dropdown menu currently showing 'Production of alcohol and alcoholic beverages'), 'organic load (p.e.)', a checkbox for 'Respecting conditions under Art. 13', 'date of compliance', and a dropdown for 'Status of the industry for the reference date' (currently set to 'inactive'). A 'Save' button is positioned at the bottom right of the form area. The footer of the browser window shows 'Information on Member State Level' and 'Version 1.0.0'.

Figure 46. Industrial sectors of Art. 13

The form 'Art. 13: Information on industrial sectors of Food processing' contains the following information

- Inventory of food processing industrial plants
- ID, name, organic load, type of industrial sector and date of compliance

Explanations

As this form is directly linked to the information on Member State level, the parameters *ID of the Report* and *ID of the Member State* are pre-filled automatically by the reporting tool and are hence, inactive.

Data on the food processing industrial plants is filled-in directly by writing into the list. **The ID of the plant and the name of the plant should be identical with ID and name of the plant reported under EPER/ E-PRTR.**

In case a Member State does not want to provide information for the industrial sector, one empty txt-file needs to be created without any indication of parameters (e.g. report ID). This means that the Excel- template for industries forming the basis for creating txt-files needs to be completely empty as shown in Figure 47.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	repCode	mslID	indCodePlant	indNamePlant	indBranch	indOrganicLoad	indConditions	indDateCompliance	indDateexported						
2															
3															
4															
5															

Figure 47. Excel-template for industries, in case a Member State does not want to provide data for industries

Parameter *respecting conditions under Art. 13* (tick-list): in case the tick-list is ticked, the conditions under Art. 13 are respected.

Rules for this form

- Click on *Back* button after first data entry or change of data:
 - Without saving before – Warning message “You did not save, all changes done in this form will be lost. Are you sure? [yes] [no]”; in case of *yes*, data will not be saved and form will close; in case of *no*, data remains in the form and form will not close.
 - After successful saving: form will close
- Click on *Back* button without any changes:
 - Form will close
- Click on *Delete* button:
 - All fields (with exception of parameters *ID of the Report* and *Name of the Member State*) will become blank
- Click on *Save* button:
 - Data will be saved

ANNEXES

Annex 1: Description of the data blocks

The Annex 1 – file '[Description of data blocks for UWWTD Questionnaire](http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/description_blockspdf/_EN_1.0_&a=i)' is available on CIRCA at:
http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/description_blockspdf/_EN_1.0_&a=i

Annex 2: List of parameters per each data block

The Annex 2 – file '[List of parameters for UWWTD Questionnaire](http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/requested_parametersdoc/_EN_1.0_&a=i)' is available on CIRCA at: http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/requested_parametersdoc/_EN_1.0_&a=i

Annex 3: Identification numbers / coding

Concise coding will ease up electronic data transfer in the future and allow linkage to additional datasets that use the same coding mechanism. GIS feature coding is the assignment of unique identification codes to each table or spatial feature that will be referenced by GIS. This assignment needs to be managed to ensure uniqueness at national and international level. Standard code formats will ease electronic data transfer and enhance the possibility of central querying against distributed storage.

Unique European codes should be generated by placing the ISO 2 character national code for each Member State in front of up to 22 characters unique identifier codes generated within Member States.

Coding of point information

The Urban Waste Water Directive leads to the establishment of 3 features requiring unique coding at European Level. These features are:

- Agglomerations
- Waste Water Treatment Plants
- Discharge Points

By specifying a code one should ensure the persistence of the code in the future. Therefore it is recommended to use upper case and characters from A to Z and figures from 0 to 9 only. Codes for selected features (rivers, lakes etc) are presumed to be consistent with previously reported coding systems for the Water Framework directives Article 3 and 5 to be in line with further reporting within WISE.

Unique European codes are provided by following format

MS #1#2...#22 where:

MS = 2 character Member State identifier, in accordance with ISO 3166-1-Alpha-2 country codes, and

#1#2...#22 = an up to 22 character feature code that is unique within the Member State
symbol # = wildcard character (a wildcard character can be used to substitute for any other character or characters in a string)

Coding of sensitive areas and less sensitive areas

The feature code for sensitive areas should be unique also among the different types of sensitive areas. Therefore the following format for the sensitive areas code is recommended:

MS SA #1#2...#22 where:

MS = 2 character Member State identifier, in accordance with ISO 3166-1-Alpha-2 country codes, and

SA = a 2 character code for the sensitive area (see below)

#1#2...#22 = an up to 22 character feature code that is unique within the Member State
symbol # = wildcard character (a wildcard character can be used to substitute for any other character or characters in a string)

The following 2 character unique identifiers for sensitive areas are recommended:

RI for Sensitive Area – river
LK for Sensitive Area – lake
CL for Sensitive Area – coastline
CA for Sensitive Area – coast area
CM for Sensitive Area – catchment
LS for Less sensitive area (coastline)
TW for Sensitive Areas and Less Sensitive Areas – transitional waters⁶

For example:

A sensitive area lake in Italy might have the identifier ITLK45734
or an agglomeration in Spain might have the identifier ES6712454212145

Use of the MS #1#2...#22 and MS SA #1#2...#22 is the only requirement for unique European feature identification codes. Codes of this format should be used for initial and subsequent references to features reporting to the Commission.

Underscores (“_”) must not be used directly after the Member State identifier (MS). This could result in difficulties when creating European codes by placing the ISO 2 character national code for each Member state in front of up to 22 characters unique identifier codes generated within Member States. However, underscores can be used as part of the 22 character feature code (e.g. an agglomeration in Spain might have the identifier ESAG_67124542145)

⁶ Comprehensive definition of transitional waters is given in ANNEX 4 to the Manual

Annex 4: GIS-Guidance for UWWTD

See separate file: '[Short GIS guidance for reporting under the UWWTD](http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/04-annex_uwwtd_reporting/appendix_uwwtd_240609/_EN_1.0_&a=i)' on CIRCA at:
http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/04-annex_uwwtd_reporting/appendix_uwwtd_240609/_EN_1.0_&a=i

Annex 5: How to create GIS Data Files?

General definition

GIS is a system of hardware and software used for storage, retrieval, mapping, and analysis of geographic data. Spatial features are stored in a coordinate system (latitude/longitude, state plane, UTM, etc.), which references a particular place on the earth. Descriptive attributes in tabular form are associated with spatial features. Spatial data and associated attributes in the same coordinate system can then be layered together for mapping and analysis. GIS can be used for scientific investigations, resource management, and development planning.

GIS differs from CAD and other graphical computer applications in that all spatial data is geographically referenced to a map projection in an earth coordinate system. For the most part, spatial data can be "re-projected" from one coordinate system into another, thus data from various sources can be brought together into a common database and integrated using GIS software. Boundaries of spatial features should "register" or align properly when re-projected into the same coordinate system. Another property of a GIS database is that it has "topology," which defines the spatial relationships between features. The fundamental components of spatial data in a GIS are points, lines (arcs), and polygons. When topological relationships exist, you can perform analyses, such as modelling the flow through connecting lines in a network, combining adjacent polygons that have similar characteristics, and overlaying geographic features.

Data creation

The most common method of data creation is digitization, where a hardcopy map or survey plan is transferred into a digital medium through the use of a GIS software or a computer-aided drafting (CAD) program, and georeferencing capabilities. A digitizer produces vector data* as an operator traces points, lines, and polygon boundaries from a map. Scanning a map results in raster data that could be further processed to produce vector data.

Another method of GIS data creation is the knowledge of the location of the source data object. Location may be annotated by x, y, and z coordinates of longitude, latitude and their coordinate system definition, by elevation, or by other geocode systems like ZIP Codes or by highway mile markers. Any object that can be located spatially can be fed as tabular data form into a GIS and the output will be a GIS file (shape, coverage) for further spatial analyses.

Survey data can be directly entered into a GIS from digital data collection systems on survey instruments. Positions from a Global Positioning System (GPS), another survey tool, can also be directly entered into a GIS.

* Vector data type uses geometries such as points, lines (series of point coordinates), or polygons, also called areas (shapes bounded by lines), to represent objects.

Annex 6: Link of reporting under UWWTD and WFD

Please note that **Guidance No 9** was (recently) replaced by **Guidance No 22 on Implementing GIS elements of the EU water policy**. (Principles of coding remained the same). The document is available at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidance-no22-nov08pdf_1/EN_1.0_&a=d

The link between reporting under the UWWT-Directive in the frame of UWWTD Questionnaire 2009 and the WFD (and other EU reporting exercises) is established in the form “Master data of discharge point” via the parameters:

- ID of WFD surface waterbody
- ID of WFD groundwater body
- ID of receiving water (once there is a unique coding in Europe)
- ID of the WFD sub-unit (once implemented)
- ID of the WFD river basin district

For all these parameters the person, responsible for implementation of the WFD in a Member State will be able to give advice on the IDs of these parameters.

A general approach how to create IDs for WFD features is given in the WFD guidance document No.9 (GIS Guidance). This document is under revision now. Among others, the integration of existing datasets like the UWWTD dataset will be described. The revised document will be available at the end of 2007/beginning 2008. However, the general approach to create unique codes for WFD features will not be changed. This approach is also applied for UWWTD coding in order to have a consistent coding within Europe.

Important is to distinguish between the member state code (unique code for e.g a surface water body within the member state) and the European code. Codes must be unique at European level. To achieve this, it is required, to precede each member state code with the county code (ISO 3166-1-Alpha-2).

ID of WFD surface waterbody

According to the WFD a surface water body is defined as a discrete and significant element of surface water, such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water (Art. 2(10)). Guidance on the identification of location and boundaries of surface water bodies is given in Annex II of the WFD. Surface water bodies are management units and can be linked to the relevant hydrological features.

Each MS defines its WFD surface waterbodies and allocates IDs to these waterbodies according to the WFD guidance document No.9. This has already been done for the WFD 2005 reporting (Article 5 of the WFD) and the data have been reported to WISE in 2006 (more details about the WFD 2005 reporting: CIS document “Reporting under the Water Framework Directive; Informal guidance document on compliance reporting using the Water Information System for Europe (WISE)”).

ID of WFD groundwater body

Under the WFD a ground water body is defined as a distinct volume of groundwater within an aquifer or aquifers. Groundwater bodies are management units and can be linked to the relevant hydrological features. Each MS defines its WFD groundwater bodies and allocates IDs to these groundwater bodies according to the WFD guidance document No.9. This has already been done for the WFD 2005 reporting (Article 5 of the WFD) and the data have been

reported to WISE in 2006.

ID of the receiving water (once there is a unique coding in Europe)

The term “receiving waters” is an umbrella term for hydrological features like rivers and lakes. Until now only for WFD surface water bodies and groundwater bodies unique codes exist. In the course of the development of WISE and the revision of the WFD guidance document No.9 so called WISE-GIS reference datasets will be developed. These reference datasets will be, among others, hydrological features like rivers, lakes, coastal lines and coastal features, canals and reservoirs and river basins. A proposal for a European coding system for hydrological features has been drafted and will be included into the revised GIS guidance document. This coding will be applied to uniquely identify hydrological features. UWWTD features can then be linked to hydrological features/receiving waters.

ID of the WFD sub-unit (once implemented)

Within the WFD the information reported is linked to River Basin Districts (RBD). The use of the RBD scale alone limits the comparison of data between Member States, due to the large differences in RBD size. Therefore it is currently discussed in the Working Group D on Reporting under the Water Framework Directive to introduce sub-units as reporting units. Larger RBD's should be sub-divided to provide Europe-wide sub-units of comparable size. These sub-units should fall within national boundaries and consist of river basins and/or river sub-basins (as well as parts or groups of river basins /river sub-basins). The advantage would be to gain comparable units for comparative analysis and to create more comparable compliance indicators.

At the moment no consistent system and definition of sub-units in Europe exists. A proposal regarding the principles of delineating sub-units and the size range was drafted by the GIS Activity Group 1 under the WD 2 Reporting in 2005. A draft of sub-units in the Danube RBD exemplifies the approach.

ID of the WFD river basin district

According to Art. 2(15) WFD river basin districts are areas of land and sea, made up of one or more neighbouring river basins together with their associated groundwater and coastal waters, which is identified under Art. 3(1) as the main unit for management of river basins. For the river basin districts there will be a unique code at EU-level, which should be reported in the context of UWWTD Questionnaire 2009. The unique code at EU-level is still under development and will be subject of the up-date of the WFD Guidance document No.9 for the Common Implementation Strategy for the Water Framework Directive.

Annex 7: Data dictionary and codification of parameters

See separate file: [Data Dictionary and Codification of parameters for UWWTD Questionnaire](http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/codification_parametersx/_EN_1.0_&a=i) on CIRCA at:
http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/codification_parametersx/_EN_1.0_&a=i

Annex 8: Excel Templates

See separate file: '[MS Excel Templates for UWWTD Questionnaire](http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/manual_templatesxls/_EN_1.0_&a=i)' on CIRCA at:
http://eea.eionet.europa.eu/Public/irc/eionet-circle/wwdr/library?l=/treatment_directive/uwwtd_request_2009/supporting_documents/manual_templatesxls/_EN_1.0_&a=i

Annex 9: Glossary and terms

Table 14: General terms and glossary

TERM	DESCRIPTION	REFERENCE
Classification description	means the identification of the water bodies as defined in Art. 5 and Art. 6: normal (no identification), sensitive (Art. 5(1) and Art. 5(8)), catchment of sensitive (Art. 5(5)), less sensitive (Art. 6(1))	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
Compliance	means that, considering the quality of the discharge from the plant, the value for concentration or the percentage of reduction respects, for the concerned parameter, the requirements of the Directive (Art. 15, Annex I.B and Art. 2(7) (primary treatment)) during the last 12 months in accordance with the control procedures laid down in Annex I.D of the Directive (or since the completion date if this is less than 12 months old)	Directive 91/271/EEC, Art. 15, Annex I.B, Art. 2(7)
Date of classification	means the date of identification of the waterbodies as defined at Art. 5 and Art. 6 or the date of the last review. In the case of normal areas and in the case of the use of Art. 5(8) it means the date of the relevant decision.	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
Emission standard	means the emission standard of the effluent included in the prior regulation and/or the specific authorisation of the discharge from the plant	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
Implementation (Programme)	The carrying out of a project or programme. Involves not only the work itself, but all the practical supporting activities such as preparing terms of reference, fund-raising, setting up an organisational structure, communicating, and carrying out a project evaluation. (2) Implementation means compliance checking and compliance promotion. Implementation consists of the activities required to comply with legislation and may regard activities by inspectorates as well as companies. Source:	EEA glossary (http://glossary.eea.europa.eu/EEAGlossary)
Monitoring of waters	Means monitoring of waters subject to the discharge from the plant, in accordance to Art.15.2 of the Directive	Directive 91/271/EEC, Art. 15(2)
Reduction	means the percentage of reduction	Directive 91/271/EEC, Annex I, Table 1 and 2
Urban waste water	Domestic waste water or a mixture of domestic waste water with industrial waste water and/ or run-off rain water	Directive 91/271/EEC, Art. 2(1)

Table 15: Glossary on data block 1

TERM	DESCRIPTION	REFERENCE
Catchment area	1) An area from which surface runoff is carried away by a single drainage system. (2) The area of land bounded by watersheds draining into a river, basin or reservoir.	EEA glossary (http://glossary.eea.europa.eu/EEAGlossary)
Less Sensitive area	A marine water body or area can be identified as a less sensitive area if the discharge of waste water does not adversely affect the environment as a result of morphology, hydrology or specific hydraulic conditions which exist in that area.	Directive 91/271/EEC, Annex II B
N	Total Nitrogen	Directive 91/271/EEC, Annex I, Table 2 of Annex
Organic design capacity (ODC)	Technical parameter that indicates the treatment capacity (in p.e.) of the plant. This parameter is relevant for the construction and dimension of treatment plants (i.e. the size of a plant) and is usually linked to a permit system. It refers to the maximum flows and loads of the influent the treatment plant is designed for, which conform to the specified consent standard. It is calculated in the planning phase of a treatment plant or when a plant is re-dimensioned or upgraded. When determining the ODC, growth of the agglomeration should be taken into account. Apart from its relevance for the size of treatment plants, the ODC provides information about the waste water infrastructure being (or planned to be) in place for a certain area. On a technical level, detailed guidance(s) exists for its calculation; however, there is no standardised international method and, as a result, Member States use different methods.	Terms and definitions of the Urban Waste Water Treatment Directive (91/271/EEC), Brussels, 2007
P	Total Phosphorus	Directive 91/271/EEC, Annex I, Table 2 of Annex
p.e.	'1 p.e. (population equivalent)' means the organic biodegradable load having a five-day biochemical oxygen demand (BOD ₅) of 60 g of oxygen per day	Directive 91/271/EEC, Art. 2(6)
Sensitive Area	Member States has to identify water bodies as sensitive areas in accordance with the criteria of the urban waste water treatment directive (eutrophication, high concentration of nitrates in surface waters intended for abstraction of drinking water, areas where further treatment is necessary to fulfil other directives). In sensitive areas and catchment of sensitive areas Member States have to ensure the provision of more advanced treatment.	EEA glossary (http://glossary.eea.europa.eu/EEAGlossary)
Specific hydraulic conditions	Specific hydraulic conditions have to be defined individually in Member States and may include wind speed, lake depth and fetch	

Table 16: Glossary on data block 2

TERM	DESCRIPTION	REFERENCE
Agglomeration	'agglomeration' means an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant or to a final discharge point	Directive 91/271/EEC, Art. 2(4)
Generated load	Generated load means the organic biodegradable load of the agglomeration, expressed in p.e. It consists of urban waste water ⁷ requiring collection, or otherwise to be addressed, under Article 3(1) of the Directive ⁸ . It does not include the load of unmixed industrial waste water which is treated separately and directly discharged into waters.	Terms and definitions of the Urban Waste Water Treatment Directive (91/271/EEC), Brussels, 2007
Freshwater	Naturally occurring water having a low concentration of salts, which is often acceptable as suitable for abstraction and treatment to produce drinking water	Directive 91/676/EEC
Coastal water	Means the water outside the low water line or the outer limit of an estuary	Directive 91/271/EEC
Estuary	Means the transitional area at the mouth of a river between fresh-water and coastal waters. Member States shall establish the outer (seaward) limits of estuaries for the purpose of this Directive as part of the programme for implementation in accordance with the provisions of Art. 17(1) and (2)	Directive 91/271/EEC
Irrigation (use)	Artificial application of water on lands to assist the growing of crops and pastures	Eurostat/ OECD Joint Questionnaire on Inland Waters
Water body	a discrete and significant element of surface water such as a river, lake or reservoir, or a distinct volume of groundwater within an aquifer	Directive 2000/60/EC
Receiving water	Any type of water body where water or waste water is discharged	DIN EN 1085 – Waste water treatment Vocabulary, May 1997
River basin districts	Area of land and sea, made up of one or more neighbouring river basins together with their associated groundwaters and coastal waters, which is identified under Art. 3(1) as the main unit for management of river basins	Directive 2000/60/EC

⁷ 'urban waste water', according to Article 2(1), means domestic waste water or the mixture of domestic waste water with industrial waste water and/or run-off rain water

⁸ As a general rule, via collecting systems, but in special cases described in paragraph 3 of Article 3(1) individual or other appropriate systems may be used.

Table 17: Glossary on data block 3

TERM	DESCRIPTION	REFERENCE
Collecting system	System of conduits which collects and conducts urban waste water	Directive 91/271/EEC
Individual and other appropriate systems (IAS)	To regard a system as an 'individual or other appropriate system' for the purposes of the final sub-paragraph of Article 3(1) of the Directive, the respective system has to represent an exception and then only on the basis that establishment of a collecting system is not justified. In this context, it may again be recalled that 'collecting system' is defined in Article 2(5) to mean a 'system of conduits that collects and conducts urban waste water'.	Terms and definitions of the Urban Waste Water Treatment Directive (91/271/EEC), Brussels, 2007
Calculated	Release data are based on calculations ("C"). "C" is used when the releases are based on calculations using activity data (fuel used, production rate, etc.) and emission factors or mass balances. In some cases more complicated calculation methods can be applied, using variables like temperature, global radiance etc.	Guidance document for the implementation of the European PRTR, May 2006
Estimated	Release data are based on non-standardised estimations ("E"). "E" is used when the releases are determined by best assumptions or expert guesses that are not based on publicly available references or in case of absence of recognised emission estimation methodologies or good practice guidance	Guidance document for the implementation of the European PRTR, May 2006

Table 18: Glossary on data block 4

TERM	DESCRIPTION	REFERENCE
Preliminary treatment	Removal of large solids, oils, fat and other material from sewage so as to protect waste water treatment facilities engaged in further treatment. (2) The first stage of waste water treatment which removes debris, sand, grit and fine particles.	EEA glossary (http://glossary.eea.europa.eu/EEAGlossary)
Primary treatment	Means treatment of urban waste water by a physical and/ or chemical process involving settlement of suspended solids, or other processes in which the BOD ₅ of the incoming waste water is reduced by at least 20% before discharge and the total suspended solids of the incoming waste water are reduced by at least 50%	Directive 91/271/EEC
Secondary treatment	Means treatment of urban waste water by a process generally involving biological treatment with secondary settlement or other process in which the requirements established in Table 1 of Annex I are respected.	Directive 91/271/EEC
N-removal	Facility of a waste water treatment plant to bring the efficiency for nitrogen elimination to a high level. This can be done by creating special process conditions to stimulate nitrification and denitrification	Eurostat/ OECD Joint Questionnaire on Inland Waters
P-removal	Facility of a waste water treatment plant to bring the efficiency for elimination of phosphorus to a high level. This can be done using chemical and/ or biological processes.	Eurostat/ OECD Joint Questionnaire on Inland Waters
TSS	Total Suspended Solids	Directive 91/271/EEC, Annex I, Table 1 of Annex I
BOD ₅	Biochemical oxygen demand (BOD ₅ at 20 °C) without nitrification	Directive 91/271/EEC, Annex I, Table 1 of Annex I
COD	Chemical Oxygen Demand	Directive 91/271/EEC, Annex I, Table 1 of Annex I

Table 19: Glossary on data block 7

TERM	DESCRIPTION	REFERENCE
Sludge	Residual sludge, whether treated or untreated, from urban waste water treatment plants	Directive 91/271/EEC
Sludge disposal	means quantity of sludge in t ds/y after treatment; the total quantity may be different to the quantity of sludge production; in the case of sludge treatment centre the quantity may be a result of a "pro-rata"-calculation	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
Sludge production	means quantity of sludge in t DS/y before treatment	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
Sludge treatment	means all measures necessary to bring the sludge up to the required standard for reuse or other disposal	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'
t DS/y	Tons dry solids/year	Electronic UWWT-Questionnaire 1999, 'Explanatory Note'

Table 20: Glossary on data block 5 (Proposed data for future reporting)

TERM	DESCRIPTION	REFERENCE
Storm water overflows	Device on a combined or partially separate sewerage system or at waste water treatment works that relieves the system of excess flows	DIN EN 1085 – Waste water treatment Vocabulary, May 1997
Combined system	Sewer system designed to carry both waste water and surface water in the same pipeline(s)	[3.6 of EN752-1:1995] DIN EN 1085 – Waste water treatment Vocabulary, May 1997
Separate system	Sewer system normally of two pipelines, one carrying waste water and the other surface water	[3.37 of EN752-1:1995] DIN EN 1085 – Waste water treatment Vocabulary, May 1997
Partially separate system	A sewer system, normally of two pipelines, where one pipeline carries waste water together with a designed volume of surface water and the other pipeline carries the balance of the surface water.	DIN EN 1085 – Waste water treatment Vocabulary, May 1997

Annex 10: Frequently asked questions/ Reporting in specific situations

- **There are only Sensitive Areas designated, but no Catchment Areas of Sensitive Areas**

According to the UWWTD-Directive each designated area has its own relevant catchment area, which usually may correspond to the hydrological catchment of the receiving area. It is essential, that a catchment area is designated for each sensitive area, as it is naturally that each sensitive area has its catchment. Therefore, it is not possible to report only a sensitive area without the related catchment of this sensitive area. It is also crucial to provide the GIS-shape file of the sensitive area and the catchment area of each sensitive area in the UWWTD Questionnaire 2009.

In case a catchment area of a sensitive area is inserted into UWWTD Questionnaire 2009 and linked to the sensitive area (via the parameter "Type of the area" and "Related Sensitive Area"), the designation criteria applied to the sensitive area are pre-filled automatically by the system, as the designation criteria of the sensitive area and its related catchment area are the same. The parameters, which have to be filled-in manually are "Last date of designation or revision", "Root of corresponding GIS-Data" and the application of the UWWTD-Article of concern (either Art. 5(2-3) or Art. 5(4)).

- **Two or more UWWTPs are discharging via the same discharge point:**

In case one or more UWWTPs are discharging via the same discharge point, different IDs according to the UWWTPs have to be defined for one discharge point. This is essential, as one of the data validation checks of the reporting systems proofs unambiguousness of ID-codes. In the *Remark*-field the explanation on this specific situation should be given.

- **Use of GIS-files**

GIS-shp-files of the sensitive areas have to be up-loaded to the UWWTD- DEM-tool/ RerportNet in any case. If it is guaranteed that the extent and the borders of the area designated under the UWWTD and under another Directive are identical, the same GIS-shp file delivered for reporting under another Directive can be provided for UWWTD-reporting.