UWWTD QUESTIONNAIRE-2007:
MANUAL AND GUIDANCE FOR REPORTING
UNDER THE URBAN WASTE WATER TREATMENT DIRECTIVE
(91/271/EEC)

umweltbundesamt

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HELP DESK SERVICE:

The help desk service for the reporting exercise for the UWWTD Questionnaire 2007 is available from the contractor working for the European Commission DG Environment – Umweltbundesamt GmbH, Vienna Austria.

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Users are invited to send their questions and files to the help desk. Umweltbundesamt GmbH will identify the technical problems on the basis of files and explanations on difficulties provided by the users and guide users to solve the problem. In case of further questions, please contact Ms Katharina Lenz

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ABBREVIATIONS

BOD	Biochemical Oxygen Demand
BWD	Bathing Water Directive (76/160/EEC)
COD	Chemical Oxygen Demand
CSA	Catchment Area of Sensitive Area
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
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 costal 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 (according to Article 16 and 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.

In addition, referring the EC Treaty article 10 the Commission may ask more extensive information in case of a need to have as complete as possible picture of a status of implementation of the EU Water legislation especially the UWWT Directive and fulfilment of the obligations of articles 174-176 of the EC Treaty.

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 of water body (or receiving area), which receives waste water discharges define the treatment level requirements for the treatment plant(s) serving this agglomeration.

The first step for the implementation of the UWWTD is the **identification of the type** (coastal, estuary, freshwater) **and sensitivity of the receiving water body**. As the water body is one of the core elements of the WFD, it establishes the strong link between both Directives. In the sense of the UWWTD, water bodies receiving waste water discharges can be divided into sensitive (SA), not sensitive areas (or so-called normal areas, NA) and less sensitive areas (LSA).

The second step for the implementation of the UWWTD comprises the **delineation of the agglomeration**, resulting in the size (= generated load) of the agglomeration. According to the size classes defined in the UWWTD different types of waste water treatment are required. Based on the first and the second step of implementation of UWWTD the requirements for

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[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).

waste water collection and **treatment standards in the UWWTP(s)** serving the agglomeration are defined.

The third step for implementation of the Directive is compliance of **aggregated information at MS level** (sewage sludge).

When making an assessment of the performance of implementation of the UWWTD, a logical sequence starting from the agglomeration size to the receiving water body/ receiving area has to be addressed (see Figure 1 for the schematic presentation of this system). The structure of UWWTD Questionnaire 2007 takes the key role of both parameters into account as it is based on the main principles of the Directive, and stipulates that the **inventory and mapping of the receiving areas is done BEFORE the inventory of the agglomerations.**
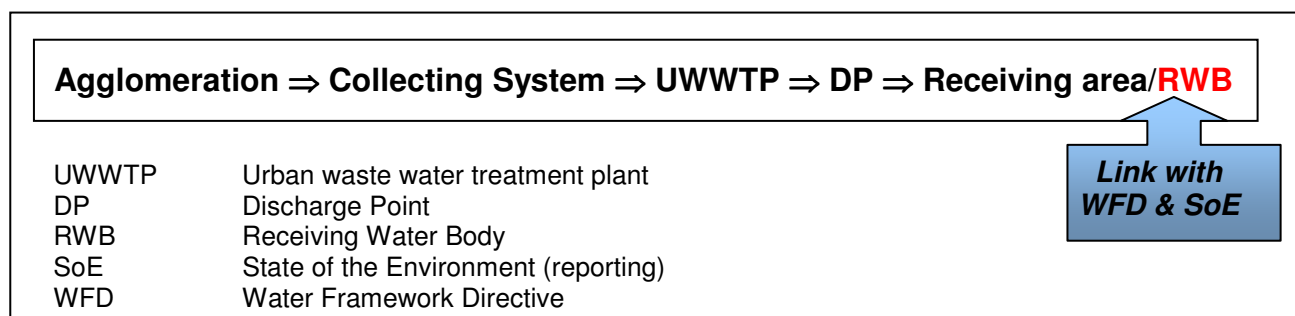
Figure 1: Principal pathway of urban waste water as foreseen by UWWTD

1.3 How to use the manual for UWWTD Questionnaire 2007

1.3.3. Purpose and structure of the Manual

The Manual for UWWTD Questionnaire 2007 was drafted with the purpose to provide guidance for compilation and delivery of information required under the UWWTD and to fulfil some needs of certain information of other EU services/institutions (EEA, Eurostat, JRC).

The 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.

It 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 Questionnaire 2007 and includes guidance on data input. In order to assure maximum user-friendliness, the guidance on UWWTD Questionnaire is organised in hierarchical manner, starting from the basic idea and data model to detailed explanation on the requirements of each IT-Form and upload of data. 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 of UWWTD Questionnaire 2007. Furthermore, one focus of the manual is the provision of examples for data input, in case of application of different Articles of UWWTD (see Annex 12).

Structure of the Manual: The manual is structured according to the working steps of providing information for UWWTD Questionnaire 2007. This structure is reflected in the table of contents:
  • Structure of the reporting tool for Questionnaire 2007, data model and principles of

navigation
- Installation of UWWTD Questionnaire 2007
- Data import and validation
- Data export and validation
- Navigation through UWWTD Questionnaire 2007 – manual data entry

Examples for providing data to UWWTD Questionnaire 2007 according to the application of different Articles of UWWTD is given in Annex 12.

The description of parameter blocks/ reporting sheets, the list of parameters, guidance on the creation of identification numbers/ coding, the GIS-guidance for UWWTD, a guidance on how to create GIS-data files, information on the link between UWWTD and WFD, the data dictionary, the templates for data import, a template for new big cities/ big dischargers, a glossary and a "Frequently-asked-questions"-chapter are provided in further Annexes.

1.3.1. Reasons for new concept of the UWWTD Questionnaire 2007

From 1999 onwards the Commission has sent formal requests to Member States in order to obtain information on the implementation of UWWTD. Member States started to report information in an electronic form with the second reporting exercise carried out to produce the second Commission synthesis report. The electronic questionnaire was developed as part of the UWWTD - database and access was provided to upload information via the internet. Although this early implementation of an electronic reporting forms, the reported information in relation to deadlines 1998 and 2000 was frequently inconsistent. Data was lacking, incomplete or of bad quality, as the official questionnaires and classifications have not been used when replying to the Commission's request. In addition, a common implementation strategy of the Directive was missing, previous questionnaires were concentrated on a separate directive deadlines, with no systematic approach to long-term reporting exercises.
For these reasons structure and content of the UWWTD questionnaire has been discussed within the working group on reporting during 2004-2006 in order to prepare and update it for the next reporting exercise taking into account a long-term reporting perspective for the Directive (also considering the deadline of 31/12/2005). Finally, during the 9th UWWTD-REP working group meeting on 20 December 2006, the structure of UWWTD Questionnaire 2007 as well as the paper on 'Terms and Definitions for UWWTD'[2] was agreed (see more detailed description of reporting data blocks and the list of parameters in Annexes 1 and 2).

1.3.2. Link to WISE

UWWTD Questionnaire 2007 stipulates reporting according to the new systematic approach of reporting on all water issues within the Water Information System for Europe (WISE)[3]. WISE 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. In the past countries often had to report what appeared to be similar information to a number of different organisations with some commitments for reporting being legally binding while others rather moral. Quite

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[2]

      http://forum.europa.eu.int/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive&vm=detailed&sb=Title

[3]

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

often the former took precedence over the latter because of resource constraints in a Member State. WISE will stipulate the streamlining the reporting process, gathering more useful and relevant information and making the exchange process of data as efficient as possible using modern technology. It is intended that WISE will cover all water-related information arising from EU water policy (Water Framework, Urban Waste Water Treatment, Nitrates, Bathing Waters and Drinking Water Directives) as well as the upcoming Marine Strategy and Flood Action Programmes, etc. In addition WISE will include other water-related datasets such as EIONET-Water developed by EEA and those arising from relevant water research projects. The starting point of WISE is the WFD.

The development of the UWWTD Questionnaire 2007 including technical specification, structure and parameters requested was based on the new reporting requirements according to the WFD and – in a broader context - under WISE. According to the WFD a clear and stable link is required from the source of pollution to the discharge point and the impact on water quality in the receiving water. Spoken in terms of the UWWTD this means that there must be a clear linkage of agglomerations, discharge points and receiving areas. In context with the WFD a further link has to be established to the receiving water bodies, as the river basin scale presents the key element of integrated water management. Not only the programme of measures but also the river basin management plans have to be established on the river basin scale. Furthermore, the WFD defines the implementation of the UWWTD as minimum requirement to achieve good ecological status under the programme of measures.

Within the broader context of WISE a close linkage of data reported under UWWTD and information needs of other EU-institutions (e.g. EEA, ESTAT) and/or Directives is aspired. The idea is to ease the burden of reporting for Member States and to use information, reported under UWWTD for other reporting purposes and needs.

1.3.4. What is new in UWWTD Questionnaire 2007

In order to consider both, the need to harmonise comprehensive data collection for different EU-institutions, Directives and EU environmental policy in principle, a step-wise approach was chosen for the next UWWTD reporting exercises.

The novelty about the step-wise approach of the UWWTD Questionnaire is based on an allocation of reporting parameters into parameter blocks, with the **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:

- receiving water bodies/ receiving areas
- agglomerations → UWWTPs → discharge points
- collecting systems
- treatment standards and treatment performance in UWWTPs serving agglomerations
- aggregated information at MS level

The logical structure and order of the parameter blocks represents in a very straight manner both, the pathway of waste water from its source of origin to the area of discharge, as well as the priority of key elements required for implementation of the UWWTD.

The **first step** in the reporting process (parameter block 1) foresees the inventory of receiving areas and the provision of related GIS-data files (.shp-files).

The **second step** in the reporting procedure (parameter block 2) asks for inventories of agglomerations, UWWTPs and discharge points. In addition, it traces the pathway of waste water from its source of origin to its final discharge into the environment by establishing the

links 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 and to "close the chain". Based on the established link between receiving areas and waste water discharge it is furthermore possible to define the treatment requirements for each agglomeration.

The **third step** in the reporting process (parameter block 3) asks for basic information on the collecting systems, representing a prerequisite to assess completeness of reporting on waste water from agglomerations.

The **fourth step** (parameter block 4) covers the request for information on the treatment standards in UWWTP(s) serving the agglomerations of concern. 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.

The **fifth step** (parameter block 7) of the reporting procedure asks for aggregated information on Member State level (sewage sludge), which is defined as further criteria for implementation of the UWWTD.

Step-wise approach of reporting does not only refer to the approach of clearly indicating the principles of implementation of UWWTD, but also to the amount of parameters asked for. In the frame of reporting 2007, the majority of parameters is essential for basic assessment of implementation of UWWTD, and at the same time the parameters are of additional relevance for other EU-policies or Directives. For future reporting (e.g. UWWTD Questionnaire 2007) further parameters are proposed to be requested. These parameters are still under discussion and require agreement from Member States before their inclusion in the Commission's request. However, as basis for discussion and in order to give Member States the possibility to test data availability for providing data, the parameters discussed for future reporting have been included in Questionnaire 2007 in terms of separate forms. Information discussed for future reporting can be provided on voluntary basis.

1.3.5 Structure of UWWTD Questionnaire 2007

Figure 2 gives an overview of the structure of UWWTD Questionnaire 2007. 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.

QUESTIONNAIRE 2007

1. Designated receiving areas
2. Agglomeration level
3. Member State level

Contents of Questionnaire 2007

     Block 0: General information about the report and contact details
Receiving areas
     Block 1: Inventory of receiving areas (RA) and catchments
Agglomeration level
     Block 2: Master data on agglomerations (including UWWTPs, DP and RA)
     Block 3: Collecting systems: basic questions
     Block 4: Treatment level & performance
     Block 5: Compliance: New details on collecting systems (proposed for future reporting)
     Block 6: Other important data needs: loads, SoE, public, statistics (proposed for future reporting)
MS level
     Block 7: Aggregated information on MS-level: sludge & treated waste water reuse
     Block 8: Food processing industries (proposed for future reporting)

Questionnaire 2007
Reporting reference year 2005

Block 0:	General information/ Contact details
Block 1:	Inventory of RA and catchments
Block 2:	Master data on agglomerations
Block 3:	Collecting systems: basic questions
Block 4:	Treatment level & performance
Block 7:	MS level: Information on sludge ('old') & waste water reuse

Based on reporting issues already reported previously, however in a more systematic manner
To be submitted 6 months after request from the Commission

Blocks for future reporting (Questionnaire 2009)
Reporting reference year 2007

Agglomeration level

Block 5:	Compliance: New details on collecting systems
Block 6:	Other data needs: loads & volumes

Member State level

Block 8:	Food processing industries

Voluntary testing as part of Questionnaire 2007
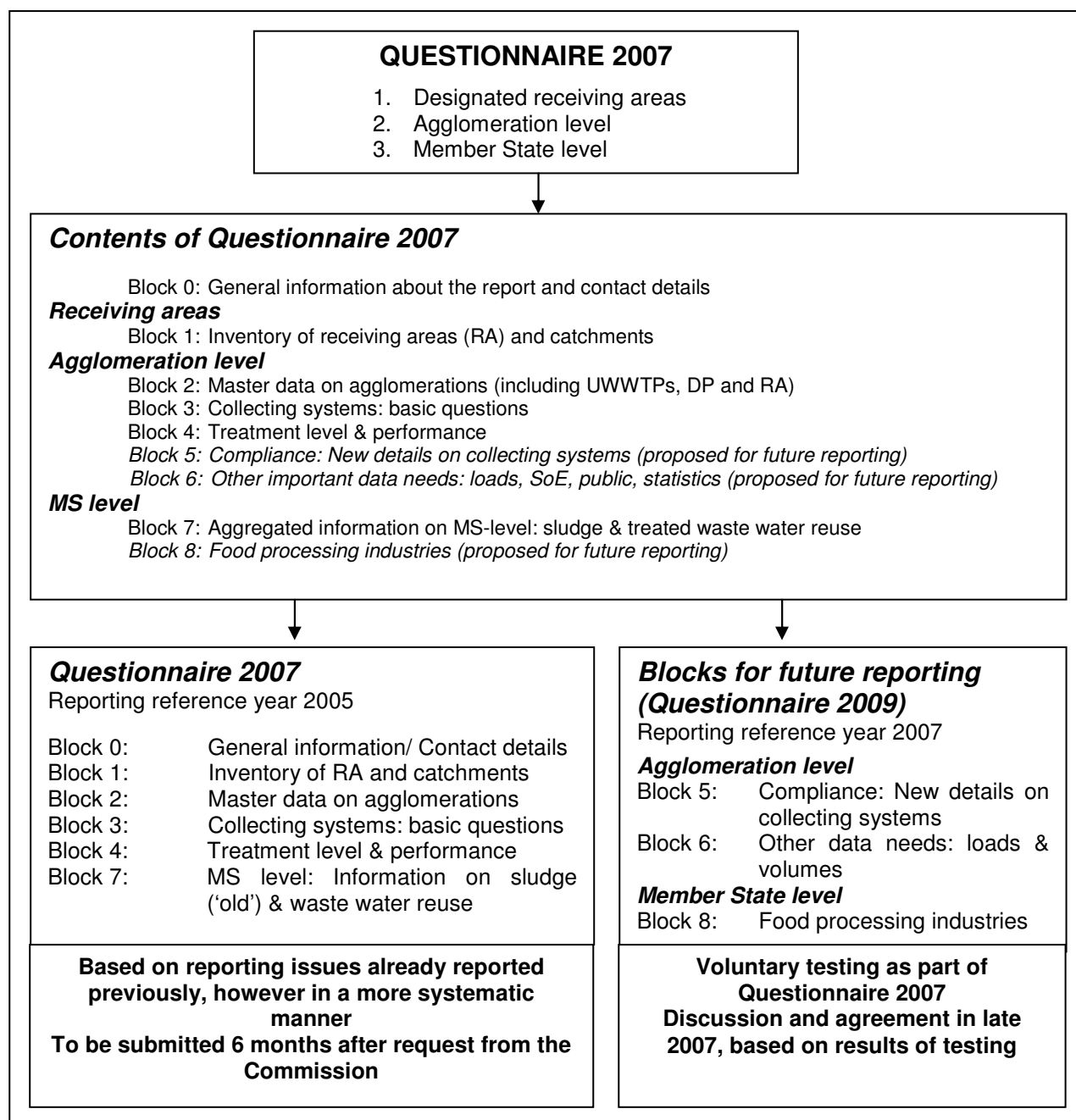**Discussion and agreement in late 2007, based on results of testing**

Figure 2: Structure of UWWTD Questionnaire 2007

Table 1: Parameters of UWWTD Questionnaire 2007, 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, OECD/ESTAT-JQ,
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	• 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	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. Potential for use of data reported via UWWTD questionnaire: • 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 • Technical way forward: pre-fill JQ with data reported under UWWTD before launching JQ in 2008

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)	Reporting year 2007, deadline to report June 2008; frequency – once/year; Commission REGULATION (166/2006),
	
	 All parameters are mandatory, except few optional
	
	 Overlapping issues:
	
	 • 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	• Art. 2: sludge from all sewage plants treating domestic or urban waste water + from septic tanks + from other sources[4] • 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	• 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

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[4] this is wider than sludge generated in urban waste water treatment plants

2   DATA MODEL AND STRUCTURE OF THE REPORTING TOOL FOR Questionnaire 2007, AND PRINCIPLES OF NAVIGATION

2.1 Conceptual Data Model of UWWTD Questionnaire 2007

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).

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 7.5)
- one form each for the for data entry according to the different possibilities of implementation → Form 5a – 5e (chapter 7.5.1 - 7.5.5)

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. Table 4 gives an overview of the parameters specified in the database table "ReceivingAreas" (and the corresponding import/export-file ReceivingAreas.txt) and an indication of the Art.5/ Art. 6 – approach, which results in data entry for the respective parameter. For all normal areas of a country one data entry exists (rcaType = 'NA')

Table 4: Parameters identifying the type of receiving area in the database

Paramters in the database	Explanation of the parameter/ Name of the parameter in the reporting system	Information on Art. 5(8)+5(2-3)	Information on Art. 5(8)+5(4)	Sensitive Areas and Catchment Areas of Sensitive Areas	Less Sensitive Areas	Normal area
		Form 5a	Form 5b	Form 5c+5d	Form 5e	Applied when no other Form is selected
rcaCode	ID of the area	x	x	x	x	
rcaName	Name of the MS/area	x	x	x	x	
rcaType	Art. 5(8) area, Art. 5(4) area, Sensitive area (SA) or catchment area of sensitive area (CSA), Less sensitive are, Normal area	x	x	x	x	
rcaSensitiveArea	Link to SA in case of CSA			x		
rcaDateArt58	Starting date of Art. 5(8)	x	x			
rcaParameterN	Parameters subject to more stringent treatment	X				
rcaParameterP	Parameters subject to more stringent treatment	X				
rcaParameterOther	Parameters subject to more stringent treatment	X				
rcaDateDesignation	Last date of designation or revision		X	x	x	
rcaANitro	Designation criteria			X		
rcaAPhos	Designation criteria			X		
rcaB	Designation criteria			X		
rcaC	Designation criteria			X		
rcaCRelevantDirective	Designation criteria			X		
rcaMorphology	Designation criteria				X	
rcaHydrologie	Designation criteria				X	
rcaHydraulic	Designation criteria				X	
rcaAbsenceRisk	Designation criteria				X	
rcaDateArt54	Starting date of Art. 5(4)		X	x*		
rcaPlants	In case Art. 5(4) is applied: Number of UWWTPs		X	x*		
rcaPlantsCapacity	Total organic design capacity of all the these UWWTPs		X	x*		
rcaNIncomingMeasured	Incoming loads Ntot meas.		X	x*		
rcaNIncomingCalculated	Incoming loads Ntot calc.		X	x*		
rcaNIncomingEstimated	Incoming loads Ntot est.		X	x*		
rcaPIncomingMeasured	Incoming loads Ptot meas.		X	x*		
rcaPIncomingCalculated	Incoming loads Ptot calc.		X	x*		
rcaPIncomingEstimated	Incoming loads Ptot est.		X	x*		
rcaNDischargedMeasured	Discharged loads Ntot meas.		X	x*		
rcaNDischargedCalculated	Discharged loads Ntot calc.		X	x*		
rcaNDischargedEstimated	Discharged loads Ntot est.		X	x*		
rcaPDischargedMeasured	Discharged loads Ptot meas.		X	x*		
rcaPDischargedCalculated	Discharged loads Ptot calc.		X	x*		
rcaPDischargedEstimated	Discharged loads Ptot est.		X	x*		
rcaGIS	Root of corresponding GIS-data file			x	x	
rcaCIDOtherDirective	ID applied to the area according to this Directive			x		
rcaCDateOtherDirective	Reference date of the area according to this Directive			x		
rcaRemarks		x	x	x	x	

Paramters in the database	Explanation of the parameter/ Name of the parameter in the reporting system	Information on Art. 5(8)+5(2-3)	Information on Art. 5(8)+5(4)	Sensitive Areas and Catchment Areas of Sensitive Areas	Less Sensitive Areas	Normal area
		Form 5a	Form 5b	Form 5c+5d	Form 5e	Applied when no other Form is selected
rcaArt54Applied	Tick box to indicate that Art. 5(4) is applied			x		

* in case Art. 5(4) is applied

2.1.2 Implementation of the chain/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 document[5]. 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 UWWTD Questionnaire 2007 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 Questionnaire 2007 is given in Figure 3.

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[5] 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?l=/working_groups/u-uwwtd-rep&vm=detailed&sb=Title–
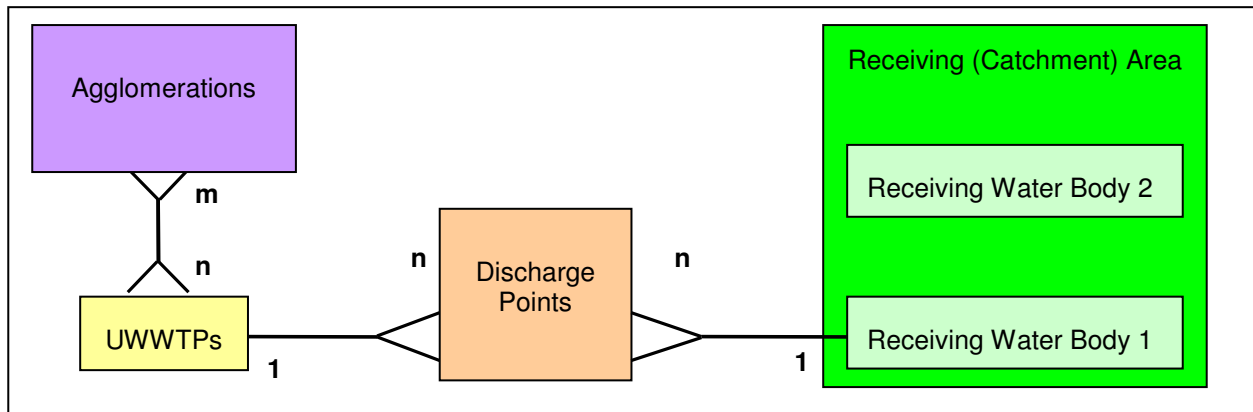
Figure 3: Conceptual data model for linking agglomeration – treatment plant(s) – discharge point(s) and receiving areas/water bodies in UWWTD Questionnaire 2007

For the purpose of the database in UWWTD Questionnaire 2007 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. Linkage between files (tables) is done by one parameter per each pair of files, which is identical in both documents. Each database table can be imported and exported as separate file.

Figure 4 gives an example for the establishment of the chain from agglomeration to receiving area in the database.

List of agglomerations: Extract of the file Agglomerations.xls

aggID	aggState	repID	aggCode	aggName	aggNUTS	aggLatitude	aggLongitude
			AT01	Agglom. 1			
			AT02	Agglom. 2			
			AT03	Agglom. 3			

List of UWWTPs: Extract of the file UWWTPs.xls

uwwID	uwwState	repID	aggID	uwwCode	uwwName	uwwCollectingSystem	uwwDateClosing
				AT44	UWWTP 1		
				AT45	UWWTP 2		
				AT46	UWWTP 3		

Linking agglomerations and UWWTPs: Extract of the file UwwtpAgglo.xls

uwwID	aucUwwCode	aucUwwName	aggID	aucAggCode	aucAggName
	AT44	UWWTP 1		AT01	Agglom.1
	AT44	UWWTP 1		AT02	Agglom.2
	AT45	UWWTP 2		AT02	Agglom.2
	AT46	UWWTP 3		AT01	Agglom.1
	AT46	UWWTP 3		AT03	Agglom.3

Relation m:1

Relation 1:n

Relation 1:1

Linking UWWTPs with discharge points and receiving areas: Extract of the file DischargePoints.xls

uwwcode	dcpCode	dcpName	dcpLatitude	dcpLongitude	dcpWaterBodyType	dcpTypeOfReceivingArea	rcaID
AT44	AT777	DP1				Sensitive Area (SA) 1	ATRI1
AT44	AT778	DP2				Catchment Area of SA1	ATCM2
AT45	AT779	DP3				Catchment Area of SA1	ATCM2
AT46	AT780	DP4				Sensitive Area (SA) 2	ATRI3

Figure 4: Example for linking of agglomerations – UWWTPs – discharge points and receiving areas in UWWTD Questionnaire 2007

2.2 Structure of UWWTD Questionnaire 2007

UWWTD Questionnaire 2007 is an electronic tool for the collection of data on UWWTD. It contains three basic parts: (1) information on receiving areas including georeferenced information; (2) information on agglomeration level; (3) and aggregated information on a Member State level. The structural basis for reporting the information on agglomeration level is similar to former electronic UWWT – Questionnaires from previous reporting exercises. According to the new approach on reporting of all water issues within WISE, UWWTD Questionnaire 2007 represents a more systematic and structured way of reporting. It provides clear guidelines concerning the form and specification of the required data and ensures a preliminary automatic validation of the provided data.

2.2.1 Description of the data blocks (reporting sheets) of UWWTD Questionnaire 2007

The description of data blocks (reporting sheets) of UWWTD Questionnaire 2007 is given in Annex 1.

2.3 Navigation through UWWTD Questionnaire 2007 – An overview

Figure 5 presents the realisation of two aspects of organisation of implementation of the Directive reflected in the conceptual data model (see Table 4 and Figure 2) behind UWWTD Questionnaire 2007.

Table 8 also reflects the schematic logical structure of the Questionnaire 2007 and the logical structure of the IT-reporting tool and navigation through it by using the single forms.

The schema depicts the topics of each form and the structural order of navigation. Continuous boxes and arrows represent the issues asked for reporting 2007, doted boxes and arrows represent the data blocks for future reporting (Questionnaire 2009). They are provided in UWWTD Questionnaire 2007, but data input occurs on voluntary basis.
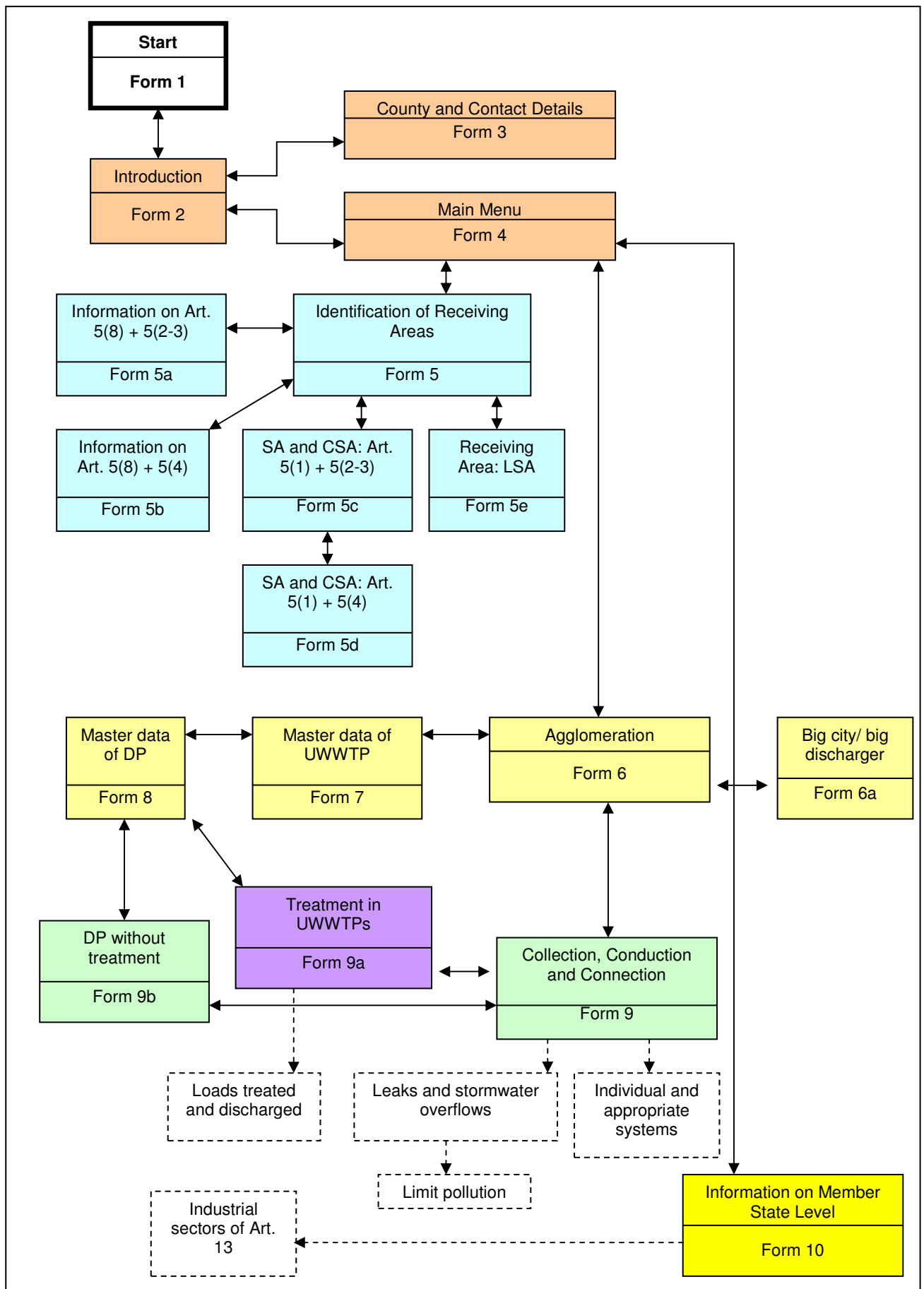
Figure 5: Navigation through UWWTD Questionnaire 2007: Forms

2.3.1 Linkage of agglomeration, UWWTP, discharge point and receiving area in UWWTD Questionnaire 2007

As mentioned in chapters 1.2 and 1.3, the inventory of designation of receiving areas (including GIS data files) and linking of agglomerations, UWWTPs, discharge points and receiving areas/ receiving water bodies is the main principle for UWWTD and UWWTD Questionnaire 2007. Within three Forms (Form 6: Agglomeration, Form 7: Master data of UWWTPs and Form 8: Master data of discharge point) UWWTD Questionnaire 2007 provides a clearly structured and step-wise approach for data-input concerning these main issues, which are presented in the following chapter. Figure 6 gives a general overview of the step-wise data input established in the questionnaire. In addition, the chapter describes the logical link between the different Forms, while detailed guidance for data input is given in chapters 7.7 - 7.8.
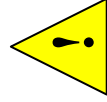
The prerequisite for provision of data on agglomerations, UWWTPs and discharge points is that the inventory and mapping of receiving areas has been done BEFORE!
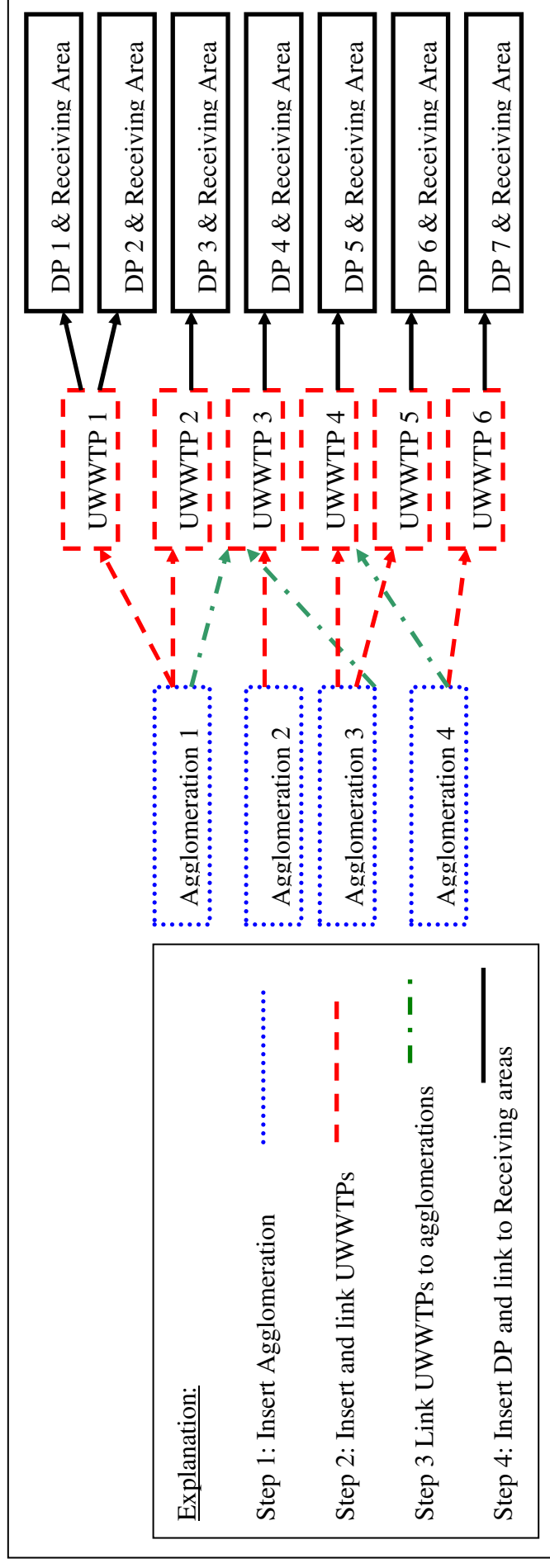
Figure 6: General overview of the step-wise data input established in UWWTD Questionnaire 2007

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3 INSTALLATION of UWWTD Questionnaire 2007

3.1 System requirements

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

3.2 Download from the EC CIRCA-server

UWWTD Questionnaire 2007 is available for download for Member States at the following CIRCA-server: http://forum.europa.eu.int/Members/irc/env/wfd/library?l=/working_groups/u-uwwtd-rep&vm=detailed&sb=Title:

The reporting system and the database are provided in terms of a .zip-file on the CIRCA-server. The *first step* to access UWWTD Questionnaire 2007 is to download the .zip – file to your PC. The *second step* includes the extraction of the .zip – file. The supporting documents should also be downloaded from the CIRCA-server.

3.3 Procedure of installation

> ⚠ For the installation of and using the UWWTD Questionnaire 2007 the user needs to have **Administrator rights**.

The first work step includes the installation of the reporting system from the extracted .zip-file. After clicking the folder *setup* (see Figure 7), the installation procedure starts.
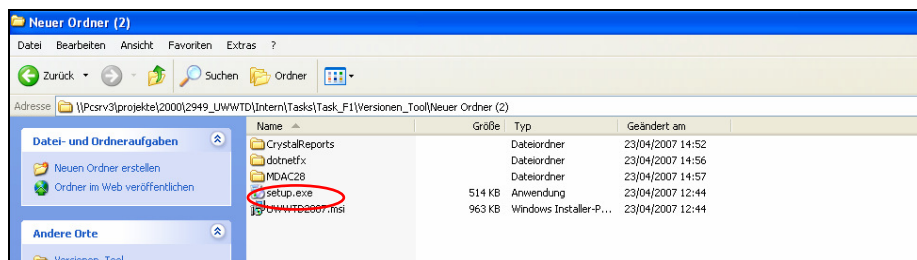
Figure 7: Process of installation

In case another person than the one installing UWWTD Questionnaire 2007 on his/ her PC should have the possibility to work with UWWTD 2007 on the same PC, please choose the following setting during the installation procedure (Figure 8):
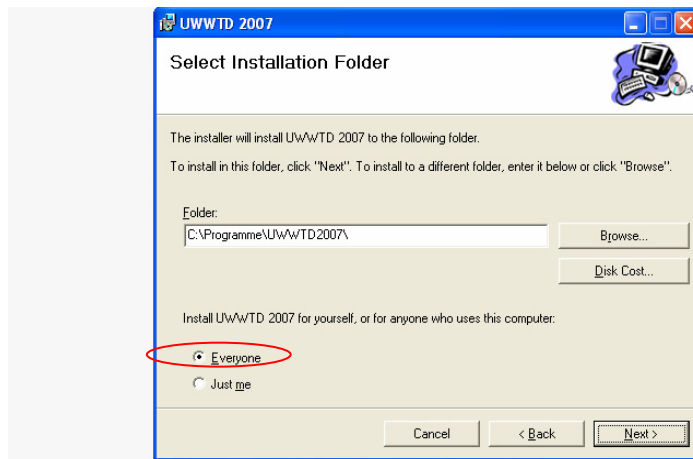
Figure 8: Setting during the installation procedure

In case another person than the person installing UWWTD Questionnaire 2007 on the PC should be able to work with UWWTD 2007 on his/ her PC, it is necessary that this person is added to the user accounts (control panel → user accounts → add user). In order to have reading and writing privileges, the "new" user has to be identified as "main/standard user".
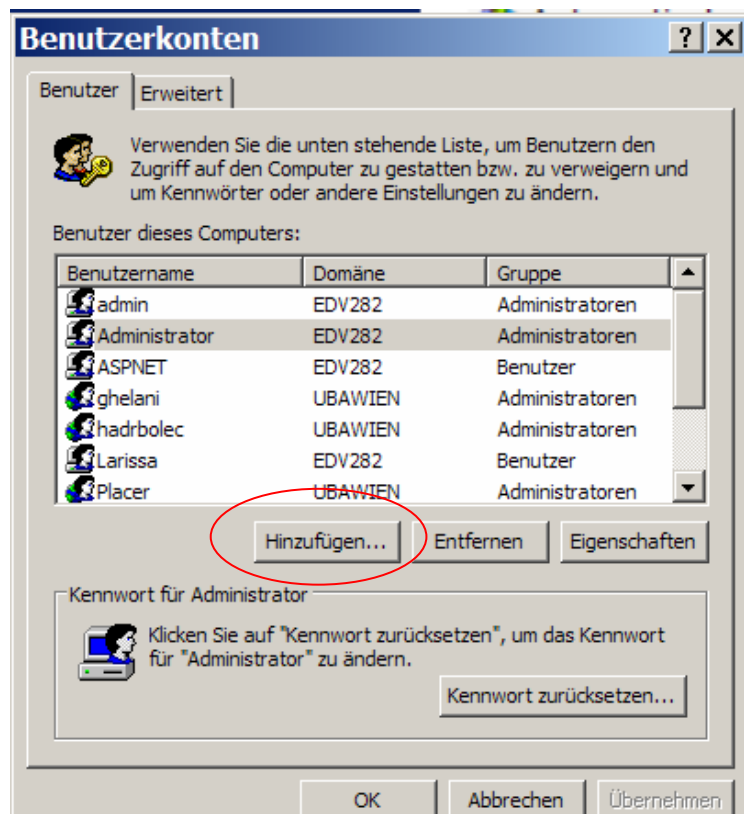
In a second work step the IT – tool has to be linked with the database. For this purpose a new data source has to be added in the Control Panel → Administration → Datasources (ODBC). The database can be found in the directory which was selected during the installation procedure. The work steps for linking include:

1. **Step:** Go to the Control Panel→ select Administrative tools (followed double click)
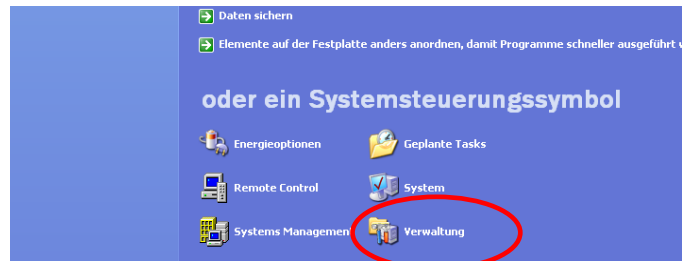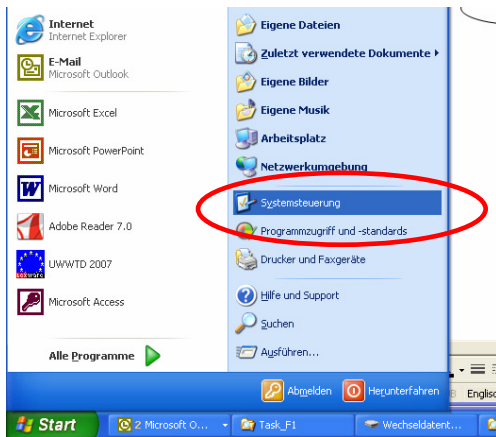
2. **Step:** select Database (ODBC) (double click followed)

3. **Step:** click "Add"
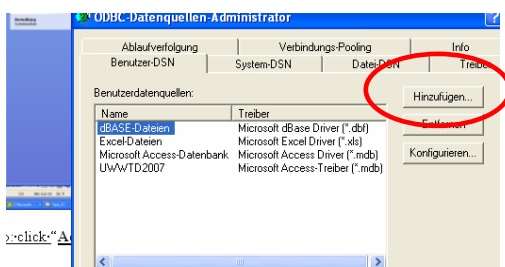
4. **Step:** select "Microsoft Access Treiber" (go to 'Finish')
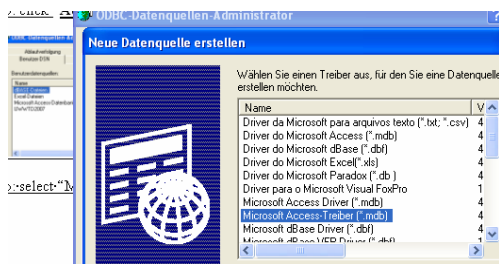
5. **Step**: Fill in the data source name typing: '**UWWTD2007**' and click "select"
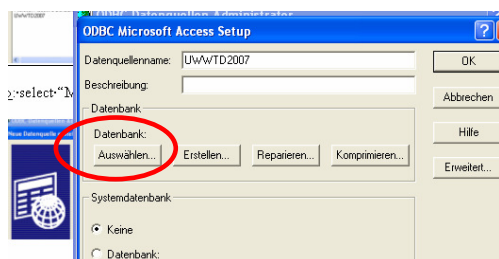
6. **Step:** in the 'Directories' choose the directory, where the reporting system was saved after installation (as usual it is on C-drive in 'Programme Files') and select the folder "Data_Application" → double-click → Uwwtd2007 becomes visible in the list of data base names → click to the data-base → click "OK"
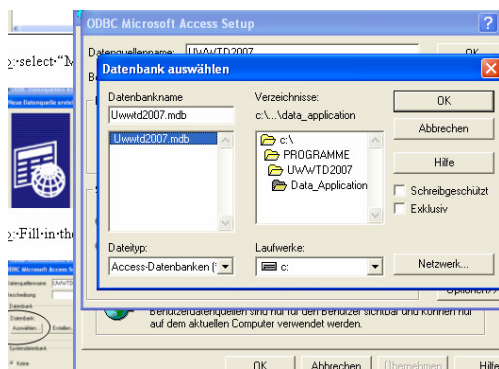
3.4 File folders in the directory of the application

After successful installation and linking the reporting system with the database, the following file folders appear in the directory of the application (Figure 9).
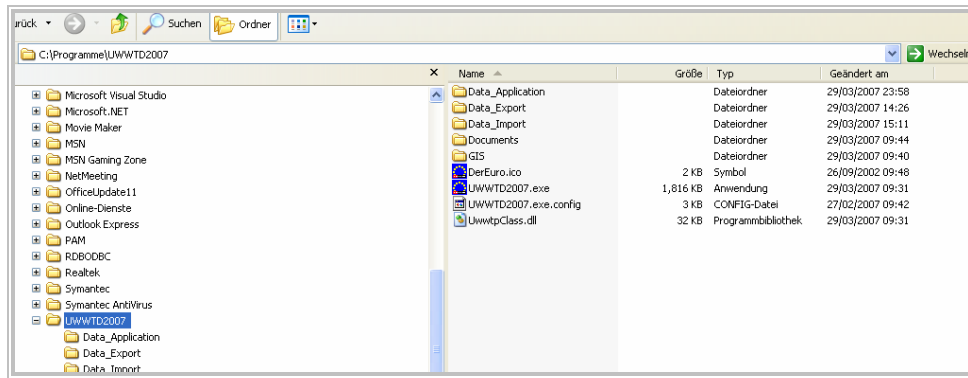
Figure 9: file-folders in the directory of the application –to be updated

Data _Application: this file folder comprises the database of UWWTD Questionnaire 2007

Documents: this file folder contains supporting documents for providing data according to the requirements of UWWTD Questionnaire 2007 (e.g. Manual, data dictionary, list of parameters). In addition, the files provided by the Member State (e.g. Reports, additional information) are saved in this file-folder after up-load in the UWWTD Questionnaire 2007 – application (see chapter 7.2).

Data_Import: Besides manual data entry the reporting system offers the possibility to import data. For this purpose data has to be organised in .xls – templates (see Annex 8) which are saved as TAB-delimited .txt – files in this file- folder. During the import – process the software accesses the .txt – files from this folder (see chapter 4)

Data_Export: This Directory will finally have to be sent to the Commission. After data-input into UWWTD Questionnaire is finished, the whole data-set is exported into this file – folder (Click button *Data export* in Form 4). Data of each Form of UWWTD Questionnaire 2007 is automatically saved as TAB-delimited .txt-file. During the export-process an automatic data-validation (e.g. linking of data, data completeness) is performed by the reporting tool (see chapter 5)

GIS: all GIS-files to which references are indicated in the application have to be copied to this file - folder (e.g. GIS-files on receiving areas) and sent to the Commission.

4 DATA IMPORT AND VALIDATION

Besides manual data entry into UWWTD Questionnaire 2007 an automatic up-load of information is possible. This functionality is of specific importance in case large amounts of data are reported in UWWTD Questionnaire 2007. In addition, a first validation of data is provided during the import process. The organisation of data in terms of import files is a prerequisite and first step for successful data import.

The import files have to be stored in the directory of the application in the folder Data_Import (see chapter 3.4). It is essential that the names of the individual .txt-files are identical to the names shown in section 4.1 below. Additionally, the user will have to copy all relevant GIS-data to the Directory "GIS". After providing the correct files in the folder "Data_Import" data import is possible by clicking the Import – button in Form 4 (Figure 10).

Figure 10: Data import (in Form 4: Main Menu)

4.1 Structure of import files

Data import is based on .txt-files, with TAB as field separators and CR as record deliminators. 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 following files:

- **ReceivingAreas.txt**
- **Agglomerations.txt**
- **UWWTPs.txt**
- **UwwtpAgglo.txt**
- **DischargePoints.txt**

Missing information may be completed by manual input with the application.

4.2 (Import) Data validation

Validation of data during the Import – process (i.e. after clicking the *Import* – button) comprises the following issues:

o   Consistency of reporter and report ID - Import terminated if files/information is missing or inconsistent

o   Master data check (minimum requirements for import are ID and name) – if an ID or name is missing, the record will not be imported; if master data field according to Data Dictionary is missing, the record will be imported and there will be an entry into the Import error log

o   Syntax checks (data type, field length) according to Data Dictionary – a field with a wrong data type will not be imported, strings with length exccedence will be truncated

o   Reference Checks
- For every link Agglomeration-UWWTP in the file UwwtpAgglo.txt there must be an agglomeration in the file Agglomeration.txt and an UWWTP in the file UWWTP.txt
- every agglomeration must be linked to an UWWTP (or collecting system without treatment
- every UWWTP must be linked to a Discharge Point
- every Catchment Area of Sensitive Area must be linked to a Sensitive Area

The validation process is performed in that way that the software imports all the data available (in the order Reporter.txt, ReportPeriod.txt, ReccevingAreas.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.

Each new data import replaces the import Error log, which means saving of different Error logs from different data imports is not foreseen. The Error log describes:

o   date and time of the validation
o   code and name of the error
o   field of the database, where the error occurred
o   record number of the error in the import – file

The error log is saved as one file of the database of UWWTD 2007 (T_ErrorLogImport). It can be either accessed directly via the UWWTD database (Option 1) or via the button *Print import error log* in Form 4: Main Menu (see Figure 11). The Error log gives users the possibility to find and identify the errors in the data sets very quickly and hence, eases manual data correction. In addition, an import validation protocol is given directly after data import, which gives a statistical overview of the data provided.
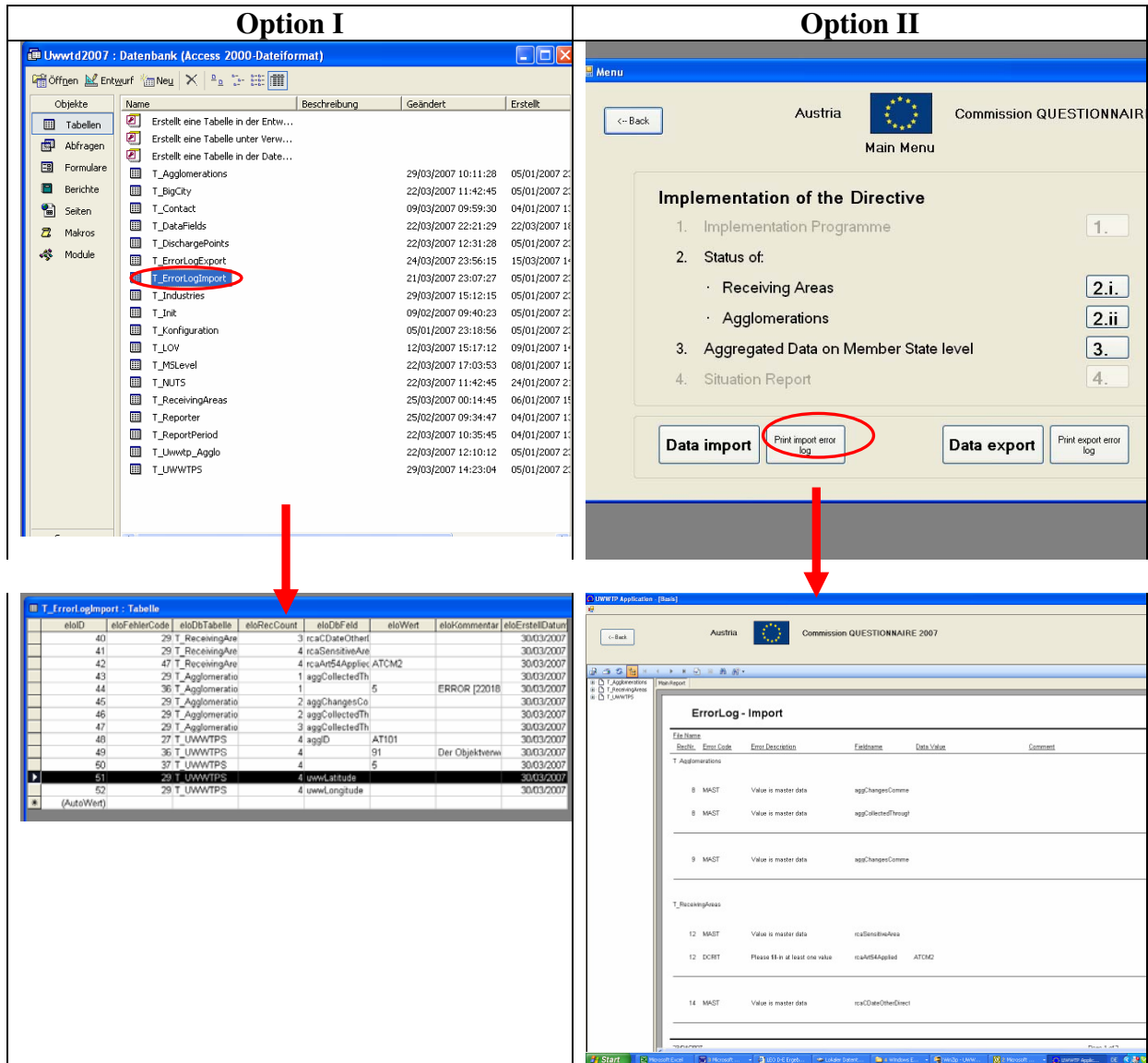
Option I	Option II

Figure 11: Different ways to access the Import Errorlog

Figure 12: Import validation protocol

Figure 13: Example: Import Errorlog

Figure 14: Import Errorlog as presented in the database (T_ErrorLogImport)

4.3 Work steps (How to import 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 4.1) 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 in the file folder Data-Import of the application (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 during the saving procedure.

Fourth step: Form 4 'Main Menu' with the button for Data import can only be approached after inserting data on the Country and Contact Details (Form 3). Hence, this information has to be provided manually before data import.

> ⚠️ **As the import files comprise files on the Reporter and the Report period as well, it is essential for successful data import that the information on these parameters (Member State, Report-ID and Situation as at) in the import files and the information inserted manually to the application are identical.**

Data on the Contacts is not imported from the import-files; hence it is essential to insert this information manually.

Table 5: Example: Need for identical data input in the import-files and during manual data input as prerequisite for successful data import

Table 6: MS Excel work sheet ‚Reporter'

rptMStateKey	rptMStateWert
AT	Austria

Table 7: MS Excel work sheet ‚ReportPeriod'

rptMStateKey	repCode	repVersion	repSituationAt	repReportedPeriod
AT	AT15		31.12.2005	

Fifth step: Click on the button Data import in Form 4 'Main Menu' to import the .txt-files
Sixth step: After data import, data can be modified manually in the application

⚠	**For the purpose of UWWTD Questionnaire 2007 a list of "real" big cities is provided in the database of the IT-tool and hence, no file on big cities/ big dischargers is imported. In case a Member State defines "new" big cities/ big dischargers which are not provided in the list of "real" big cities, these new big cities/ big dischargers have to be provided to COM separately in terms of an Excel template as given in Annex 9.**

5   DATA EXPORT AND VALIDATION

After finalisation of data entry into UWWTD Questionnaire 2007 (via data import and/ or manual data entry) data has to be exported from the reporting system. Similar to data import the process of export comprises a data validation step, which is more comprehensive than the import validation. To start data export the button *Data export* in the Form 'Main Menu' (see Figure 15) has to be clicked.

Figure 15: Data export (in Form 4: Main Menu)

After clicking to the button *Export* data will be automatically exported as TAB delimited .txt-files and saved in one folder. The application automatically proposes the file folder 'Data_Export' to save the export files, however, any other directory can be chosen as well. Date and time of the data export will be saved as "Validation time stamp" and given in the .txt-file ReportPeriod.txt. During a new import of the export-files to UWWTD Questionnaire 2007, this validation time stamp will be given automatically in the parameter field *Version of reported data.*

5.1 Structure of export files

After export of data, the information should be stored as .txt-files in the folder "Data_Export" in the directory of the application. Data is organised in the following .txt-files:
   - **Reporter.txt**
   - **ReportPeriod.txt**
   - **Contact.txt**
   - **ReceivingAreas.txt**
   - **Agglomerations.txt**
   - **UWWTPs.txt**
   - **UwwtpAgglo.txt**
   - **DischargePoints.txt**
   - **MSLevel.txt**

   • **Industries.txt**

5.2 (Export) Data validation

Data validation before the export process comprises the following issues:
   o   How many data sets are provided?
   o   Are all master data in the data sets available (the parameters indicated in yellow colour
       in the Forms of UWWTD Questionnaire 2007)
   o   Syntax checks (data type, field length) according to Data Dictionary: Upon error, data
       will still be exported and there will be an entry into the error log
   o   Reference Checks
       - For every link Agglomeration-UWWTP in the file UwwtpAgglo.txt there must be an
         agglomeration in the file Agglomeration.txt and an UWWTP in the file UWWTP.txt
       - every agglomeration must be linked to an UWWTP (or collecting system without
         treatment)
       - every UWWTP must be linked to a Discharge Point
       - every Catchment Area of Sensitive Area must be linked to a Sensitive Area

Statistical overview of information on this data validation is given in the Form 'Protocol'.
Detailed information on the errors identified can be obtained from the Error log, which will be
saved in the database of the application (T_ErrorLogExport). The Export Error log describes:

   o   date and time of the validation
   o   code and name of the error
   o   field of the database, where the error occurred
   o   record number of the error in the import – file

and will be organised in the same way as the Import Errorlog shown in chapter 4.2

The error log facilitates to identify possible errors quickly. Based on the error log users have
the possibility to correct the errors manually or to provide new data sets via data import
functions.

5.3 Work steps

   Step 1: After finalisation of data import (and/ or manual data entry), click the button *Data
           export* in the Form 'Main Menu'
   Step 2: Data is exported and the generated export .txt-files are stored in one folder (the
           application proposes the file folder Data_Export in the application of UWWTD
           Questionnaire 2007). During the export-process, data validation is performed. After
           validation, the Form 'Protocol' gives a summary of the errors identified. Details on
           the errors are provided in an Error log
   Step 3: Click button *Print export error log* to show the identified errors.
   Step 4: Click button *Print export error log* and Print *import error log* to compare the
           identified errors after import and before export
   Step 5: In case the export error log shows severe errors, which the user wants to correct
           manually in the application: Click button *Back* in the Form 'Protocol' → the user
           returns to the application and has the possibility to change data. After data
           correction, data has to be exported again. In case data is exported to the same file
           folder as during previous data export, the "old" export data-sets are deleted.
   Step 6: According to the "new" data export, a new data validation time stamp is given and

saved in the export-file ReportPeriod.txt.

> ⚠️ **For the purpose of UWWTD Questionnaire 2007 a list of "real" big cities is provided in the database of the IT-tool and hence, no file on big cities/ big dischargers is exported. In case a Member State defines "new" big cities/ big dischargers which are not provided in the list of "real" big cities, these new big cities/ big dischargers have to be provided to COM separately in terms of an Excel template as given in Annex 9.**

6 DATA DELIVERY TO THE EUROPEAN COMMISSION AND ORGANISATION OF DATA REQUEST IN ONE MEMBER STATE

6.1 Data delivery to the European Commission

After finalisation of data entry and export of data into the file folder UWWTD2007/Data_Export, Member States should deliver data to the European Commission in the following way:

the file folders 'Data_Export', 'Documents' and 'GIS', the list of new big cities/ big dischargers (Annex 9) as well as a Word-file giving master data of the form "Country and Contact Details" (Parameters "Member State", "Report ID", "Situation as at", "Name of the Contact Person", "Institution" and "Phone") have to be added to a .zip-file and stored on **CD-ROM**, and which has to be sent to the European Commission by ordinary mail (and if possible in addition by **e-mail).**

> ⚠️ **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)**

6.2 Organisation of data request in one Member State

In case different administrative units in one Member State collect data for UWWTD Questionnaire 2007, the reporting system could be distributed inside the Member State. After data input by different administrative units it is recommended, that these units export data from the Questionnaire and send the export files to the official contact person/institution of UWWTD Questionnaire 2007 within the Member State. The responsible person/ institution for UWWTD Questionnaire 2007 should merge the export .txt – files and send one compiled data-set to the Commission.

> ⚠️ **All parameters of the data blocks 0 to 4 and 7 requested in UWWTD Questionnaire 2007 have to be reported if deadlines of the Accession Treaties and/or Directive have been expired.**
>
> **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.**

7   NAVIGATION THROUGH UWWTD Questionnaire 2007 – MANUAL DATA ENTRY

A comprehensive overview of the background of UWWTD Questionnaire 2007 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 5 (and data models are presented in Table 4 and Figure 3).

The description of each individual form presented in Figure 5 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.

The list of forms and their relation with the data blocks presented in Annex 1 is the following:

Block 0:
> Form 1: Start
> Form 2: Introduction
> Form 3: Country and Contact Details
> Form 4: Main Menu

Block 1:
> Form 5: Identification of Receiving Areas
> Form 5a: Information on Art. 5(8) + 5(2-3)
> Form 5b: Information on Art. 5(8) + 5(4)
> Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(2-3)
> Form 5d: Sensitive Areas and Catchment Areas of Sensitive Areas (Information on Art. 5(1) + 5(4))
> Form 5e: Less Sensitive Area

Block 2:
> Form 6: Agglomeration
> Form 6a: Big city/ big discharger
> Form 7: Master data of UWWTP
> Form 8: Master data of the discharge point

Block 3:
> Form 9: Collection, Conduction and Connection
> Form 9b: Discharge point without treatment

Block 4:
> Form 9a: Treatment in UWWTPs

Block 5:
> Proposed data for future reporting: Management of leaks and storm water overflows
> Proposed data for future reporting: Individual and Appropriate Systems (IAS)

Block 6:
    Proposed data for future reporting: Loads treated and discharged for each UWWTP

Block 7:
    Form 10: Information on Member State level

Block 8:
    Proposed data for future reporting: Food processing industry

The following chapters give a detailed explanation on each form of UWWTD Questionnaire and guidance for manual data entry. The overview concerning the connection and systematic order of forms is given in chapter 2.3. **Detailed recommendations on single parameters of UWWTD Questionnaire are given in Annex 1: Description of the data-blocks (reporting sheets), which should be consulted additionally to this chapter.**

7.1 Form 1: Start

Figure 16: Form 1: Start

After installation of UWWTD Questionnaire 2007 a shortcut to the desk-top is created automatically by the programme. The application starts with ***Form 1: Start***
- Button *Start*: application starts → ***Form 2: Introduction*** opens
- Button *Close*: application closes

7.2 Form 2: Introduction

Figure 17: Form 2: Introduction

The form 'Introduction' contains the following information
- Available Documents
- Country and Contact Details
- Data input/Data editing

Work flow
Step 1: Click button *Country and Contact Details* → **Form 3: Country and Contact Details**
     opens and insert required details indicated in this form;
Step 2: Click button *Data input/ Data editing* → **Form 4: Main Menu** opens

Explanations
In the field *Available Documents* all documents related to using UWWTD Questionnaire 2007 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) to UWWTD Questionnaire 2007. In case a Member State wants to add documents, button *Add Document* 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 "Documents" in the directory of the application (see chapter 3.3).

All information on agglomerations, UWWTPs, discharge points and receiving areas is linked to a country and to contact details, which form the basis for reporting. Hence it is required to firstly fill-in information on this issue, which is covered by **Form 3: Country and Contact Details.** After provision of data in **Form 3: Country and Contact Details** and clicking the *Back*-button, users return to **Form 2**.

Rules for this form

Button *Data input/ Data editing* is only active once Form 3 about **Country and Contact Details** is completed (i.e. data about country, Report ID, situation as at and at least one contact person is available).

7.3 Form 3: Country and Contact Details

Figure 18: Form 3: 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…

> **The parameter fields marked in yellow are <u>master data</u> and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported <u>in all cases</u> (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 (see Figure 19)
(in case of first data input, database is empty)
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 2: Introduction** opens
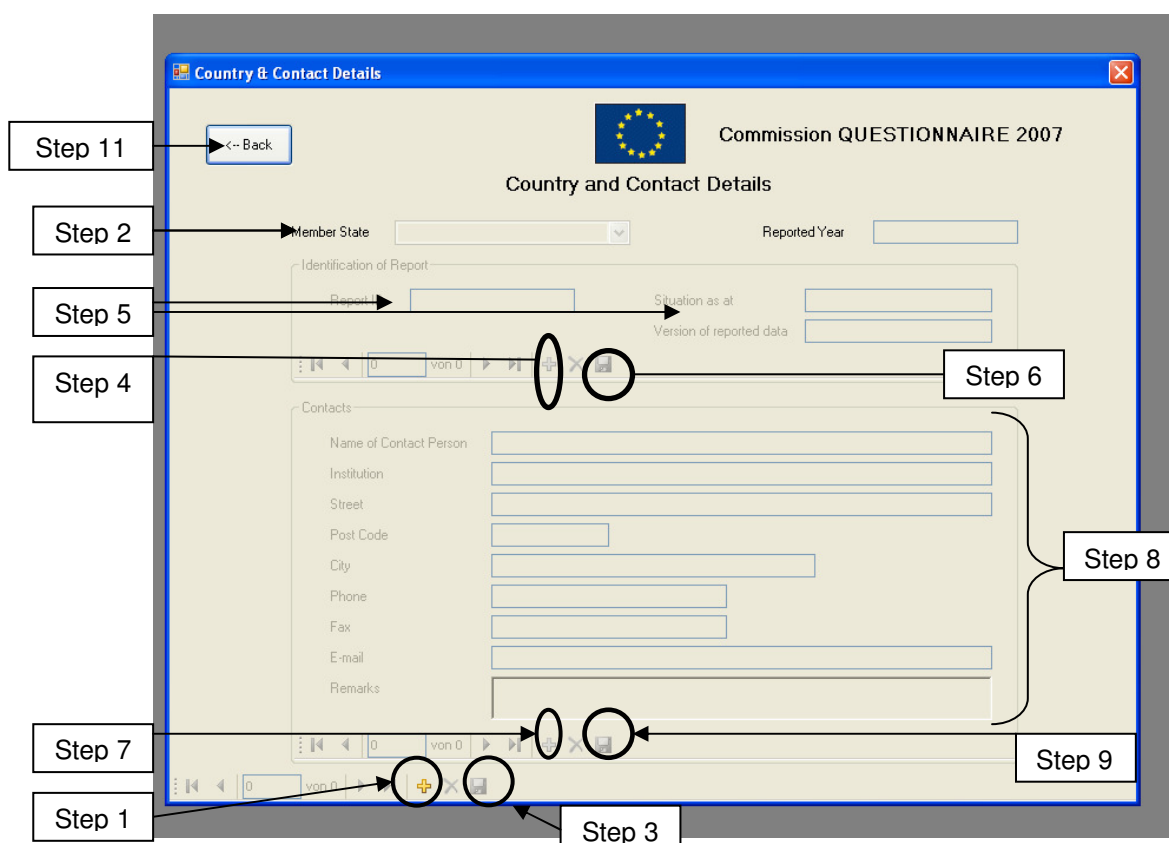
Figure 19: Work- flow for providing data in Form 3: Country and Contact Details

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 reference year** on the status in all agglomerations for one Member State. The **reference year is 2005**. If the Member State has already data for all agglomerations for the

year 2006 they are very welcome to report it. The possibility to report for more than one reference date (and accordingly link it to a new Report-ID) should only be taken into account, if a MS is able to provide - in addition to the reference date requested by DG ENV – more recent data.

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.

> ⚠️ **In case data import is planned, it is essential that information provided for the parameters "Member State", "Report-ID" and "Situation as at" during manual data entry is identical with the information provided in the import .txt-files!**

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.

7.4 Form 4: Main Menu

Figure 20: Form 4: Main Menu

The form 'Main Menu' contains the following information
- Status of Receiving Areas
- Status of Agglomerations
- Aggregated Data on Member State Level
- Data import
- Data export

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

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.

The parameters *1. Implementation Programme* and *4. Situation Report* foresee an up-load of these documents in the future (e.g. Questionnaire 2009) and hence, are inactive in UWWTD Questionnaire 2007.

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 UWWTD Questionnaire 2007 → click button *Data import*. This function can only be executed, when data has been prepared for data import (see chapter 4). During data import data validation is performed (see chapter 4). The import error log becomes visible on the screen after clicking the button *Print import error log*.

The button *Data export* 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 5).

7.5 Form 5: Identification of Receiving Areas

Figure 21: 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 UWWTP Questionnaire 2007 (automatically linking of discharge points and receiving areas) would be corrupted.**

> **In UWWTD Questionnaire 2007 the inventory of receiving area will be linked with the discharge points via the form "Master data of discharge point" (see chapter 7.9). 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 wants to change 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 of *no*, nothing will change in the 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.

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

Figure 22: Form 5a: Information on Art. 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.

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

Figure 23: 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 blanc. 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 blanc, 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.

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.

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

Figure 24: Sensitive Area and Catchment Area of Senitive 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 <u>master data</u> and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported <u>in all cases</u> (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 – Posphurus 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: "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."
- 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*

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

Figure 25: 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 blanc. 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 blanc, 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.

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.

7.5.5 Form 5e: Less Sensitive Area

Figure 26: 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 <u>master data</u> and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported <u>in all cases</u> (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:
    o Empty form opens
- Click on *Save* button:
    o 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
    o 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:
    o 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.
    o After successful saving: form will close automatically
- Click on *Back* button without any changes:
    o 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)***

7.6 Schematic link of agglomerations, UWWTPs and discharge points via the questionnaire forms
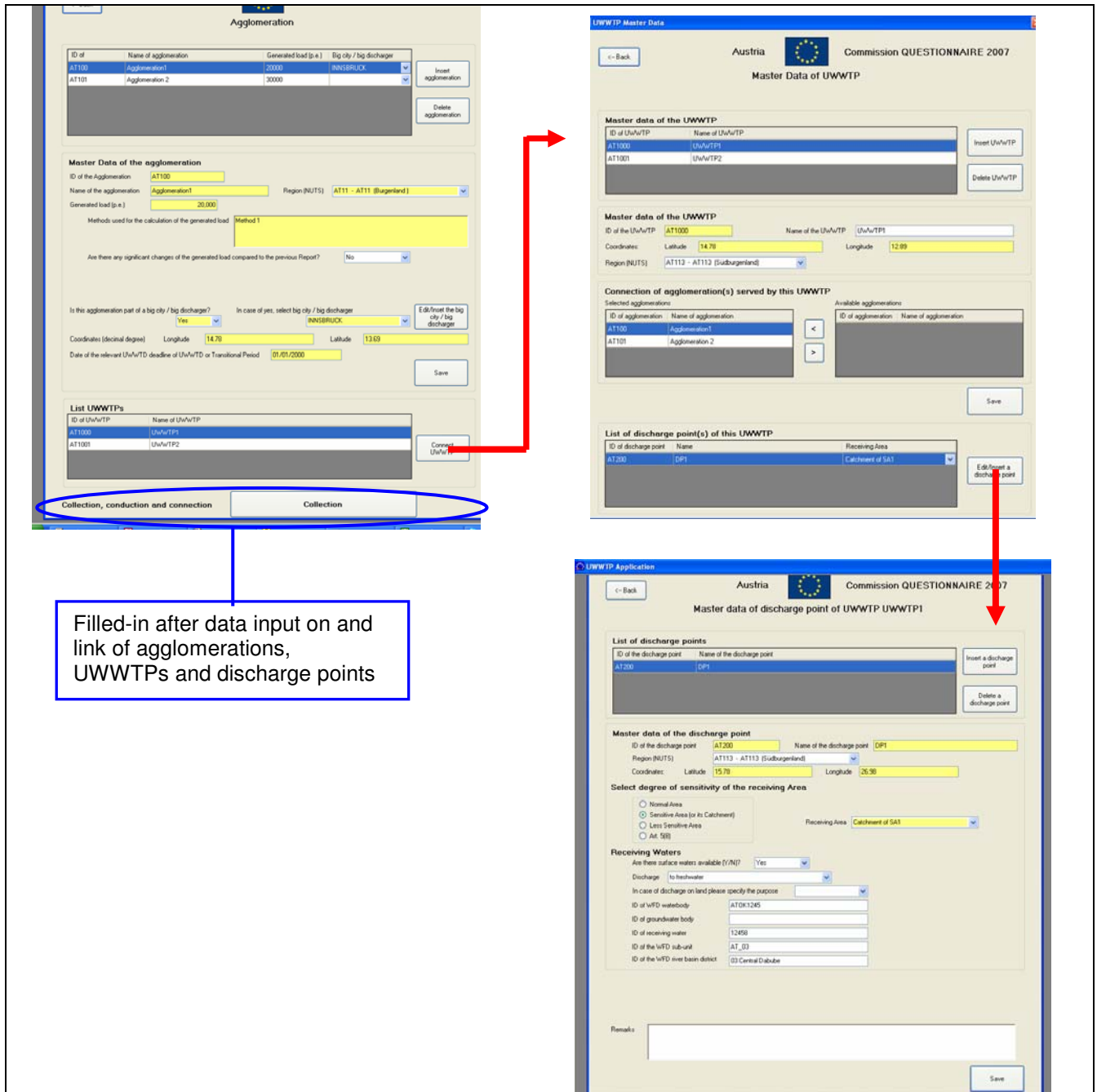
Figure 27: Schematic link of agglomerations, UWWTPs and discharge points via the questionnaire forms

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 2007 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 UWWTD Questionnaire 2007:

Figure 28: Representation of the four tables on agglomerations, UWWTPs and Discharge Points of the database in the Forms of UWWTD Questionnaire 2007

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.

7.7 Form 6: Agglomeration

Figure 29: Form 6: Agglomeration

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 2007 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
  - o 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")
  - o Fill-in master data of the agglomeration (ID, name, generated load, region (NUTS), Methods used for the Calculation of the generated Load)
  - o After finishing input of master data for one agglomeration, click *Save*
  - o If a new agglomeration is created, the field *Are there significant Changes of the generated Load compared to the previous Report* becomes invisible
  - o 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
  - o Button *Edit/ Insert the big city/* big discharger
- Click on *Save* button:
  - o 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
  - o 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
  - o if no problem – data will be saved and Button *ConnectUWWTP* will become active
- Click on *Back* button:
  - o Warning message if there was no saving after a change
  - o Closing of the form if there was no change
- UWWTPs
  - o Case UWWTP is already in the selection list:
    1. ID and name of UWWTP are given in the list of UWWTPs
  - o Case UWWTP is not in the selection list:
    2. Click on Button *Insert UWWTP*→ new form "UWWTP Master Data" opens

7.8 Form 7: Master data of UWWTP

Figure 30: Overview of the data sections in the form Master data of UWWTP

Figure 31: 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 <u>master data</u> and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported <u>in all cases</u> (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 S*ave* → 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

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 S*ave* 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;
  - 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:
    - o   Warning message if there was no saving after a change

Closing of the form if there was no change.

7.9 Form 8: Master data of discharge point

Figure 32: 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 disrict

	The parameter fields marked in yellow are <u>master data</u> and represent the absolute minimum requirements for a systematic electronic data collection. They have to be reported <u>in all cases</u> (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;
  - 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.

7.10 Form 6a: Big city/ big discharger

Figure 33: 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 → 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

> **For the purpose of UWWTD Questionnaire 2007 a list of real big cities is provided in the database of the IT-tool. In case a Member State defines "new" big cities/ big dischargers which are not provided in the list of "real" big cities, these new big cities/ big dischargers have to be provided to COM separately in terms of an Excel template as given in Annex 9.**

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.

⚠️ **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*

7.11 Form 9: Collection, Conduction and Connection

Figure 34: 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

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
have to add up to 100%.

Work flow (see Figure 34)
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 for future reporting (under discussion for Questionnaire 2009). Data on these two data blocks can be provided on a 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 7.15.

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 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:
    o 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.
    o After successful saving: form will close
  • Click on *Back* button without any changes:
    o 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: "% values doe not add up to 100%. Would you like to change this? [yes] [no]"; in case of *yes* – the 3 fields will become red; in case of *no*, data will be saved

7.12 Form 9b: Discharge Point without Treatment

Figure 35: 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 7.9). 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.

7.13 Form 9a: Treatment in UWWTPs

Figure 36: 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 (i.e. for the 4th Commission Synthesis Report) are also reported in UWWTD Questionnaire 2007 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 for future reporting (under discussion for Questionnaire 2009). Data on this data block can be provided on a 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*

7.14 Form 10: Information on Member State level

Figure 37: 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 future reporting (under discussion for Questionnaire 2009). Data on this data block can be provided on a voluntary basis. 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 "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 Report* and *ID of Member State* become blank
- Click on *Save* button:
  - Data will be saved

7.15 Formats related to data blocks for future reporting (under discussion for Questionnaire 2009)

7.15.1   Data block 5: Proposed data for future reporting: Details on collecting system

Figure 38: Proposed data for future reporting: Details on collecting system

Figure 39: 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

7.15.2   Data block 5: Proposed data for future reporting: Individual and Appropriate systems (IAS)

Figure 40: Proposed data for future reporting: 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

Work flow
Fill-in data in the provided order

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:

- o Form will close
- Click on *Delete* button:
  - o All fields (with exception of *ID of the Agglomeration* and *Name of the Agglomeration*) will become blank
- Click on *Save* button:
  - o 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: "% values doe not add up to value indicated for IAS. Would you like to change this? [yes] [no]"; in case of *yes* – the relevant fields will become red; in case of *no*, data will be saved

7.15.3   Data block 6: Proposed data for future reporting: loads treated and discharged for each UWWTP

Figure 41: Proposed data for future reporting: 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 blanc. 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 blanc, 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:
  o   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.
- o After successful saving: form will close automatically
- Click on *Back* button without any changes:
  - o Form will close
- Click on *Delete* button:
  - o All fields (with exception of parameters ID of the UWWTP and Name of the UWWTP) will become blank
- Click on *Save* button:
  - o Data will be saved

7.15.4   Data block 8: Proposed data for future reporting: Food processing industry

Figure 42: Proposed data for future reporting: 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

Work flow
Fill-in data directly into the list

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.**

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.
- o After successful saving: form will close
- Click on *Back* button without any changes:
  - o Form will close
- Click on *Delete* button:
  - o All fields (with exception of parameters <u>*ID of the Report*</u> and <u>*Name of the Member State*</u>) will become blank
- Click on *Save* button:
  - o Data will be saved

ANNEXES

8   Annex 1: Description of the data blocks

The Annex 1 – file 'Description of data blocks for UWWTD Questionnaire 2007' is available on CIRCA at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive/00-uwwtd_questionnaire/02-manual_supporting

9   Annex 2: List of parameters per each data block

The Annex 2 – file 'List of parameters for UWWTD Questionnaire 2007' is available on CIRCA at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive/00-uwwtd_questionnaire/02-manual_supporting

Note: The list of parameters in national languages is available in the Annex 2 from the official data request for UWWTD Questionnaire 2007 (Commission reference No. D(2007) 5622).

10   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.

10.1 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)

10.2 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 waters[6]

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)

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

11   Annex 4: GIS-Guidance for UWWTD

See separate file: 'GIS guidance for UWWTD Questionnaire 2007' on CIRCA at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_dir ective/00-uwwtd_questionnaire/02-manual_supporting

12 Annex 5: How to create GIS Data Files?

12.1 Geographic information system (GIS)

12.1.1   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.

12.1.2   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.

13 Annex 6: Link of reporting under UWWTD and WFD

The link between reporting under the UWWT-Directive in the frame of UWWTD Questionnaire 2007 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[7]). 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 "reciving waters" is an umbrella term for hydrological features like rivers and lakes.

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[7] http://forum.europa.eu.int/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents&vm=detailed&sb=Title

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 dived 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 principals 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 2007. 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.

14 Annex 7: Data dictionary and codification of parameters

See separate file: <u>'Data Dictionary and Codification of parameters for UWWTD Questionnaire 2007'</u> on CIRCA at:

<u>http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive/00-uwwtd_questionnaire/02-manual_supporting</u>

15   Annex 8: Excel Templates

See separate file: 'MS Excel Templates for UWWTD Questionnaire 2007' on CIRCA at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive/00-uwwtd_questionnaire/02-manual_supporting

16   Annex 9: Excel Template for the list of new big cities/ big dischargers

See separate file: <u>'MS Excel Template - list of BigCity_BigDischarger for UWWTD Questionnaire 2007'</u> on CIRCA at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/treatment_directive/00-uwwtd_questionnaire/02-manual_supporting

17 Annex 10: Practical examples for data entry

17.1 Examples for manual data entry in case of application of different Articles

17.1.1   Example for application of Art. 5(8) + 5(2-3)

Step 1	**Form 4: Main Menu** Click button *2.i.* → Format 5: Identification of Receiving Areas opens
Step 2 Step 3 Step 4 Step 5	**Form 5: Identification of Receiving Areas** Tick list: Application of Art. 5(8) Tick list: Application of Art. 5(2) + 5(3) Click button *Save* Click button *Add/Edit Art. 5(8) + Art. 5(2-3)* → Form 5a: Information on Art. 5(8) + 5(2-3) opens
Step 6 Step 7	**Form 5a: Information on Art. 5(8) + 5(2-3)** Fill-in: number of ID of the area Fill in: starting date of application of Art. 5(8) Fill in: starting date of application of Art. 5(2-3) Fill-in: Remarks Click: Parameters subject to more Stringent Treatment Click button *Save*

17.1.2   Example for application of Art. 5(8) + 5(4)

Form 4: Main Menu

Click button *2.i.* → Format 5: Identification of Receiving Areas opens
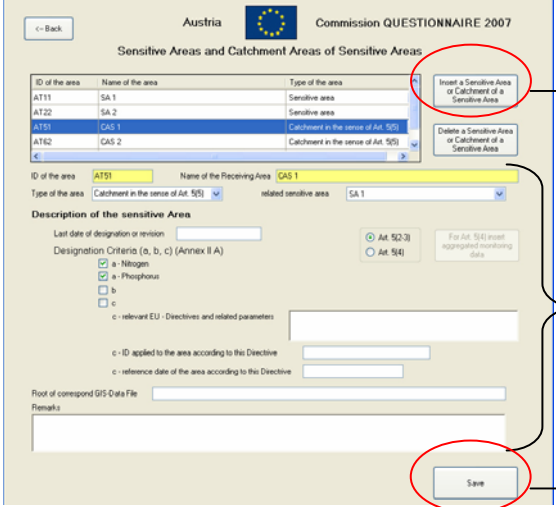
Form 5: Identification of Receiving Areas

Tick list: Application of Art. 5(8)
Tick list: Application of Art. 5(4)
Click button *Save*
Click button *Add/Edit Art. 5(8) + Art. 5(4)* →
            Form 5b: Information on Art. 5(8) + 5(4) opens

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

Fill-in: number of ID of the area
Fill in: starting date of application of Art. 5(8)
Fill in: starting date of application of Art. 5(4)
Fill-in: number of UWWTPs
Fill-in: Total organic design capacity of ALL these UWWTPs (p.e.)
Fill-in: Incoming loads (t/y)
Fill in: Discharged loads (t/y)
Fill-in remarks
Click button *Save*

17.1.3   Example for application of Art. 5(1) + 5(2-3)

Step 1	**Form 4: Main Menu** Click button *2.i.* → Format 5: Identification of Receiving Areas opens
Step 2 Step 3 Step 4 Step 5	**Form 5: Identification of Receiving Areas** Tick list: There are designated Sensitive Areas and/ or Less Sensitive Areas Tick list: There are Designated Sensitive Areas – application of Art. 5(1) Click button *Add/Edit Sensitive Areas*→ Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas opens
Step 6 Step 7 Step 8	**Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas** Click button: Insert a Sensitive Area or Catchment of a Sensitive Area Fill-in: number of ID of the area Fill in: Name of the Receiving Area Fill in: type of the area Fill-in related sensitive area (in case type of the area is Catchment in the sense of Art. 5(5)) Click tick – list *Art. 5(2-3)* Fill-in: Last date of designation or revision Click tick list: Designation criteria (a and/or b and/ or c) Fill-in data related to Designation Criteria c in case Designation criteria c is ticked Fill-in root of corresponding GIS-Data file Fill-in remarks Click button *Save* ***Repeat this process until all Sensitive Areas and Catchment Areas of Sensitive Areas in your country, applying Art. 5(1) + 5(2,3) are provided in the list***

17.1.4   Example for application of Art. 5(1) + 5(4)
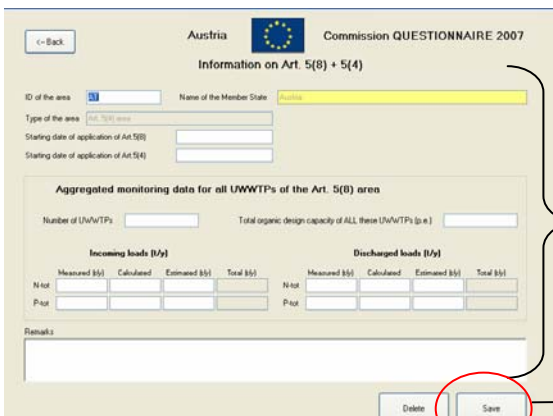
<table>
<tr>
<td>

Step 1

</td>
<td>

Form 4: Main Menu

Click button *2.i.* → Format 5: Identification of Receiving Areas opens

</td>
</tr>
<tr>
<td>

Step 2

Step 3

Step 4

Step 5

</td>
<td>

Form 5: Identification of Receiving Areas

Tick list: There are designated Sensitive Areas and/ or Less Sensitive Areas
Tick list: There are Designated Sensitive Areas – application of Art. 5(1)
Click button *Save*
Click button *Add/Edit Sensitive Areas* → Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas opens

</td>
</tr>
<tr>
<td>

Step 6

Step 9

Step 7

Step 8

</td>
<td>

Form 5c: Sensitive Areas and Catchment Areas of Sensitive Areas

Click button: Insert a Sensitive Area or Catchment of a Sensitive Area
Fill-in: number of ID of the area
Fill in: Name of the Receiving Area
Fill in: type of the area
Fill-in related sensitive area (in case type of the area is Catchment in the sense of Art. 5(5))
Click tick-list *Art. 5(4)* → button *For Art. 5(4) insert aggregated monitoring data* becomes active – DO NOT CLICK THIS BUTTON NOW
Fill-in: Last date of designation or revision
Click tick list: Designation criteria (a and/or b and/ or c)
Fill-in data related to Designation Criteria c in case Designation criteria c is ticked
Fill-in root of corresponding GIS-Data file
Fill-in remarks
Click button *Save*
Click on button *For Art. 5(4) insert aggregated monitoring data* → Form 5d: Application of Art. 5(4) opens

Repeat this process until all Sensitive Areas and Catchment Areas of Sensitive Areas in

</td>
</tr>
</table>

Form 5d: Application of Art. 5(4)

Fill in: starting date of application of Art. 5(4)
Fill-in: number of UWWTPs
Fill-in: Total organic design capacity of ALL these UWWTPs (p.e.)
Fill-in: Incoming loads (t/y)
Fill in: Discharged loads (t/y)
Fill-in remarks
Click button *Save*

17.2 Examples for different relations between agglomeration and UWWTP

Manual data input for ALL relations between agglomerations and UWWTPs can be done according to the principles (2 options) laid down in the following chapter:

17.2.1 How to insert the link agglomeration – UWWTP – Discharge point

The reporting forms to be used:
1. *Agglomeration*   *(MD-AG)*
2. *Master data of UWWTP*   *(MD-TP)*
3. *Master data of Discharge point and Receiving area/water body*   *(MD-DP&RA)*

Option 1:

Step 1:

> **INSERT** master data of <u>one</u> agglomeration (by using MD-AG) ➔
> **REPEAT** the process until <u>all</u> agglomerations (one-by-one) are inserted
>
> *RESULTS* ➔
>   = list of agglomerations and master data of agglomerations

Step 2:

> **SELECT** <u>one agglomeration</u> from the list and **INSERT** master data of <u>one</u> UWWTP
>   (by using MD-TP) ➔
> **LINK** inserted master data of <u>this</u> UWWTP with related agglomeration
>   (by using MD-AG)
> **REPEAT** the process until <u>all</u> UWWTPs (one-by-one) are inserted for <u>this agglomeration</u>
>
> *RESULTS* ➔
>   = each UWWTP is linked to agglomeration(s) which is(are) served
>   by this plant: **agglomeration(s) ⇔ UWWTP(s)**
>   = list of UWWTPs and master data of all UWWTPs

Step 3:

> **SELECT** <u>one</u> UWWTP from the list and **INSERT** master data (one-by-one) of <u>one</u>
> discharge point (DP) discharging from this plant (by using MD-DP&RA) ➔
> **REPEAT** the process until <u>all</u> discharge points (one-by-one) are inserted which are
> discharging from <u>this</u> plant
>
> *RESULTS* ➔
>   = list of all discharge points and master data of DPs and receiving
>   water bodies/areas
>   = each DP(s) will be linked to a particular UWWTP from which it is
>   discharging: **UWWTP ⇔ DP(s)**

> *LEGEND:*
>   Internal loops to fill-in questionnaire

Option 2:

Step 1:

INSERT master data of one agglomeration ➜
REPEAT the process until all agglomerations are inserted

RESULTS ➜
    = list of agglomerations and master data of agglomerations

Step 2:

SELECT one agglomeration from the list and **INSERT** master data of one UWWTP serving this agglomeration ➜

LINK inserted master data of this UWWTP with related agglomeration

INSERT master data (one-by-one) of one discharge point (DP) discharging from this plant ➜

REPEAT the process until all discharge points (one-by-one) are inserted which are discharging from this plant

RESULTS ➜
    = list of all discharge points and master data of DPs and receiving water bodies/areas related to this UWWTP are inserted
    = each DP will be linked to a particular UWWTP from which it is discharging

REPEAT the process until all UWWTPs (one-by-one) are inserted serving this agglomeration

RESULTS ➜
    = list of all UWWTPs serving this agglomeration
    = list of all discharge points discharging from each UWWTP
    = the link of UWWTP ⇔ DP(s) and receiving water bodies/areas related to the particular UWWTP from which it is discharging

REPEAT the process until all agglomerations from the list will be linked to the UWWTPs serving them

RESULTS ➜
    = the link **agglomeration(s) ⇔ UWWTP(s) ⇔ DP (s) & receiving areas/water bodies** will be established for each agglomeration until discharge point/receiving area, i.e.
        = each UWWTP is linked to agglomeration which is served
        = each discharge point is linked to the UWWTP from which it is discharging
    = list of all agglomerations
    = list of all UWWTPs
    = list of all discharge points discharging from each UWWTP

17.3 Examples for different relations between agglomerations and UWWTPs

17.3.1 Example of relation 1:1 (1 agglomeration: 1 UWWTP)
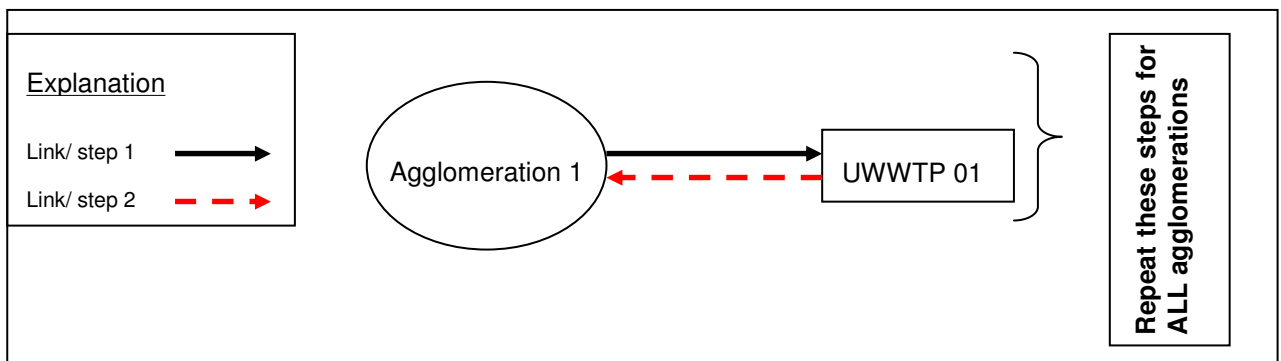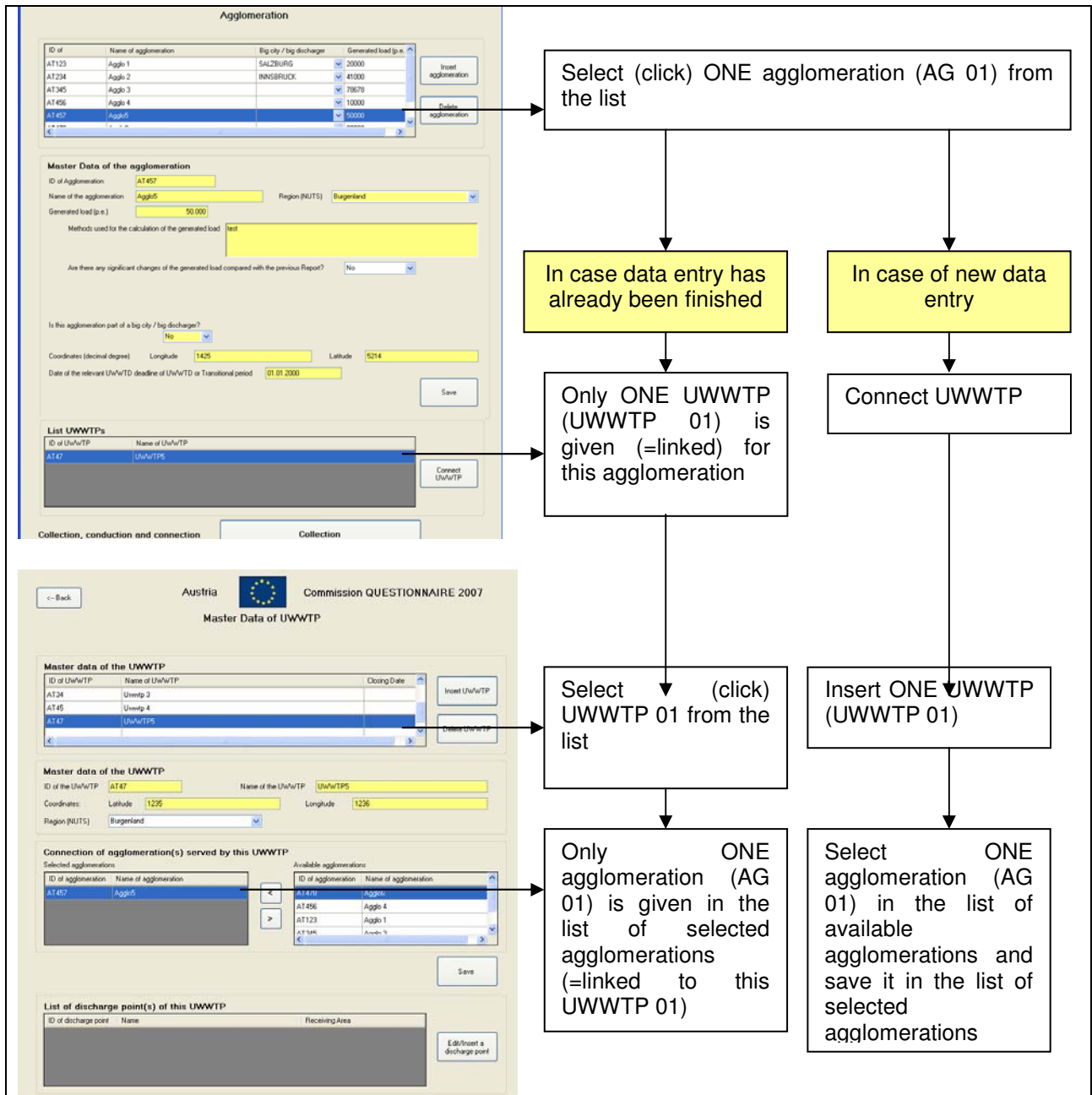
17.3.2   Example of relation 1:n (1 agglomeration: n UWWTPs)

Select (click) ONE agglomeration (AG 01) from the list

In case data entry has already been finished

In case of new data entry

SEVERAL UWWTPs: (e.g. UWWTP 01, UWWTP 02 and UWWTP 03) are given for (= linked to) this agglomeration

Connect UWWTP

Mark one UWWTP (UWWTP 01) in the list → master data of this UWWTP is given

Insert ONE UWWTP (UWWTP 01)

Only ONE agglomeration (AG 01) is given in the list of selected agglomerations (=linked) to this UWWT P01

Select ONE agglomeration (AG 01) in the list of available agglomerations and save it in the list of selected agglomerations

Explanation

Link/ step 1

Link/ step 2

Link/ step 3

Link/ step 4

Agglomeration 1

UWWTP 01

UWWTP 02

UWWTP 03

Repeat these steps for ALL agglomerations

17.3.3   Example of relation m:1 (several agglomerations: 1 UWWTP)

Select (click) ONE agglomeration (AG 01) from the list

In case data entry has already been finished

In case of new data entry

ONE UWWTP: (e.g. UWWTP 01) is given for (=linked to) this agglomeration

Connect UWWTP

Select (click) UWWTP 01 from the list

Insert ONE UWWTP (UWWTP 01)

SEVERAL agglomerations (e.g. AG 0, AG 02, AG 03) are given in the list of selected agglomerations (=linked) to this UWWT P01

Select SEVERAL agglomerations (e.g. AG 01, AG 02, AG 03) in the list of available agglomerations and save it in the list of selected agglomerations

Explanation

Link/ step 1

Link/ step 2

Agglomeration 2

Agglomeration 3

Agglomeration 1

UWWTP 01

Repeat this step one-by-one for all agglomeration and UWWTPs (starting from the agglomeration)
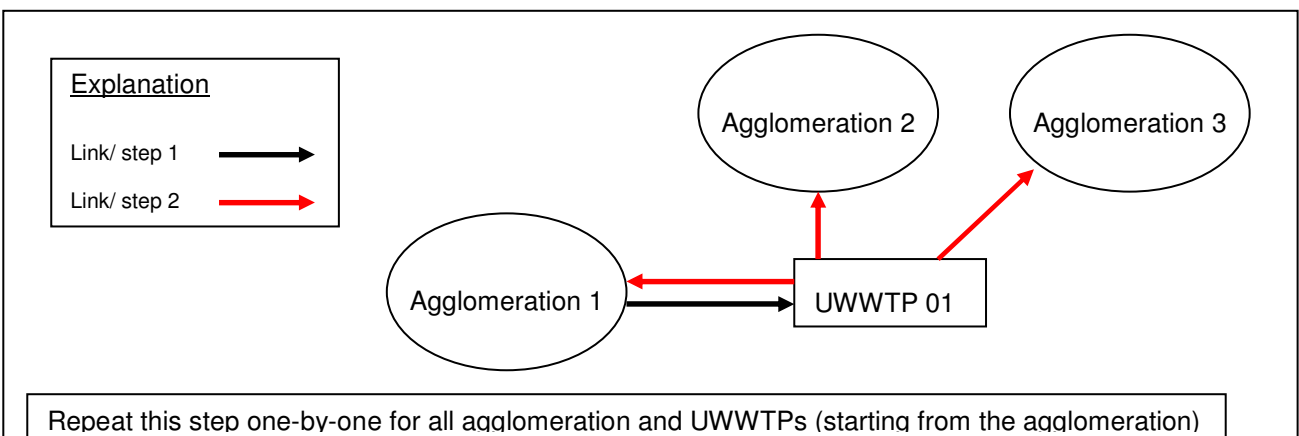
17.3.4 Example for m:n-relation between agglomerations and UWWTPs (several agglomerations: several UWWTPs)

Select (click) ONE agglomeration (AG 01) from the list

In case data entry has already been finished

In case of new data entry

SEVERAL UWWTPs: (e.g. UWWTP 01, UWWTP 02 and UWWTP 03) are given for (= linked to) this agglomeration

Connect UWWTP

Mark one UWWTP (UWWTP 01) in the list → master data of this UWWTP is given

Insert ONE UWWTP (UWWTP 01)

SEVERAL agglomerations (e.g. AG 01, AG 02, AG 04) are given in the list of selected agglomerations (=linked) to this UWWT P01

Select SEVERAL agglomerations (e.g. AG 01, AG 02, AG 04) in the list of available agglomerations and save it in the list of selected

18 Annex 11: Glossary and terms

Table 8: General terms and glossary

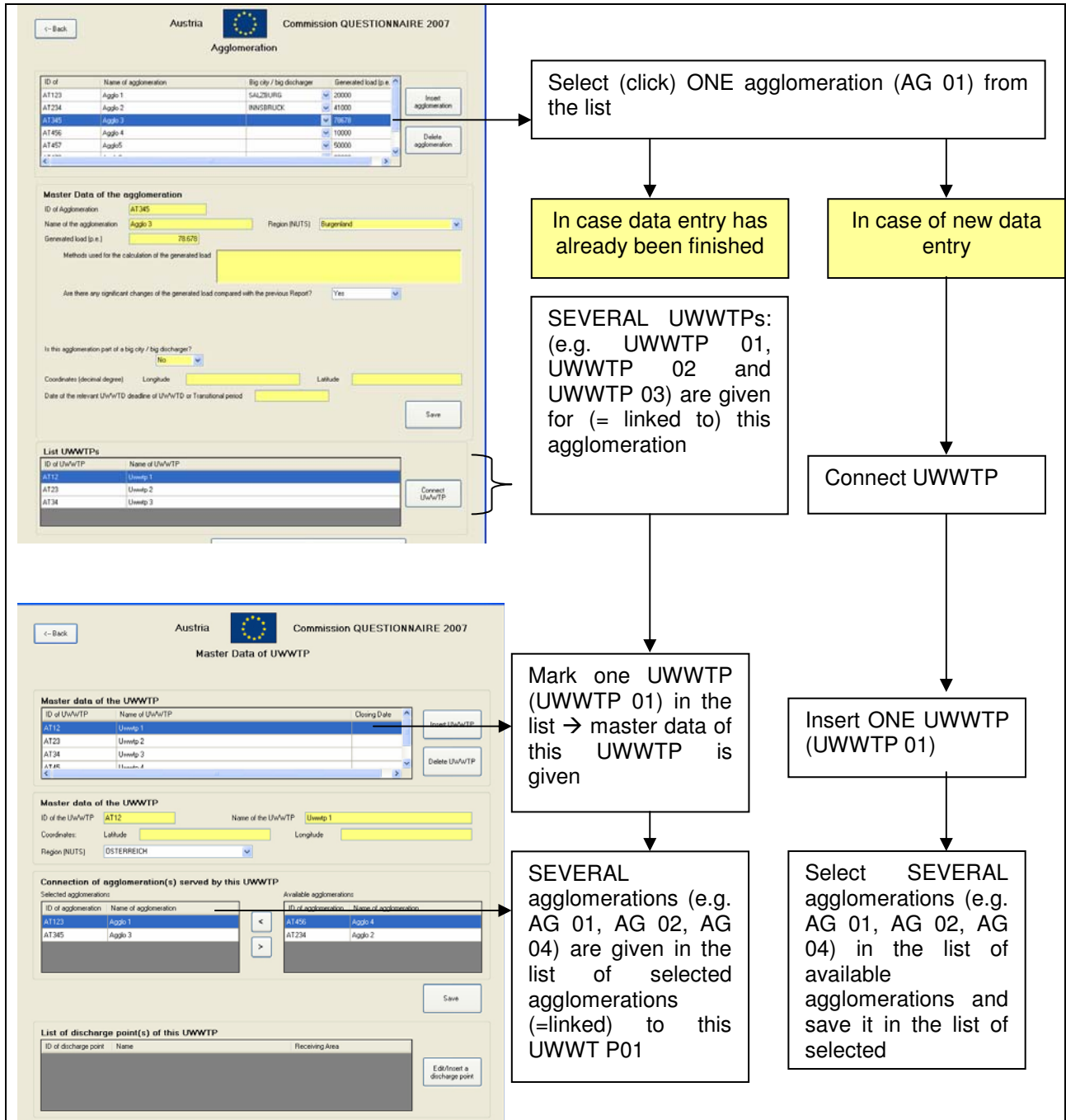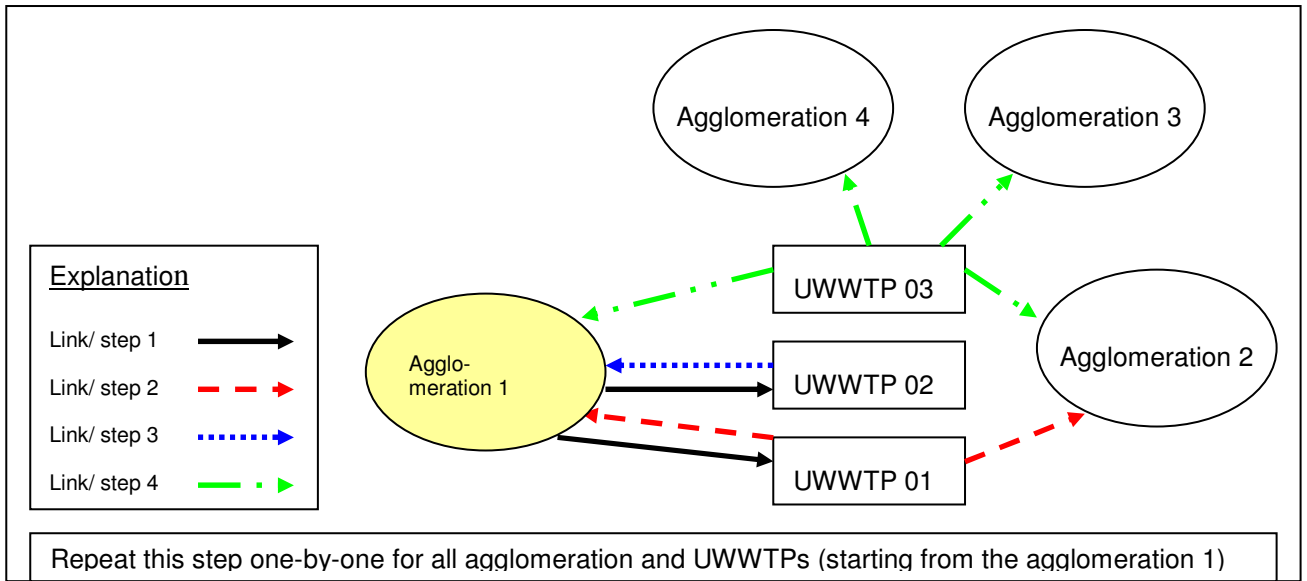| TERM	DESCRIPTION	REFERENCE
Classification description	means the identification of the water bodies as defined in Art. 5 and Art. 6: normal (no identification), sensitive (Art. 5(1) and Art. 5(8)), catchment of sensitive (Art. 5(5)), less sensitive (Art. 6(1))	Electronic UWWT-Questionnaire 1999, 'Explanatory 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 9: 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 10: 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 water8 requiring collection, or otherwise to be addressed, under Article 3(1) of the Directive9. 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 purpse of this Directiveas 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

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[8] '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

[9] 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 11: 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 12: 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 BOD5 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
BOD5	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 13: Glossary on data block 7

TERM	DESCRIPTION	REFERENCE
Sludge	Residual sludge, whether treated or untreated, from urbanm 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 14: 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

19 Annex 12: Frequently asked questions/ Reporting in specific situations

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

  According to the UWWT-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 2007.

  In case a catchment area of a sensitive area is inserted into UWWTD Questionnaire 2007 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.

- **In which way can the current data base (already reported datasets) be used for UWWTD Questionnaire 2007?**

  Compared to previous reporting exercises, the UWWTD Questionnaire 2007 has basic structural changes: (1) making the inventory of designated sensitive areas and their catchments; (2) linking agglomerations to treatment plants (possible links 1:1, 1:n, m:1) and discharge points.

  Because of these basic changes pre-filling UWWTD Questionnaire 2007 by the old data-sets will not be provided from the Commission side. However, the Commission contractor (UBA-Vienna) will provide - for each EU15 - files with IDs and names of agglomerations and UWWTPs used in the previous reporting exercise of EU15. Member States have the possibility to use these IDs and names, but need not necessarily use them in reporting under UWWTD Questionnaire 2007.

  As the structure of export files from previous and current reporting exercise is tab-delimitated txt.-files and the data dictionary is available for both, old and new reporting exercise, the IT experts from EU15 can easily adopt and use some basic / master data already available.

- **Use of GIS-files**

  GIS-shp-files of the sensitive areas have to be up-loaded to the UWWTD-questionnaire 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.