

**INFORMAL BACKGROUND DOCUMENT  
TO THE COMMUNICATION FROM THE COMMISSION  
'TOWARDS SUSTAINABLE WATER MANAGEMENT  
IN THE EUROPEAN UNION'**

**4<sup>th</sup> Commission Report on Implementation  
of the Urban Waste Water Treatment Directive:  
Status of Implementation in each Member State**

January 2007

**Disclaimer:**

This document has been developed by a consultant for the European Commission, DG Environment. In general, it reflects reports by Member States as per 1 January 2003, with consultation of Member States on relevant parts of the document during March and April 2004. Last updates were done in December 2006 and January 2007. This document does not necessarily represent the official position of the European Commission or of any Member State.

Brussels, January, 2007.

## TABLE OF CONTENTS

Background .....	7
1. Implementation Status in each Member State.....	9
1.1. Belgium.....	9
1.1.1. General comments on data quality .....	9
1.1.2. Sensitive areas.....	9
1.1.3. Waste water treatment in big cities .....	9
1.2. Denmark.....	11
1.2.1. General comments on data quality .....	11
1.2.2. Sensitive areas.....	11
1.2.3. Waste water treatment in big cities .....	11
1.3. Germany.....	13
1.3.1. General comments on data quality .....	13
1.3.2. Sensitive areas.....	13
1.3.3. Agglomerations reported as discharging into normal areas.....	14
1.3.4. Waste water treatment in big cities .....	16
1.4. Greece .....	19
1.4.1. General comments on data quality .....	19
1.4.2. Sensitive areas.....	19
1.4.3. Agglomerations reported as discharging into normal areas.....	20
1.4.4. Waste water treatment in big cities .....	25
1.5. Spain.....	27
1.5.1. General comments on data quality .....	27
1.5.2. Sensitive areas.....	27
1.5.3. Agglomerations discharging into sensitive areas.....	29
1.5.4. Agglomerations reported as discharging into normal areas.....	31
1.5.5. <i>Updated information from Spain on self-compliance-check results for agglomerations reported as discharging into normal areas (data reported in April 2004)</i> .....	36
1.5.6. Waste water treatment in big cities .....	38

1.6.	France.....	41
1.6.1.	General comments on data quality .....	41
1.6.2.	Sensitive areas.....	41
1.6.3.	Agglomerations reported as discharging into normal areas.....	42
1.6.4.	<i>Updated information from France on self compliance-check results for agglomerations reported as discharging into normal areas (data reported in May 2004)</i> .....	47
1.6.5.	Waste water treatment in big cities .....	49
1.7.	Ireland .....	53
1.7.1.	General comments on data quality .....	53
1.7.2.	Sensitive areas.....	53
1.7.3.	Agglomerations reported as discharging into normal areas.....	54
1.7.4.	Waste water treatment in big cities .....	58
1.8.	Italy .....	61
1.8.1.	General comments on data quality .....	61
1.8.2.	Sensitive areas.....	61
1.8.3.	Agglomerations reported as discharging into normal areas.....	63
1.8.4.	Waste water treatment in big cities .....	76
1.9.	Luxembourg .....	81
1.9.1.	General comments on data quality .....	81
1.9.2.	Sensitive areas.....	81
1.9.3.	Waste water treatment in big cities .....	82
1.10.	The Netherlands .....	83
1.10.1.	General comments on data quality .....	83
1.10.2.	Sensitive areas.....	83
1.10.3.	Waste water treatment in big cities .....	83
1.11.	Austria.....	85
1.11.1.	General comments on data quality .....	85
1.11.2.	Sensitive areas.....	85
1.11.3.	Agglomerations reported as discharging into normal areas.....	86

1.11.4.	Waste water treatment in big cities .....	88
1.12.	Portugal .....	89
1.12.1.	General comments on data quality .....	89
1.12.2.	Sensitive areas .....	89
1.12.3.	Less sensitive areas .....	90
1.12.4.	Agglomerations reported as discharging into normal areas or less sensitive areas ...	90
1.12.5.	Waste water treatment in big cities .....	96
1.13.	Finland .....	99
1.13.1.	General comments on data quality .....	99
1.13.2.	Sensitive areas .....	99
1.13.3.	Waste water treatment in big cities .....	100
1.14.	Sweden .....	101
1.14.1.	General comments on data quality .....	101
1.14.2.	Sensitive areas .....	101
1.14.3.	Waste water treatment in big cities .....	101
1.15.	United Kingdom.....	103
1.15.1.	General comments on data quality .....	103
1.15.2.	Sensitive areas .....	103
1.15.3.	Agglomerations reported as discharging into normal areas.....	105
1.15.4.	Waste water treatment in big cities .....	111
2.	Infringements .....	113



## BACKGROUND

Three reports have been already published by the Commission in relation to the progress of the Directive<sup>1</sup> implementation so far. This document presents the assessment results for:

- the year 2001 or 2002 in EU-15 for agglomerations<sup>2</sup> with more than 15 000 population equivalents (p.e.)<sup>3</sup> discharging into normal areas and agglomerations with more than 10 000 p.e. discharging into sensitive areas<sup>4</sup>; and
- waste water treatment in big cities<sup>5</sup> on 1 January 2003.

It also gives information on the status of infringement procedures on 31 December 2006.

Other relevant information such as the maps of designated sensitive areas by the EU15 Member States and the situation about waste water treatment in 'big cities' as well as the list of transitional periods for new Member States (EU-10 and EU-2) can be found on: [http://europa.eu.int/comm/environment/water/water-urbanwaste/index\\_en.html](http://europa.eu.int/comm/environment/water/water-urbanwaste/index_en.html).

---

<sup>1</sup> COM (1998) 775 final, 15.1.1999; COM (2001) 685 final, 21.11.2001; COM (2004) 248 final, 23.4.2004

<sup>2</sup> An *agglomeration* is a community of homes, shops hospitals and certain industries which are sufficiently concentrated for the waste water to be collected for treatment at a sewage treatment works. Agglomeration usually refers to cities or towns.

<sup>3</sup> *Population equivalent (p.e.)* refers to the organic pollution in waste water. 1 population equivalent means the amount of oxygen-demanding substances whose oxygen consumption during biodegradation equals the average oxygen demand of the waste water produced by one person (60 g O<sub>2</sub>/day over a time period of five days).

<sup>4</sup> Member States were invited by the Commission to provide updated information for these agglomerations (i.e. this was an optional request to update information in the official Commission questionnaire issued on 25 November 2002).

<sup>5</sup> A *big city* under the Directive is an agglomeration or a group of agglomerations forming a city and having the load of more than 150 000 p.e.





## 1. IMPLEMENTATION STATUS IN EACH MEMBER STATE

### 1.1. Belgium

#### 1.1.1. General comments on data quality

**Sensitive areas:** The latest information concerning the situation in agglomerations discharging into sensitive areas provided by Belgium was within the context of the 3rd Commission report (on the status on 1 January 2002<sup>6</sup>).

**Normal areas:** After the latest designation of sensitive areas in 2001 the entire territory of Belgium is sensitive area, thus there are no normal areas in Belgium under this Directive.

#### 1.1.2. Sensitive areas

Belgium did not provide updated information for the year 2002 for the 4th report (optional information update request), it is therefore assumed that the situation has not changed since the 3rd reporting exercise. According to the information provided for the 3rd report, 114 agglomerations out of 186 (or 71.3% of the total generated pollution load) did not have the required more stringent treatment level according to article 5(2,3) of the Directive.

#### 1.1.3. Waste water treatment in big cities

##### 1.1.3.1. Evaluation results of big cities

Based on the latest available information (information provided for the 3rd report and updated information about the treatment situation in Pepinster) Belgium had 12 big cities on 1 January 2003. The status of waste water treatment in these cities was as follows:

- three cities - *Oostende, Mons and Pepinster* - had the required more stringent treatment facilities (with total nitrogen and total phosphorus removal)
- one city - *Gent* - had more stringent treatment for a part of its population (90 000 p.e.)
- three cities - *Antwerpen, Brugge and Deurne*<sup>7</sup> - had partial more stringent treatment (total phosphorus removal)
- two cities - *Aiseau-Presles and Wavre* - had secondary treatment
- three cities – *Brussels, Charleroi and Liège* - had no treatment for major parts of their population:
  - *Brussels:* Since 2000 secondary treatment for about one quarter of the waste water generated in Brussels is in place (urban waste water treatment plant -

---

<sup>6</sup> According to the opinion of the Belgian authorities (Flemish region) the Commission report took into account the reported organic design capacity of treatment plants, but not the hydraulic design capacity, according to which monitoring data comply with the Directive.

<sup>7</sup> According to Belgian (Flemish region) comments on the draft of this Report on 09/04/04

Brussels-South). The second plant - Brussels-North will not provide secondary treatment and total nitrogen and total phosphorus removal before 2006.

- *Charleroi and Liège*: only a small part of the waste water generated in these cities (i.e. for Charleroi – 24 000 p.e., for Liège – 62 000 p.e.) is subject to secondary treatment. There was no waste water treatment at all for the remaining part of the pollution load.

#### 1.1.3.2. Conclusions

According to the 3rd Commission report the city of Pepinster had no waste water treatment on 1 January 2002. Since August 2002 it has been equipped with more stringent treatment including total nitrogen and total phosphorus removal. Therefore, it complies with the requirements for treatment installations of the Directive.

The urban waste water treatment plants serving agglomerations, which are forming the big cities of Aiseau-Presles, Antwerpen, Brugge, Brussels, Charleroi, Deurne, Gent, Liège, and Wavre, still did not comply with the Directive requirements.

#### **LAST UPDATES – 2004-2006**

- According to Belgium, over the 2002-2006 period, the following agglomerations became compliant with the requirements of the Directive: Gent, Antwerpen, Brugge. The Urban Waste Water treatment plant of Brussels-North was planned to be fully operational by end of 2006, however no updated information has been received yet.

## 1.2. Denmark

### 1.2.1. *General comments on data quality*

**Sensitive areas:** The latest information provided by the Danish authorities on the status in agglomerations discharging into sensitive areas was within the context of the 3rd Commission report (status on 1 January 2002). At the 16<sup>th</sup> UWWT Directive Committee Meeting held in September 2003, Denmark informed that a wrong (generated) load of Danish agglomerations had been reported. The correction was taken into consideration in the present report.

Denmark did not provide updated information for the year 2002 (optional information update request).

**Normal areas:** As Denmark (since 1999) applies Article 5(8) of the Directive there are no normal areas to be considered in Denmark.

### 1.2.2. *Sensitive areas*

Following Article 5(8) of the Directive, Denmark does not have to identify sensitive areas for the purpose of the Directive but applies more stringent treatment for total nitrogen and total phosphorus removal over all its territory.

In the context of the 3rd Commission report (status on 1 January 2002) Denmark reported 127 agglomerations with a population equivalent of more than 10 000. According to the Danish authorities, on 1 January 2002, all these agglomerations were complying with the Directive requirements for more stringent treatment (total nitrogen and total phosphorus removal).

### 1.2.3. *Waste water treatment in big cities*

The five big cities *Aalborg, Aarhus, Fredericia, Copenhagen and Odense* have been equipped with the required more stringent treatment facilities (total nitrogen and total phosphorus removal) since 1998.



## 1.3. Germany

### 1.3.1. General comments on data quality

**Sensitive areas:** The latest information about the situation regarding waste water treatment in German agglomerations with a population equivalent of more than 10 000 discharging into sensitive areas is the data presented in the context of the 3rd Commission report on the status on 1 January 2002.

**Normal areas:** The reference date chosen by Germany to report treatment levels and monitoring results of agglomerations with more than 15 000 p.e. discharging into normal areas was 31 December 2001.

Germany made the selection of large agglomerations according to the treatment capacity (organic design capacity) of their urban waste water treatment plants<sup>8</sup>, which implies that agglomerations with a load lower than 15 000 p.e. served by plants with a capacity above 15 000 p.e. were reported. Germany defined an agglomeration as being the catchment area of a plant, which, according to the Commission opinion, is not completely in line with the definition of an agglomeration in the Directive. Therefore, the Commission does not completely accept this approach as it results in the fact that agglomerations with a load above 15 000 p.e. which are not equipped with the sufficient treatment capacity were not reported.

In Germany one agglomeration was served by one urban waste water treatment plant, therefore, the ratio [*agglomeration : UWWTP*] = [1 : 1] was used. The situation regarding compliance of treatment levels and treatment performance in agglomerations and urban waste water treatment plants is therefore identical.

### 1.3.2. Sensitive areas

By the end of 2000 Germany had designated the entire drainage area of the North Sea and the Baltic Sea in its territory as sensitive area. In addition, the regions of Bavaria and Baden-Württemberg designated the Lake Constance, some of the Bavarian lakes and the Upper Danube, including their catchment areas, as sensitive areas. Therefore, the entire territory of Germany, except the lower part of the Danube, has been designated as sensitive area.

In 2001, Germany decided to apply Article 5(4) of the Directive in its sensitive areas. At that time the required 75% reduction rate was achieved for total phosphorus (90% removal) but not for total nitrogen (reduction rate of 74%). According to the updated information provided by the German authorities (on 13/04/04), the required 75% reduction rate in 2002 was achieved for total nitrogen (76.5%) as a result of the extension of calculations including smaller plants.

---

<sup>8</sup> The German authorities commenting on this report (on 13/04/04) explained that in Germany the capacity of the treatment plant is the parameter used to issue the permits for water use and therefore this parameter is also used to assess the implementation of the Directive. The generated load of agglomerations is only used as a parameter to calculate the capacity of treatment plants in the planning stage. The plant is dimensioned based on this load, after including an additional multiplying factor in the calculation (i.e. to take account of seasonal variations and a possible extension of the agglomeration).

Therefore, Germany complies with the requirements of the Article 5(4) of the Directive in its sensitive areas since 31/12/2002.

### 1.3.3. Agglomerations reported as discharging into normal areas

#### 1.3.3.1. Comparison of data for the 3rd and the 4th Commission Reports

For the 3rd Commission report Germany reported 126 agglomerations discharging into normal areas by 31 December 2000. The total load of these agglomerations was 8 264 830 p.e. Each of these agglomerations was equipped with at least secondary treatment level by this date.

In the framework of the 4th report, Germany reported 193 agglomerations (with 193 UWWTPs) discharging into normal areas by 31 December 2001 (see also Table 1-1).

The difference is mainly due to the above-mentioned approach to report agglomerations, which have a plant with an organic design capacity above 15 000 p.e..

In addition, German authorities stated that four agglomerations should no longer be considered as discharging into normal areas, as

- treated waste water from the agglomerations *Kulmbach* and *Bad Windsheim* is discharged into sensitive areas;
- the load of the agglomeration of *Bogen* (i.e. the organic design capacity of a plant) was lowered below 15 000 p.e. after the disconnection of a poultry farm. A new dimensioning of the UWWTP of Bogen with integrated nitrification was carried out at the same time.
- waste water from the agglomeration of *Burghausen* is now connected to an industrial plant and urban waste water is treated in this plant.

Following the specific selection criteria of calculating the agglomeration load by using organic design capacity, Germany reported 71 new agglomerations with total generated load of 828 063 p.e.

**Table 1-1: Agglomerations<sup>9</sup> reported by Germany as discharging into normal areas: Comparison of data for the years 2000 and 2001**

GERMANY	Number of agglomerations		Generated load [p.e.]	
	2000	2001	2000	2001
Total	126	193	8 264 830	8 904 693
Secondary treatment	126	193	8 264 830	8 904 693
No information available	0	0	0	0
Treatment not in compliance	0	0	0	0

<sup>9</sup> As Germany defined its agglomerations as the catchment of one single UWWTP, the number of agglomerations equals the number of UWWTPs.

### 1.3.3.2. Receiving areas

None of the 193 agglomerations (UWWTPs) reported by Germany is discharging into a potentially sensitive area or sensitive area.

### 1.3.3.3. Normal areas: treatment levels and monitoring results

Each of the 193 reported agglomerations (UWWTPs) has to be equipped with secondary treatment and to provide satisfactory monitoring results for BOD<sub>5</sub> and COD in order to comply with the requirements of the Directive.

#### **UWWTPs: treatment levels and monitoring results**

All 193 reported UWWTPs were equipped with secondary treatment, 191 of them being also equipped with more stringent treatment (most of them with total nitrogen and total phosphorus removal).

For all 193 reported urban waste water treatment plants the reported self-assessment of monitoring results for BOD<sub>5</sub> and COD were complying with the Directive requirements (see Table 1-2).

**Table 1-2: Treatment levels and monitoring results of German UWWTPs discharging into normal areas (reported year 2001)**

<b>GERMANY – Normal areas</b>	<b>Number of UWWTPs</b>	<b>Organic design capacity [p.e.]</b>	<b>% of organic design capacity</b>
<b>Reported UWWTPs (year 2001)</b>	<b>193</b>	<b>14 214 695</b>	<b>100</b>
More stringent treatment	191	14 148 695	100
Secondary treatment	2	66 000	0
Primary treatment	0	0	0
Information about treatment level not available	0	0	0
Monitoring results (BOD <sub>5</sub> , COD) in compliance	193	14 214 695	100
Monitoring results not in compliance	0	0	0
Monitoring results not available	0	0	0

#### **Agglomerations: treatment levels and monitoring results**

As Germany reported only agglomerations with UWWTPs with a capacity above 15 000 p.e. the number of agglomerations and UWWTPs is identical.

All reported agglomerations had UWWTPs with sufficient organic design capacities and the treatment level required for waste water treatment in normal areas, and were therefore in compliance with the Directive. Furthermore, the self-assessment results of monitoring for BOD<sub>5</sub> and COD were also in compliance (see Table 1-3).

**Table 1-3: Treatment levels and monitoring results of German agglomerations discharging into normal areas (reported year 2001)**

GERMANY – Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2001)</b>	<b>193</b>	<b>8 904 693</b>	<b>100</b>
More stringent treatment	191	8 877 833	100
Secondary treatment or partial more stringent treatment	2	26 860	0
Primary treatment or partial secondary treatment	0	0	0
No treatment or preliminary treatment only	0	0	0
Information about treatment level not available	0	0	0
Monitoring results (BOD <sub>5</sub> , COD) in compliance	193	8 904 693	100
Monitoring results not in compliance	0	0	0
Monitoring results not available	0	0	0

#### 1.3.3.4. Conclusions

By 31/12/2001 Germany was in compliance with the Directive as regards the treatment level and monitoring results in normal areas.

The Commission does not fully agree with the approach of reporting agglomerations on the basis of the organic design capacity of their UWWTPs, as agglomerations with a load of more than 15 000 p.e. which do not have urban waste water treatment plants with adequate capacities are not reported.

#### 1.3.4. Waste water treatment in big cities

##### 1.3.4.1. Evaluation results of big cities

On 1 January 2003 Germany reported 143 agglomerations with a generated load (or treatment capacity above 150 000 p.e.<sup>10</sup>). Compared to the 3rd Report, there were the following changes:

- *Hamburg* is no longer considered as big city after the disconnection of a brewery. The load of the agglomeration now lies below 75 000 p.e., the UWWTP was reconstructed with an organic design capacity of 75 000 p.e.
- *Monheim* has a new urban waste water treatment plant with an organic design capacity of 166 000 p.e. (secondary treatment level, being upgraded to denitrification, i.e. providing total nitrogen removal).

On 1 January 2003 the situation of German big cities regarding waste water treatment was as follows:

- 130 cities were discharging into sensitive areas from which

<sup>10</sup> Generated load in several cases reported to be equal with organic design capacity



- 123 (including Berlin, Hamburg, Frankfurt and Düsseldorf) had more stringent treatment for total nitrogen and total phosphorus removal
- seven were equipped with secondary treatment (Dresden, Flensburg, Hagen, Leipzig, Lübeck, Lünen and Monheim).
- 13 cities were discharging into normal areas and had more stringent treatment (total nitrogen and/or total phosphorus removal), i.e. were in compliance with the Directive requirements.

#### 1.3.4.2. Conclusions

On 1 January 2003 all 143 German big cities were in compliance with the treatment requirements of the Directive.



## 1.4. Greece

### 1.4.1. General comments on data quality

**Sensitive areas:** When commenting on the 3rd Commission report Greece (on 22/05/2003) had sent updated information about several UWWTPs which became operational after the reference date for Directive implementation relevant for the 3rd report (1 January 2002). This progress is taken into consideration in the assessment of the situation in the 4th report.

**Normal areas:** Greece reported information for the year 2002 for the 4th report, however, did not send information in the requested (MS Excel) format but used another format (MS Word-documents). This caused additional efforts of data processing to perform the compliance check. For the next reporting exercise the Commission will not accept data not sent in the requested format.

In Greece one agglomeration was served by one urban waste water treatment plant, therefore the ratio [*agglomeration : UWWTP*] = [*1 : 1*] was used. The situation regarding the compliance of treatment levels and treatment performance in agglomerations and urban waste water treatment plants is therefore identical.

### 1.4.2. Sensitive areas

Greece identified 36 sensitive areas in 1999 and 2002.

Despite further clarifications with the Greek authorities and additional information provided by Greece in 2002, the Commission believes that additional 14 water bodies (so-called potentially sensitive areas) should have been identified as sensitive (see Table 1-4).

**Table 1-4: Areas which should have been designated as sensitive areas in Greece**

No.	Potentially sensitive area	No.	Potentially sensitive area
1	Vegoritida	8	Lysimachia
2	Chimaditida and Zazari	9	Pagazitikos Gulf
3	Kastoria	10	Kifisos
4	Lapsista Channel	11	Argolikos Gulf
5	Ioannina	12	Gulf of Kalloni
6	Pinios	13	Gulf of Geras
7	Amvrakia	14	Strait of Mytilini

Following the designations in 1999 and the revision of Greek sensitive areas in 2002 the two big cities of Athens and Thessaloniki are now considered as agglomerations discharging into sensitive areas in addition to the 17 agglomerations of more than 10 000 p.e. that were already reported in the 3rd Report.

Apart from these two agglomerations - *Athens and Thessaloniki*, 17 agglomerations with more than 10 000 p.e. were discharging into sensitive areas (as reported by Greek authorities for the 3rd Commission Report for the status on 01/01/2002). However, according to the 3rd Commission Report only eight (out of 17) agglomerations had the required more stringent treatment facilities.

Since the 3rd report the situation has changed as follows:

- According to the updated information communicated by Greece on 22 May 2003 the situation improved in four agglomerations – *Didimoteicho* (12 000 p.e.), *Mesologgi* (14 000 p.e.), *Drama* (40 000 p.e.), *Theba* (40 000 p.e.), which provide total nitrogen and total phosphorus removal since 2002.
- However, the required treatment level was still not in place (on 1 January 2003) for
  - *Arta* (32 000 p.e.) and *Serres* (70 000 p.e.) - had no total phosphorus removal
  - *Elefsina Aspropyrgos* (120 000 p.e.), *Grevena* (14 000 p.e.) and *Kilkis* (26 000 p.e.) - had no waste water treatment at all.

Compared to the 3rd Report, 12 agglomerations (out of 17) were in compliance with the Directive requirements and the compliance rate improved from 40% by 1 January 2002 to 56% by 1 January 2003. Table 1-5 contains summary information not including the status in Athens (3 500 000 p.e. with primary treatment only) and Thessaloniki (1 100 000 p.e. with secondary treatment followed by total nitrogen removal) on 01/01/2003.

**Table 1-5: Waste water treatment in Greek agglomerations of more than 10 000 p.e. discharging into sensitive areas<sup>11</sup>**

GREECE – Sensitive areas	Treatment level in agglomerations of more than 10 000 p.e. discharging into sensitive areas			
	Situation on 01/01/2003	Number of agglomerations	% of agglomerations	Generated load [p.e.]
Total	17	100.0	598 000	100.0
More stringent treatment	14	82.4	438 000	73.2
<i>but missing treatment steps</i>	2	11.8	102 000	17.0
<i>but insufficient treatment capacity</i>	0	0.0	0	0.0
<b>Not in compliance</b>	<b>5</b>	<b>29.4</b>	<b>262 000</b>	<b>43.8</b>
<b>In compliance</b>	<b>12</b>	<b>70.6</b>	<b>336 000</b>	<b>56.2</b>

#### 1.4.3. Agglomerations reported as discharging into normal areas

##### 1.4.3.1. Comparison of data for the 3rd and the 4th Commission report

In the frame of the 3rd report Greece reported 77 agglomerations discharging into normal areas by 31 December 2000 with a total load of 8 317 800 p.e.. 52 of these agglomerations were equipped with a complying secondary treatment level by this date (49% of the total generated load) (see Table 1-6).

In the frame of the 4th report Greece reported 75 agglomerations discharging into normal areas by 31 December 2002 and having total generated load of 3 713 300 p.e. The decrease in the total generated load was due to the two large agglomerations of Athens and Thessaloniki, which are currently considered as discharging into sensitive areas.

<sup>11</sup> Not including Athens and Thessaloniki

**Table 1-6: Agglomerations reported by Greece as discharging into normal areas: Comparison of the data for the years 2000 and 2002**

GREECE	Number of agglomerations		Generated load [p.e.]	
	2000 <sup>12</sup>	2002 <sup>13</sup>	2000	2002
Total	77	75*	8 317 800	3 713 300
Secondary treatment	52	62	4 040 300	3 356 800
Information not available	0	0	0	0
Treatment not in compliance	25	13	4 277 500	356 500

\* Athens and Thessaloniki not considered in the data of 2002 as these agglomerations are currently discharging into sensitive areas

Note: For three agglomerations - Argostoli, Kerkyra, Chersonissos - for which Greece provided two seasonal values for the generated load (for the year 2002), the Commission used the higher value for compliance-check (see Table 1-7).

**Table 1-7: Greek agglomerations for which seasonal changes of the generated load were reported for the year 2002**

Agglomerations	Greek comment concerning load (ref. year 2002)	Used for assessment by the Commission [p.e.]
Argostoli	Summer 18 000 p.e., winter 10 000 p.e.	18 000
Kerkyra	Summer 60 000 p.e., winter 40 000 p.e.	60 000
Chersonissos	Summer 30 000 p.e., winter 9 000 p.e.	30 000

#### 1.4.3.2. Receiving areas

For the reference year 2002, the comparison of the location of the discharge points of the reported agglomerations with sensitive areas and potentially sensitive areas is shown in Table 1-8.

**Table 1-8: Receiving areas of agglomerations and UWWTPs reported by Greece as discharging into normal areas**

GREECE - Receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of generated load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas (NA)	72	3 443 300	93	60	3 399 454	93
Potentially sensitive areas (PSA)	2	160 000	4	1	135 000	4
Sensitive areas (SA) and catchment of sensitive areas (CA of SA)	1	110 000	3	1	135 000	4
Localisation not possible due to missing coordinates	0	0	0	0	0	0
<b>Total</b>	<b>75</b>	<b>3 713 300</b>	<b>100</b>	<b>62</b>	<b>3 669 454</b>	<b>100</b>

<sup>12</sup> Reported by Greece as response to the Commission request of 14/03/2001 (reference A(2001)/310097)

<sup>13</sup> Reported by Greece as response to the Commission request of 25/11/2002 (reference A(2002)/311301)

### 1.4.3.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

This section contains two parts. Part A concerns agglomerations discharging into ‘real’ normal areas<sup>14</sup>. Part B concerns agglomerations discharging into sensitive areas and potentially sensitive areas or their catchments. However, Greece reported those as discharging into normal areas.

#### **Part A - Normal areas: treatment levels and monitoring results**

The evaluation concerns 72 agglomerations and their 60 UWWTPs discharging into normal areas by 31/12/2002 (see Table 1-10).

#### **UWWTPs: treatment levels and monitoring results**

All 60 UWWTPs were equipped with required secondary treatment; 39 of them had more stringent treatment, only self assessment of the monitoring results of the UWWTP of Tripoli were not in compliance for the parameters of BOD<sub>5</sub> and COD.

**Table 1-9: Treatment levels and monitoring results of Greek UWWTPs discharging into normal areas (reported year 2002)**

GREECE – Normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (year 2002)</b>	<b>60</b>	<b>3 399 454</b>	<b>100</b>
More stringent treatment level	39	2 015 924	59
Secondary treatment level	21	1 383 530	41
Primary treatment level	0	0	0
Information about treatment level not available	0	0	0
Monitoring results (BOD <sub>5</sub> , COD) in compliance	59	3 369 454	99
Monitoring results not in compliance	1	30 000	1
Monitoring results not available	0	0	0%

#### **Agglomerations: treatment levels and monitoring results**

According to Table 1-10, 60 (out of 72) agglomerations (or 90% of the total generated load) had the required secondary or more stringent treatment and 59 (out of 72) had monitoring results in compliance with the requirements of the Directive. Monitoring results of Tripoli (30 000 p.e.) were not in compliance with the Directive.

12 agglomerations did not have any waste water treatment or were equipped with preliminary treatment only (see the list in Table 1-11).

<sup>14</sup> The Commission used the geographical co-ordinates of the discharge points to check their location against the receiving area type as designated by the Member State. In this case Part A of the chapter means that agglomerations were really discharging into a normal area. However, the check of the location revealed that some agglomerations reported by the Member State as discharging into normal areas were discharging into potentially sensitive areas, sensitive areas or their catchments.

**Table 1-10: Treatment levels and monitoring results of Greek agglomerations discharging into normal areas (reported year 2002)**

GREECE – Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2002)</b>	72	3 443 300	100
More stringent treatment level	37	1 699 800	49
Secondary treatment level or partial more stringent treatment	23	1 412 000	41
Primary treatment level or partial secondary treatment	0	0	0
No treatment or preliminary treatment only	12	331 500	10
Information about treatment level not available	0	0	0
Monitoring results (BOD <sub>5</sub> , COD) in compliance	59	3 081 800	90
Monitoring results not in compliance	1	30 000	1
Monitoring results not available	12	331 500	10

**Table 1-11: Greek agglomerations discharging into normal areas without any waste water treatment or equipped with preliminary treatment only (reported year 2002)**

Nat. Ref.	Name of the agglomeration	Generated load [p.e.]	Comments by Greece <sup>15</sup>
GR29	Artemidia	44 000	
GR113	Chrysoupoli	16 000	The UWWTP is not in operation because the collecting system has not been completed, yet. The existing UWWTP is to be upgraded
GR46	Kalymnos	20 000	
GR58	Koropi	16 000	
GR65	Litochoro (S. Pieria)	70 000	The UWWTP is not in operation because the collecting system is under construction
GR116	Malia	15 000	
GR67	Markopoylo	17 000	The UWWTP treats septage only.
GR68	Megara	40 000	
GR72	N. Kydonis - Crete	30 000	
GR79	Nea Makri	29 500	
GR115	Porou-Galata	15 000	The construction of the UWWTP is being completed and the collecting system is under construction.
GR90	Rafina	19 000	

### **Part B - Sensitive areas and potentially sensitive areas: treatment levels and monitoring results**

This evaluation concerns three agglomerations which were reported by Greece as discharging into normal areas but which, according to the Commission, are discharging into:

- (a) potentially sensitive areas (Edessa, Volos) and
- (b) the catchment area of a sensitive area (Ioannina).

Therefore, waste water from these agglomerations requires more stringent treatment level (see Tables 1-8 and 1-13).

### **UWWTPs: treatment levels and monitoring results**

Only the agglomerations of Volos and Ioannina were served by a UWWTP in 2002. The UWWTP of Volos had the required more stringent treatment for total nitrogen and total phosphorus. The UWWTP of Ioannina had secondary treatment only. The monitoring results

<sup>15</sup> Provided on 08/04/04

of both UWWTPs were complying with the requirements of the Directive for BOD<sub>5</sub> and COD in 2002 (see Table 1-12).

**Table 1-12: Treatment levels and monitoring results of Greek UWWTPs discharging into areas requiring more stringent treatment level (reported year 2002)**

GREECE – sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (year 2002)</b>	<b>2</b>	<b>270 000</b>	<b>100</b>
More stringent treatment	1	135 000	50
Secondary treatment	1	135 000	50
Primary treatment	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	2	270 000	100
Monitoring results not in line with the secondary treatment requirements	0	0	0
Monitoring results not available	0	0	0

### **Agglomerations: treatment levels and monitoring results**

At least three of the reported agglomerations (reported year 2002) were discharging into areas which require, according to the Commission's opinion more stringent treatment of nutrients (see Table 1-13 and Table 1-14). As Greece reported these agglomerations as discharging into normal areas, self-assessment of monitoring results on treatment performance were available for BOD<sub>5</sub> and COD only (i.e. it was only possible to check the compliance of treatment performance for secondary treatment).

**Table 1-13: Greek agglomerations reported as discharging into normal areas, but requiring more stringent treatment level**

National reference	Name of agglomeration	Existing type of treatment	Generated load [p.e.]	Receiving water body
GR35	Edessa	No treatment	25 000	
GR42	Ioannina	Secondary	110 000	Ditch of Iapostas (freshwater)
GR107	Volos	Total N and total P removal	135 000	Pagasetikos Gulf (freshwater)

The monitoring results of the UWWTPs of Volos and Ioannina were complying for BOD<sub>5</sub> and COD in 2002.

**Table 1-14: Treatment levels and monitoring results of Greek agglomerations discharging into areas requiring more stringent treatment level**

GREECE – sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2002)</b>	<b>3</b>	<b>270 000</b>	<b>100</b>
More stringent treatment	1	135 000	50
Secondary treatment or partial more stringent treatment	1	110 000	41
Primary treatment or partial secondary treatment	0	0	0
No treatment or preliminary treatment only	1	25 000	9
Information about treatment level <u>not</u> available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	2	245 000	91
Monitoring results not in line with the secondary treatment requirements	0	0	0
Monitoring results not available	1	25 000	9



#### 1.4.3.4. Conclusions

By 31 December 2002, 62 out of the 75 agglomerations reported by Greece as discharging into normal areas were equipped with at least secondary treatment and 61 were presenting monitoring results for secondary treatment in compliance with the Directive. The Commission considered 3 (out of 75) agglomerations as discharging into areas requiring more stringent treatment. The 13 agglomerations<sup>16</sup> still did not have any waste water treatment or were only equipped with preliminary treatment on 01/01/2003.

#### 1.4.4. *Waste water treatment in big cities*

##### 1.4.4.1. Evaluation results of big cities

Greece reported five big cities (agglomeration or group of agglomerations forming a big city with a load of more than 150 000 p.e.) - Athens, Metamorphosis, Thessaloniki, Iraklion and Patra.

By 1 January 2003 the situation of waste water treatment in these cities was as follows:

- Athens (3 500 000 p.e.) is discharging into a sensitive area designated in April 2002 and had primary treatment only. More stringent treatment (total nitrogen removal) was planned to be in place from the beginning of 2004.
- Metamorphosis (540 000 p.e.): on 1 January 2003 still considered as discharging into a normal area. However, from the beginning of 2004 it is connected to the UWWTP of Athens.
- Thessaloniki (1 100 000 p.e.): discharging into a sensitive area (designated in April 2002), secondary treatment followed by nitrogen removal (as reported on situation as at 1 January 2003 (total nitrogen removal is operational since 2000).
- Iraklion (150 000 p.e.): discharging into a normal area (Mediterranean Sea), secondary treatment followed by total nitrogen removal.
- Patra (180 000 p.e.): discharging into a normal area (Mediterranean Sea), secondary treatment followed by total nitrogen and total phosphorus removal.

---

<sup>16</sup> Artemida, Chrysoupoli, Edessa, Kalymnos, Koropi, Litochoro (S. Pieria), Malia, Markopoylo, Megara, N. Kydonis - Crete, Nea Makri, Porou-Galata and Rafina

#### 1.4.4.2. Conclusions

The three big Greek cities discharging into sensitive areas are equipped with more stringent treatment facilities since 2004. The two big cities discharging into normal areas are in compliance with the treatment requirements of the Directive.

The agglomeration Elefsina Aspropyrgos was reported in the second Commission report (for the year 1998) as city above 150 000 p.e. and did not have waste water treatment at all. According to the information<sup>17</sup> from Greece, this situation had not changed until 1 January 2003. When providing information for the 3rd Commission report (for the situation on 1 January 2002) Greece indicated that the load had dropped below 150 000 p.e. However, as this agglomeration discharges into a sensitive area, the agglomeration should be provided with more stringent than secondary treatment.

#### **LAST UPDATES – 2004-2006**

- In 2005 treatment plant serving the city of Athens fully complied with the requirement for more stringent treatment; however there are still some problems left concerning management and disposal of sludge generated in this plant.
- On 24/06/2004 the European Court of Justice condemned Greece for not taking the measures necessary for the installation of a collecting system for urban waste water from the area of Thriasio Pedio (agglomeration of Elefsina Aspropyrgos) and not subjecting urban waste water from that area to more stringent than secondary treatment before its discharge into the sensitive area of the Gulf of Elefsina, failing to fulfil its obligations under Articles 3(1) and 5(2) of the Directive. According to the recent communication by the Greek Authorities, the treatment plant is planned to be operational only by the end of 2009.

---

<sup>17</sup> Communication of information by Greece on 29/03/2002 and updated information on agglomerations discharging into normal areas on 07/11/2003.

## 1.5. Spain

### 1.5.1. General comments on data quality

**Sensitive areas:** For the 3rd Commission report Spain did not report self-assessment of monitoring results for some agglomerations. However, on 3 September 2003 the Spanish authorities communicated this information to the Commission for 79 agglomerations which are discharging into the officially designated sensitive areas. The results are presented in *section* 1.5.3.1 (for more information see also Table 1-17).

On 13 April 2004, with one year delay (as the official deadline for data delivery was 31/05/2003) Spain sent the following information relevant for this report: (a) modified data about 114 agglomerations and their UWWTPs; (b) self-assessment results of monitoring data for 77 of UWWTPs; (c) information regarding the review of sensitive areas. The results are presented in section 1.5.3.2.

**Normal areas:** On 7 July 2003 (with a delay of one month) Spain provided self-assessment of treatment performance (monitoring) data for **178 agglomerations** and UWWTPs discharging into normal areas. However, the information was not in the requested electronic (MS Excel) format. The data was reported for the year 2001. The evaluation results are presented in section 1.5.4

In Spain one agglomeration was served by one urban waste water treatment plant, therefore, the ratio [*agglomeration : UWWTP*] = [*1 : 1*] was used. In this case the compliance situation of treatment levels and treatment performance in agglomerations and urban waste water treatment plants are identical.

On 13 April 2004 (after the official deadline of 31/05/2003) Spain sent new information about **521 agglomerations** (and treatment plants) discharging into normal areas but provided self-assessment of monitoring results for only 206 of them. **Due to the delay of one year (and taking into account that all MSs have to be treated equally) it was not possible to perform a compliance check in the frame of this report.** Therefore, this information was not taken into account in the summary information for the EU-15.

Spain performed self-compliance checks of the Directive implementation of these data. The results presented in section **Error! Reference source not found.** are for information only and **do not represent the official Commission position.** It must also be pointed out that the Commission will not accept such a delayed information delivery which was in addition not in the requested format.

### 1.5.2. Sensitive areas

#### 1.5.2.1. Designated areas

The process of designation of sensitive areas in Spain was carried out from 1998 to 2003. It resulted in 90 sensitive areas designated by the Ministry of Environment (MIMAM) and 153 sensitive areas designated by the Regional Authorities (CCAA).

According to the information sent by Spain in April 2004, 12 sensitive areas still remain in the status as not officially designated areas (i.e. the areas identified as sensitive by the regional authorities) (see Table 1-15).

**Table 1-15: Sensitive areas reported by Spain in the context of the 3rd Commission report as being not officially designated<sup>18</sup>**

No.	Sensitive area	No.	Sensitive area
1	Bahia de Benidorm	7	Cales de Manacor
2	Bahia de Pasajes	8	Costa del Cabo San Antonio
3	Bahia de Txingudi	9	Litoral Oropesa-Benicassim-Castellon
4	Cala Millor	10	Puerto de Mahon
5	Cala Peguera	11	Rio de Mundeka
6	Cala Santa Ponca	12	Zona de las Salinas (San Jose)

In addition, the Commission is of the opinion that Spain should have identified 44 additional water bodies as sensitive areas under the eutrophication criterion (those are so-called potentially sensitive areas), including freshwaters, coastal waters and estuaries (see Table 1-16).

**Table 1-16: Potentially sensitive areas<sup>19</sup> of Spain**

No.	Potentially sensitive areas	No.	Potentially sensitive areas
1	Bahia de Algeciras	23	Embalse de Portaje
2	Bahia de Avilés	24	Embalse de Rosarito
3	Bahia de Santander	25	Embalse de Salor
4	Embalse de Acorlo	26	Embalse de Sobrón
5	Embalse de Alcántara	27	Embalse de Torrejón (Rio Tajo)
6	Embalse de Alloz	28	Embalse de Torrejón (Rio Tietar)
7	Embalse de Arrocampo-Almarez	29	Embalse de Turleque (Finisterre)
8	Embalse de Azután	30	Embalse de Urrúnaga
9	Embalse de Balesar	31	Embalse de Valdecanas
10	Embalse de Borlarque	32	Embalse de Valdeobispo
11	Embalse de Castrejón	33	Embalse de Villar del Rey
12	Embalse de Cazalegas	34	Embalse de Zadorra (Ullibari)
13	Embalse de Cedillo (Rio Tajo)	35	Embalse de Zújar
14	Embalse de Conchas	36	Estuario de Butroi (Plentzia)
15	Embalse de Frieria	37	Estuario de Deba
16	Embalse de Guadiloba	38	Estuario de Lea
17	Embalse de Guijo de Granadilla	39	Estuario de Nerbioi
18	Embalse de LA Aceña	40	Estuario de Rio Oria
19	Embalse de Mequinenza	41	Estuario de Rio Urola
20	Embalse de Orellana	42	Estuario de Rio Urumea
21	Embalse de Pálmaces	43	Puerto de Soller
22	Embalse de Plasencia	44	Rio de Ferrol

<sup>18</sup> These areas were not included in the list of officially designated sensitive areas reported in April 2004 by Spain.

<sup>19</sup> In its comment on the draft of the fourth Commission report (on 13/04/04, reference - A(2004)/522041) Spain emphasised that the Directive does not define the concept of 'potentially sensitive areas'. The Commission stresses that the term 'potentially sensitive areas' is used to present areas, which have to be designated as sensitive because of the three criteria laid down in Annex II of the Directive. The scientific background for these areas, are the results of the ERM study 'Verification of vulnerable zones identified under the Nitrates Directive and sensitive areas identified under the Urban Waste Water Treatment Directive'.

### 1.5.3. Agglomerations discharging into sensitive areas

- In the context of the 3rd Commission report Spain reported 113 agglomerations with more than 10 000 p.e. and discharging into sensitive areas, 34 of them were complying with the requirements of the Directive regarding the treatment level. Spain did not provide information about treatment performance (or self-assessment of monitoring) results.
- In September 2003, Spain sent new information on monitoring results for 79 out of 113 agglomerations.
- In April 2004, Spain sent again new corrections of the information.

The following sections provide separate assessments of these pieces of information.

#### 1.5.3.1. Evaluation of monitoring results for agglomerations discharging into sensitive areas based on information of September 2003

For the 79 (out of 113) agglomerations, reported as discharging into sensitive areas, the situation of treatment performance (self-assessment of monitoring) results by 31 December 2002 was the following:

- 36 agglomerations discharging into sensitive areas were identified under **critterion a** (eutrophication) of Annex II.A of the Directive:
  - a) for 29 of them monitoring results were in compliance with the requirements of the Directive
  - b) seven of them - Alginet, Almonte, Bollubos, Crevillente, Los Alcazares, San Javier, Santona – were not in compliance. However, Spain reported that the completion of more stringent treatment for all of them was planned for 2005 at the latest.
- 42 agglomerations were discharging into sensitive areas identified under **critterion b** (surface freshwaters intended for the abstraction of drinking water),
  - a) 34 of them had monitoring results in compliance with the requirements of the Directive,
  - b) eight of them - Alfarras-Almenar, Capellades, Deltebre, Girona (148 576 p.e.), Manresa, Monistrol de Monserrat, Montferrer, Naut-Aran – were not in compliance. Spain reported that the completion of more stringent treatment for all of them was planned for 2005 at the latest.
- The agglomeration of Pontevedra-Marin (134 352 p.e.) was discharging into the sensitive area of “Ria de Pontevedra” identified under **critterion c**. This agglomeration did not comply with the requirements for more stringent treatment. The completion of the required treatment was planned for 2005.

Summing up the treatment performance of agglomerations discharging into officially designated sensitive areas the situation was as follows (see also Table 1-17):

- Treatment performance results were reported for 79 (out of 113) agglomerations, of these:
  - 63 (out of 79 reported) agglomerations were in compliance with the requirements of the Directive for treatment level and treatment performance,
  - 16 were not in compliance for treatment performance, from those:
    - six agglomerations (out of 79 reported) had no waste water treatment. These were: Alfarras-Almenar, Alginet, Almonte, Deltebre, Naut-Aran, Santona).

**Table 1-17: Spanish agglomerations discharging into officially designated sensitive areas: updated information (reported year 2002) on waste water treatment levels and monitoring results for 79 (out of 113 reported agglomerations)**

SPAIN - Sensitive areas	Number of agglomerations	% of agglomerations	Generated load [p.e.]	% of generated load
<b>Agglomerations (year 2002)</b>	79	100	3 305 094	100
More stringent treatment	63	80	2 292 643	69
Secondary treatment	9	11	478 064	14
Primary treatment	1	1	134 352	4
No treatment	6	8	400 035	12
Monitoring results in compliance	63	80	2 292 643	69
Monitoring data not available	0	0	0	0
Monitoring results not in compliance	16	20	1 012 451	31

#### 1.5.3.2. Evaluation results for agglomerations discharging into sensitive areas based on information sent by Spain in **April 2004**

On 13 April 2004 Spain sent new information about **114 agglomerations** discharging into sensitive areas. The assessment results are as follows (see also Table 1-18):

- 68 out of 114 were in compliance with the requirements of the Directive for treatment level and 64 – for treatment performance,
- for 37 agglomerations no monitoring results were provided,
- 15 agglomerations had no waste water treatment. These were: Las Navas del Marques, Almonte, Bollulos, Santona (Cuenca Baja Rio Ason), Angles, Archidona, Campillos, Capellades, Castellon (176 800 p.e.), El Tiemblo, Fuento De Cantos, Chucena Escacena Paterna, Naut-Aran, Navaluenga, Sueca.

**Table 1-18: Evaluation results of data sent by Spain in April 2004 regarding agglomerations discharging into sensitive areas (reported year 2002)**

SPAIN – Sensitive areas	Number of agglomerations	% of agglomerations	Generated load [p.e.]	% of generated load
<b>Agglomerations (year 2002)</b>	<b>114</b>	<b>100</b>	<b>4 664 700</b>	<b>100</b>
More stringent treatment	68	60	2 887 800	62
Secondary treatment	31	27	1 215 700	26
Primary treatment	0	0	0	0
No treatment	15	13	561 200	12
Complying monitoring results	64	56	2 642 000	57
Monitoring data not available (including agglomerations without waste water treatment)	37	32	1 518 600	33
Monitoring results not in compliance	13	11	504 100	11

For the aggregation of data at EU-15 level, the data delivery of April 2004 by Spain, including information about agglomerations discharging into sensitive areas, was taken into account.

In addition it has to be pointed out that following the designation of the Balearic Islands as sensitive areas in 2003, the total number of agglomerations discharging into sensitive areas to be considered in future assessments will increase to **136**.

#### *1.5.4. Agglomerations reported as discharging into normal areas<sup>20</sup>*

This section is based on the information sent by Spain (on 07/07/2003) in relation to the Commission request (dated 25/11/2002) in the frame of the 4th report. Spain officially reported **178 agglomerations discharging into normal areas**. This information was sent with a delay of one month after the official deadline of six months set up in the Directive Art.15(4).

In April 2004 (i.e. a year later after the deadline to report information) when commenting the draft of the 4th Commission report, Spain sent new information about 521 agglomerations discharging into normal areas. Due to the reasons explained in the previous sections, the Commission did not perform a compliance-check of these data. The results of the self-compliance check done by Spain are presented in section 1.5.5 **for information only**. They do not represent the official Commission position and the assessment of 521 agglomerations is not included in the overall summary of the report presenting the status at EU-15 level.

##### 1.5.4.1. Comparison of data for the 3rd and the 4th Commission report

For the 3rd Commission report, Spain reported 458 agglomerations discharging into normal areas, of which 245 had secondary or more stringent treatment (on 31 December 2000).

For the 4th Commission report, Spain reported 178 agglomerations discharging into normal areas. **As 43 of them were reported for the first time, it is assessed that information about**

<sup>20</sup> evaluation based on the data provided by Spain on 07/07/2003 to the Commission's request on 25/11/2002

**323 agglomerations was missing.** Out of these 178 agglomerations 146 had at least secondary treatment. These 178 agglomerations represented 50% of the total generated load of the agglomerations reported for the 3rd report (see Table 1-19).

**Table 1-19: Agglomerations reported by Spain as discharging into normal areas: Comparison of data for the years 2000 and 2001**

SPAIN	Number of agglomerations		Generated load [p.e.]	
	2000	2001	2000	2001
<b>Total</b>	<b>458</b>	<b>178</b>	<b>53 862 365</b>	<b>26 980 300</b>
Secondary treatment	245	146	33 307 446	20 529 300
No information available	0	0	0	0
Less than secondary treatment level	213	32	20 554 919	6 451 000

#### 1.5.4.2. Receiving areas

According to the Commission opinion, 32 out of the 178 agglomerations were discharging into normal areas and 146 were discharging into potentially sensitive areas, sensitive areas or catchment areas of sensitive areas, and therefore would have required more stringent than secondary treatment (see Table 1-20).

**Table 1-20: Receiving areas of Spanish agglomerations and UWWTPs reported by Spain as discharging into normal areas (reported year 2001)**

SPAIN - Receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas (NA)	32	3 150 500	12	32	2 913 261	10
Potentially sensitive areas (PSA)	90	17 970 000	67	90	20 462 774	67
Sensitive areas (SA) and catchment of sensitive areas (CA of SA)	56	5 859 800	22	56	7 014 562	23
Localisation not possible due to missing coordinates	0	0	0	0	0	0
<b>Total</b>	<b>178</b>	<b>26 980 300</b>	<b>100</b>	<b>178</b>	<b>30 390 597</b>	<b>100</b>

#### 1.5.4.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

This section contains three parts. Part A concerns agglomerations discharging into ‘real’ normal areas. Part B concerns agglomerations discharging into sensitive areas and potentially sensitive areas or their catchments (However, Spain reported these as discharging into normal areas). Part C concerns information about the missing 323 agglomerations which had been reported for the 3rd Commission report only.

#### **Part A- Normal areas: treatment levels and monitoring results**

This evaluation refers to the 32 (out of 178 reported) agglomerations (and/or UWWTPs) considered by the Commission as discharging into ‘real’ normal areas (see Table 1-20).



### **UWWTPs: treatment levels and monitoring results**

30 of the UWWTPs had the required secondary or more stringent treatment. Two UWWTPs were reported as having insufficient treatment efficiency for organic pollution.

**Table 1-21: Treatment levels and monitoring results of Spanish UWWTPs discharging into normal areas (reported year 2001)**

<b>SPAIN – Normal areas</b>	<b>Number of UWWTPs</b>	<b>Organic design capacity [p.e.]</b>	<b>% of organic design capacity</b>
<b>Reported UWWTPs (year 2001)</b>	32	2 913 261	100
More stringent treatment	3	74 300	3
Secondary treatment	27	2 692 858	92
Primary treatment	2	146 103	5
Information about treatment level not available	0	0	0
Monitoring results in compliance with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	30	2 814 558	97
Monitoring results not in compliance with the secondary treatment requirements	2	98 703	3
Monitoring results not available	0	0	0

### **Agglomerations: treatment levels and monitoring results**

21 out of 32 agglomerations (or 68% of the total generated load) had the required secondary or more stringent treatment. 11 agglomerations had primary or partial secondary treatment (see Table 1-22).

**Table 1-22: Treatment levels and monitoring results of Spanish agglomerations discharging into normal areas (reported year 2001)**

<b>SPAIN - Normal areas</b>	<b>Number of agglomerations</b>	<b>Generated load [p.e.]</b>	<b>% of generated load</b>
<b>Reported agglomerations (reported year 2001)</b>	<b>32</b>	<b>3 150 500</b>	<b>100</b>
More stringent treatment	2	45 700	1
Secondary or partial more stringent treatment	19	2 119 200	67
Primary or partial secondary treatment	11	985 600	31
No treatment or preliminary treatment only	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in compliance with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	30	2 935 700	93
Monitoring results not in compliance	2	214 800	7
Monitoring results not available	0	0	0

### **Part B - Sensitive areas and potentially sensitive areas: treatment levels and monitoring results**

This assessment refers to the 146 out of 178 agglomerations (and UWWTPs) considered by the Commission as discharging into potentially sensitive areas, sensitive areas or their catchments, which require more stringent treatment (see Table 1-20). The sensitive areas are designated by the Spanish Ministry of Environment (MIMAM) or by Regional Authorities

(CCAA). However, **Spain did not identify catchment areas of sensitive areas**. According to the Commission these agglomerations should have been equipped with more stringent treatment since 31 December 1998.

### **UWWTPs: treatment levels and monitoring results**

Summary of the assessment results of the reported year 2001 is presented in Table 1-23.

**Table 1-23: Treatment levels and monitoring results of Spanish UWWTPs discharging into areas requiring more stringent treatment level (reported year 2001)**

<b>SPAIN - sensitive areas, catchment of sensitive areas and potentially sensitive areas</b>	<b>Number of UWWTPs</b>	<b>Organic design capacity [p.e.]</b>	<b>% of organic design capacity</b>
<b>Reported UWWTPs (year 2001)</b>	<b>146</b>	<b>27 477 336</b>	<b>100</b>
More stringent treatment	38	4 563 372	17
Secondary treatment	106	19 179 714	70
Primary treatment	2	3 734 250	14
Information about treatment not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	126	21 458 336	78
Monitoring results not in line with the secondary treatment requirements	20	6 019 000	22
Monitoring results not available	0	0	0

### **Agglomerations: treatment levels and monitoring results**

Summary of the assessment results for the reported year 2001 presented in Table 1-24.

**Table 1-24: Treatment levels and treatment performance of Spanish agglomerations discharging into areas requiring more stringent treatment (reported year 2001)**

<b>SPAIN- sensitive areas, catchment of sensitive areas and potentially sensitive areas</b>	<b>Number of agglomerations</b>	<b>Generated load [p.e.]</b>	<b>% of generated load</b>
<b>Reported agglomerations (year 2001)</b>	<b>146</b>	<b>23 829 800</b>	<b>100</b>
More stringent treatment	37	3 561 200	15
Secondary or partial more stringent treatment	88	14 803 200	62
Primary or partial secondary treatment	21	5 465 400	23
No treatment or preliminary treatment only	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	126	19 477 700	82
Monitoring results not in line with the secondary treatment requirements	20	4 352 100	18
Monitoring results not available	0	0	0

### **Part C- Assessment of treatment levels of 323 Spanish agglomerations not reported for the 4th Commission report**

As mentioned in section 1.5.4.1 **information about 323 agglomerations** (with a total generated load of 29 532 803 p.e.) discharging into normal areas (including big cities as Almeria or Murcia) **was missing** for the 4th Commission Report.

The assessment results for these agglomerations according to the 3rd Commission report (reported year 2000) were the following:

- 145 agglomerations (with 15 693 818 p.e. of the total generated load) had secondary or more stringent treatment;
- 178 agglomerations (with 13 838 985 p.e. of the total generated load) had primary treatment or no waste water treatment at all and therefore, were not in compliance with the Directive.

#### 1.5.4.4. Conclusions

Comparing the information on agglomerations provided for the 3rd Commission report (458 agglomerations, reported year 2000), the information reported for the 4th Commission report (178 agglomerations, reported year 2001) was not complete, as information about 323 agglomerations was missing.

According to the Commission at least 298 agglomerations did not comply with the treatment requirements of the Directive:

- Normal areas: 11 agglomerations (out of 32 presented in Part A) with a total generated load of 985 600 p.e.
- Sensitive areas and potentially sensitive areas: 109 agglomerations (out of 146 presented in Part B) with the load of 20 268 600 p.e.
- Not reported: 323 agglomerations for the 4th Report: 178 agglomerations (out of 323 presented in Part C) with the load of 13 838 985 p.e. did not have secondary treatment by 31 December 2000.

The monitoring results of at least 22 out of 178 UWWTPs reported for the 4th report were not in compliance with the Directive requirements for BOD<sub>5</sub> and COD.

1.5.5. Updated information from Spain on self-compliance-check results for agglomerations reported as discharging into normal areas (data reported in April 2004)

This section is based on the information provided by Spain (on 13/04/2004) and presents self-compliance-check results done by Spanish authorities for 521 agglomerations discharging (as reported by Spain) into normal areas by 31 December 2002.

As this information was provided after the official deadline (30 May 2003), the Commission did not carry out an assessment of the exact location of these agglomerations as regards the Spanish sensitive and potentially sensitive areas. Therefore, section 1.5.5 does not represent the Commission position.

**Comparison of data for the 3rd and 4th reporting exercises:**

For the 3rd Commission report, Spain reported 458 agglomerations discharging into normal areas, out of which 245 had secondary or more stringent treatment level (by 31 December 2000).

In April 2004, Spain provided information on 521 agglomerations discharging into normal areas out of which 384, according to the Spanish authorities, had secondary treatment (by 31 December 2002) (see Table 1-25).

**Table 1-25: Spanish agglomerations discharging into normal areas: Comparison of data for the years 2000 and 2002**

SPAIN	Number of agglomerations		Generated load [p.e.]	
	2000	2002	2000	2002
Total	458	521	53 862 365	57 132 700
Secondary treatment	245	384	33 307 446	46 685 800
Less than secondary treatment	213	137	20 554 919	10 446 900

**UWWTPs: treatment levels and monitoring results**

The 521 agglomerations were reported to be served by 400 UWWTPs, of which 384 (or 98% of the total load reported) had secondary treatment and 161 (or 34% of the total load) had treatment performance (monitoring results) in line with secondary treatment requirements. Monitoring results were not provided for 194 UWWTPs (see Table 1-26).

**Table 1-26: Treatment levels and monitoring results of Spanish UWWTPs discharging into normal areas (reported year 2002)**

SPAIN – Normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPS (year 2002)</b>	<b>400</b>	<b>54 606 025</b>	<b>100</b>
More stringent treatment	121	14 676 128	27
Secondary treatment	263	38 810 322	71
Primary treatment	16	1 119 575	2
Information about treatment level not available	0	0	0
Monitoring results in compliance with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	161	18 515 836	34
Monitoring results not in compliance with the secondary treatment requirements	45	4 301 498	8
Monitoring results not available	194	31 788 691	58

**Agglomerations: treatment levels and monitoring results**

384 out of 521 agglomerations (or 81% of the total load) had secondary treatment and 161 agglomerations (or 27% of the load) had treatment performance (monitoring results) in line with secondary treatment requirements.

121 agglomerations (or 18% of the load) did not have any waste water treatment (or only preliminary treatment). The Spanish authorities indicated that for these agglomerations 73 UWWTPs were already under construction<sup>21</sup> and 30 UWWTPs were planned<sup>22</sup>.

**Table 1-27: Treatment levels and monitoring results of Spanish agglomerations discharging into normal areas (reported year 2002)**

SPAIN – Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2002)</b>	<b>521</b>	<b>57 132 700</b>	<b>100</b>
More stringent treatment	121	12 717 700	22
Secondary treatment	263	33 968 100	59
Primary or partial secondary treatment	16	821 100	1
No treatment or preliminary treatment only	121	9 625 800	18
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	161	15 699 500	27
Monitoring results not in compliance with secondary treatment requirements	45	3 730 200	7
Monitoring results not available	194	28 077 200	48
No treatment and no monitoring data	121	9 625 800	18

<sup>21</sup> including large agglomerations such as Besos, El Prat de Llobregat, San Sebastian, Gijón, Vueltra Ostrera, Muro del Alcoy or Pineda de Mar

<sup>22</sup> including large agglomerations such as A Coruña or Ferrol

### 1.5.6. Waste water treatment in big cities

For the 3rd Commission report Spain reported 75 big cities (agglomerations with a generated load of more than 150 000 p.e.).

According to the data sent for the 4th Commission report and the last data sent by Spain in April 2004, Spain by 31 December 2002 reported **74 big cities**:

- three agglomerations were no longer considered as big cities: Colmenar Viejo (78 300 p.e.), Talavera de la Reina (126 000 p.e) and Tui (132 300 p.e)
- two agglomerations were reported for the first time as big cities: Cocentaina (300 600 p.e.) and Denia (358 000 p.e.).

The situation of these 74 big cities was as follows:

- 10 cities were discharging into sensitive areas, out of which:
  - four had the required more stringent treatment: Alginet<sup>23</sup>, Calvia, Castellón de la Plana and Denia
  - two cities had partial more stringent treatment: Palma la Mallorca and Valencia
  - two cities had secondary treatment: Mataro and Salou
  - one city (Tarragona) had partial secondary treatment
  - one (Pineda del Mar) did not have waste water treatment.
- 37 cities were discharging into potentially sensitive areas out of which:
  - 11 had the required more stringent treatment: Elda, León, Mostoles, Oviedo, San Fernando de Henares, Sestao, Talavera de la Reina, Valladolid, Vitoria-Gasteiz, Xirivella and Zaragoza,
  - two cities had partial more stringent treatment: Alcala de Henares and Cartagena
  - 19 cities had secondary treatment
  - three cities had partial secondary treatment: Alcobendas, Barcelona and Granada
  - two cities did not have waste water treatment: Donostia-San Sebastian and Ferrol.
- 27 cities were discharging into normal areas out of which
  - four had more stringent treatment: Almeria, Benalmadena, Fuengirola and Roquetas de Mar
  - 15 had the required secondary treatment: Alicante, Cadiz, Cocentaina, Estepona, Gandia, Huelva, Jerez de la Frontera, Las Palmas de Gran Canaria, Malaga, Marbella, Murcia, Olza, Santa Cruz de Tenerife, Torrevieja and Vigo

---

<sup>23</sup> The agglomeration of Alginet (180 000p.e.) did not have waste water treatment by 01/01/2002. However, a waste water treatment plant with more stringent treatment (removal of total phosphorus) was built during 2002. Thus, in April 2004, Spain reported that Alginet had more stringent treatment in place; however, no monitoring data on treatment performance were available for this time.

- four cities had partial secondary treatment: Benidorm, Salamanca, Santander and Santiago de Compostela
- four cities did not have waste water treatment: A Coruna, Gijon, Muro del Alcoy, Suances.

#### 1.5.6.1. Conclusions

34 out of 74 big cities were in compliance with the requirements of the Directive. The other 40 cities still needed to be upgraded, in particular, seven of them, which did not have waste water treatment by 31 December 2002.

#### **LAST UPDATES – 2004-2006**

- In July 2006, Spain designated new sensitive areas including several areas that had to be designated as such according to the Commission's opinion (i.e. potentially sensitive areas).
- According to Spain, over the 2002-2006 period, the following agglomerations became compliant or were forecasted to become compliant with the requirements of the Directive: Salamanca and Cartagena.





## 1.6. France

### 1.6.1. General comments on data quality

**Sensitive areas:** France provided updated information on self-assessment of monitoring data results on 30 June 2004, i.e. after the official deadline to report for the 4th report. Therefore, the Commission only carried out an incomplete evaluation of the information<sup>24</sup>.

**Normal areas:** France responded to the Commission request for the 4th reporting exercise in the required technical format, providing the data for the year 2001.

In France one agglomeration was served by several urban waste water treatment plants, therefore the ratio [*agglomeration* : *UWWTP*] = [*1* : *n*] was used. In this case an agglomeration can only be in compliance with the required treatment and monitoring, if all UWWTPs serving this agglomeration are considered as being in compliance with the Directive requirements.

The data also included 47 agglomerations discharging into sensitive areas designated in 1999. Until 2006 these agglomerations were considered as discharging into normal areas.

### 1.6.2. Sensitive areas

#### 1.6.2.1. Designated areas

France identified 62 sensitive areas in 1994 and 1999. However, the Commission is of the opinion that 14 additional sensitive areas (so-called – potentially sensitive areas) should have been designated in terms of eutrophication (see Table 1-28).

**Table 1-28: Areas which should have been designated as sensitive in France**

No.	Potentially sensitive area
1	La Seine en Aval de la confluence de la Seine et de l'Andelle
2	L'ensemble de la zone urbanisée limitrophe de la frontière belge
3	Le bassin versant de la Somme
4	Elorn
5	Baie de Douarnenez
6	Golfe du Morbihan
7	Baie de Concarneau
8	Vistre
9	La rade de Lorient
10	La baie de la Seine
11	Les rivières Couesnon, Gouessant, Trieux, Laïta/Elle et Blavet
12	La baie de la Vilaine
13	L'étang de Thau
14	Le littoral Artois-Picardie

<sup>24</sup> The evaluation carried out for the third Commission report showed that the opinion of the Commission regarding N and/or P removal requirements differs from the opinion of France in at least 50 cases.

### 1.6.2.2. Agglomerations discharging into sensitive areas

In the 3rd Commission Report 348 agglomerations with more than 10 000 p.e. were reported as discharging into sensitive areas, with 143 of them in compliance with the Directive requirements for treatment. No information about self-assessment of monitoring results was provided.

On 30 June 2004, i.e. after the official deadline, France reported updated information for 361 agglomerations (and 444 UWWTPs) for the year 2003. In some cases the opinion of the Commission regarding treatment requirements for total N and/or total P differs from the opinion of France. This report represents the Commission opinion. The compliance check results are presented in Table 1-29).

**Table 1-29: French agglomerations discharging into sensitive areas (reported year 2003)**

FRANCE - Sensitive areas	Number of agglomerations	% of agglomeration	Generated load [p.e.]	%
<b>Total (year 2003)</b>	<b>361</b>	<b>100</b>	<b>17 524 958</b>	<b>100</b>
More stringent treatment	251	70	11 749 548	67
<i>but insufficient treatment capacity</i>	26	7	898 052	5
Information about treatment type incomplete	4	1	67 116	0
Complying treatment level	225	62	10 851 496	62
Treatment level not in compliance	132	37	6 606 346	38
Monitoring in compliance*	210	58	9 891 352	56
Information about monitoring incomplete	34	9	1 119 268	6
Monitoring results not in compliance	117	32	6 514 338	37

*\*i.e. monitoring results in compliance for BOD5, COD, total N and/or total P removal (dependent on required treatment level for both nutrients or only one of them)*

### 1.6.3. Agglomerations reported as discharging into normal areas

#### 1.6.3.1. Normal areas: comparison of data of the 3rd and 4th Commission report

For the 3rd Commission report France reported 486 agglomerations of more than 15 000 p.e. discharging into normal areas for the reference year 2000. This included 39 agglomerations discharging in areas which were designated as sensitive areas in 1999 and which did not need more stringent treatment before 2006. The total generated load of 486 reported agglomerations was 42 548 060 p.e.

For the 4th Commission report France reported the same 486 agglomerations (with the total generated load of 42 545 900 p.e.). The Commission was notified that three agglomerations - Agen, Bierne and Rambouillet, discharging in areas designated as sensitive in 1994, should not be taken into account in further analysis for normal areas.

In April 2004, France also informed that 47 out of these 486 agglomerations were discharging into areas designated as sensitive in 1999. Eight agglomerations<sup>25</sup> for this data delivery had a generated load of less than 15 000 p.e. However, under a common agreement the assessment

<sup>25</sup> Bressuire, Chantilly, Niort, Parthenay Bourg, Saint Martin, Saint-Maiwent-L'Ecole, Thouars and Villers Sous St Leu

was performed for all agglomerations, as the load for some of them was close to 15 000 p.e. or the organic design capacity of the plants was above 15 000 p.e.

The more detailed level of information provided for the 4th report (information at UWWTP level instead of agglomeration level as for the 3rd report) allowed a finer assessment. Therefore:

- The situation deteriorated in 50 agglomerations<sup>26</sup>. This resulted from the change of assessment and aggregation of information from UWWTP to agglomeration level, resulting in non-compliance of the whole agglomeration in case of non-compliance of one or more of the treatment plants serving the same agglomeration. For example, Paris-Zone Centrale (10 M p.e.) for which, one out of five treatment plants was not in compliance with the Directive requirements.
- The situation improved in 90 agglomerations<sup>27</sup> (including Le Mans, Bordeaux and Limoges) as secondary treatment was in place by 31 December 2001.

The summary of the data comparison for the reported agglomerations discharging into normal areas (in 2000 and 2001) is presented in table 1-30.

**Table 1-30: Agglomerations reported by France as discharging into normal areas: Comparison of the data for the years 2000 and 2001**

FRANCE	Number of agglomerations		Generated load [p.e.]	
	2000	2001	2000	2001
Total	486	483	42 548 060	42 384 700
Secondary treatment	307	344	29 042 277	21 328.618
Information not available	0	0	0	0
Treatment not in compliance	179	139	13 505 783	21 056 082

<sup>26</sup> Antibes, Argelès sur Mer, Arles-Pont de Crau, Bastia Nord, Bozel, Brétignolles-sur-Mer, Capbreton , Carcassonne, Château Gontier, Dange-Saint-Romain, Etang - Salé, Evron, Forges Les Eaux, Fousenat, Ghisonaccia, Golfe du Valinco, Gosier, Gruissan, Marseillan, Masegros, Ménuires-Val Thorens, Meyzieu Jonage, Mirebeau, Montélimar, Morez, Moyenne Vallée du Gier (S.I.A. de la), Nogent le Rotrou, Notre-Dame-de-Monts, Nyons, Paris Zone Centrale, Plaisir, Pontivy, Pornic, Porto Vecchio, Région Ajacienne, Rivesaltes, Robert, Sablé sur Sarthe, Saint - Denis, Saint Gaudens, Saint Georges de Luzencon, Saint Mars la Jaille, Saint-Gilles-Croix-de-Vie, Sallanches, St Gilles/Trois Bassins, Talmont-Saint-Hilaire, Tignes Lac, Val d'Isère, Vielle Aure and Villers Saint-Paul

<sup>27</sup> Alençon, Alès, Allex-Grane, Amboise, Antrain, Autreilhan, Avesnes-Sur-Helpe, Bastia Sud, Beaufortin, Bergerac, Beziers, Biscarosse Plage, Bolbec, Bonneville, Bordeaux, Bourg Saint Maurice, Bourges, Bressuire, Cagnes-Sur-Mer, Camaret-Sur-Aigues, Cambrai, Canet en Roussillon, Carpentras, Castres, Cavaillon, Champagnole, Chantilly, Chateaulin, Cholet, Cogolin-Gassin, Conde-Sur-L'Escout, Emrun, Fontainebleau, Fort de France, GAP, Grimaud, Gueret, Guerlesquin, Guillestre, Hendaye, Hourtin, La Ferte-Sous-Jouarre, La Rochelle, Landivisiau, Lanester, Le Cheylard, Le Mans, Levroux, Limay Porcheville, Limoges, Lion d'Angers, L'Isle-Sur-La-Sorgue et Saumane, Lourdes, Lubersac, Maubeuge, Mazingarbe, Millau, Montluçon, Moyen Champsaur, Oyonnax, Paimpol, Pamiers, Parthenay bourg, Pays rochois, Pertuis, Pont-Sainte-Maxence, Quimper, Ramatuelle, Rochefort, Saint - Louis, Saint Francois, Saint Martin, Saint-Alban du Rhône, Saint-Brieuc, Saint-Yrieix-La-Perche, Sarriens/Vacqueyras, Sin-Le-Noble, Sorgues, St Amand-les-Eaux, Thouars, Tulle, Ussel, Vaison-la-Romaine, Vallée du Gapeau (Communauté de Communes), Valreas, Vescovato, Vierzon, Villeneuve-D'Ascq, Wavrechain and Wingles

### 1.6.3.2. Receiving areas

From 483 agglomerations reported by France as discharging into normal areas for the year 2001 (see Table 1-31):

- 107 agglomerations out of 483 (or 40% of the total load) were discharging into potentially sensitive areas (listed in Table 1-28),
- 47 (included in the remaining 376) were discharging into areas designated as sensitive in 1999, these will require more stringent treatment as of 2006).

**Table 1-31: Receiving areas of agglomerations and UWWTPs reported by France as discharging into normal areas (reported year 2001)**

FRANCE - Receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of generated load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas	376	25 480 091	60	517	26 663 383	60
Potentially sensitive areas	107	16 904 609	40	115	17 577 220	40
Sensitive areas and catchments of sensitive areas	0	0	0	0	0	0
Localisation not possible due to missing co-ordinates	0	0	0	0	0	0
Total	483	42 384 700	100	632	44 240 603	100

### 1.6.3.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

The compliance of an agglomeration with the Directive requirements was assessed in a two-step procedure: (1) compliance check for each individual UWWTP, (2) aggregation of information at the agglomeration level.

An agglomeration was considered to be in compliance only if all UWWTPs serving this agglomeration were in compliance with the Directive requirements.

In total France reported 483 agglomerations served by 632 UWWTPs as discharging into normal areas.

#### **Part A - Normal areas: treatment levels and monitoring results**

This evaluation refers to the 376 agglomerations (and their 517 UWWTPs) reported for the year 2001 as discharging into normal areas (see Table 1-31).

#### **UWWTPs: treatment levels and monitoring results**

461 out of the 517 UWWTPs (or 81% of the total capacity) had required secondary treatment or more stringent treatment and 331 (or 60% of the total organic design capacity) had monitoring results in compliance with secondary treatment requirements for BOD<sub>5</sub> and COD (see Table 1-32).

**Table 1-32: Treatment levels and monitoring results of French UWWTPs discharging into normal areas (reported year 2001)**

FRANCE - Normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Total UWWTPs (year 2001)</b>	<b>517</b>	<b>26 663 383</b>	<b>100</b>
Secondary treatment or more stringent treatment	461	21 490 180	81
Primary treatment	56	5 173 203	19
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	331	15 954 198	60
Monitoring results not in compliance with secondary treatment requirements	164	10 598 573	40
Monitoring results not available	22	110 612	0

### **Agglomerations: treatment levels and monitoring results**

258 out of the 376 agglomerations (or 61% of the total generated load) had required secondary treatment or more stringent treatment and 234 (or 50% of the total generated load) monitoring results were in compliance. Seven agglomerations<sup>28</sup> had no waste water treatment or preliminary treatment only (see Table 1-33).

**Table 1-33: Treatment levels and monitoring results of French agglomerations discharging into normal areas (reported year 2001)**

FRANCE- Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2001)</b>	<b>376</b>	<b>25 480 091</b>	<b>100</b>
Secondary or more stringent treatment	258	15 530 499	61
Primary or partial secondary treatment	111	9 778 692	38
No treatment or preliminary treatment only	7	170 900	1
Information about treatment level not available	0	0	0
Monitoring results in compliance with the secondary treatment for parameters BOD <sub>5</sub> , COD	234	12 682 336	50
Monitoring results not in compliance with the secondary treatment	134	12 376 635	49
Monitoring results not available*	8	421 120	2

\*Including agglomerations without UWWTPs

### **Part B - Potentially sensitive areas: treatment levels and monitoring results**

This evaluation refers to the 107 agglomerations (and their 115 UWWTPs) reported for the year 2001 and considered by the Commission as discharging into potentially sensitive areas or into the catchment areas of sensitive areas designated in 1994. According to the Commission these agglomerations should have been equipped with more stringent treatment since 31 December 1998. This includes big cities of Paris, Lille or Bonneuil en France (see Table 1-31).

<sup>28</sup> Bagneres, Guilhaud-Granges, Saint - Benoît, Saint Michel de Maurienne, Tullins, Villefranche-sur-mer (SIVOM de), le Sabre

### **UWWTPs: treatment levels and monitoring results**

111 out of the 115 UWWTPs (or 96% of the total capacity) had required secondary treatment or more stringent treatment and 92 (88% of the total capacity) had monitoring results for BOD<sub>5</sub> and COD in line with secondary treatment requirements (see Table 1-34).

As more detailed information about treatment level (concerning more stringent treatment), and other monitoring results (total N and total P removal) was not available, a more complete assessment of the status of these UWWTPs was not possible.

**Table 1-34: Treatment levels and monitoring results of UWWTPs discharging into areas requiring more stringent treatment level (reported year 2001)**

France – sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (year 2001)</b>	<b>115</b>	<b>17 577 220</b>	<b>100</b>
Secondary treatment or more stringent treatment	111	16 958 220	96
Primary treatment	4	619 000	4
Information about treatment level not available	0	0	0
Monitoring results in line with secondary treatment for parameters BOD <sub>5</sub> , COD	92	15 501 687	88
Monitoring results not in line with secondary treatment	23	2 075 533	12
Monitoring results not available	0	0	0

### **Agglomerations: treatment levels and monitoring results**

86 out of the 107 agglomerations (or 14% of the total load) had secondary treatment or more stringent treatment and 83 (or 29% of the total load) had monitoring results in line with secondary treatment requirements for parameters BOD<sub>5</sub> and COD. 19 agglomerations (or 65% of the total load) had only primary or partial secondary treatment and 2 agglomerations (Lille-C.U.-Comines and Sainte Affrique) had no water treatment or preliminary treatment only (see Table 1-35).

**Table 1-35: Treatment levels and monitoring results of French agglomerations discharging into areas requiring more stringent treatment (reported year 2001)**

FRANCE - sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2001)</b>	<b>107</b>	<b>16 904 609</b>	<b>100</b>
More stringent treatment	0	0	0
Secondary or more stringent treatment	86	5 798 119	34
Primary or partial secondary treatment	19	11 050 950	65
No treatment or preliminary treatment only	2	55 540	0
Information about treatment level not available	0	0	0
Monitoring results in line with secondary treatment for parameters BOD <sub>5</sub> , COD	83	4 953 369	29
Monitoring results not in line with secondary treatment	24	11 951 240	71
Monitoring results not available	0	0	0

#### 1.6.3.4. Conclusions

Comparing the data assessment results for 2000 and 2001 the situation has improved as the number of agglomerations with secondary treatment increased from 307 to 344.

According to the Commission at least 139 out of 483 agglomerations (or 50% of the total load) did not comply with the treatment requirements of the Directive by 31 December 2001:

- 130 had primary or partial secondary treatment
- 9 (with a generated load of 226 440 p.e.) had no waste water treatment or preliminary treatment only.

By 31 December 2001, 187 out of the 632 UWWTPs did not have monitoring results in line with the secondary treatment requirements for BOD<sub>5</sub> and COD.

#### 1.6.4. Updated information from France on self compliance-check results for agglomerations reported as discharging into normal areas (data reported in May 2004)

*It has to be pointed out that in May 2004<sup>29</sup>, France sent updated information presenting self compliance-check results performed by France for normal areas and sensitive areas designated in 1999.*

*This assessment does not take into consideration the fact that an agglomeration is only considered to be in compliance with the Directive requirements for treatment level if all the UWWTPs serving the agglomeration are equipped with secondary treatment (this is relevant for the agglomeration of Paris and many others).*

*The information given in section 1.6.4 represents self compliance-check results done by French authorities. As this information was provided after the official deadline (30 May 2003), the Commission did not carry out a compliance-check, therefore, this section does not represent the official Commission position and therefore does not reflect the conclusions of the analyses done by the Commission in the summary of this report.*

*Self compliance-check results done by France are presented in Table 1-36, 1-37, 1-38 and 1-39.*

**Table 1-36: French self compliance-check: Treatment levels and monitoring results in UWWTPs discharging into normal areas<sup>30</sup> (reported year 2001)**

FRANCE - normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Total UWWTPs (year 2001)</b>	<b>584</b>	<b>40 921 549</b>	<b>100.0</b>
More stringent treatment	174	11 401 084	27.9
Secondary treatment	338	23 451 421	57.3
Primary treatment	60	5 792 203	14.2
No treatment (no WWTP)	11	261 840	0.6

<sup>29</sup> The official deadline to provide information was May 2003.

<sup>30</sup> Not including sensitive areas designated in 1999

FRANCE - normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Information about treatment level not available	1	15 001	0.0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	373	28 381 051	69.4
Monitoring results not in compliance with secondary treatment	178	12 429 886	30.4
No results at all (no UWWTP)	11	-	-
Monitoring results not available	22	110 612	0.3

**Table 1-37: French self compliance-check: Treatment levels and monitoring results in French agglomerations discharging into normal areas<sup>31</sup> (reported year 2001)**

FRANCE - Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2001)</b>	<b>436</b>	<b>39 518 644</b>	<b>100.0</b>
More stringent treatment level	150	6 591 579	16.7
Secondary or partial more stringent treatment*	220	25 812 695	65.3
Primary or partial secondary treatment	54	6 837 529	17.3
No treatment or preliminary treatment only	11	261 840	0.7
Information about treatment level not available	1	15 001	0.0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	279	16 538 539	41.8
Monitoring results not in compliance with secondary treatment	149	22 558 985	57.1
Monitoring results not available	8	421 120	1.1

\* The agglomeration of Paris is considered as being equipped with secondary treatment level (99,93%) as the all plants achieve the required treatment results of secondary treatment level.

**Table 1-38: French self compliance-check: Treatment levels and monitoring results in French UWWTPs discharging into sensitive areas designated in 1999 (reported year 2001)**

FRANCE - Normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Total UWWTPs (year 2001)</b>	<b>59</b>	<b>3 319 053</b>	<b>100</b>
More stringent treatment	25	2 075 453	63
Secondary treatment	34	1 243 600	37
Primary treatment	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	50	3 074 833	93
Monitoring results not in compliance with secondary treatment requirements	9	244 220	7
Monitoring results not available	0	0	0

<sup>31</sup> Not including sensitive areas designated in 1999



**Table 1-39: French self compliance-check: Treatment levels and monitoring results in French agglomerations discharging into sensitive areas designated in 1999 (reported year 2001)**

FRANCE - Normal areas	Number	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (year 2001)</b>	<b>47</b>	<b>2 896 216</b>	<b>100</b>
More stringent treatment level	20	1 259 358	43
Secondary or partial more stringent treatment	27	1 636 858	57
Primary or partial secondary treatment	0	0	0
No treatment or preliminary treatment only	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	38	2 308 466	80
Monitoring results not in compliance with secondary treatment	9	587 750	20
Monitoring results not available	0	0	0

### 1.6.5. Waste water treatment in big cities

#### 1.6.5.1. Evaluation results of big cities

By 1 January 2003 France reported 60 big cities (single agglomerations or groups of agglomerations with a load of more than 150 000 p.e.). By this date the situation in the cities was as follows:

- 23 cities were discharging into **sensitive areas designated in 1994** and should therefore have been equipped with more stringent treatment by 31 December 1998 :
  - eight cities were equipped with the required more stringent treatment: Besancon, Calais, Colmar, Metz, Orleans, Rennes, Thonon and Troyes
  - one city had partial more stringent treatment: Dunkerque (about 50% of the load had more stringent treatment level, the rest secondary treatment level)
  - 14 cities were equipped with secondary treatment: Aix-en-Provence, Angoulême, Boulogne-Sur-Mer, Caen, Clermont-Ferrand, Dijon, Le Havre, Montpellier, Mulhouse, Nancy, Reims, Rodez, St-Etienne and Strasbourg
- five cities were discharging into **sensitive areas designated in 1999** and should therefore have been equipped with secondary treatment by 31 December 2000 and will have to be equipped with more stringent treatment at the latest by 2006:
  - three cities had more stringent treatment: Evry, Lagny-Sur-Marne and Tours
  - two cities had were equipped with secondary treatment: Melun and Versailles

- eight cities were discharging into **potentially sensitive areas** and therefore, in the Commission's opinion, should have been equipped with more stringent treatment already by 1998:
  - four cities had the required more stringent treatment: Bonneuil-en-France, Cergy, Douai and Rouen
  - two cities were equipped with secondary treatment: Amiens and Nimes
  - Paris, Zone Centrale (generated load 10 000 000 p.e.), was reported by the French authorities as one single agglomeration served by five UWWTPs: four of them being equipped with more stringent or secondary treatment, the fifth (Carrières sous Poissy, 104 000 p.e.) being only equipped with primary treatment. Following the Commission's compliance-check approach, Paris was therefore, evaluated as to be equipped with partial secondary treatment level<sup>32</sup>.
  - The city of Lille<sup>33</sup> had partial secondary treatment: it consists of five agglomerations of which four were equipped with secondary treatment level. The agglomeration Wattrelos (450 000 p.e.) had primary treatment only.
- 24 cities were discharging into **normal areas** and should have been equipped with secondary treatment:
  - five cities had more stringent treatment: Annecy, Le-Mans, Limoges, Nantes and Royan
  - ten cities had the required secondary treatment or partial more stringent treatment: Angers, Antibes-Biot, Bordeaux, Brest, Chambéry, Grenoble, La-Rochelle, Nice, Quimper and Toulouse
  - five cities had partial secondary treatment: Arcachon, Lyon, Pau, Perpignan and Valence
  - 4 cities had only primary treatment only: Cannes-Mandelieu, Frejus-St-Raphael, Marseille and Toulon

#### 1.6.5.2. Conclusions

According to the Commission's opinion 32 out of 60 big cities were in compliance with the requirements of the Directive by 1 January 2003: eight in sensitive areas designated in 1994, five in sensitive areas designated in 1999, four in potentially sensitive areas and fifteen in normal areas.

The remaining 28 cities still need to be upgraded to complete secondary treatment level (in normal areas) or to more stringent treatment level.

---

<sup>32</sup> However, France expressed its dissatisfaction with this evaluation result as according to the French opinion 99% of the urban waste water of Paris is treated in the required way.

<sup>33</sup> One part of Lille (Armentières) discharges into a sensitive area, the other parts into a potentially sensitive area.

In the 3rd Commission report (situation on 1 January 2002) the situation in Paris was overestimated (secondary treatment) as France had not provided the information that one agglomeration had primary treatment only. The Commission is of the opinion that Paris did not have complete secondary treatment by that date as one of the treatment plants serving Paris (104 000 p.e.) had primary treatment only.

#### **LAST UPDATES – 2004-2006**

- In early 2006, France designated new sensitive including all the 14 areas that had to be designated as such (i.e. potentially sensitive areas). Today almost all surface and coastal waters of Artois-Picardie, Loire-Bretagne and Seine basins are designated as sensitive with regards to eutrophication problems (nitrogen and phosphorus).
- According to France, over the 2002-2006 period, the following agglomerations became compliant or were forecasted to become compliant with the requirements of the Directive: Reims, Dijon, Strasbourg, Nancy, Melun, Amiens, Valence. Paris-Zone centrale is forecasted to become compliant in 2011.



## 1.7. Ireland

### 1.7.1. General comments on data quality

**Sensitive areas:** Ireland reported 26 agglomerations with more than 10 000 p.e. and discharging into sensitive areas (designated in 1994 and 2001) by 31 December 2002.

**Normal areas:** Ireland reported 19 agglomerations with more than 15 000 p.e. and discharging into normal areas by 31 December 2001.

In Ireland one agglomeration was served by one urban waste water treatment plant, therefore the ratio [*agglomeration* : *UWWTP*] = [1 : 1] was used.

### 1.7.2. Sensitive areas

In 1994 and in 2001 Ireland designated 36 sensitive areas under the eutrophication criterion. However, the Commission is of the opinion that six more areas should have been designated as sensitive areas by Irish authorities under the eutrophication criterion (see Table 1-40).

**Table 1-40: Areas that should have been designated as sensitive in Ireland**

No.	Potentially sensitive area	Irish comments <sup>34</sup>
1	Boyne	Irish EPA completed the report on the assessment of trophic status in 2004
2	Cork Harbour	It is planned to designate this area as sensitive area
3	Dublin Bay	
4	Garavogue, Sligo	Irish EPA completed the report on the assessment of trophic status in 2004
5	Lady's Island Lake	It is planned to designate this area as sensitive area
6	River Dodder	River Dodder enters the Liffey Estuary, which was designated as sensitive area in 2001 (by S.I. No 254 of 2001). Obligations of Articles 3 and 5 relating to discharges inside the River Dodder catchment apply in any event, where relevant, as it is part of the Liffey Estuary catchment.

By 31 December 2002 Ireland reported 26 agglomerations<sup>35</sup> as discharging into sensitive areas. 13 out of the 26 agglomerations had more stringent treatment and therefore complied with the Directive. The remaining 13 agglomerations (Bandon, Carlow, Clonmel, Fermoy, Kilkenny City, Longford, Mallow, Navan, Portlaoise, Ringsend, Roscrea, Swords and Thurles) had only secondary or partial more stringent treatment (see Table 1-41).

<sup>34</sup> Irish comments on the draft of this Commission report on 08/04/04 (ref. A(2004)522043).

<sup>35</sup> Athlone, Bandon, Carlow, Carrickmacross, Castlebar, Cavan, Clonmel, Fermoy, Kilkenny City, Killarney, Leixlip, Longford, Mallow, Monaghan, Mullingar, Naas, Navan, Nenagh, Portlaoise, Ringsend, Roscommon, Roscrea, Swords, Thurles, Tullamore and Wexford.

**Table 1-41: Waste water treatment in Irish agglomerations of more than 10 000 p.e. discharging into sensitive areas (reported year 2002)**

IRELAND	Number of agglomerations	% of agglomerations	Generated load [p.e.]	% of generated load
<b>Agglomerations (year 2002)</b>	<b>26</b>	<b>100</b>	<b>2 706 600</b>	<b>100</b>
More stringent treatment	13	50	357 168	13
Secondary or partial more stringent treatment	13	50	2 349 432	87
Primary treatment	0	0	0	0
No treatment	0	0	0	0

Compared to the situation reported for the 3rd Commission report (for the reported year 2001) the situation during the year 2002 improved in at least three agglomerations. New treatment plants had been built providing secondary treatment for Fermoy (20 769 p.e.) and Thurles (10 600 p.e.), and more stringent treatment for Wexford (16 000p.e.).

### 1.7.3. Agglomerations reported as discharging into normal areas

#### 1.7.3.1. Comparison of data for the 3rd and 4th Commission reports

As a result of the designation of new sensitive areas in 2001 the number of agglomerations discharging into normal areas reported between years 2000 and 2001 decreased from 28 (or the total generated load of 3 901 479 p.e.) to 19 (or the load of 1 602 015 p.e.). Therefore, the agglomerations listed in Table 1-42 are now to be considered as discharging into sensitive areas.

The number of agglomerations complying with the treatment level requirements of the Directive decreased from 13 to 5 (see Table 1-40).

**Table 1-42: Irish agglomerations considered to be discharging into sensitive areas (since the year 2001)**

No.	National reference	Name of agglomeration	Generated load [p.e.]
1	IE24	Carlow	31 000
2	IE25	Clonmel Tipperary	40 000
3	IE32	Kilkenny City	110 000
4	IE33	Leixlip Kildare	90 000
5	IE37	Monaghan	32 645
6	IE39	Ringsend	1 818 594
7	IE42	Swords	34 010
8	IE43	Tralee Kerry	41 680
9	IE47	Wexford Town	17 000

**Table 1-43: Agglomerations reported by Ireland as discharging into normal areas: Comparison of the data for the year 2000 and 2001**

Ireland	Number of agglomerations		Generated load [p.e.]	
	2000	2001	2000	2001
Total	28	19	3 901 479	1 602 015
Secondary treatment level	13	5	706 032	205 162
Information not available	0	0	0	0
Treatment not in compliance	15	14	3 195 447	1 396 853

### 1.7.3.2. Receiving areas

According to the Commission of the 19 agglomerations reported by Ireland as discharging into normal areas (see Table 1-44)

- six are discharging into potentially sensitive areas: Drogheda Louth, Sligo, Ballingcollig Cork, Waterford, Tramore River/Valley Cork and Cork City
- 13 are discharging into ‘real’ normal areas: Ballykeeffe Dundalk, Limerick, Bray Wicklow, Bundoran Donegal, Ennis North Clare, Galway City, Howth, Letterkenny Donegal, Limerick City, Malahide, Shanganagh, Tramore Waterford and North Dublin.

**Table 1-44: Receiving areas of agglomerations and UWWTPs reported by Ireland as discharging into normal areas (reported year 2001)**

IRELAND - Receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas (NA)	13	988 315	62	4	150 597	64
Potentially sensitive areas (PSA)	6	613 700	38	2	83 000	36
Sensitive areas (SA) and catchment of sensitive areas (CAofSA)	0	0	0	0	0	0
Allocation not possible due to missing co-ordinates	0	0	0	0	0	0
Total	19	1 602 015	100	6	233 597	100

### 1.7.3.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

#### **Part A - Normal areas: treatment levels and monitoring results**

This evaluation refers to the 13 agglomerations (and their four UWWTPs) reported as discharging into normal areas by 31 December 2001 (see Table 1-44).

## UWWTPs: treatment levels and monitoring results

Four urban waste water treatment plants discharging into normal areas (with a total organic design capacity of 150 597 p.e.) had the required secondary treatment level on 31 December 2001. However, monitoring results for the year 2001 of three of them - Ennis North Clare (17 000 p.e.), Letterkenny (20 000 p.e.), and Malahide (18 597 p.e.) - were not in compliance with the required secondary treatment standards, and for Dundalk (95 000 p.e.) - monitoring results were not provided.

## Agglomerations: treatment levels and monitoring results

Summary of the compliance-check results is presented in Table 1-45, and the list of agglomerations having no waste water treatment or only preliminary treatment in Table 1-46.

**Table 1-45: Treatment levels and monitoring results of Irish agglomerations discharging into normal areas (reported year 2001)**

IRELAND – Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2001)</b>	<b>13</b>	<b>988 315</b>	<b>100</b>
More stringent treatment	0	0	0
Secondary or partial more stringent treatment	3	130 462	13
Primary or partial secondary treatment	1	37 000	4
No treatment or preliminary treatment only	9	820 853	83
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment for parameters BOD <sub>5</sub> , COD	0	0	0
Monitoring results not in compliance with secondary treatment	12	893 315	90
Monitoring results not available	1	95 000	10

**Table 1-46: Irish agglomerations discharging into normal areas without any waste water treatment (reported year 2001)**

National reference	Agglomeration	Generated load [p.e.]
IE22	Bray Wicklow	40 000
IE23	Bundoran Donegal	20 000
IE30	Galway City	73 000
IE31	Howth	43 584
IE35	Limerick City	52 000
IE38	North Dublin	505 969
IE21	Ballykeeffe Limerick	25 500
IE45	Tramore Waterford	15 300
IE40	Shanganagh	45 500



## **Part B - Sensitive areas and potentially sensitive areas: treatment levels and monitoring results**

The evaluation refers to the six agglomerations (and their two UWWTPs) reported for the year 2001 and considered by the Commission as discharging into potentially sensitive areas (see Table 1-44). According to the Commission these agglomerations should have been equipped with more stringent treatment since 31 December 1998.

### **UWWTPs: treatment levels and monitoring results**

The two UWWTPs - Ballincollig (16 000 p.e.) and Drogheda (67 000 p.e.) - had secondary treatment level and monitoring results were in line with the secondary treatment requirements for parameters BOD<sub>5</sub> and COD. However, the Commission is of the opinion that these plants should have had more stringent treatment (see Table 1-47).

**Table 1-47: Treatment levels and monitoring results of Irish UWWTPs discharging into areas requiring more stringent treatment level (reported year 2001)**

<b>IRELAND - sensitive areas, catchment of sensitive areas and potentially sensitive areas</b>	<b>Number of UWWTPs</b>	<b>Organic design capacity [p.e.]</b>	<b>% of organic design capacity</b>
<b>Reported UWWTPs (year 2001)</b>	2	83 000	100
More stringent treatment	0	0	0
Secondary treatment	2	83 000	100
Primary treatment	0	0	0
Information about treatment level not available	0	0	0
Monitoring results in line with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	2	83 000	100
Monitoring results not in line with the requirements for secondary treatment	0	0	0
Monitoring results not available	0	0	0

### **Agglomerations: treatment levels and monitoring results**

Two out of the six agglomerations (or 12% of the total generated load) had secondary treatment and had monitoring results for BOD<sub>5</sub> and COD in line with the secondary treatment requirements. Four agglomerations (having 88% of the total generated load) had no waste water treatment or only preliminary treatment: Cork city (328 000 p.e.), Sligo (20 000 p.e.), Tramore River Valley Cork (37 000 p.e.) and Waterford City (154 000 p.e.) (see Table 1-48).

According to the Commission these six agglomerations should have been equipped with more stringent treatment.

**Table 1-48: Treatment levels and monitoring results of Irish agglomerations discharging into areas requiring more stringent treatment level (reported year 2001)**

<b>IRELAND – sensitive areas, catchment of sensitive areas and potentially sensitive areas</b>	<b>Number of agglomerations</b>	<b>Generated load [p.e.]</b>	<b>% of generated load</b>
<b>Reported agglomerations (year 2001)</b>	6	613 700	100
More stringent treatment	0	0	0
Secondary or partial more stringent treatment	2	74 700	12
Primary or partial secondary treatment	0	0	0
No treatment or preliminary treatment only	4	539 000	88
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	2	74 700	12
Monitoring results not in line with the secondary treatment requirements	4	539 000	88
Monitoring results not available	0	0	0

#### 1.7.3.4. Conclusions

Out of the 19 agglomerations reported as discharging into normal areas for the reported year 2001 (see Table 1-44):

- three had the required treatment level: Malahide, Ennis North Clare and Dundalk
- 13 did not have waste water treatment or had preliminary treatment only. This concerns Limerick City, Ballykeeffee Limerick, Bray Wicklow, Bunduran Donegal, Galway City, Shanganagh, Tramore Waterford, Howth, North Dublin, Cork City, Sligo, Tramore River Valley Cork and Waterford City.
- all 19 agglomerations did not have monitoring results in compliance with the required treatment level.

#### 1.7.4. Waste water treatment in big cities

##### 1.7.4.1. Evaluation results of big cities

By 31 December 2002, there were three big cities (agglomerations or a group of agglomerations with a load of more than 150 000 p.e.) in Ireland. Since the 3rd Commission report the city of Dundalk is not considered any longer as a big city as the generated load dropped to 95 000 p.e.

Each of these three cities was discharging into a sensitive area or a potentially sensitive area and had therefore to be equipped with more stringent treatment.

The situation in these cities was the following:

- **Dublin** (2 368 148 p.e.) consists of three agglomerations:

- Howth (43 585 p.e.) discharging into the Irish Sea after preliminary treatment
- North Dublin (505 969 p.e.) discharging into the Irish Sea after secondary treatment. The treatment plant with an organic design capacity of 578 823 p.e. became operational in August 2002. North Dublin was diverted to Ringsend during 2003 and became part of the Ringsend agglomeration.
- Ringsend (1 818 594 p.e.) discharging into the sensitive area of Liffey Estuary after secondary treatment. Ringsend UWWTP was completed in 2002 and the situation has improved significantly compared with the situation in 2001.

However, as waste water treatment for Howth (with more than 40 000 p.e.) was only on preliminary level, the big city of Dublin is considered in the evaluation to be equipped with partial secondary treatment only.

- **Waterford** (154 000 p.e.) was discharging in the Suir Estuary without any waste water treatment by 1 January 2003. The completion of secondary treatment was foreseen for the end of 2004. The Irish authorities do not consider Waterford as being discharging into a sensitive area. However, the Commission is of the opinion that Waterford should have already been equipped with more stringent treatment level on 31 December 1998.
- **Cork** (328 000 p.e.) had no waste water treatment by 1 January 2003. The construction of a secondary treatment plant was completed at the end of 2003.

#### 1.7.4.2. Conclusions

Between 2001 and 2002, the situation in three big cities of Ireland has slightly improved mainly due to improved treatment in North Dublin. The improvements for Cork city were also expected in the short term.

#### **LAST UPDATES – 2004-2006**

- In 2004, Ireland designated two new sensitive areas, in the Cork Harbour area: Lee estuary/Lough Mahon and Owennacura Estuary/North Channel.



## 1.8. Italy

### 1.8.1. General comments on data quality

**Sensitive areas:** The latest information provided by the Italian authorities was information for the year 1999 for the 3rd Commission report. As no updates were reported for the 4th report the Commission assumed that the situation has not significantly changed since 1999.

However, in August 2003 Italy informed that the assessment results published in the 3rd Commission report have to be corrected as an error occurred due to a change of the approach used for the designation of agglomerations discharging into sensitive areas.

**Normal areas:** Italy did not provided information in the form and technical format officially required. Furthermore, two separate data sets – one on the agglomerations, another on waste water treatment plants - were provided. No link between the two separate data sets was identified. It was impossible to link-up which waste water treatment plant serves which agglomeration. Italy provided the names and generated loads for 417 agglomerations and information on treatment level and monitoring for 598 UWWTPs. Besides the difficulties to link-up agglomerations with UWWTPs, Italy did not indicate the reporting year (2001 or 2002 as required). Organic design capacity and monitoring results were missing for 52 UWWTPs; geographical co-ordinates were missing for 107 agglomerations.

On 31 March 2004 and on 9 April 2004 Italy sent (not in the required technical format) a complete new set of information for 536 agglomerations (with the load of 46 310 595 p.e.) and for 815 UWWTPs. Compared with the figure of 630 agglomerations (or the load of 55 142 105 p.e.) reported for the 3rd Commission report this data delivery was still incomplete.

As the information was provided after the official deadline with a delay of one year it was impossible to assess it. The information reported in 2004 was used by the Commission for the assessment of the situation in big cities only (see section 1.8.4.)

In Italy one agglomeration could be served by several urban waste water treatment plants, therefore the approach [*agglomeration* : *UWWTP*] = [*1* : *n*] was used. Therefore, an agglomeration can only be considered as complying with the required treatment level and monitoring results, when all UWWTPs serving this agglomeration are complying with the Directive requirements.

### 1.8.2. Sensitive areas

In 1999 Italy designated 13 sensitive areas, including seven lakes and parts of the Adriatic coast.

In 2001, Italy additionally designated 194 water bodies as sensitive areas. There was no official notification of this designation by the deadline of 01/01/2003 to report information. Therefore, in the 4th report these areas were considered as not officially designated sensitive areas<sup>36</sup>. Furthermore, Italy did not delineate catchment areas of the newly designated sensitive areas.

---

<sup>36</sup> The information arrived in a later stage.

This new designation did still not include the areas, which, according to the Commission, should have been identified as sensitive due to eutrophication (under *criterion a* of the Directive) (Table 1-49).

In the Court Judgement of 25 April 2002 concerning the absence of waste water treatment of the city of Milan, the European Court of Justice stated that direct and indirect discharges into a sensitive area have to be subject of more stringent treatment than secondary. The Commission would like to point out that this is relevant for all catchments of sensitive areas.

**Table 1-49: Areas that should have been as sensitive areas in Italy**

Potentially sensitive area	Identification criteria
Arno (A Avallo da Firenze)	high nitrate concentrations
Bacino da Adda	high nitrate concentrations
Bacino Della Lambro-Olona-Meridion	high nitrate concentrations
Bacino Della Sacre-Minco	high nitrate concentrations
Bacino di Oglio	high nitrate concentrations
Bacino di Ticino	high nitrate concentrations
Greve	high nitrate concentrations
Golfo di Castellallare	Eutrophication
Mare Adriatico (Nord Bacino)	Eutrophication
All catchment areas of sensitive areas identified in 2001	Commission's opinion (see text above)

*Note: some of these areas are within the catchment of the Po river basin.*

In the 3rd Commission report, 49 agglomerations of more than 10 000 p.e. were reported as discharging into sensitive areas by 1 January 2002. In a communication of August 2003 Italy informed that 10 agglomerations<sup>37</sup> should be withdrawn from this list.

All 39 reported agglomerations discharging into sensitive areas were equipped with more stringent treatment. 21 agglomerations (or 71.5 % of the load) were in compliance with the requirements of the Directive (treatment and monitoring results). 16 were considered as not compliant: either (a) for lack of treatment capacity (six of them, including the agglomeration of Arcisate), (b) for missing treatment steps (11 of them), or (c) for missing information (Cesenatico and Porto S. Stefano-Porto Ercole) (see Table 1-50).

**Table 1-50: Waste water treatment in Italian agglomerations with more than 10 000 p.e. discharging into sensitive areas (reported year 2002)**

ITALY	Treatment level in agglomerations of more than 10 000 p.e. discharging into sensitive areas			
	Number	[%]	Generated load [p.e.]	[%]
Reported year 2002				
Total	39	100.0	2 863 257	100.0
More stringent treatment	39	100.0	2 863 257	100.0
<i>but exact type of treatment not known</i>	2	5.1	154 426	5.4
<i>but missing treatment steps</i>	11	28.2	490 073	17.1
<i>but insufficient treatment capacity</i>	6	15.4	220 925	7.7
No information available	0	0.0	0	0.0
<b>Not in compliance</b>	<b>16</b>	<b>41.0</b>	<b>661 748</b>	<b>23.1</b>
<b>In compliance</b>	<b>21</b>	<b>53.8</b>	<b>2 047 083</b>	<b>71.5</b>

<sup>37</sup> Ballabio, Bosisi Parini, Brenta, Cernobbio, Galbiate, Liporno, Maslianico, Oggiono, Olginate and Tavernerio

### 1.8.3. Agglomerations reported as discharging into normal areas

#### 1.8.3.1. Comparison of data for the 3rd and 4th Commission report

For the 3rd Commission report Italy reported 630 agglomerations of more than 15 000 p.e. discharging into normal areas by 31 December 2000. The total load of these 630 agglomerations was 55 142 105 p.e., 312 of these agglomerations were complying with the Directive requirements.

For the 4th Commission report Italy reported 417 agglomerations (with the total generated load of 37 058 373 p.e.) (see Table 1-51). **116 out of 417 agglomerations were reported for the first time** as discharging into normal areas (see Table 1-53). The compliance-check results are described in section 1.8.3.3.

The assessment showed that **329 agglomerations reported for the 3rd report were no longer reported for the 4th report**. The total generated load of these 329 agglomerations was 27 964 627 p.e., among them: Rome (3.1 M p.e.), Fuceccio (1.9 M p.e.), Genua (1.0 M p.e.) or Palermo (980 000 p.e.) (see Table 1-52).

The additional information provided by Italy in March and April 2004 after the official deadline (31 May 2003) on the situation of the implementation of the Directive in 536 agglomerations (or the load of 46 310 595 p.e) and 815 UWWTPs was not taken into account due to more than one year delay to report information.

**Table 1-51: Agglomerations reported by Italy as discharging into normal areas: Comparison of the data for the years 2000 and for 2001 (or 2002)**

ITALY	Number of agglomerations		Generated load [p.e.]	
	2000	2001 or 2002*	2000	2001 or 2002*
Total	630	417	55 142 105	37 058 373
Secondary treatment level	312	341	28 764 701	31 068 785
No information available	0	0	0	0
Treatment not in compliance	318	76	26 377 404	5 989 588

\* reported year was not indicated

**Table 1-52: Italian agglomerations discharging into normal areas not reported for the 4th Commission report**

No.	National reference	Agglomeration	Generated load [p.e.], year 2000
1	IT674	Aci Castello (Sicilia)	19 342
2	IT675	Aci Catena (Sicilia)	26 001
3	IT676	Acireale (Sicilia)	51 595
4	IT677	Acquappesa (Calabria)	22 121
5	IT680	Acri (Calabria)	30 387
6	IT681	Adria (Veneto)	20 000
7	IT682	Agrigento (Sicilia)	61 182
8	IT683	Agropoli (Campania)	55 000
9	IT686	Albenga (Liguria)	23 000
10	IT695	Amantea (Calabria)	41 287
11	IT697	Ancona (Marche)	80 000
12	IT67	Angera (Lombardia)	20 000
13	IT68	Antonimina, Gerace, Locri, Siderno (Calabria)	83 000
14	IT74	Area fiorentina (Toscana)	566 700

No.	National reference	Agglomeration	Generated load [p.e.], year 2000
15	IT77	Argentiera (Sardegna)	16 400
16	IT79	Ascoli Piceno (Marche)	87 000
17	IT82	Atessa - Paglieta - Mezzagogna (Abruzzo)	39 000
18	IT83	Augusta (Sicilia)	33 972
19	IT84	Avezzano (Abruzzo)	19 872
20	IT85	Avola (Sicilia)	32 012
21	IT87	Bagheria (Sicilia)	46 000
22	IT89	Bagnara Calabra (Calabria)	24 855
23	IT90	Bagno a Ripoli (Toscana)	20 000
24	IT92	Barcellona Pozzo di Gotto (Sicilia)	43 500
25	IT99	Belpasso (Sicilia)	21 517
26	IT100	Belvedere Marittimo (Calabria)	59 123
27	IT101	Benestare, Bianco, Bovalino (Calabria)	38 367
28	IT103	Bernalda (Basilicata)	20 000
29	IT104	Bibbona (Toscana)	35 000
30	IT105	Biella (Piemonte)	55 255
31	IT107	Bisignano (Calabria)	20 152
32	IT111	Bonifati (Calabria)	17 439
33	IT112	Bordighera (Liguria)	45 000
34	IT113	Borghetto Santo Spirito - Loano (Liguria)	20 000
35	IT114	Borgo San Lorenzo (Toscana)	30 000
36	IT115	Borgo Valsugana (Trentino Alto Adige)	30 000
37	IT119	Botricello (Calabria)	26 399
38	IT120	Bova Marina (Calabria)	16 416
39	IT121	Bra (Piemonte)	27 500
40	IT122	Brancaleone (Calabria)	15 083
41	IT127	Bronte (Sicilia)	23 567
42	IT131	Caivano (Campania)	132 000
43	IT132	Calagonone (Dorgali) (Sardegna)	29 134
44	IT135	Caltagirone (Sicilia)	43 000
45	IT136	Caltanissetta (Sicilia)	61 000
46	IT137	Calusco D'Adda (Lombardia)	40 000
47	IT139	Camerano (Marche)	21 000
48	IT140	Campiglia Marittima (Toscana)	54 000
49	IT141	Campo nell'Elba (Toscana)	20 400
50	IT142	Campobasso (Molise)	90 000
51	IT143	Campomarino (Molise)	35 000
52	IT144	Canazei (Trentino Alto Adige)	20 000
53	IT148	Cardinale, Chiaravalle centrale, Torre di Ruggiero (Calabria)	15 421
54	IT149	Cariati (Calabria)	42 274
55	IT150	Carini (Sicilia)	25 000
56	IT152	Carmignano (Toscana)	22 000
57	IT153	Carovigno (Puglia)	18 951
58	IT155	Cartigliano, Cassola (Veneto)	200 000
59	IT156	Casalbuttano ed uniti (Lombardia)	16 000
60	IT162	Caserta (Campania)	782 798
61	IT163	Casoli (Abruzzo)	15 500
62	IT164	Cassano allo Ionio (Calabria)	50 942
63	IT165	Cassano D'Adda (Lombardia)	60 200
64	IT166	Cassano delle Murge (Puglia)	17 800
65	IT168	Castel di Sangro (Abruzzo)	28 000
66	IT170	Castelfidardo (Marche)	55 000
67	IT172	Castelfranco (Emilia-Romagna)	19 579
68	IT174	Castelmassa (Veneto)	50 000
69	IT177	Castelvetrano (Sicilia)	50 000
70	IT178	Castiglione della Pescaia (Toscana)	35 000
71	IT180	Castrignano del Capo (Puglia)	38 941
72	IT181	Castrovillari, Civita, Frascineto, Lungro, Morano, Mormanno, S. S.Basile (Calabria)	73 621
73	IT182	Catania (Sicilia)	350 000
74	IT183	Catanzaro (Calabria)	157 975
75	IT184	Cavalese (Trentino Alto Adige)	30 000
76	IT187	Ceglie Messapica (Puglia)	33 335
77	IT189	Cerignola (Puglia)	62 867
78	IT191	Cervignano del Friuli (Friuli Venezia Giulia)	357 000
79	IT194	Cetraro (Calabria)	42 816
80	IT195	Chianciano Terme (Toscana)	29 300
81	IT197	Chiavari (Liguria)	33 000
82	IT200	Chieti (Abruzzo)	51 000
83	IT205	Ciro' Marina (Calabria)	28 062
84	IT210	Civitanova Marche (Marche)	80 000



No.	National reference	Agglomeration	Generated load [p.e.], year 2000
85	IT216	Comiso (Sicilia)	28 836
86	IT219	Conselve (Veneto)	19 000
87	IT220	Conversano (Puglia)	24 771
88	IT224	Cortona (Toscana)	18 000
89	IT225	Costa Rey (Muravera)-Cala Sinzias (Castiadas) (Sardegna)	35 654
90	IT228	Crispiano (Puglia)	19 055
91	IT229	Cropani(Calabria)	25 923
92	IT230	Crosia (Calabria)	28 878
93	IT231	Crotone(Calabria)	88 998
94	IT233	Cutro (Calabria)	40 717
95	IT235	Deگو - Cairo Montenotte (Liguria)	35 000
96	IT236	Diamante, Buonvicino (Calabria)	75 647
97	IT238	Dueville-Montecchio Precalcino (Veneto)	21 358
98	IT239	Empoli (Toscana)	75 000
99	IT243	Fabriano (Marche)	21 500
100	IT245	Falconara Albanese (Calabria)	21 494
101	IT246	Falconara Marittima (Marche)	62 000
102	IT247	Fano (Marche)	55 000
103	IT249	Favara (Sicilia)	33 000
104	IT253	Fermo (Marche)	30 000
105	IT256	Figline Valdarno (Toscana)	37 000
106	IT257	Filadelfia(Calabria)	16 896
107	IT258	Finale Ligure (Liguria)	35 000
108	IT259	Fiorano-Sassuolo (Emilia-Romagna)	79 775
109	IT260	Fiorenzuola d'Arda (Emilia-Romagna)	20 341
110	IT261	Fisciano (Campania)	50 000
111	IT262	Fiamefreddo Bruzio, Longobardi (Calabria)	36 915
112	IT265	Floridia (Sicilia)	20 578
113	IT271	Formia (Lazio)	70 000
114	IT272	Francavilla al mare (Abruzzo)	65 000
115	IT276	Fucecchio (Toscana)	1 924 000
116	IT277	Fuscaldo(Calabria)	32 586
117	IT279	Galatina (Puglia)	28 798
118	IT280	Galatone (Puglia)	16 078
119	IT281	Gallipoli (Puglia)	51 719
120	IT284	Genova (Liguria)	1 015 500
121	IT286	Giarre (Sicilia)	26 000
122	IT289	Gioia Tauro (Calabria)	55 900
123	IT290	Gioiosa Jonica, Marina di Gioiosa Jonica(Calabria)	29 976
124	IT292	Gissi (Abruzzo)	20 000
125	IT293	Giugliano in Campania (Campania)	142 600
126	IT294	Giulianova (Abruzzo)	55 000
127	IT296	Gorizia (Friuli Venezia Giulia)	70 000
128	IT297	Gradisca di Isonzo (Friuli Venezia Giulia)	37 500
129	IT299	Gravina di Catania (Sicilia)	28 276
130	IT300	Gravina in Puglia (Puglia)	31 500
131	IT301	Grisolia, Maierà, Diamante (Cirella) (Calabria)	24 898
132	IT305	Grottaglie (Puglia)	39 224
133	IT306	Grottammare (marche)	30 000
134	IT307	Guardavalle (Calabria)	15 441
135	IT308	Guardia Piemontese (Calabria)	21 682
136	IT311	Imperia (Liguria)	40 000
137	IT313	Irgoli (Sardegna)	15 079
138	IT314	Isca sullo Jonio, Badolato, Sant'Andrea Apostolo dello Jonio (Calabria)	27 839
139	IT316	Isola di Capo Rizzuto (Calabria)	48 115
140	IT318	Jesi (Marche)	35 000
141	IT322	La Spezia (Liguria)	59 000
142	IT324	Lamezia Terme (Calabria)	162 700
143	IT326	Lanciano -Castel Frentano (Abruzzo)	37 000
144	IT328	L'Aquila (Abruzzo)	160 000
145	IT332	Lauria (Basilicata)	16 000
146	IT333	Lavagna (Liguria)	18 000
147	IT335	Lecco (Lombardia)	67 000
148	IT336	Legnago (Veneto)	40 000
149	IT338	Lentini (Sicilia)	26 000
150	IT340	Lerici (Liguria)	35 000
151	IT343	Livigno (Lombardia)	32 000
152	IT346	Lodi (Lombardia)	35 000
153	IT348	Lucca (Toscana)	370 000

No.	National reference	Agglomeration	Generated load [p.e.], year 2000
154	IT351	Luzzi (Calabria)	15 256
155	IT352	Macerata (Marche)	42 000
156	IT356	Manduria (Puglia)	23 776
157	IT360	Maranello (Emilia-Romagna)	18 304
158	IT361	Marigliano (Campania)	92 083
159	IT362	Marina di Grosseto (Toscana)	30 000
160	IT366	Martinsicuro (Abruzzo)	60 000
161	IT369	Massa (Toscana)	154 000
162	IT367	Massa e Cozzile (Toscana)	16 000
163	IT370	Matera (Basilicata)	54 000
164	IT375	Melito di Napoli (Campania)	632 900
165	IT376	Melito di Porto Salvo, Roghiudi (Calabria)	18 000
166	IT380	Mesagne (Puglia)	50 348
167	IT381	Mesoraca (Calabria)	21 345
168	IT382	Messina (Sicilia)	268 080
169	IT384	Mezzolombardo (Trentino Alto Adige)	22 000
170	IT385	Milazzo (Sicilia)	40 250
171	IT388	Misilmeri (Sicilia)	23 505
172	IT389	Misterbianco (Sicilia)	190 000
173	IT391	Modica (Sicilia)	46 000
174	IT394	Monasterace (Calabria)	15 039
175	IT395	Monfalcone (Friuli Venezia Giulia)	62 500
176	IT397	Monreale (Sicilia)	34 000
177	IT400	Montebello Jonico (Calabria)	16 000
178	IT403	Montecatini Terme (Toscana)	55 000
179	IT405	Montechiarugolo-Monticelli Terme (Emilia-Romagna)	15 378
180	IT406	Montepaone, Gasperina, Montauro, Petrizzi (Calabria)	43 506
181	IT408	Montevarchi (Toscana)	60 900
182	IT412	Motta di San Giovanni (Calabria)	16 000
183	IT413	Mottola (Puglia)	18 296
184	IT414	Napoli (Campania)	800 000
185	IT416	Naturno (Trentino Alto Adige)	15 050
186	IT418	Nocera Terinese (Calabria)	23 865
187	IT419	Noci (Puglia)	15 001
188	IT422	Nucleo Ind.le Tortol-Arbatax (Sardegna)	125 918
189	IT425	Orta (Puglia)	15 955
190	IT426	Orta di Atella (Campania)	445 000
191	IT427	Orta Nova (Puglia)	16 000
192	IT428	Ortona (Abruzzo)	42 400
193	IT432	Pachino (Sicilia)	21 494
194	IT434	Paese (Veneto)	45 000
195	IT436	Palagonia (Sicilia)	16 800
196	IT438	Palazzolo sull'Oglio (Lombardia)	22 000
197	IT439	Palermo (Sicilia)	980 000
198	IT441	Paola (Calabria)	49 999
199	IT444	Paternò (Sicilia)	55 000
200	IT445	Patti (Sicilia)	16 380
201	IT447	Pergine Valsugana (Trentino Alto Adige)	100 000
201	IT449	Pescara (Abruzzo)	375 000
203	IT450	Peschici (Puglia)	21 436
204	IT452	Pescia (Toscana)	262 000
205	IT453	Petilia Policastro (Calabria)	19 620
206	IT455	Pietrasanta (Toscana)	80 000
207	IT458	Pineto (Abruzzo)	48 000
208	IT460	Pisa (Toscana)	68 000
209	IT461	Pisticci (Basilicata)	25 000
210	IT462	Pistoia (Toscana)	80 000
211	IT463	Poggibonsi (Toscana)	31 500
212	IT466	Pontassieve (Toscana)	36 100
213	IT468	Pontedera (Toscana)	38 800
214	IT470	Portigliola, Ardore, Sant'Ilario(Calabria)	25 110
215	IT471	Porto Empedocle (Sicilia)	17 500
216	IT472	Porto Recanati (Marche)	60 000
217	IT473	Porto Rotondo (Sardegna)	18 783
218	IT474	Porto San Giorgio (Marche)	30 000
219	IT475	Porto Sant'Elpidio (Marche)	25 000
220	IT479	Pozzallo (Sicilia)	35 000
221	IT480	Praia a mare(Calabria)	56 685
222	IT481	Prato (Toscana)	980 000
223	IT482	Predazzo (Trentino Alto Adige)	67 000

No.	National reference	Agglomeration	Generated load [p.e.], year 2000
224	IT484	Priolo-Melilli - Impianto consortile ASI. (Sicilia)	23 800
225	IT485	Putignano (Puglia)	24 500
226	IT486	Quarrata (Toscana)	18 400
227	IT487	Quattro Castella-Montecchio-Val D'Enza-Roncofiesi (Emilia-Romagna)	81 162
228	IT488	Ragusa (Sicilia)	75 000
229	IT489	Rapallo (Liguria)	30 000
230	IT490	Recanati (Marche)	19 800
231	IT493	Reggio Calabria frazione Pellaro (Calabria)	16 000
232	IT492	Reggio Calabria(Calabria)	180 000
233	IT495	Rende (Calabria)	250 000
234	IT498	Ribera (Sicilia)	30 000
235	IT499	Ricadi, Spilinga, Drapia(Calabria)	31 834
236	IT503	Roccaraso (Abruzzo)	25 000
237	IT504	Roccella Jonica, Caulonia(Calabria)	44 767
238	IT505	Roma (Lazio)	3 166 445
239	IT507	Rombiolo, San Calogero, Jonadi, Filandari (Calabria)	22 558
240	IT508	Romeno (Trentino Alto Adige)	20 000
241	IT509	Roseto Capo Spulico (Calabria)	31 859
242	IT511	Rosolini (Sicilia)	21 800
243	IT512	Rossano, Corigliano Calabro (Calabria)	80 000
244	IT514	Rovetta (Lombardia)	20 000
245	IT517	Ruffano (Puglia)	28 334
246	IT518	Russi (Emilia-Romagna)	35 000
247	IT520	Sacile (Friuli Venezia Giulia)	20 000
248	IT522	Salve (Puglia)	15 150
249	IT523	San Benedetto del Tronto (Marche)	180 000
250	IT526	San Cataldo (Sicilia)	23 520
251	IT528	San Costantino Calabro, Mileto, Francica(Calabria)	26 013
252	IT529	San Donà di Piave (Veneto)	45 000
253	IT531	San Felice Circeo (Lazio)	38 000
254	IT532	San Giorgio Ionico (Puglia)	29 333
255	IT533	San Giovanni in Fiore (Calabria)	33 829
256	IT534	San Giovanni La Punta (Sicilia)	21 800
257	IT537	San Lucido (Calabria)	26 902
258	IT538	San Marco in Lamis (Puglia)	20 000
259	IT539	San Michele al Tagliamento-Bibione (Veneto)	150 000
260	IT540	San Miniato (Toscana)	743 800
261	IT541	San Nicola Arcella (Calabria)	39 435
262	IT542	San Pietro Vernotico (Puglia)	21 326
263	IT543	San Roberto, Fiumara, Campo Calabro (Calabria)	20 000
264	IT544	San Salvo (Abruzzo)	100 000
265	IT547	San Vito al Tagliamento (Friuli Venezia Giulia)	40 230
266	IT548	San Vito dei Normanni (Puglia)	23 476
267	IT549	San Vito sullo Jonio, Cenadi, Olivadi, Centrache, Chiaravalle centrale (Calabria)	16 081
268	IT550	Sanginetto(Calabria)	17 965
269	IT551	Sannicandro Garganico (Puglia)	19 918
270	IT552	Sanremo (Liguria)	65 000
271	IT553	Sansepolcro (Toscana)	20 000
272	IT554	Santa Margherita (Sardegna)	26 776
273	IT555	Santa Maria del Cedro (Calabria)	86 767
274	IT558	Sant'Ambrogio di Valpolicella (Veneto)	20 000
275	IT559	Sant'Angelo Lodigiano (Lombardia)	19 000
276	IT561	Saronno (Lombardia)	38 643
277	IT564	Savona (Liguria)	120 000
278	IT565	Scalea, Santa Domenica Talao (Calabria)	113 058
279	IT568	Sciacca (Sicilia)	40 775
280	IT569	Scicli (Sicilia)	37 796
281	IT570	Scilla (Calabria)	16 048
282	IT571	Scordia (Sicilia)	17 000
283	IT572	Sellia Marina (Calabria)	34 164
284	IT574	Senigallia (Marche)	90 000
285	IT575	Senise (Basilicata)	25 385
286	IT576	Seravezza (Toscana)	18 300
287	IT580	Sezze (Lazio)	22 475
288	IT587	Soverato, Satriano, Davoli, San Sostene (Calabria)	78 811
289	IT590	Squillace, Staletti (Calabria)	21 097
290	IT591	Squinzano (Puglia)	21 853

No.	National reference	Agglomeration	Generated load [p.e.], year 2000
291	IT595	Strongoli (Centro e Marina) (Calabria)	31 959
292	IT596	Sulmona (Abruzzo)	42 000
293	IT597	Taggia (Liguria)	45 600
294	IT598	Taio (Trentino Alto Adige)	20 000
295	IT599	Taranto (Puglia)	360 951
296	IT601	Teramo (Abruzzo)	58 000
297	IT602	Terlizzi (Puglia)	114 420
298	IT603	Termini Imerese (Sicilia)	28 000
299	IT604	Termoli (Molise)	23 300
300	IT608	Tione di Trento (Trentino Alto Adige)	92 000
301	IT609	Tirrenia (Toscana)	20 000
302	IT611	Tolentino (Marche)	25 000
303	IT615	Tortora(Calabria)	30 695
304	IT618	Transacqua (Trentino Alto Adige)	20 000
305	IT619	Trapani (Sicilia)	70 000
306	IT621	Trebisacce(Calabria)	28 992
307	IT622	Tremestieri Etneo (Sicilia)	19 981
308	IT630	Trinitapoli (Puglia)	16 500
309	IT631	Tropea(Calabria)	20 000
310	IT632	Tropea, Parghelia, Zaccanopoli, Drapia (Calabria)	54 855
311	IT636	Ugento (Puglia)	18 950
312	IT640	Vallecrosia (Liguria)	17 500
313	IT642	Varese (Lombardia)	205 000
314	IT643	Vasto (Abruzzo)	97 000
315	IT644	Velletri (Lazio)	49 457
316	IT647	Venosa (Basilicata)	23 000
317	IT648	Ventimiglia (Liguria)	36 000
318	IT650	Vernole (Puglia)	17 243
319	IT651	Verona (Veneto)	330 000
320	IT654	Vibo Marina, Cessaniti, Briatico (Calabria)	37 960
321	IT655	Vibo Valentia (Calabria)	25 000
322	IT657	Vieste (Puglia)	15 284
323	IT658	Vietri sul mare (Campania)	35 000
324	IT660	Viggiu' (Lombardia)	22 000
325	IT662	Villa San Giovanni (Calabria)	23 408
326	IT664	Villapiana(Calabria)	29 718
327	IT666	Villorba-Carbonera-Breda di Piave-Maserada sul Piave-Spresiano (Veneto)	20 000
328	IT667	Viterbo (Lazio)	55 300
329	IT668	Vittoria (Sicilia)	50 000

**Table 1-53: Italian agglomerations reported for the first time as discharging into normal areas for the year 2001 (or 2002)**

No.	National reference	Agglomeration	Generated load [p.e.], year 2001 (or 2002)
1	IT698	A.S.I. Cagliari - Machiareddu (Sardegna)	521 141
2	IT700	Alba (Piemonte)	89 499
3	IT701	Alta E Media Val Susa (Piemonte)	69 908
4	IT702	Alata Val Sesia (Piemonte)	41 740
5	IT703	Arcisate (Lombardia)	260 000
6	IT704	Arco (Trento)	33 976
7	IT705	Auronzo Di Cadore (Veneto)	17 500
8	IT706	Azzano Decimo (Friuli Venezia Giulia)	20 000
9	IT707	Badesi (Sardegna)	27 400
10	IT708	Barisardo (Sardegna)	20 176
11	IT1000	Bassa Val sesia (Piemonte)	19 324
12	IT709	Bassa Val Susa (Piemonte)	171 923
13	IT710	Bassano Del Grappa (Veneto)	197 000
14	IT711	Bellinzago Novarese (Piemonte)	22 373
15	IT712	Boara Pisani (Veneto)	18 000
16	IT713	Bracciano (Lazio)	15 558
17	IT714	Brembate (Lombardia)	40 000
18	IT715	Budoni (Capoluogo) (Sardegna)	46 498
19	IT716	Cagliari – Is Arenas (Sardegna)	571 621
20	IT717	Cala Gonone (Dorgali) (Sardegna)	29 134
21	IT718	Campitello Di Fassa (Trento)	16 530
22	IT719	Camposampiero, S. Giustina in Colle, Loreggia (Veneto)	20 000
23	IT720	Capizzone (Lombardia)	36 000
24	IT721	Carbonera (Veneto)	72 000
25	IT722	Carignano (Piemonte)	42 800
26	IT723	Carmagnola (Piemonte)	49 546
27	IT724	Carmiano (Puglia)	16 543
28	IT725	Carpenedolo (Lombardia)	15 000
29	IT726	Cassano Spinola (Piemonte)	18 136
30	IT172	Castelfranco Emilia (Emilia-Romagna)	15 407
31	IT727	Castello Di Fiemme (Trento)	21 620
32	IT728	Castro (Puglia)	24 496
33	IT729	Cavareno (Trento)	17 164
34	IT730	Cavriago - Montecchio - Val D'enza (Emilia-Romagna)	81 974
35	IT731	Cividale Del Friuli (Friuli Venezia Giulia)	16 600
36	IT732	Clusone (Lombardia)	20 000
37	IT733	Colle Di Val D'Elsa (Toscana)	17 149
38	IT734	Cologna Veneta (Veneto)	34 000
39	IT217	Como (Lombardia)	507 302
40	IT735	Cordenons (Friuli Venezia Giulia)	19 500
41	IT736	Cordignano (Veneto)	125 000
42	IT737	Cossato (Piemonte)	40 096
43	IT738	Covo (Lombardia)	23 320
44	IT739	Crocetta Del Montello (Veneto)	19 000
45	IT740	Cuorgne - Valperga (Piemonte)	16 389
46	IT741	Folgaria (Trento)	15 364
47	IT742	Fossano (Piemonte)	23 553
48	IT743	Fratta Polesine (Veneto)	62 000
49	IT744	Giavera Del Montello, Nervesa Della Battaglia, Vol (Veneto)	30 000
50	IT745	Giustino (Trento)	25 076
51	IT746	Grisignano Di Zocco (Veneto)	56 000
52	IT748	Ilbono (Sardegna)	19 445
53	IT750	Imer (Trento)	23 404
54	IT751	Inzago (Lombardia)	45 000
55	IT752	Iseo (Lombardia)	70 000
56	IT753	Laveno-Mombello (Lombardia)	40 600
57	IT754	Levico Terme (Trento)	59 777
58	IT755	Lido Di Camaiore (Toscana)	45 000
59	IT756	Limena (Veneto)	25 000
60	IT757	Lizzanello (Puglia)	30 291
61	IT346	Lodi (Lombardia)	54 000

No.	National reference	Agglomeration	Generated load [p.e.], year 2001 (or 2002)
62	IT758	Longarone (Veneto)	47 000
63	IT759	Madonna Di Campiglio (Trento)	31 196
64	IT760	Marina Di Carrara-Avenza Ovest-Fossone (Toscana)	27 500
65	IT761	Marina Di Castagneto Carducci (Toscana)	35 353
66	IT762	Massa Agglomerato A-B (Toscana)	59 900
67	IT763	Massa Agglomerato C (Toscana)	38 300
68	IT764	Massa Agglomerato D-E-F (Toscana)	23 300
69	IT765	Massazza (Piemonte)	21 053
70	IT766	Mathi-Nole (Piemonte)	15 414
71	IT767	Mede (Lombardia)	15 000
72	IT768	Melfi (Basilicata)	18 500
73	IT769	Mezzocorona (Trento)	15 611
74	IT771	Mondovi (Piemonte)	22 033
75	IT772	Montegrotto Terme (Veneto)	20 000
76	IT773	Montichiari (Lombardia)	15 000
77	IT774	Oderzo (Veneto)	32 000
78	IT775	Oristano Nucleo Industriale (Sardegna)	200 046
79	IT776	Orvieto (Umbria)	85 000
80	IT777	Ovest Ticino (Piemonte)	66 175
81	IT778	Pieve Di Cadore (Veneto)	18 000
82	IT779	Ponte Nicolo' (Veneto)	18 000
83	IT780	Porto Cesareo (Puglia)	31 200
84	IT781	Portogruaro (Veneto)	43 000
85	IT782	Pula (Sardegna)	42 801
86	IT783	Quarto D'Altino (Veneto)	44 000
87	IT784	Querceta (Toscana)	45 000
88	IT785	Quinto (Veneto)	58 000
89	IT786	Reggiolo - Novellara - Rolo (Emilia-Romagna)	28 777
90	IT787	Rivarolo (Piemonte)	29 181
91	IT788	Robbiate (Lombardia)	15 000
92	IT789	Rovato (Lombardia)	15 000
93	IT790	Ruvo Di Puglia (Puglia)	77 081
94	IT791	S. Dona Di Piave (Veneto)	50 000
95	IT792	S. Michele Al Tagliamento-Bibione (Veneto)	156 400
96	IT793	S.Felice Circeo (Lazio)	30 000
97	IT794	S.Vito Al Tagliamento (Cises) (Friuli Venezia Giulia)	28 000
98	IT795	Salice Salentino (Puglia)	26 714
99	IT796	San Cesareo (Lazio)	15 000
100	IT797	San Giorgio Di Nogaro (Friuli Venezia Giulia)	698 000
101	IT798	San Giovanni Suergiu (Sardegna)	38 017
102	IT799	San Vendemiano (Veneto)	30 000
103	IT800	San Zeno (Toscana)	23 000
104	IT801	Sassuolo - Fiorano (Emilia-Romagna)	54 734
105	IT802	Sernaglia Della Battaglia (Veneto)	32 000
106	IT803	Somma Lombardo (Lombardia)	20 000
107	IT804	Suzzara (Lombardia)	15 000
108	IT805	Tesero (Trento)	24 349
109	IT806	Tezze Sul Brenta (Veneto)	112 000
110	IT807	Torre Santa Susanna (Puglia)	19 957
111	IT808	Tortoli'-Arbatax (Nucleo Industriale) (Sardegna)	144 590
112	IT809	Valledoria (Sardegna)	26 398
113	IT645	Venezia - Mirese (Veneto)	625 000
114	IT810	Venturina (Toscana)	41 650
115	IT811	Veroli (Lazio)	25 978
116	IT812	Villa Agnedo (Trento)	22 778

### 1.8.3.2. Receiving areas

According to the Commission, 229 out of 417 agglomerations (and 312 out of 571 UWWTPs) were discharging into areas, which require more stringent treatment (i.e. into sensitive areas, catchments of sensitive areas or potentially sensitive areas) (see Table 1-54).

As Italy did not provide co-ordinates (mandatory parameters of the Commission request) of 107 agglomerations, the clear localisation of discharge points in receiving areas was not possible. The results of the assessment of these 107 agglomerations are described in section 12.8.3.3 and Table 1-61.

**Table 1-54: Receiving areas of agglomerations and UWWTPs reported by Italy as discharging in normal areas (reported year 2001 or 2002)**

ITALY - receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas	81	6 835 199	18	150	6 827 228	19
Potentially sensitive areas	228	24 515 190	66	310	23 138 048	65
Sensitive areas and catchment of sensitive areas	1	625 000	2	2	165 000	0
Localisation not possible due to missing co-ordinates	107	5 082 984	14	109	5 582 090	16
Total	417	37 058 373	100	571	35 712 366	100

### 1.8.3.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

The following evaluation refers to 310 out of 417 agglomerations (or 462 out of 571 UWWTPs) (see Table 1-54), for which monitoring results and co-ordinates were available.

The results of the analysis of the 107 agglomerations reported without co-ordinates are described in the last part of this section.

#### **Part A - Normal areas: treatment levels and monitoring results**

This evaluation concerns 81 agglomerations and 150 UWWTPs, which were discharging into 'real' normal areas and therefore require secondary treatment (see Tables 1-54, 1-55 and 1-56).

#### **UWWTPs: treatment levels and monitoring results**

144 out of the 150 UWWTPs (or 98% of the total organic design capacity) had secondary or more stringent treatment and 52 (or 45% of the capacity) had monitoring results in compliance with the Directive requirements for secondary treatment. Six UWWTPs had primary treatment only (see Table 1-55).

**Table 1-55: Treatment levels and monitoring results of Italian UWWTPs discharging into normal areas (reported year 2001 or 2002)**

ITALY – Normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year unknown – 2001 or 2002)</b>	<b>150</b>	<b>6 827 228</b>	<b>100</b>
More stringent treatment	16	1 294 914	19
Secondary treatment	128	5 399 414	79
Primary treatment	6	132 900	2
Information about treatment level not available	0	0	0
Monitoring results in compliance for secondary treatment requirements for parameters BOD <sub>5</sub> , COD	52	3 085 193	45
Monitoring results not in compliance for secondary treatment requirements	98	3 742 035	55
Monitoring results not available	0	0	0

**Agglomerations: treatment levels and monitoring results**

53 out of the 81 agglomerations (or 56% of the total generated load) had the required secondary or more stringent treatment and 19 (or 22% of the load) had monitoring results in compliance with the Directive requirements. Two agglomerations of Carloforte (21 164 p.e.) and Castelsardo (25 800 p.e.) did not have any waste water treatment (see Table 1-56).

**Table 1-56: Treatment levels and monitoring results of Italian agglomerations discharging into normal areas (reported year 2001 or 2002)**

ITALY – Normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year not provided - 2001 or 2002)</b>	<b>81</b>	<b>6 835 199</b>	<b>100</b>
More stringent treatment	8	591 752	9
Secondary or partial more stringent treatment	45	3 237 831	47
Primary or partial secondary treatment	26	2 958 652	43
No treatment or preliminary treatment only	2	46 964	1
Information about treatment level not available	0	0	0
Monitoring results in compliance for secondary treatment requirements for parameters BOD <sub>5</sub> , COD	19	1 514 948	22
Monitoring results not in compliance	62	5 320 251	78
Monitoring results not available	0	0	0

**Part B - Sensitive areas and potentially sensitive areas: treatment levels and monitoring results**

This evaluation refers to the 229 agglomerations (and their 312 UWWTPs) which, by 31 December 2001 (or 2002), were discharging into potentially sensitive areas (228) or sensitive areas (the agglomeration of Venezia-Mirese (625 000 p.e.)). According to the Commission these agglomerations, should have had more stringent treatment level (see Table 1-54).



### UWWTPs: treatment levels and monitoring results

150 out of the 312 UWWTPs (or 57% of the total organic design capacity) had the required more stringent treatment (however, the type of treatment concerning which nutrient is treated – N or P - was not reported). Three UWWTPs<sup>38</sup> had primary treatment only.

215 out of the 312 UWWTPs (or 88% of the total organic design capacity) had monitoring results for BOD<sub>5</sub> and COD in line with secondary treatment requirements. However, monitoring results for nutrients removal was not reported (see Table 1-57).

**Table 1-57: Treatment levels and monitoring results of Italian UWWTPs in areas requiring more stringent treatment level (reported year 2001 or 2002)**

ITALY – sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year not indicated: 2001 or 2002)</b>	312	23 303 048	100
More stringent treatment	150	13 323 878	57
Secondary treatment	159	9 704 170	42
Primary treatment	3	275 000	1
Information about treatment level not available	0	0	0
Monitoring results in line with the requirements for secondary treatment for parameters BOD <sub>5</sub> , COD	215	20 417 123	88
Monitoring results not in line with the requirements for secondary treatment	97	2 885 925	12
Monitoring results not available	0	0	0

### Agglomerations: treatment levels and monitoring results

85 out of the 229 agglomerations (or 27% of the total generated load) had the required more stringent treatment, and 154 (or 68% of the load) had monitoring results in line with secondary treatment requirements for BOD<sub>5</sub> and COD (see Table 1-58).

Seven agglomerations did not have waste water treatment or had preliminary treatment only (see Table 1-59).

**Table 1-58: Treatment levels and monitoring results of Italian agglomerations discharging into areas requiring more stringent treatment level (reported year 2001 or 2002)**

ITALY - sensitive areas and potentially sensitive areas	Number	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year not provided - 2001 or 2002)</b>	<b>229</b>	<b>25 140 190</b>	<b>100</b>
More stringent treatment	85	6 873 223	27
Secondary treatment or partial more stringent treatment	116	16 070 640	64
Primary or partial secondary treatment	21	1 964 455	8
No treatment or preliminary treatment only	7	231 872	1
Information about treatment level not available	0	0	0
Monitoring results in line with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	154	16 993 655	68

<sup>38</sup> Bressanone (capacity 35 000 p.e.), Lomagna (capacity 20 000 p.e.) and Trieste Servola (capacity 220 000 p.e.)

Monitoring results not in line with secondary treatment requirements	75	8 146 535	32
Monitoring results not available	0	0	0

**Table 1-59: Italian agglomerations discharging into potentially sensitive areas without any waste water treatment<sup>39</sup> (situation for the reported year 2001 or 2002)**

National reference	Name of the agglomeration	Generated load [p.e.]
IT95	Basiglio	16 000
IT1000	Bassa Val Sesia	19 324
IT711	Bellinzago Novarese	22 373
IT373	Mediglia	25 000
IT777	Ovest Ticino	66 175
IT579	Sesto San Giovanni	33 000
IT633	Turbigo	50 000

### **Part C - Treatment levels and monitoring results of Italian agglomerations and UWWTPs for which the location (co-ordinates) was not indicated**

This section refers to the 107 agglomerations (served by 109 UWWTPs) for which it was impossible to assess the type of receiving area (sensitive, potentially sensitive and their catchment areas, or normal area) without geographical co-ordinates (see Table 1-54).

#### **UWWTPs: treatment levels and monitoring results**

19 out of the 109 UWWTPs (or 27% of the total organic design capacity) had more stringent treatment, 86 had secondary treatment, four<sup>40</sup> - primary treatment only.

57 out of the 109 UWWTPs (or 67% of the capacity) had monitoring results in line with the secondary treatment requirements (for BOD<sub>5</sub> and COD)- (see Table 1-60).

**Table 1-60: Treatment levels and monitoring results of UWWTPs for which the co-ordinates were not reported by Italian authorities (reported year 2001 or 2002)**

ITALY – no localisation possible	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year not indicated - 2001 or 2002)</b>	<b>109</b>	<b>5 582 090</b>	<b>100</b>
More stringent treatment	19	1 488 132	27
Secondary treatment	86	4 045 404	72
Primary treatment	4	48 554	1
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	57	3 444 185	62
Monitoring results not in line with secondary treatment requirements	52	2 137 905	38
Monitoring results not available	0	0	0

<sup>39</sup> or equipped with preliminary treatment only

<sup>40</sup> Bitonto Palombaio, Brindisi Casale, Casamassima and Gioia del Colle A

## **Agglomerations: treatment levels and monitoring results**

16 out of the 107 agglomerations (or 19% of the total generated load) had the required more stringent treatment, nine agglomerations<sup>41</sup> had primary or partial secondary treatment.

51 out of the 107 agglomerations (or 52% of the load) had monitoring results in line with the secondary treatment requirements for parameters BOD<sub>5</sub> and COD (see Table 1-61).

11 agglomerations had no waste water treatment or were equipped with preliminary treatment only (see Table 1-62).

**Table 1-61: Treatment levels and monitoring results in agglomerations for which the co-ordinates were not reported by Italian authorities (reported year 2001 or 2002)**

ITALY - no localisation possible	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year not indicated - 2001 or 2002)</b>	<b>107</b>	<b>5 082 984</b>	<b>100</b>
More stringent treatment	16	951 046	19
Secondary or partial more stringent treatment	71	3 344 293	66
Primary or partial secondary treatment	9	370 796	7
No treatment or preliminary treatment only	11	416 849	8
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	51	2 617 829	52
Monitoring results not in line with the secondary treatment requirements	56	2 465 155	48
Monitoring results not available	0	0	0

**Table 1-62: Agglomerations for which the co-ordinates were not provided by Italian authorities and which had no waste water treatment (or were equipped with preliminary treatment only) (reported year 2001 or 2002)**

National reference	Name of agglomeration	Generated load [p.e.]
IT562	Sava	55 000
IT728	Castro	24 496
IT744	Giavera del Montello, Nervosa della Battaglia, Vol	30 000
IT757	Lizzanello	30 291
IT722	Carignano	42 800
IT221	Copertino	68 173
IT283	Garlasco	35 000
IT483	Presicce	15 872
IT339	Lequile	51 387
IT442	Parabiago	48 000
IT435	Palagiano	15 830

<sup>41</sup> Bitonto, Brindisi, Canosa di Puglia, Casamassima, Castellarano – Casalgrande – Salvaterra, Gioia del Colle, Mola di Bari, Acquaviva delle Fonti and Sernaglia della Battaglia.

## **Part D - Agglomerations for which no updated information was provided for the 4th Commission report**

This section refers to the 329 agglomerations which had been reported for the 3rd Commission report but were no more reported for the 4th Commission report (see Table 1-52).

According to the data reported for the 3rd Commission report, by 31 December 2000, 137 of these agglomerations had secondary or more stringent treatment. Monitoring results were not available (see Table 1-63).

**Table 1-63: Treatment situation in Italian agglomerations for which no updated information was provided by Italy**

<b>ITALY – Normal areas - agglomerations for which no update was provided</b>	<b>Number</b>	<b>Generated load [p.e.]</b>	<b>% of generated load</b>
<b>Total (reported year 2000)</b>	<b>329</b>	<b>27 964 627</b>	<b>100</b>
Secondary or more stringent treatment	137	13 075 471	47
Less than secondary treatment	189	14 889 156	53

### 1.8.3.4. Conclusions

Compared with the data delivered for the 3rd Commission report (630 agglomerations, reported year 2000) the data provided for the 4th Commission report (417 agglomerations, 116 reported for the first time, 329 not reported any longer, 107 reported without geographical co-ordinates, and reported year was unknown – 2001 or 2002) seems to be incomplete.

At least 381 agglomerations were not compliant with the treatment level requirements: 28 - discharging into normal areas, 144 - discharging in sensitive and potentially sensitive areas, 20 for which co-ordinates were not provided and 189 for which no updated information was provided by Italy.

### 1.8.4. *Waste water treatment in big cities*

#### 1.8.4.1. Evaluation results of big cities

The assessment takes into consideration the information that was sent by Italy in March 2004. For the 3rd Commission report, Italy reported 92 big cities, i.e. agglomerations (or group of agglomerations) having a generated load of more than 150 000 p.e.. For the 4th Commission report, ten additional big cities were reported for the first time (see Table 1-64).

**Table 1-64: Italian big cities, reported for the first time (by 1 January 2003)**

No.	Main City	Generated load [p.e.]
1.	Arcisate	260 000
2.	Bassa val Susa	171 923
3.	Bassano del Grappa	197 000
4.	Castelfranco Veneto	183 000
5.	Chioggia	160 000
6.	Crema	170 000
7.	Romano di Lombardia	168 800
8.	S. Michele al Tagliamento	156 400
9.	San Giorgio di Nogaro	698 000
10.	Vicenza	242 000

In addition, Italy indicated that the cities of Jesolo, Forli and Savona were to be considered as big cities whereas the agglomeration Rosolina-Donada-Contarina should not (generated load of 27 000 p.e.). The situation on waste water treatment in **104 Italian big cities** on 1 January 2003 was as follows:

- six cities were discharging into **sensitive areas** and should have been equipped with more stringent treatment
  - four of these cities had more stringent treatment (with total nitrogen and total phosphorus removal): Ravenna, Rimini, Rimini-S.Giustina and Venezia;
  - the city of Como had partial more stringent treatment for total nitrogen and phosphorus removal;
  - the city of Cagliari also had more stringent treatment for a part of the city, but another part of its waste water was still discharged without any treatment.
- 59 cities were discharging into **potentially sensitive areas** and should, therefore according to the Commission's opinion, be equipped with more stringent treatment:
  - 23 cities had more stringent treatment: Arcisate, Bergamo, Bologna, Bolzano, Brescia, Busto Arsizio, Caronno Pertusella, Carpi Correggio, Chioggia, Forli, Lugo, Merano, Modena, Montebello Vicentino, Padova, Parma, Pavia, Peschiera, Pescia, Ranica, San Miniato, Santa Corce Sull'Arno and Verona;
  - 30 cities had secondary or partial more stringent treatment: Andria, Bassa Friulana, Bassano del Grappa, Capannori Porcari, Cartigliano, Cervignano del Friuli, Chiampo, Cinisello Balsamo, Crema, Ferrara, Jesolo, Lignano Sabbiadoro, Magenta, Milano Niguarda, Milano/Peschiera/Borromeo, Monza, Pero-Milano, Prato, Reggio Emilia, Rho, Robecco, S. Michele al Tagliamento-Bibione, San Colombano al Lambro, San Giorgio Di Nogaro, Tolmezzo, Torino, Trento, Udine, Varese and Vicenda;
  - four cities had primary or secondary treatment only for parts of the waste water collected: Castelfranco Veneto, Firenze, Romano di Lombardia and Trieste;
  - the city of Milan (2 545 000 p.e.) still did not have any waste water treatment at that time. The Italian authorities clarified that three UWWTPs serving Milan

city were under construction with the forecasted completion date being end of 2004;

- the situation remained unclear regarding treatment facilities in the city of Fucecchio. In the context of the second Commission report it had been reported that it will be equipped with more stringent treatment by 1998 but this information was not confirmed later.
- 38 cities were discharging into **normal areas** and should therefore, have had at least secondary treatment:
  - 24 cities had secondary or more stringent treatment: Livorno and Palermo (more stringent treatment), Acerra, Area Casertana, Area Nolana, Bari, Caserta, Catanzaro, Foce Regi Iagni, Foggia, Frosinone, Latina, Lecce, Maglie, Melito di Napoli, Orta di Atella, Pescara, Porto Torres, Reggio Calabria, Roma, San Benedetto del Tronto, Savona, Sassari and Scalea (secondary or partial more stringent treatment);
  - Eight cities had primary or partial secondary treatment only: Catania, Genova, Lamezia Terme, Lucca, Massa, Messina, Rende and Taranto;
  - Four cities still did not have any waste water treatment: Foce Sarno, Imperia Foce Imperia, Medio Sarno and Misterbianco;
  - For the cities of Napoli and L'Aquila the situation about wastewater treatment installations was unclear as the information from Italy was lacking.
- The city of Bassa Val Susa was equipped with secondary treatment; however, Italy did not provide information about the treatment performance and location of discharge points.

#### 1.8.4.2. Conclusions

Despite inconsistency in the data reported by Italy for big cities, the situation in the following big cities apparently improved between 2002 and 2003:

- Waste water treatment in the agglomerations of Bologna, Lugo, Merano, Modena, Montebello Vicentino, Padova, Pavia and Venezia improved from secondary to more stringent treatment.
- Waste water treatment in the agglomeration of Busto Arsizio improved from primary to more stringent treatment.
- Waste water treatment in the agglomerations of Latina, Maglie, Rho and Roma improved from primary to secondary or partial more stringent treatment.

However on 1 January 2003, at least 49 cities were still not in compliance with the Directive (including Milan, Foce Sarno, Imperia Foce Imperia, Medio Sarno, Misterbianco which had no waste water treatment).

## **LAST UPDATES – 2004-2006**

- According to the information provided by the Italian Authorities, the Milan city is being served, since mid-2005, by three urban wastewater treatment plants providing more stringent treatment with total nitrogen and total phosphorus removal.
- Treatment plant serving the agglomeration of Manfredonia started to be operational and compliant with the requirements for more stringent treatment (with total nitrogen and total phosphorus removal) also in 2005.
- The Italian Authorities stated that Article 5(4) of the Directive will apply in all catchment of the Po river basin as of 1 January 2005. However they indicated that 75% reduction rate of total nitrogen and total phosphorus will be reached only in 2008 (instead of 1998 as it is required by the Directive).
- On 30/11/2006 the European Court of Justice condemned Italy for not taking the necessary measures for more stringent treatment in agglomerations of the area of Varese (discharging into the catchment of the river Po) and failing to fulfil its obligations under Articles 5(2) and 5(5) of the Directive.
- It shall be also underlined that after several bilateral communication rounds and actions, the reporting by the Italian Authorities has a slight tendency to improve. However it still does not mean that the improved communication leads to complete implementation of the Directive.





## 1.9. Luxembourg

### 1.9.1. General comments on data quality

**Sensitive areas:** Luxembourg did not provide any (optionally requested) updated information for the 4th Commission report. Therefore, the Commission considered that the situation as regards sensitive areas did not change since the 3rd Commission Report (situation on 1 January 2002).

**Normal areas:** As Luxembourg applies Article 5(8) of the Directive, normal areas in Luxembourg do not exist.

### 1.9.2. Sensitive areas

Luxembourg is applying Article 5(8) of the Directive and therefore did not have to designate sensitive areas. Luxembourg also states that they apply Article 5(4) of the Directive. Therefore, the minimum percentage of reduction of the overall load entering all UWWTPs has to be at least 75% for total P and 75% for total N. However only 11 agglomerations were reported.

According to the 3rd Commission report, on 1 January 2002, the situation in 11 agglomerations with more than 10 000 p.e. (or a total load of 804 500 p.e.) was as follows:

- Three agglomerations - Mamer, Pétange, Uebersyren - had the required more stringent treatment with total N and total P removal (the load of 108,500 p.e.),
- Five agglomerations – Bettembourg, Diekirch, Schifflange, Luxembourg (Beggen) and Luxembourg (Bonnevoie) - had total P but not total N removal,
- Three agglomerations – Echternach, Differdange and Mersch had secondary treatment only.

In 1999, according to the latest available information from Luxembourg on calculation of overall reduction rate for total P and total N was the following: 74% of total P and only 30% of total N removal.

Since 2003, the new Schifflange urban waste water treatment plant started to be operational and had total N and total P removal in place. Besides this improvement it is clear that Luxembourg is not in compliance with the Directive requirements neither in applying Article 5(2,3) nor Art.5(4).

### *1.9.3. Waste water treatment in big cities*

The only big city is Luxembourg (360 000 p.e.), which is served by two UWWTPs (Beggen and Bonnevoie). As reported by Luxembourg, total N reduction facilities would be operational by 2005. Therefore, it is not in compliance with the Directive requirements either.

#### **LAST UPDATES – 2004-2006**

- On 23 November 2006 the European Court of Justice condemned Luxembourg for breach of Article 5(4) of the Directive as the global reduction rate for nitrogen does not reach 75%.

## 1.10. The Netherlands

### 1.10.1. General comments on data quality

**Sensitive areas:** The 3rd Commission report assessed the situation of Dutch agglomerations on 1 January 2002.

The Netherlands provided updated information regarding the reduction of total nitrogen and total phosphorus in their UWWTPs on 1 January 2003 (as required according to Article 5(4) of the Directive).

**Normal areas:** As the Netherlands applies Article 5(8) of the Directive, normal areas in the Netherlands do not exist.

### 1.10.2. Sensitive areas

Beside the application of Article 5(8) the Netherlands are also applying Article 5(4) of the Directive, therefore the minimum percentage of reduction of the overall load entering all UWWTPs has to be at least 75% for total P and 75% for total N.

In the year 2002 (last available information reported by Dutch authorities) total P was reduced by 78.9%, however total N by 67.7% only.

The Dutch authorities indicated that it was planned to reach a 75% reduction for total nitrogen by 31 December 2005 at the latest.

### 1.10.3. Waste water treatment in big cities

By 1 January 2003 the Netherlands reported 21 cities with a population equivalent of more than 150 000 with the following situation:

- 10 cities had both total N and total P removal: Arnhem, Bergen op Zoom, Breda, Dintther, Enschede, Haarlem, 's-Hertogenbosch, Oss, Susteren and Utrecht;
- four cities - Amsterdam, Heerlen, Rotterdam and Tilburg - had total N and total P removal for parts of the waste water generated in these cities;
- Seven remaining cities had secondary treatment and total phosphorus removal.

**LAST UPDATES – 2004-2006**

- According to the information and data provided by the Dutch Authorities for the monitoring year 2005, the overall reduction rate for total nitrogen reached the level of 74.3%. Therefore the overall reduction rate of all 394 urban wastewater treatment plants in the Netherlands is very close to the target rate of 75%. However it is worth mentioning that in some waterboards the overall reduction rate in 2005 was significantly below 75%. Therefore the Dutch Authorities are actively implementing measures in Amstel, Noorderzijlvest, De Dommel, Hollandse Delta, and Delftland to improve treatment of nitrogen removal. It is forecasted that the requirements of the Directive for the monitoring results for year 2006 will be met.

## 1.11. Austria

### 1.11.1. General comments on data quality

**Sensitive areas:** The latest information about the situation regarding waste water treatment in Austrian agglomerations with more than 10 000 p.e. were data provided on agglomerations discharging into the catchments of sensitive areas of other Member States. This was in the context of the 3rd Commission report reflecting the situation for the reported year 2001. At that time Austria had normal areas only.

Since December 2002, Austria applies Article 5(8).

**Normal areas:** For the 4th Commission report Austria reported data for the year 2002 (January – December), therefore it reported agglomerations of more than 15 000 p.e. discharging into normal areas.

In Austria one agglomeration is served by one urban waste water treatment plant, therefore the approach [*agglomeration : UWWTP*] = [1 : 1] is applied. Furthermore, Austria assumed that the generated load in agglomerations is equal to the treatment capacity (organic design capacity) of their related urban waste water treatment plants. This implies that a change of the UWWTP's size leads to a change of the generated load of the agglomeration. This means that an agglomeration is defined as being the catchment area of a plant, which, according to the Commission opinion, is not completely in line with the definition of an agglomeration in the Directive.

### 1.11.2. Sensitive areas

In December 2002 Austria decided to apply Article 5(8) over all its territory. Therefore, there is no need for designation of sensitive areas, and more stringent treatment shall be provided in all agglomerations above 10 000 p.e.

As for the 4th report Austria reported information for the year 2002, therefore the report does not reflect this situation.

However, in the context of the 3rd Commission report, Austria reported 25 agglomerations with more than 10 000 p.e. (with the total load of 1 851 885 p.e.) and discharging into sensitive areas: 13 agglomerations discharging into the catchment area of the River Rhine (via Lake Constance); 11 agglomerations discharging into tributaries of the sensitive areas of the Bavarian lakes; one agglomeration is discharging into the Elbe catchment. Each of these agglomerations was equipped with more stringent treatment and was therefore, in compliance with the provisions of the Directive under Article 5(2, 3). This status does not yet include the information for the entire territory in accordance with Article 5(8).

### 1.11.3. Agglomerations reported as discharging into normal areas

#### 1.11.3.1. Comparison of data for the 3rd and 4th Commission report

For the 3rd Commission report, Austria reported 181 agglomerations (with a total generated load of 15 189 287 p.e.) discharging into normal areas by 31 December 2000. These 181 agglomerations were equipped with at least secondary treatment by this date.

As Austria decided to apply Art.5(8) from December 2002 onwards, for the 4th Commission report it reported the situation as in the previous reporting exercises, i.e. information about agglomerations discharging into normal and sensitive areas.

Therefore, for the 4th Commission report, Austria reported 214 agglomerations discharging into normal areas by 31 December 2002. These included 24 agglomerations discharging into catchment areas of sensitive areas. Among the 214 agglomerations were also nine agglomerations reported for the first time due to the increase of the organic design capacity of the plants above 15 000 p.e. (see Table 1-65).

In addition, Austria withdrew five<sup>42</sup> agglomerations from the list, as the load of these agglomerations decreased below the threshold value of 15 000 p.e. The main reasons of the decrease of the load were that the new smaller capacity plants had been built instead of oversized old-ones.

The comparison of the information reported for the 3rd and for the 4th Commission report, i.e. for the reported years 2000 and 2002 is provided in Table 1-66.

**Table 1-65: Agglomerations of more than 15 000 p.e. reported for the year 2002 for the first time by Austria as discharging into normal areas**

Agglomeration	Load [p.e.] in 2002
Marktgemeinde Guntramsdorf	27 000
Gemeindeabw.verband Wolkersdorf - Pillichsdorf - Großengersdorf	25 000
Wasserverband Unteres Drautal	23 000
Reinholdungsverband Gallneukirchner Becken	22 833
Gemeindeabwasserverband Raum St. Andrä - Wördern	20 000
Reinholdungsverband Großraum Windischgarsten	16 667
ARIWA Abwasserreinigung im Waldviertel GmbH	16 000
Gemeindeverband für Abwasserreinigung im südlichen Waldviertel	16 000
Abwasserverband Oberes Perschlingtal	15 300

<sup>42</sup> Köflach-Gradnerbachtal (from 18 000 to 12 000 p.e.), AWV Oberes Stremtal (from 20 000 to 12 500 p.e.), AWV Strem and Zickental (from 28 000 to 14 000 p.e.), St.Michael (from 16 000 to 14 000 p.e.), Laakirchen pure industrial waste water treatment plant.)

**Table 1-66: Agglomerations reported by Austria as discharging into normal areas: Comparison of data for the years 2000 and 2002**

AUSTRIA	Number of agglomerations		Generated load [p.e.]	
	2000	2002	2000	2002
Total	181	185	15 189 287	15 429 720
Secondary treatment level	181	185	15 189 287	15 429 720
Information is not available	0	0	0	0
Treatment not in compliance	0	0	0	0

### 1.11.3.2.Receiving areas

Austria decided to apply Article 5(8) since December 2002. For this report the reported year was 2002, therefore, the 4th report does not reflect the application of this Article.

### 1.11.3.3.Treatment levels and monitoring results

By 31 December 2002, 170 out of 185 agglomerations discharging into normal areas (containing 92% of the total generated load) were equipped with more stringent treatment (most of them with nitrogen and phosphorus removal). 15 agglomerations were equipped with secondary treatment or partial more stringent treatment. Therefore, all of them were compliant with the Directive. All 185 reported agglomerations had monitoring results in compliance with secondary treatment requirements for parameters BOD<sub>5</sub> and COD (Table 1-67).

Following Article 5(8) of the Directive, the 15 above-mentioned agglomerations as well as all the agglomerations with a generated load of more than 10 000 p.e. have to be upgraded to more stringent treatment.

**Table 1-67: Treatment levels and monitoring results of Austrian UWWTPs and agglomerations discharging into normal areas (reported year 2002)**

AUSTRIA	Number	Generated load or organic design capacity [p.e.]	% of generated load
<b>Reported agglomerations / UWWTPs (reported year 2002)</b>	<b>185</b>	<b>15 429 720</b>	<b>100</b>
More stringent treatment	170	14 244 970	92
Secondary or partial more stringent treatment	15	1 184 750	8
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	185	15 429 720	100
Monitoring results not in compliance with secondary treatment requirements	0	0	0
Monitoring results not available	0	0	0

#### 1.11.3.4. Conclusions

In 2002, the treatment level and monitoring results of all 185 agglomerations with the load of more than 15 000 p.e. and discharging into normal areas were in compliance with the Directive requirements.

#### *1.11.4. Waste water treatment in big cities*

For the 3rd report Austria reported 21 big cities (agglomerations or groups of agglomerations with a generated load of more than 150 000 p.e.). However, the Austrian authorities mentioned that the only cities with more than 150 000 inhabitants were Wien, Graz and Linz, as the other big cities, to a large extent, treat more industrial waste water than urban waste water.

On 1 January 2003 the situation of these 21 Austrian big cities was as follows:

- three cities - Hard/Hofsteig, Dornbirn and Feldkirch - discharging into the catchment area of the North Sea had more stringent treatment (total N and total P removal) and therefore were compliant with the Directive.
- Among the 18 big cities discharging into normal areas, 16 had more stringent treatment (total N and total P removal) and two had secondary treatment (Graz and Steyrmühl).

All Austrian cities were compliant with the requirements of the Directive for the reported year 2002.



## 1.12. Portugal

### 1.12.1. General comments on data quality

**Sensitive areas:** For the 3rd Commission report Portuguese authorities had provided the information for the year 2001. The information was not updated for the 4th Commission Report.

**Normal areas:** Portugal provided information on treatment levels and monitoring results for the agglomerations of more than 15 000 p.e. for the year 2002 for the 4th report.

In Portugal one agglomeration could be served by one or several urban waste water treatment plants, therefore the ratio [*agglomeration* : *UWWTP*] = [*1* : *n*] is used. In this case an agglomeration can only be in compliance with the Directive requirements for treatment and monitoring, if all UWWTPs serving this agglomeration are considered as being in compliance.

### 1.12.2. Sensitive areas

In 1997 Portugal designated 41 sensitive areas. In 2004 Portugal made further designations. As a result, some previously designated sensitive areas were de-listed, and some sensitive areas were newly designated. As Portugal did not officially notify the Commission of this designation, it was not taken into consideration in the maps and evaluation results of this Commission report.

Moreover the Commission is of the opinion that **four** water bodies should have been designated as sensitive (see Table 1-68).

**Table 1-68: Areas that should have been designated as sensitive areas by Portugal**

No.	Potentially sensitive areas	Remarks
1	Cala de Norte (Tagus Estuary)	The area is identified as water body qualified by the ERM Report <sup>43</sup> in 2000 for designation as sensitive under the criterion related to the problems of bacteria of faecal origin and organic pollution
2	Cavado	The area is identified as water body qualified by the ERM Report in 2000 <sup>43</sup> for designation as sensitive under the criterion nitrate
3	Miranda	The area is identified as water body qualified by the ERM Report in 2000 <sup>43</sup> for designation as sensitive under the criterion eutrophication
4	Punto Canas	The area is identified as water body qualified by the ERM Report in 2000 <sup>43</sup> for designation as sensitive under the criterion nitrate

According to the 3rd Commission report, on 1 January 2002, five out of 27 agglomerations discharging into sensitive areas were considered to be in compliance with the requirements for more stringent treatment.

On 1 January 2002, the following agglomerations discharging into sensitive areas did not have any waste water treatment: Curia e Tamengos (20 000 p.e.), S. Pedro do Sul/Vouzela (15 000 p.e.), Bacia da Rib. de Caster (18 000 p.e.), Bacia da Rib. de Lage (17 000 p.e.),

<sup>43</sup> Verification of Vulnerable Zones identified under the Nitrate Directive and Sensitive Areas identified under the Urban Waste Water Treatment Directive (ERM, February 2000)

Barreiro/Moita/Palhais (239 000 p.e.), Moita (48 100 p.e.), Seixal (80 000 p.e.) and Lamego (15 000 p.e.).

### *1.12.3. Less sensitive areas*

In 1997, the Portuguese authorities designated all their coastal waters, except the waters of the Algarve, as less sensitive areas. According to the information sent by Portugal in April 2004 the regional authority of Madeira (island of Madeira and island of Porto Santo) also considers its coastal waters as less sensitive.

According to Article 6(2) of the Directive, if a Member State intends to apply less than secondary treatment for the agglomerations as described in this article it has to provide “*comprehensive studies indicating that the discharges will not adversely affect the environment*”. However, Portugal has not provided such studies.

In 2001, Portugal was granted a derogation according to Article 8(5) of the Directive for the agglomeration of Costa do Estoril (720 000 p.e.) near Lisbon (Commission Decision 2001/720/EC), therefore, less stringent than secondary waste water treatment was allowed. On 1 January 2002, the agglomeration of Costa de Estoril did not fulfil the requirements set out in the Decision.

In April 2004 Portugal reviewed the designation of less sensitive areas. Their number was reduced to seven: Estoril, six spot points of the continental coast and the islands of Madeira and Porto Santo (of Madeira archipelago). In April 2004 Portugal also explained that for the agglomerations with the load of more than 15 000 p.e. discharging into less sensitive areas secondary treatment is also required. The Commission is of the opinion that as explanation on the fulfilment of the criteria laid down in the Annex II.B and comprehensive studies on the possible risks of the discharges have not been provided, these areas are considered as normal areas (accept the Estoril coast subject to the Decision) and therefore secondary treatment is required.

### *1.12.4. Agglomerations reported as discharging into normal areas or less sensitive areas*

#### *1.12.4.1. Comparison of data for the 3rd and 4th Commission report*

In the framework of the 3rd Commission report Portugal reported 94 agglomerations discharging into normal areas and less sensitive areas by 31 December 2000 with a total generated load of 8 455 900 p.e. 45 of these agglomerations had complying secondary treatment by this date (or 37% of the entire load).

In the framework of the 4th Commission report Portugal reported 95 agglomerations discharging into normal areas and less sensitive areas by 31 December 2002 with a total generated load of 9 088 200 p.e. 68 of these agglomerations had complying secondary treatment by this date (or 58% of the entire load) (see Table 1-69).

Compared to the 3rd Commission report, four agglomerations were no longer reported (see Table 1-70) and five agglomerations were reported for the first time (see Table 1-71).

**Table 1-69: Agglomerations reported by Portugal as discharging into normal or less sensitive areas: comparison of the data for the years 2000 and 2002**

PORTUGAL	Number of agglomerations		Generated load [p.e.]	
	2000	2002	2000	2002
Total	94	95	8 455 900	9 088 200
Secondary treatment	45	68	3 149 200	5 251 800
Information is not available	0	0	0	0
Treatment not in compliance	49	27	5 306 700	3 836 400

**Table 1-70: Agglomerations not reported for the 4th Commission report (for the year 2002) as discharging into normal areas**

National reference	Name of agglomeration	Justification
PT37	Armação de Pera/Albufeira	Discharges into a sensitive area
PT50	Cova da Beira	This agglomeration was replaced by 2 new agglomerations
PT34	Montemor-o-Novo	The generated load has changed significantly from 17 000 p.e. to 11 000 p.e.
PT87	Sta. Cita	The WWTP treats only industrial waste water

**Table 1-71: Portuguese agglomerations reported for the first time for the year 2002 as discharging into normal areas**

National reference	Name of agglomeration	Generated load [p.e.]
PT125	Cartaxo / Vila Chã de Ourique	19 900
PT128	S. Martinho do Porto	30 000
PT124	Carregado	20 000
PT127	Fundão / Alcaria	22 000
PT126	Covilhã	136 900

#### 1.12.4.2.Receiving areas

According to the Commission, the 16 agglomerations (listed in Table 1-72) reported by Portugal as discharging into less sensitive areas are to be considered as discharging in normal areas and therefore should have had at least secondary treatment (except Costa do Estoril).

In April 2004, Portugal informed the Commission that all agglomerations with a generated load of more than 15 000 p.e. discharging into less sensitive areas *should have been* equipped with secondary treatment level.

**Table 1-72: Agglomerations reported by Portugal as discharging into less sensitive areas (Atlantic Ocean) (reported year 2002)**

National reference	Name of agglomeration	Type of treatment	Generated load [p.e.]
PT30	Angra do Heroísmo	Secondary	25 800
PT93	Câmara de Lobos /Estreito/Z.Oeste do Funchal	No treatment or preliminary	40 000
PT49	Costa de Aveiro	Partial secondary	315 000
PT70	Costa do Estoril	Primary	720 000
PT71	Costa Oeste	Partial secondary	66 000

National reference	Name of agglomeration	Type of treatment	Generated load [p.e.]
PT51	Espinho/Feira	Secondary	85 800
PT94	Funchal	No treatment or preliminary	100 000
PT105	Matosinhos	Primary	287 000
PT33	Milfontes	Primary	30 000
PT78	Nazaré/ Famalicão	Primary	50 000
PT81	Peniche	Secondary	40 700
PT31	Ponta Delgada	Primary	27 500
PT112	Póvoa de Varzim/ V. do Conde	No treatment or preliminary	120 000
PT84	Sesimbra	Secondary	18 000
PT117	V N de Gaia / Bacia do Atlantico	No treatment or preliminary	200 000
PT121	Viana do Castelo - Cidade	Secondary	66 700

The summary analysis results on the location of all 95 agglomerations reported by Portugal as discharging into normal and less sensitive areas are provided in Table 1-73.

**Table 1-73: Receiving areas of the agglomerations and UWWTPs reported by Portugal as discharging into normal areas and less sensitive areas (reported year 2002)**

PORTUGAL - Receiving areas	Agglomerations			UWWTPs		
	Number of agglo.	Generated load [p.e.]	% of load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas (NA) (including less sensitive areas (LSA*))	73	5 741 700	63	77	5 857 500	62
Potentially sensitive areas (PSA)	22	3 346 500	37	22	3 527 400	38
Sensitive areas (SA) plus catchment of sensitive areas (CSA)	0	0	0	0	0	0
Localisation not possible due to missing co-ordinates	0	0	0	0	0	0
Total	95	9 088 200	100	99	9 384 900	100

\* 16 out of 72 agglomerations are considered by Portugal to be discharging into less sensitive areas. Only for 1 agglomeration (Estoril) the derogation with the Commission decision exists

#### 1.12.4.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas or less sensitive areas

##### **Part A - Normal areas: treatment levels and monitoring results**

The evaluation refers to the 73 agglomerations (served by 77 UWWTPs) considered by the Commission as discharging into 'real' normal areas (see Table 1-73).

##### **UWWTPs: treatment levels and monitoring results**

72 UWWTPs (or 76% of the total capacity) had the required secondary or more stringent treatment and 48 (having 38% of the total capacity) presented monitoring results in compliance with the requirements for secondary treatment for parameters BOD<sub>5</sub> and COD. Five UWWTPs had primary treatment only.

72 out of 77 UWWTPs (or 78% of the total organic design capacity) discharging into normal areas and less sensitive areas (according to the opinion of Portugal) (see Table 1-73) had at least secondary treatment. The monitoring results of 48 of these UWWTPs (or 38% of the total organic design capacity) were in compliance with the requirements for secondary treatment for parameters BOD<sub>5</sub> and COD (see Table 1-74).

**Table 1-74: Treatment levels and monitoring results of Portuguese UWWTPs discharging into normal areas and less sensitive areas\* (reported year 2002)**

PORTUGAL – normal areas	Number	Organic design capacity [p.e.]	% of organic design capacity
<b>Total UWWTPs (reported year 2002)</b>	<b>77</b>	<b>5 857 500</b>	<b>100</b>
More stringent treatment	13	1 054 300	18
Secondary treatment	59	3 405 700	58
Primary treatment	5	1 397 500	24
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	48	2 218 100	38
Monitoring results not in compliance with secondary treatment requirements	24	2 506 700	43
Monitoring results not available	5	1 132 700	19

\*On the opinion of Portugal

### **Agglomerations: treatment levels and monitoring results**

52 agglomerations (or 58% of the total load) had the required secondary or more stringent treatment and 35 (or 25% of the total load) had monitoring results in compliance with the requirements for secondary treatment for parameters (BOD<sub>5</sub> and COD) (see Table 1-75).

12 agglomerations did not have any waste water treatment or were equipped with preliminary treatment only (see Table 1-76).

**Table 1-75: Treatment levels and monitoring results of Portuguese agglomerations discharging into normal areas and less sensitive areas\* (reported year 2002)**

Portugal	Number	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2002)</b>	<b>73</b>	<b>5 741 700</b>	<b>100</b>
More stringent treatment level	6	745 300	13
Secondary or partial more stringent treatment	46	2 558 300	45
Primary or partial secondary treatment	9	1 649 000	29
No treatment or preliminary treatment only	12	789 100	14
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	35	1 453 500	25
Monitoring results not in compliance	33	3 324 600	58
Monitoring results not available	5	963 600	17

\*in the opinion of Portugal

**Table 1-76: Portuguese agglomerations discharging in normal areas and less sensitive areas\* without any waste water treatment (or equipped with preliminary treatment only) (reported year 2002)**

National reference	Name of agglomeration	Generated load [p.e.]	Receiving area
PT46	Bacia do Rio Uíma	25 000	NA
PT93	Câmara de Lobos /Estreito/Z.Oeste do Funchal	40 000	LSA*
PT69	Costa da Caparica/Trafaria	87 200	NA
PT94	Funchal	100 000	LSA*
PT127	Fundão / Alcaria	22 000	NA
PT104	Lanheses/Geraz do Lima	16 000	NA
PT109	Peso da Régua	25 000	NA
PT110	Ponte de Lima	18 400	NA
PT112	Póvoa de Varzim/ V. do Conde	120 000	LSA*
PT117	V N de Gaia / Bacia do Atlantico	200 000	LSA*
PT118	V N de Gaia / Douro Nordeste	81 000	NA
PT123	Vila Real	54 500	NA

\*in the opinion of Portugal

### **Part B - Sensitive areas, potentially sensitive areas and catchment areas of sensitive areas: treatment levels and monitoring results**

22 agglomerations (served by 22 UWWTPs) were considered by the Commission as discharging into potentially sensitive areas, sensitive areas or catchment areas of sensitive areas (see Table 1-73). Among these agglomerations are the big cities as Lisboa, Loures or Alcenana (potentially sensitive area).

#### **UWWTPs: treatment levels and monitoring results**

Four UWWTPs (or 38% of the total organic design capacity) had the required more stringent treatment, 17 UWWTPs (or 41% of the total capacity) had secondary treatment and 14 UWWTPs (or 76% of the total capacity) had monitoring results in line with the secondary treatment requirements for parameters BOD<sub>5</sub> and COD (see Table 1-77).

**Table 1-77: Treatment levels and monitoring results of Portuguese UWWTPs discharging into areas requiring more stringent treatment level (reported year 2002)**

PORTUGAL - sensitive areas, catchment areas of sensitive areas and potentially sensitive areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year 2002)</b>	<b>22</b>	<b>3 527 400</b>	<b>100</b>
More stringent treatment	4	1 341 200	38
Secondary treatment	17	1 461 200	41
Primary treatment	1	725 000	21
Information about treatment level not available	0	0	0
Monitoring results in line with the requirements with secondary treatment for parameters BOD <sub>5</sub> , COD	14	2 670 400	76
Monitoring results not in line with secondary treatment requirements	5	793 700	23
Monitoring results not available	3	63 300	2

## **Agglomerations: treatment levels and monitoring results**

The agglomeration of Ourem (representing 0.4% of the total load) had the required more stringent treatment, 15 agglomerations (or 58% of the total load) had secondary treatment and 10 agglomerations (or 54% of the total load) had monitoring results in line with the requirements for secondary treatment for parameters BOD<sub>5</sub> and COD (see Table 1-78).

Four agglomerations did not have any waste water treatment nor had preliminary treatment only (see Table 1-79).

**Table 1-78: Treatment levels and monitoring results of agglomerations discharging into areas requiring more stringent treatment level (reported year 2002)**

<b>PORTUGAL - sensitive areas, catchment areas of sensitive areas and potentially sensitive areas</b>	<b>Number of agglomerations</b>	<b>Generated load [p.e.]</b>	<b>% of generated load</b>
<b>Reported agglomerations (reported year 2002)</b>	<b>22</b>	<b>3 346 500</b>	<b>100</b>
More stringent treatment	1	15 400	0
Secondary or partial more stringent treatment	15	1 932 800	58
Primary or partial secondary treatment	2	1 079 300	32
No treatment or preliminary treatment only	4	319 000	10
Information about treatment level not available	0	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	10	1 816 500	54
Monitoring results not in line with secondary treatment requirements	9	1 468 300	44
Monitoring results not available	3	61 700	2

**Table 1-79: Portuguese agglomerations discharging into potentially sensitive areas without any waste water treatment\* (reported year 2002)**

<b>National reference</b>	<b>Name of agglomeration</b>	<b>Generated load [p.e.]</b>
PT65	Alverca	115 000
PT124	Carregado	20 000
PT126	Covilhã	136 900
PT92	Vila Franca de Xira	47 100

\*or preliminary treatment only

### 1.12.4.4. Conclusions

Between the years 2000 and 2002 the number of agglomerations equipped with secondary treatment increased from 45 to 68 (37% to 58% of the total generated load).

According to the Commission, by 31 December 2002, at least 42 agglomerations (out of 95 reported as discharging into normal areas) did not comply with the treatment level requirements of the Directive: 21 in normal areas, and 21 in potentially sensitive areas. 16 agglomerations were not provided with waste water treatment nor had preliminary treatment only by 31 December 2002.

### *1.12.5. Waste water treatment in big cities*

#### 1.12.5.1. Evaluation results of big cities

By 31 December 2002 Portugal reported 15 big cities (agglomerations with a generated load of more than 150 000 p.e.):

- two cities were situated in sensitive areas and should therefore have been, equipped with more advanced treatment:
  - Faro, which had more stringent treatment (hygienisation)
  - Barreiro, which still did not have any waste water treatment
- four cities were discharging into potentially sensitive areas:
  - Lisboa and Loures which had more stringent treatment only for part of their generated load
  - Alcenana which had secondary treatment
  - Cova da Beira (160 000 p.e.) which still did not have any waste water treatment
- five cities were discharging into normal areas:
  - Porto which had more stringent treatment (total N and total P removal) and hygienisation
  - Vilamoura which had partial more stringent treatment
  - Setúbal and Sto Tiro which had secondary treatment
  - Famalicao/Sto.Tirso/Trofa (mostly industrial waste water) which was equipped with secondary treatment.
- Four cities were considered by the Portuguese authorities to be discharging into less sensitive areas whereas (except for Estoril), the Commission considered them as being discharging into normal areas :
  - Matosinhos which had primary treatment only
  - Vila Nova de Gaia / Bacia do Atlantico (200 000 p.e.) which still did not have any waste water treatment
  - Costa de Aveiro which had partial secondary treatment
  - Costa do Estoril (720 000 p.e.) which was not fulfilling the requirements of the Decision 2001/720/EC for BOD<sub>5</sub> and total suspended solids (TSS)



#### 1.12.5.2. Conclusions

By 31 December 2002 six (out of 15) big cities in Portugal were complying with the treatment requirements of the Directive.

#### **LAST UPDATES – 2004-2006**

- In 2004, Portugal made a revision of designated sensitive areas. The potentially sensitive areas of Cavado and Miranda were designated as sensitive areas.
- According to Portugal, over the 2002-2006 period, the following agglomerations became compliant or were forecasted to become compliant with the requirements of the Directive: Vila Nova de Gaia/Bacio de Atlantico, Vila Franca de Xira.
- In December 2006 the Commission has seized the European Court of Justice for lack of treatment in the agglomeration of the Estoril coast (non-implementation of the Decision 720/2001/EC).



## 1.13. Finland

### 1.13.1. General comments on data quality

**Sensitive areas:** The latest information was provided by Finland for the 3rd Commission report (for the year 2001).

In relation to the 4th Commission report, in September 2003, Finland provided updated information concerning generated loads of the large agglomerations and updated data for the agglomerations of Porvoo-Hermansö and Pargas-Avlopsverk. The assessment results of the updated data for the year 2002 are presented in this report.

**Normal areas:** Since Finland applies Article 5(8) of the Directive, normal areas in Finland do not exist.

### 1.13.2. Sensitive areas

Pursuant to Article 5(8) of the Directive Finland is not required to identify sensitive areas for Finland.

When applying Article 5 of the Directive the Finnish authorities foresaw total phosphorus removal but not total nitrogen removal in all large agglomerations with more than 10 000 p.e.. Considering that phosphorus and nitrogen are the causes of eutrophication in the Baltic Sea, the Commission is of the opinion that both - phosphorus and nitrogen – should have been removed for the large agglomerations discharging into the catchment area of the Baltic Sea.

For the 3rd Commission report, Finland reported that, by 1 January 2002, all their 87 agglomerations (with the load of 6 377 300 p.e.) had more stringent treatment. The Commission was however of the opinion that only 11 of the agglomerations were compliant with the treatment level requirements of the Directive as, in the most cases, only phosphorus removal was in place. Moreover, for 39 of the reported agglomerations, the treatment capacity of the UWWTPs was less than the generated load in the agglomeration.

At the Urban Waste Water Treatment Committee meeting held in September 2003 Finland explained that in the context of the data delivery for the 3rd Commission Report out-of-date information concerning the generated loads of individual agglomerations, and organic design capacities of UWWTPs had been provided. Finland mentioned that all urban waste water treatment plants are designed in a way to treat the entire urban waste water efficiently in terms of available organic design capacity. To prove this the Finnish authorities provided a list with numbers of inhabitants in its communities for the year 2002.

Additionally, Finland informed in April 2004<sup>44</sup> that the UWWTPs of the agglomerations Porvoo-Hermansö and Pargas-Avlopsverk had the required nitrogen removal facilities already in place.

Taking into account information provided by Finland in September 2003 and April 2004, the situation on 1 January 2003 is presented in Table 1-80.

---

<sup>44</sup> Communication by Finnish authorities to the Commission for the fourth report by e-mail on 06/04/04 (ref. A(2004) 522049).

However, 74 out of 87 agglomerations (representing 89% of the total generated load) were not in compliance with the treatment level requirements of the Directive.

**Table 1-80: Treatment level in Finnish agglomerations with more than 10 000 p.e. (reported year 2002)**

FINLAND – Sensitive areas	Number of agglomerations	% of agglomeration	Generated load [p.e.]*	% of generated load
<b>Total</b>	<b>87</b>	<b>100</b>	<b>6 377 300</b>	<b>100</b>
More stringent treatment	87	100	6 377 300	100
<i>but missing treatment steps</i>	74	85	5 664 000	89
<b>Not in compliance</b>	<b>74</b>	<b>85</b>	<b>5 664 000</b>	<b>89</b>
<b>In compliance</b>	<b>13</b>	<b>15</b>	<b>713 300</b>	<b>11</b>

\*Indicated p.e. are from the year 2002 and calculated on the maximum daily load

### 1.13.3. Waste water treatment in big cities

#### 1.13.3.1. Evaluation results of big cities

For 1 January 2003 Finland reported seven big cities<sup>45</sup> (agglomerations or groups of agglomerations with a generated load of more than 150 000 p.e.). Each of these cities had more stringent treatment in terms of phosphorus removal: Espoo, Helsinki, Jyväskylä, Lahti, Pori, Tampere and Turku.

The Commission believes that nitrogen treatment is still missing for these cities as they are situated in the catchment area of the Baltic Sea.

#### 1.13.3.2. Conclusions

According to the Commission's opinion all Finnish cities above 150 000 p.e. still need to be upgraded with nitrogen removal to comply with the Directive as they are situated in the catchment of the highly eutrophic Baltic Sea.

<sup>45</sup> In the previous implementation reports of the Commission, Rovaniemi was also considered as big city with more than 150 000 p.e.. In April 2004 the Finnish authorities commented and corrected the calculated load of Rovaniemi explaining that in the past they provided a wrong figure on the load of Rovaniemi. The correct load of the agglomeration is 75 000 p.e..

## 1.14. Sweden

### 1.14.1. General comments on data quality

**Sensitive areas:** Swedish authorities provided the latest information for the 3rd Commission report (for the year 2001). As no updated information was provided for the 4th report the Commission assumed that the situation did not change significantly.

**Normal areas:** Since Sweden has designated its entire territory as sensitive area, normal areas in Sweden do not exist.

### 1.14.2. Sensitive areas

In 1994 Sweden identified all its waters as sensitive areas. In June 1998 Sweden confirmed its identification to the Commission, indicating that the criterion applied was eutrophication, and that the type of more stringent treatment is dependent on the water bodies concerned. Sweden stated that tertiary treatment of phosphorus was necessary in all its agglomerations of more than 10 000 p.e. to combat eutrophication and the risk of eutrophication of freshwaters, estuaries and coastal waters. However, it believes that only the North Sea and the Baltic Sea from the Norwegian border to the municipality of Norrtälje, including coastal waters of the island of Oland and around the island of Gotland were sensitive to nitrogen. The Commission believes that tertiary treatment of both phosphorus and nitrogen is essential under the Directive in all agglomerations above 10 000 p.e. situated in the catchment areas, which flow into the Baltic. In addition, the Commission believes that discharges of agglomerations in the south, central part, also contribute to the pollution of those sensitive areas (see more details in the second Commission report).

According to the 3rd Commission report (for the year 2001), Sweden reported 134 large agglomerations (having the total load of 7 672 670 p.e.). Phosphorus removal was provided in each of these agglomerations, but the required nitrogen removal was provided in 74 agglomerations only. As there was no updated information provided for the 4th report it is assumed that the situation did not change.

Therefore, the Commission is of the opinion that only 74 out of 134 of these agglomerations (representing 73.4% of the total generated load) were compliant with the Directive requirements for treatment.

### 1.14.3. Waste water treatment in big cities

#### 1.14.3.1. Evaluation results of big cities

According to the 3rd Commission report on the situation on 1 January 2003, Sweden reported eight big cities (agglomerations or groups of agglomerations having a load of more than 150 000 p.e.). Six of them were equipped with total phosphorus and total nitrogen removal: Göteborg, Helsingborg, Lidingö, Malmö, Stockholm and Uppsala, two of them - Linköping and Örebro - had phosphorus removal only.

#### 1.14.3.2. Conclusions

According to the Commission's opinion all Swedish agglomerations with a load of more than 10 000 p.e. should have been equipped with more stringent treatment regarding both – nitrogen and phosphorus removal already by 31 December 1998. In the context of this requirement the big cities of Linköping and Örebro are still not compliant with the Directive requirements due to missing nitrogen removal.

## 1.15. United Kingdom

### 1.15.1. General comments on data quality

**Sensitive areas:** The latest information about the situation regarding waste water treatment in large agglomerations of the UK was the data (for the year 2001) for the 3rd Commission report. No updated information was provided for this report.

**Normal areas:** The UK provided the data for the year 2001 for the 4th report through a number of communications (May 2003, August, October, December 2003 and April 2004). For many agglomerations corrections of the generated load of the agglomerations were made, explaining that some of them had been reported with a wrong load for the 3rd Commission report.

In the UK one agglomeration is served by one urban waste water treatment plant, thus the approach [*agglomeration* : *UWWTP*] = [1 : 1] was used.

### 1.15.2. Sensitive areas

The designation of 348 sensitive areas was carried out step by step by the UK from 1994 to 2002. In April 2004, the UK authorities stated that once a water body was designated as sensitive, more stringent treatment was provided for indirect and direct discharges from relevant agglomerations in the catchment of these areas, which contribute to their pollution. Furthermore, the UK indicated that they have designated sensitive areas where more than secondary treatment is needed to fulfil requirements of the Bathing Water Directive.

However, the catchment areas of the sensitive areas have not been indicated and delineated. According to Article 5(5) of the Directive and referring to the relevant case-law (the judgement of the European Court of Justice for the case C - 396/00 for Milan city) the Commission is of the opinion that the agglomerations with a generated load of more than 10 000 p.e. discharging into these areas have to be subject of more stringent treatment.

Moreover, according to the Commission, significant estuaries and coastal waters should have been designated as sensitive areas due to the existing eutrophication or risk of eutrophication (i.e. potentially sensitive areas) (see Table 1-81).

**Table 1-81: Areas had to be designated as sensitive areas in the UK**

No.	Potentially sensitive areas
1	Outer Thames Estuary
2	Humber (Estuary)
3	Wash ( catchment of all four main rivers)
4	Deben (Estuary)
5	Colne (Estuary)
6	Southampton Water
7	Bann Estuary
8	Carlingford Lough
10	Lough Foyle

No.	Potentially sensitive areas
11	North coast of Wales, North West coast of England and South coast of Scotland (from the Lleyn Peninsula in Wales to the Mull of Galloway in Scotland)
12	River Parrett (Durleigh Reservoir and Ashford Reservoir)
13	Catchment areas of all sensitive areas

For the 3rd Commission report, the UK authorities had considered that 88 out of the 90 agglomerations with a load of more than 10 000 p.e. discharging in sensitive areas designated in 1994 were compliant with treatment requirements of nitrogen and/or phosphorus removal.

However, the Commission did not share this assessment as according to the Commission's opinion the required treatment of nitrogen was missing in 57 cases<sup>46</sup> and the required phosphorus removal - in 4 cases<sup>47</sup> (not counting two agglomerations with secondary treatment only). Therefore, the Commission is of the opinion that only 26 agglomerations were in compliance with the treatment requirements.

For the 4th Commission report, UK reported 88 agglomerations discharging into sensitive areas (as the load of the agglomeration of Lisnaskea fell below the 10 000 p.e threshold after the closure of a major trade discharger, and as the agglomeration of Tullaghgarley is now being considered as part of the agglomeration Ballymena).

According to the Commission, three agglomerations still did not have the required capacity to treat their generated load and therefore are considered as not in compliance with the Directive. The two agglomerations Ballyclare (11 350 p.e.) and Cookstown (12 750 p.e.) should have been equipped with both nitrogen and phosphorus removal, but had secondary treatment level only (see Table 1-82).

In total 86 out of 88 agglomerations (representing 99% of the total generated load) had more stringent treatment, and 25 (representing 28% of the total generated load) had monitoring results (for the year 2001) in compliance with the Directive (see Table 1-83).

---

<sup>46</sup> Abingdon, Aldershot, Alton, Arborfield, Armagh, Ash Vale, Aylesbury, Ballinacor, Ballymena, Banbridge, Barnoldswick, Barston Solihull, Bedford, Bicester, Blackburn Scotland, Bracknell, Broadholme, Bullays Hill, Bury St Edmunds, Camberley, Chalton, Chertsey, Cholsey, Corby, Fleet, Great Billing, Halstead, Hartley Wintney, High Wycombe, Horwich, Little Marlow, London (Maple Lodge), Louth, Magherafelt, Maidenhead, Milltown, Moygashel, Oakham, Oxford, Pangbourne, Princes Risborough, Reading, Sandhurst, Seago, Settle, Shenfield, Silchester, Slough, Swindon, Tandragee, Thame, Walbutts, Wargrave, Weybridge, Whilton, Windsor, Wokingham

<sup>47</sup> Buckingham, Diss, Dunstable, Leighton Linlade



**Table 1-82: UK agglomerations discharging into sensitive areas for which the treatment capacity is considered insufficient to comply with the Directive**

No.	Agglomeration	Generated load (2002)	Organic design capacity	UK comments <sup>48</sup>
1	Bullays Hill	75 466	47 625	See footnote <sup>49</sup>
2	Seagoe	40 601	14 497	Upgrade in 2007
3	Tandragee	11 500	4 625	Upgrade in 2004

**Table 1-83: Treatment level in UK agglomerations discharging into sensitive areas designated in 1994<sup>50</sup>**

UK	Treatment level in agglomerations of more than 10 <sup>0</sup> 000 p.e. discharging into sensitive areas			
	Number	%	Generated load [p.e.]	%
01/01/2002				
Total	88	100.0	6 159 875	100.0
More stringent treatment	86	97.7	6 135 775	99.6
<i>but missing treatment steps (see text above)</i>	61	69.3	4 404 042	71.5
<i>but insufficient treatment capacity</i>	3	3.4	127 567	2.1
Not in compliance*	63	71.6	4 428 142	71.9
In compliance	25	28.4	1 731 733	28.1

\* Including incomplete more stringent treatment and insufficient treatment capacity of plants, taking into account possible overlaps of both shortcomings

### 1.15.3. Agglomerations reported as discharging into normal areas

#### 1.15.3.1. Comparison of data for the 3rd and 4th Commission reports

For the 3rd Commission report, UK reported (for the year 2000) 618 agglomerations with a load of more than 15 000 p.e. discharging into normal areas. 551 of them (or 89% of the total load) were reported to be equipped with secondary treatment.

For the 4th Commission report, UK reported (for the year 2001) 610 agglomerations with a load of more than 15 000 p.e. discharging into normal areas. 571 of them (or 93% of the total load) were reported to be equipped with secondary treatment (see Table 1-84).

<sup>48</sup> According to the communication of the UK authorities (in April 2003 and 2004) to the Commission providing comments on the third and fourth Commission reports (ref. A(2004) 522051)

<sup>49</sup> The discharge point for Bullays Hill has been changed and allows for a less stringent effluent standard than originally applied, but one which still complies with the requirements of UWWT Directive. This has allowed the loading capacity of the works to increase from the original design without a significant environmental impact in the interim period.

<sup>50</sup> This table is the corrected version of the Table 11-76 of the third Commission report

**Table 1-84: Agglomerations reported by UK as discharging into normal areas: Comparison of the data for years 2000 and 2001**

UK	Number of agglomerations		Generated load [p.e.]	
	2000	2001	2000	2001
<b>Total</b>	<b>618</b>	<b>610</b>	<b>65 980 345</b>	<b>60 691 881</b>
Secondary treatment	551	571	58 816 918	56 533 926
Information <u>not</u> available	0	1	0	139 825
Treatment <u>not</u> in compliance with secondary treatment requirements	67	38	7 163 427	4 018 130

The most important differences in changes of the loads of agglomerations in 2000 and 2001 are provided in Table 1-85.

**Table 1-85: UK agglomerations causing significant changes (between 2000 and 2001) of total number and total generated load discharging into normal areas**

Nat. Ref.	Agglomeration	Comment*	Consequences for 2001 evaluation (in comparison with the evaluation carried out for the 3rd Commission Report for 2000)
UK118	Baglan Outfall	Closed in 2000, flows transferred to Afan works (UK104)	Not considered anymore as individual agglomeration
UK127	Barry West	Flow transferred to Cog Moor (UK232) in February 2001	Not considered anymore as individual agglomeration
UK721	Blandford Forum	Reported for the year 2001 for the first time to be above 15 000 p.e.	Now to be considered under Article 4
UK718	Bodmin	Reported for the year 2001 for the first time to be above 15 000 p.e.	Now to be considered under Article 4
UK174	Broadstairs	Incorrect load reported in 2000	Change of load: 120,000 → 29,707 p.e.
UK195	Campbeltown	Earlier p.e. included waste water from a creamery. Now discharged separately	6 010 p.e.; not falling under the Directives requirements for Article 4
UK200	Cardiff (Central)	Flow transferred to Cardiff sewage works (UK201).	Not considered anymore as individual agglomeration
UK199	Cardiff (East)	Flow transferred to Cardiff sewage works (UK201).	Not considered anymore as individual agglomeration
UK214	Chepstow Agglomeration	Flow transferred to Nash works (UK479) by March 2001	Not considered anymore as individual agglomeration
UK733	Donaghadee	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK737	Fraserburgh	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK338	Greenfield	Incorrect load reported in 2000	Change of load: 33,066 → 9,585 p.e.; not falling under the Directives requirements for Article 4
UK377	Hull West	Flows transferred to Hull (UK376)	Not considered anymore as individual agglomeration
UK722	Leeming Bar	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK734	Limavady	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK727	Little Aston	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK165	Middlesborough	Incorrect load reported in 2000	Change of load: 1,600,000 → 1,168,279 p.e.
UK461	Milford Haven	Incorrect load reported in 2000	Change of load: 137,987 → 13,798 p.e.; not falling under the Directives requirements for Article 4
UK738	Peterhead	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK528	Plymouth (St Levan	Flow transferred to Plymouth Central	Not considered anymore as individual

Nat. Ref.	Agglomeration	Comment*	Consequences for 2001 evaluation (in comparison with the evaluation carried out for the 3rd Commission Report for 2000)
	Road)	(UK530) in July 2001	agglomeration
UK529	Plymouth (West Hoe)	Flow transferred to Plymouth Central (UK530) before 2001	Not considered anymore as individual agglomeration
UK290	Portsmouth (Eastney)	Flows transferred to Budds Farm (UK181) in October 2001. Site now a pumping station	Not considered anymore as individual agglomeration
UK552	Rhymney Valley	Flow transferred to Cardiff sewage works (UK201).	Not considered anymore as individual agglomeration
UK575	Saltash	Flows transferred to Ernesettle works (UK526)	Not considered anymore as individual agglomeration
UK587	Selby	Incorrect load reported in 2000	Change of load: 255,684 → 25,976 p.e.
UK730	Shepshed	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK720	St Austell	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK729	Stone	Reported for the year 2001 for the first time to be above 15,000 p.e.	Now to be considered under Article 4
UK629	Swinton	Incorrect load reported in 2000	Change of load: 130,370 → 17,339 p.e.
UK648	Treborth Bangor	Incorrect load reported in 2000	Change of load: 850,000 → 34,091 p.e.
UK667	Wantage	Incorrect load reported in 2000	Change of load: 74,134 → 24,800 p.e.
UK667	Wester Valley	Flow transferred to Cardiff sewage works (UK201)	Not considered anymore as individual agglomeration
UK685	Whitchurch	Incorrect load reported in 2000	Change of load: 105,361 → 17,416 p.e.
UK731	Whitewall Creek	Reported for the year 2001 for the first time to be above 15 000 p.e.	Now to be considered under Article 4
UK706	Woodhouse Mill	Incorrect load reported in 2000	Change of load: 573,489 → 151,208 p.e.
UK707	Woolacombe Sea Outfall	Load less than 15,000 p.e.	Not falling under Article 4

\* Ref. Communication by UK authorities to the Commission with comments on the 3rd and 4th Commission reports and updates on data/information (dated of 25/04/2003 and 08/04/2004;A(2004) 522051)

### 1.15.3.2.Receiving areas

According to the Commission, 416 out of the 610 agglomerations were discharging into potentially sensitive areas, sensitive areas or catchment areas of sensitive areas, and therefore required more stringent treatment level (see Table 1-86).

**Table 1-86: Receiving areas of agglomerations and UWWTPs reported by UK as discharging into normal areas (reported year 2001)**

UK - receiving areas	Agglomerations			UWWTPs		
	Number of agglomerations	Generated load [p.e.]	% of load	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
Normal areas (NA)	194	17 883 937	29	181	18 782 580	29
Potentially sensitive areas (PSA)	275	33 866 152	56	273	36 082 029	57
Sensitive areas (SA) and catchment of sensitive areas (CSA)	141	8 941 792	15	141	8 947 188	14
Localisation not possible due to missing coordinates	0	0	0	0	0	0
Total	610	60 691 881	100	595	63 811 797	100

### 1.15.3.3. Treatment levels and monitoring results in agglomerations reported as discharging into normal areas

#### **Part A - Normal areas: treatment levels and monitoring results**

This evaluation refers to the 194 agglomerations (and their 181 UWWTPs) which were discharging into 'real' normal areas by 31 December 2001 and therefore required secondary treatment (see Table 1-86).

#### **UWWTPs: treatment levels and monitoring results**

172 out of the 181 UWWTPs (representing 94% of the total capacity) had required secondary or more stringent treatment and 125 (representing 62% of the total capacity) had monitoring results in compliance with the secondary treatment requirements. Nine UWWTPs were provided only with primary treatment and for ten UWWTPs<sup>51</sup> no monitoring results were available (see Table 1-87).

**Table 1-87: Treatment levels and monitoring results of UK UWWTPs discharging into normal areas (reported year 2001)**

UK – normal areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year 2001)</b>	<b>181</b>	<b>18 782 580</b>	<b>100</b>
More stringent treatment	32	3 551 120	19
Secondary treatment	140	13 995 720	75
Primary treatment	9	1 235 740	7
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	125	11 601 581	62
Monitoring results not in compliance with secondary treatment requirements	46	6 340 845	34
Monitoring results not available	10	840 154	4

#### **Agglomerations: treatment levels and monitoring results**

169 out of the 194 agglomerations (or 80% of the total load) had required secondary treatment or partial more stringent treatment and 125 (or 60% of the total load) had monitoring results in compliance with the requirements for the secondary treatment (BOD<sub>5</sub> and COD) (see Table 1-88).

13 agglomerations did not have any waste water treatment (see Table 1-89).

<sup>51</sup> Clacton (Holland Haven), Swinstie, Cromer (West Runton), Cumbernauld Deerdykes STW, Ingoldmells, Jaywick, Lowestoft, Mundesley, Whitehaven and Workington

**Table 1-88: Treatment levels and monitoring results in UK agglomerations discharging into normal areas (reported year 2001)**

UK – normal areas	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2001)</b>	<b>194</b>	<b>17 883 937</b>	<b>100</b>
More stringent treatment	31	2 593 101	14
Secondary or partial more stringent treatment	138	11 723 871	66
Primary or partial secondary treatment	12	2 489 874	14
No treatment or preliminary treatment only	13	1 077 091	6
Information about treatment level not available	0	0	0
Monitoring results in compliance with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	125	10 654 538	60
Monitoring results not in compliance with secondary treatment requirements	58	6 686 807	37
Monitoring results not available	11	542 592	3

**Table 1-89: UK agglomerations discharging into normal areas without any waste water treatment (or equipped with preliminary treatment only) (reported year 2001)**

No.	National reference	Agglomeration	Generated load [p.e.]	Completion date for secondary treatment level
1	UK172	Bangor	92 414	28/2/2009
2	UK144	Bideford/Northam	28 259	1/1/2003
3	UK174	Broadstairs	29 707	30/4/2007
4	UK183	Bulverhythe (East Hastings, Bexhill)	110 309	31/12/2002
5	UK193	Camborne / Redruth	56 876	31/12/2002
6	UK201	Cardiff	440 927	31/3/2002
7	UK733	Donaghadee	33 600	31/5/2010
8	UK325	Gibraltar	30 000	31/12/2002
9	UK408	Kirkwall	17 287	31/12/2002
10	UK416	Larne	15 050	30/9/2005
11	UK450	Margate	66 221	30/4/2007
12	UK644	Paignton/ Brixham	94 000	31/8/2002
13	UK368	Torquay	62 441	31/12/2003

**Part B - Sensitive areas, catchment areas of sensitive areas and potentially sensitive areas: treatment levels and monitoring results**

This part of the evaluation concerns those 416 agglomerations and their 414 UWWTPs (see Table 1-86) (reported for the year 2001) which require, according to the Commission's opinion, more stringent treatment.

**UWWTPs: treatment levels and monitoring results**

17 out of the 414 UWWTPs (representing 3% of the total capacity) had the required more stringent treatment, 388 UWWTPs (representing 96% of the total capacity) had secondary treatment and 340 UWWTPs (representing 73% of the total capacity) had monitoring results

satisfying treatment requirements for parameters BOD<sub>5</sub> and COD. Eight UWWTPs had primary treatment only, no information was available for the Langford Recycling Plant (see Table 1-90).

**Table 1-90: Treatment levels and monitoring results of UK UWWTPs discharging into areas requiring more stringent treatment level (reported year 2001)**

UK - sensitive areas, catchment of sensitive areas and potentially sensitive areas	Number of UWWTPs	Organic design capacity [p.e.]	% of organic design capacity
<b>Reported UWWTPs (reported year 2001)</b>	<b>414</b>	<b>45 029 217</b>	<b>100</b>
More stringent treatment	17	1 321 244	3
Secondary treatment	388	43 358 108	96
Primary treatment	8	349 865	1
Information about treatment level not available	1	0	0
Monitoring results in line with the secondary treatment requirements for parameters BOD <sub>5</sub> , COD	340	32 667 944	73
Monitoring results not in line with the secondary treatment requirements	67	11 551 774	26
Monitoring results not available	7	809 499	2

### **Agglomerations: treatment levels and monitoring results**

17 out of the 416 agglomerations (representing 3% of the total generated load) had more stringent treatment, 385 agglomerations (having 96% of the total load) had secondary treatment and 340 agglomerations (representing 71% of the total generated load) had monitoring results in line with the requirements for secondary treatment for parameters BOD<sub>5</sub> and COD (see Table 1-91). Two agglomerations of Prestatyn and Portrush did not have any waste water treatment.

**Table 1-91: Treatment levels and monitoring results of UK agglomerations discharging into areas requiring more stringent treatment level (reported year 2001)**

UK	Number of agglomerations	Generated load [p.e.]	% of generated load
<b>Reported agglomerations (reported year 2001)</b>	<b>416</b>	<b>42 807 944</b>	<b>100</b>
More stringent treatment	17	1 222 774	3
Secondary or partial more stringent treatment	385	40 994 180	96
Primary or partial secondary treatment	11	401 708	1
No treatment or preliminary treatment only	2	49 457	0
Information about treatment level not available	1	139 825	0
Monitoring results in line with secondary treatment requirements for parameters BOD <sub>5</sub> , COD	340	30 410 579	71
Monitoring results not in line with secondary treatment requirements	69	11 596 167	27
Monitoring results not available	7	801 198	2

#### 1.15.3.4. Conclusions

According to the Commission, 424 out of the 610 agglomerations reported as discharging into normal areas (representing 74% of the total load) did not comply with the treatment level requirements of the Directive by 31 December 2001. From those 424: 25 were discharging

into normal areas and 399 discharging into sensitive, potentially sensitive areas and their catchments.

465 out of the 610 agglomerations had monitoring results for the year 2001 according to the requirements for the secondary treatment for parameters BOD<sub>5</sub> and COD.

As UK authorities do not agree with the Commission's position on further designation of sensitive areas (i.e. here so called potentially sensitive areas) they consider that, by 31 December 2001, about 95% of agglomerations with a load of more than 15 000 p.e. discharging into normal areas were compliant with the Directive requirements and, moreover, that, by 31 December 2003, this rate had increased up to 98%. However, according to the Commission opinion the compliance of those 610 reported agglomerations with the Directive requirements was only about 26%.

#### *1.15.4. Waste water treatment in big cities*

##### 1.15.4.1. Evaluation results of big cities

By 31 December 2002, UK reported 92 big cities (agglomerations and group of agglomerations forming big city with a generated load of more than 150 000 p.e.).

12 cities were discharging into sensitive areas and should therefore have had more stringent treatment:

- Milton Keynes had total nitrogen and total phosphorus removal
- Nine big cities of Coventry, Bedford, Corby, Oxford, Reading, Swindon, Wellingborough, Northampton and Rickmansworth had total phosphorus removal
- Belfast had total nitrogen removal
- Derby had secondary treatment only
- Four cities (Fareham/Gosport, Hertford, Stourbridge and Wolverhampton) were discharging into the catchment areas of sensitive areas and had secondary treatment. According to the Commission, they should have been equipped with more stringent treatment level.
- 49 cities were discharging into potentially sensitive areas, and should therefore have had more stringent treatment:
  - Swansea had more stringent treatment (hygienisation of waste water)
  - 48 cities had secondary treatment only: London, Birkenhead, Birmingham, Blackburn, Blackpool/Fleetwood, Bolton, Bradford, Burnley, Burton on Trent, Bury, Cambridge, Chesterfield, Dewsbury, Ellesmere Port, Gloucester, Great Yarmouth, Grimsby, Halifax, Hayling Island, Havant, Waterlooville, Huddersfield, Hull, Hyndburn, Kings Lynn, Leeds, Leicester, Littlehampton/Bognor, Liverpool, Manchester/Salford, Mansfield, Norwich, Nottingham, Oldham, Peterborough, Poole, Portsmouth, Preston, Rochdale,

Sheffield, Slough, St Helens, Stockport, Stoke on Rrent, Tilbury, Warrington, Widnes<sup>52</sup>, Wigan, Wisbech and York.

- 27 cities were discharging into normal areas and should therefore have had secondary treatment :
  - 24 cities had secondary treatment or more stringent treatment: Bournemouth, Edinburgh and Levenmouth (more stringent treatment), Aberdeen (partial more stringent treatment), Bridgend, Bristol, Gillingham, Glasgow, Middlesborough, Newcastle upon Tyne, Paisley, Plymouth, Port Talbot, Southend on Sea, Sunderland/Whitburn, Cardiff, Kilmarnock/Irvine, Chepstow Agglomeration, Newport, Eastbourne, Dover/Folkstone, Sandown, Worthing and Hastings.
  - Three cities had primary treatment or partial secondary treatment only: Brighton, Dundee, and Torbay.

#### 1.15.4.2. Conclusions

Compared to the 3rd Commission report, the waste water treatment situation has improved in several big cities between 2001 and 2002.

For example, among the five big cities which had no waste water treatment in 2001, the cities of Hastings, Kilmarnock/Irvine and Levenmouth had required secondary treatment, and the cities of Brighton and Torbay had primary (or preliminary) treatment (but still have to be upgraded to complete secondary treatment level).

By 31 December 2002, 56 (out of the 92 big cities) still needed to be upgraded to the required treatment level.

#### **LAST UPDATES – 2004-2007**

- During 2002-2006 according to the available information, the UK authorities put some efforts installing secondary treatment in about 25 agglomerations discharging into normal areas.
- However the question about further designation of sensitive areas (i.e. so called potentially sensitive areas) has not been solved yet that concerns about 400 agglomerations (having in total the generated load of about 50 million p.e.) which, according to the Commission, have to be upgraded from secondary to more stringent treatment level in order to fight eutrophication especially in coastal waters.
- On 25/01/2007 the European Court of Justice condemned the United Kingdom for failing to fulfil its obligations under Articles 3 and 4 of the Directive for not taking measures necessary to ensure urban waste water collection and secondary treatment in the agglomerations of Bangor, Brighton, Broadstairs, Carrickfergus, Coleraine, Donaghadee, Larne, Lerwick, Londonderry, Margate, Newtownabbey, Omagh and Portrush by 31 December 2000 at the latest.

<sup>52</sup> Widnes was reported by UK for the third report for the year 2000 with a generated load of 151 305 p.e., but for the fourth report for the year 2001 - with 96 056 p.e. only



## 2. INFRINGEMENTS

Pursuant to Article 226 of the EC Treaty, the Commission may open an infringement procedure against Member States, which have failed to meet their obligations under the Directive.

If a case has been decided by the European Court of Justice, the Member State concerned has to start with the implementation of the judgement immediately and achieve compliance very soon. If a Member State fails to do so, Article 228 of the Treaty empowers the Commission to act against it. The Article also empowers the Commission to request the Court to impose a financial penalty on the Member State concerned.

Since 1994, the Commission has sent 47 reasoned opinions in the framework of infringement procedures under Article 226 of the EC Treaty related to the Urban Waste Water Treatment Directive. 17 further cases were closed due to major improvements of the implementation by the Member States concerned.

On 31 December 2006, 22 (out of 30) infringement procedures against Member States were pursued in the field of the Urban Waste Water Treatment Directive exclusively. A further eight infringement procedures include the UWWTD together with other Directives. Out of the 22 “exclusive” cases:

- Four have resulted in an opening Article 228 cases following sentence by the European Court of Justice against Belgium (including the city of Brussels), France (including Paris), Greece (Elefsina) and Spain (Vera).
- Four cases were pending before the Court: Greece, Ireland, UK and Italy (Varese).
- For seven cases, against Portugal (four cases including Estoril coast), Finland, Sweden (lack of nitrogen removal), UK (lack of designation of sensitive areas), a Court application was decided, but not lodged yet.
- Seven cases were at the stage of reasoned opinion (EL, ES, IR(2), IT, NL, P).

In addition eight further cases had not yet reached the stage of reasoned opinion.

The Commission initiated the ongoing infringement procedures either on the basis of complaints by European citizens or on its own initiative. The cases on ‘own initiative’ are so called horizontal cases and concern significant implementation shortcomings in the entire territory of the Member State. They concern (a) lack of identification of sensitive areas, (b) lack of required collecting systems and treatment, (c) failure to comply with the reporting obligations. Infringement procedures in relation to the deadline of 31 December 2000, which affects agglomerations in normal areas, have been also launched. In summary there are 12 so-called horizontal ‘sensitive area’ cases related to the deadlines of 1993 and 1998 of the Directive, and 7 horizontal ‘normal area’ cases related to deadline 2000. The status and development of these cases in each Member State are different.

The list of Court judgements and Table 2-1 summarises the situation for each Member State.

ECJ judgements of relevance to Directive 91/271/EEC:

1. Case C-161/95, Commission v Greece, judgement of ECJ 1996-03-28
2. Case C-297/95, Commission v Germany, judgement of ECJ 1996-12-12
3. Case C-302/95, Commission v Italy, judgement of ECJ 1996-12-12
4. Case C-307/98, Commission v Belgium, judgement of ECJ 2000-05-25
5. Case C-236/99, Commission v Belgium, judgement of ECJ 2000-07-06
6. Case C-427/00, Commission v UK, judgement of ECJ 2001-11-13
7. Case C-396/00, Commission v Italy, judgement of ECJ 2002-04-25
8. Case C-280/02, Commission v France, judgement of ECJ 2004-09-23
9. Case C-419/01, Commission v Spain, judgement of ECJ 2003-05-15
10. Case C-119/02, Commission v Greece, judgement of ECJ 2004-06-24
11. Case C-27/03, Commission v Belgium, judgement of ECJ 2004-07-08
12. Case C-191/04, Commission v France, judgement of ECJ 2005-06-16
13. Case C-282/02, Commission v Ireland, judgement of ECJ 2005-06-02
14. Case C-121/03, Commission v Spain, judgement of ECJ 2005-09-08
15. Case C-452/05, Commission v Luxembourg, judgement of ECJ 2006-11-23
16. Case C-293/05, Commission v Italy, judgement of ECJ 2006-11-30
17. Case C-405/05, Commission v UK, judgement of ECJ 2007-01-25

**Table 2-1: Main obligations of the Urban Waste Water Treatment Directive (91/271/EEC) and their implementation by Member States as of 31 December 2006**

Member State	B	DK	D	EL	ES	F	IR	I	L	NL	Ö	P	SF	S	UK
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
National legislation in place (Art.19)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Implementation programmes communicated (Art.17)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Identification of sensitive areas (Art.5(1))	•	•	+	+	+	+	+	+	• <sup>2</sup>	• <sup>2</sup>	•	+	• <sup>1</sup> +	• <sup>1</sup> +	+
Identification of less sensitive areas (option) (Art.6)					+							+			
General compliance of waste water collection and treatment in sensitive areas (deadline 31/12/1998) (Art.3 and 5 – in the entire territory of the MS)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Infringement procedure for failure to meet 1998 deadline in relation to an individual agglomeration (Art.3 and 5 – in single parts of the territory of the MS)															
Waste water collection and treatment in normal areas (deadline 31/12/2000). (Art.3 and 4 - in the entire territory of the MS)	•	•	+	+	+	+	+	+	•	•	•	+	•	•	+
Infringement procedure for failure to meet 2000 deadline in relation to an individual agglomeration (Art.3 and 4 – in single parts of the territory of the MS)															
Prior regulations or specific authorisations for industrial discharges (Art.11 and 13)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Disposal of sewage sludge regulated (Art.14)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Reporting obligations fulfilled (Art.15)	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Explanations:

- + = exercise performed by the MS but not necessarily checked and approved by the Commission
- = whole territory identified as sensitive or application of more stringent treatment all over the territory (Art. 5.8)
- <sup>1</sup> = application of Article 5(8) only for P-removal
- <sup>2</sup> = application of Article 5(4)

Shaded areas:  Infringement procedure ongoing. This includes situations where an exercise by the MS was incorrectly performed.

