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**PART 2/2** 

## COMMISSION STAFF WORKING DOCUMENT Accompanying the document

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Ninth Report on the implementation status and the programmes for implementation (as required by Article 17) of Council Directive 91/271/EEC concerning urban waste water treatment

{COM(2017) 749 final}

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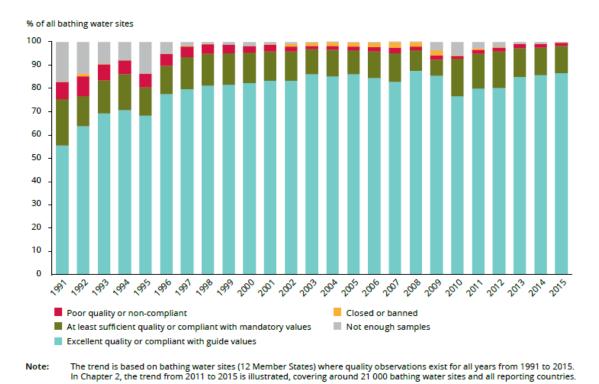
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# 2. Contribution by the UWWTD to the implementation of other directives

The Urban Waste Water Treatment Directive (UWWTD) has contributed substantially to improving water quality in surface waterbodies with regard to microbiological pollution, and also chemical parameters such as biological oxygen demand (BOD<sub>5</sub>), ammonium or orthophosphates.

#### 2.1. Bathing Water Directive

The graph below shows the positive results from the implementation of the urban waste water policy in Europe as regards bathing water quality. Bathing waters deemed to be of excellent quality have substantially increased, but the insufficient management of storm water sewage overflows in some municipalities remains the reason for certain bad results. The ongoing projects to improve the implementation of the UWWTD during exceptional rain events will help to reduce the remaining instances of non-compliance.



available at http://www.eea.europa.eu/data-and-maps/data/bathing-water-directive-status-of-bathing-water-8.

WISE bathing water quality database (data from annual reports by EU Member States). Detailed data on bathing water quality are

Bathing water quality for 9 594 bathing water sites<sup>1</sup>

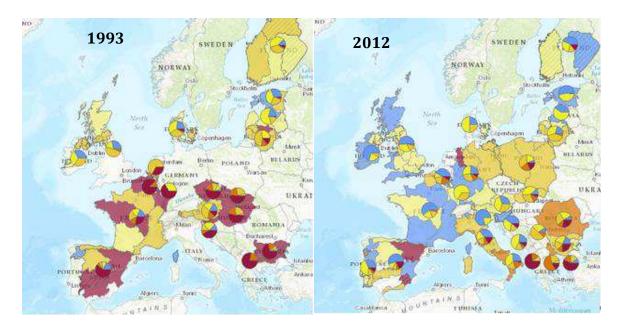
Source:

<sup>1</sup> Page 10 of the European bathing water quality report in 2015 — EEA Report No 9/2016.

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#### 2.2. Quality of waters in rivers

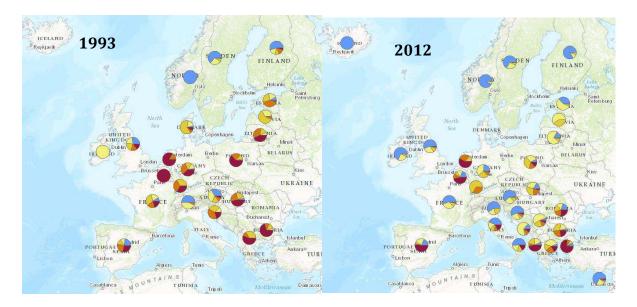
As regards the river quality in Europe there is clearly a positive impact, as shown by the evolution of parameters such as BOD<sub>5</sub>, ammonium and orthophosphate. Untreated waste water is an important source of emissions of these parameters in rivers. Therefore, it is necessary for each new urban waste project to check if the basic requirements of the Directive are sufficient to contribute to maintaining the good ecological and chemical status of the receiving water bodies. Agglomerations that are already in compliance with the Directive's basic requirements, but which still contribute to the deterioration of water quality, will have to implement complementary measures to reduce emissions.



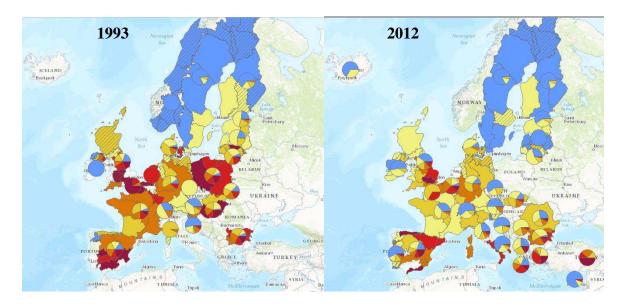
BOD water quality evolution between 1993 and 2012 — EEA mapviewer<sup>2</sup>

<sup>2</sup> http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/wise-soe-bod-in-rivers

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Ammonium water quality evolution between 1993 and 2012<sup>3</sup> — EEA mapviewer



Orthophosphate water quality evolution between 1993 and 2012<sup>4</sup> — EEA mapviewer

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<sup>&</sup>lt;sup>3</sup> http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/wise-soe-ammonium-in-rivers.

<sup>&</sup>lt;sup>4</sup>http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/wise-soe-orthophosphate-in-rivers

### 3. Information on legal procedures

### 3.1. Infringement cases since 2015

Table 1 — EU-15Member States: Main horizontal infringement cases opened and related Court judgments, where applicable<sup>5</sup>

| CASES RELAT equivalents) | ED TO LARGE T | OWNS/CITIES (above 10 000 or 15 000 population            |
|--------------------------|---------------|---|
| Case number <sup>6</sup> | Member State  | Court Ruling and related date (if applicable)             |
| 1999/2030                | BE            | 08/07/2004 (C-27/03)<br>17/10/2013 (C-533/11) (Art 260)   |
| 2002/2123                | ES            | 10/03//16 (C-38/15)                                       |
| 2002/2125                | LU            | 23/11/2006 (C-452/05)<br>28/11/2013 (C-576/11) (Art 260)  |
| 2002/2128                | PT            | 8/09/2011 (C-220/10)                                      |
| 2002/2130                | SE            | 06/10/2009 (C-438/07)                                     |
| 2004/2030                | EL            | 25/10/2007 (C-440/06)<br>15/10/2015 (C-167/14) (Art. 260) |
| 2004/2031                | ES            | 14/04/2011 (C-343/10)                                     |
| 2004/2032                | FR            | 07/11/2013 (C-23/13)                                      |
| 2004/2035                | PT            | 07/05/2009 (C-530/07)<br>22/06/2016 (C-557/14) (Art. 260) |
| 2004/2034                | IT            | 19/07/2012 (C-565/10)                                     |
| 2009/2034                | IT            | 10/04/2014 (C-85/13)                                      |

<sup>&</sup>lt;sup>5</sup> Information updated on 10 April 2017. <sup>6</sup> The case number refers to the reference number attributed by the European Commission to each infringement case.

| CASES RELATE             | D TO SMALL      | AND LARGE AGGLOMERATIONS                                       |
|--------------------------|-----------------|--|
| Case number <sup>7</sup> | Member<br>State | Court ruling and related date (if applicable)                  |
| 2009/2304                | BE              | 6/11/2014 (C-395/13)   |
| 2009/2306                | FR              | 23/11/2016 (Case C-314/15)                                     |
| 2009/2309                | PT              | 28/01/2016 (Case C-398/14)                                     |
| 2009/2310                | SE              | Pending  |
| 2011/2027                | EL              | Pending before the Court (Case C-320/15) Referral to the Court |
| 2012/2100                | ES              | Pending  |
| 2013/2056                | IE              | Pending  |
| 2013/2055                | UK              | Pending before the Court (Case C-502/15) Referral to the Court |
| 2014/2059                | IT              | Pending  |
| 2016/2134                | ES              | Pending  |

## 3.2. Court rulings since 2016

Table 2 — Court rulings since 2016, including information on fines and penalty payments where applicable<sup>8</sup>

| MS                | Ruling<br>number | Date of issuance | Hyperlink to ruling           | Information on fines and penalty payments, where relevant                            |
|-------------------|------------------|------------------|-------------------------------|--|
| Portugal          | C-398/14         | 28/01/2016       | Commission versus<br>Portugal |  |
| Portugal          | C-557/14         | 22/06/2016       | Commission versus Portugal    | Article 260 TFEU: The fine imposed was EUR 8 000 per day and EUR 3 million lump sum. |
| Spain             | C-38/15          | 10/03/2016       | Commission versus Spain       |  |
| France            | C-314/15         | 23/11/2016       | Commission versus<br>France   |  |
| United<br>Kingdom | C-502/15         | pending          |                               |  |
| Greece            | C-320/15         | pending          |                               |  |

 $<sup>^{7}</sup>$  The case number refers to the reference number attributed by the European Commission to each infringement

case.  $^8$  Information updated on 10 April 2017. Only the Court rulings issued since the publication of the eighth Implementation Report are listed in Table 2.

## 4. Information on Article 17

| The state of the s | -   |   | and the second   |  |  | Czech   |  |   |  |   |  |                   |                          |  | 1  |
|--|---|---|--|--|--|---|--|---|--|---|--|-------------------|--------------------------|--|--|
| OWWIDAL LASSESSITE IT ASSESSMENT   | Pinsny  | IIInisiaa   | puigalia   | GOSTIA   | cypius   | Republic  | Denillair  | Estonia   | Limand   | rialice   | Germany  | anaann            | nungary                  | neand  | Italy  |
| Number of collecting system and IAS works planned (expired deadlines) 2016>  |   | q   | 282  |  | q  |   |  | ٥   |  |   |  | 216               | 7/                       | п  | 2//9   |
| Number of WWTP works planned (expired deadlines) 2016>   |   | 11  | 268  |  | 10   | 5   |  | 2   | 9  | 102   |  | 42                | 28                       | 32   | 2,292  |
| Number of collecting system works planned (pending deadlines) 2016—>   |   |   |  | 275  | 0  |   |  |   |  |   |  |                   | 214                      |  |  |
| Number of WWTP works planned (pending deadlines) 2016>   |   |   |  | 261  | 0  |   |  |   |  | 2   |  |                   | 92                       |  |  |
| Load entering the planed UWWTP (p.e.)  |   | 38,990  | 5,547,693  | 6,963,120  | 375,067  | 1,593,900   |  | 1,466   | 244,500  | 1,483,260   |  | 237,079           | 1,721,709                | 2,946,911  | 11,056,386   |
| Organic design capacity UWWTP (as planned) (p.e.)  |   | 45,560  | 5,547,693  | 6,963,120  | 422,117  | 1,710,800   |  | 2,120   | 270,000  | 1,759,067   |  | 448,128           | 2,279,736                | 3,544,880  | 18,701,403   |
| Forecast cost investment needed for the collecting system (as in the national plan) (million £)  |   | 80  | 1,932  | 2,021  | 285  |   |  | 55  |  |   |  | 1,486             | 7.1                      | 157  | 1,360  |
| Forecast cost investment needed for the UWWTP (as in the national plan) (million €)  |   | 24  | 613  | 880  | 210  | 27  |  | 1   | 26   | 71.7  |  | 82                | 36                       | 550  | 1,705  |
| Amount of (planned) EU funding needed for collecting systems (million £)   |   |   | 290  | 1338   | 20   | 11  |  | 45  |  |   |  | 1.335             | ca                       |  | 275  |
| Amount of (planned) EU funding needed for WWTP (million €)   |   |   | 68   | 583  | 41   | 11  |  | 1   |  | 19  |  | 75                | 72                       | 185  | 160  |
| Name of EU fund planned to be used   |   | BELloan   | COHESION   | COHESION<br>FUNDS  | 90   | ER DF/FS  |  | CF 2014-2020  |  | FEADER,<br>FEDER  |  | COHESION<br>FUNDS | Cohesion<br>fund EU fund | European<br>Investment<br>Bank Loan  |  |
| Past yearly investment collecting system (new and renewal) (million €)   | 262   | 216   | 211  | 67   | 15   | 185   | 456  | 38  | 132  | 2,678   | 1,925  | 101               | 318                      |  | 775  |
| Past yearly investment treatment plant (new and renewal) (million €)   | 46  | 156   | 129  | 19   | 6  | 115   | 228  | 16  | 48   | 1,582   | 866  | 81                | 192                      |  | 705  |
| Current yearly investment collecting system (new and renewal) (million £)  | 289   | 233   | 211  | 225  | 15   | 185   | 533  | 12  | 140  | 2,750   | 2,090  | 167               | 365                      | 100  | 774  |
| Current yearly investment treatment plant (new and renewal) (million €)  | 41  | 127   | 129  | 86   | Œ  | 116   | 266  | 5   | 52   | 1,550   | 788  | 133               | 26                       | 195  | 27.2   |
| Expected yearly investment collecting system (new and renewal) (million €)   | 283   | 244   | 276  | 225  | 49   | 187   | 533  | 13  | 146  | 2,750   | 2,090  | 167               | 365                      | 110  | 804  |
| Expected yearly investment treatment plant (new and renewal) (million €)   | 15  | 118   | 88   | 86   | 14   | 117   | 266  | 3   | 25   | 1,550   | 788  | 133               | 26                       | 208  | 1,014  |
| Evolution of the investments (PAST to CURRENT)   | Î   | Î   | Î  | 1  | 1  | Î   | 1  | 1   | 1  | Î   | 1  | 1                 | 1                        |  | 1  |
| Evolution of the investments (CURRENT to EXPECTED)   | 1   | î   | 4  | Î  | 1  | 1   | î  | î   | 1  | Î   | î  | î                 | î                        | 1  | î  |
| Method used for the calculation of current / expected investment   | PAST: average 2010-20 w (ratio 15% UWWHT 15% UWWHT 15% UWWHT 2015-2015 E. EVPT: average 2015-2016 | PAST: average 2010-2014 CUTS average 2015-2016 EXP: average 2015-2016 EXP: average along a sloon for the Belgium Region | PAST: average 20 8-20 W (previous) (previous | PAST:2013<br>CUR: average<br>2015-2023<br>EXPT: average<br>2015-2023 | P AST: average 201-2013 CU: 201 | PAST: 20 5<br>CUR 2016<br>EKPT: average<br>20 1-20 20 | PAST: average<br>2010-2014<br>CUIR average<br>2015-20 6<br>EXPGT: 20 9 | PAS T. average<br>20 to-crit<br>previous +current<br>previous +current<br>20 E-2016<br>EXIP: average<br>2017-2023 | PAST: average<br>2010-2014<br>CUR: average<br>2017-2020<br>2017-2020 | PAS<br>(mtb<br>(mtb<br>ique<br>ique<br>ique<br>ique<br>ique<br>ique<br>ique<br>ique | PAST. average<br>2008-2015<br>CUR. 2013<br>EXP. 2013 | 8 50 E 8 8        | A COLOS SERVOR           | PAST: 7<br>CUE: average<br>2014-2016 (last<br>reporting)<br>EXPT: average<br>2017-2021 | PAST: average<br>2015-2014<br>CUR, Average<br>2015-2016<br>2016-2010 |
| Total organic design capacity (p.e.) 2014)   | 21,310,558  | 10,534,523  | 8,822,593  | 4,023,135  | 1,298,999  | 15,382,786  | 11,467,823   | 1,700,647   | 6,400,000  | 93,594,092  | 147,593,580  | 13,990,584        | 13,976,178               | 5,196,118  | 102,846,752  |
| Total organic design capacity (p.e.) (expected)  | 22,274,420  | -   | 10,101,221   | 7,658,570  | 1,721,116  | 15,507,000  | 11,307,100   | 1,717,136   | 7,100,000  | 93,594,092  | 151,831,032  | 15,000,000        | 13,976,178               | 6,937,303  | 103,018,376  |
| Generated load agglomerations  | 20,408,871  | 9,209,400   | 8,085,615  | 5,026,227  | 000'566  | 7,701,010   | 11,612,545   | 1,654,546   | 5,373,100  | 71,820,261  | 109,232,961  | 11,790,586        | 11,694,647               | 5,255,765  | 77,422,701   |
| IAS agg lomeration   | 138,055   | 0   | 5,371  |  | 16,222   | 521,405   | 0  | 41,429  | 0  | 0   | 2,007,705  | 1,221,239         | 1,483,644                | 262,788  | 3,385,253  |
| Discharged without treatment before connection   | 0   | 20,463  | 1,277,950  |  | 240,650  | 0   | 0  | 8,410   | 0  | 0   | 0  | 0                 | 0                        | 0  | 577,726  |
| Total load entering (2014)   | 13,911,535  | 9,188,937   | 6,789,381  |  | 738,128  | 9,352,356   | 11,612,545   | 1,195,858   | 5,373,100  | 71,644,776  | 107,097,681  | 10,547,796        | 10,200,443               | 5,255,765  | 73,474,063   |
| Ratio load entering the planned UWWTP/total generated load   | 960:0   | 0.5%  | 68.6%  | 138.5%   | 37.7%  | 20.7%   | 960'0  | 0.1%  | 4.6%   | 2.1%  | 960:0  | 2.0%              | 14.7%                    | 56.1%  | 14.3%  |
| Primary  |   |   |  | 22   |  |   |  |   |  | 1   |  |                   | 1                        |  |  |
| secondary  |   | m   | 219  | 159  | 1  |   |  |   |  | 47  |  | 1                 | 98                       | 11   |  |
| More stringent nitrogen  |   | 7   |  |  |  | 2   |  |   |  | 9   |  |                   | 20                       | 3  |  |
| More stringent phosphorus  |   |   |  |  |  |   |  |   | 1  | 5   |  |                   | 2                        | 6  |  |
| More stringent microbiology  |   |   |  |  | 6  | 3   |  |   |  | 3   |  | 3                 |                          |  |  |
| More stringent nitrogen phosphorus   |   | 1   | 51   | 85   |  |   |  | 2   | 2  | 38  |  |                   | 48                       | 7  |  |
| More stringent nitrogen phosphorus microbiology  |   |   |  |  |  |   |  |   |  | 9   |  | 11                |                          |  |  |
| More stringent nitrogen microbiology   |   |   |  |  |  |   |  |   |  |   |  | 25                |                          | 1  |  |
| More stringent phosphorus microbiology   |   |   |  |  |  |   |  |   |  | 1   |  |                   | æ                        | 1  |  |
| More stringent unknown or other  |   |   |  |  | 1  |   |  |   |  |   |  |                   | 10                       | 1  |  |
| TOTAL treatment  |   | 11  | 270  | 244  | 11   | 5   | 0  | 2   | 3  | 107   |  | 43                | 120                      | 33   |  |
| Population (million) (Eurostat 2014, Eurostat 2016)  | 8.7   | 11.3  | 7.2  | 4.2  | 0.8  | 10.6  | 5.7  | 13  | 5.5  | 9.99  | 82.2   | 10.8              | 9.8                      | 4.7  | 60.7   |
| ratio total investment/population PAST   | 35.4  | 33.0  | 47.5   | 23.4   | 27.9   | 28.4  | 119.8  | 41.4  | 32.8   | 64.0  | 35.6   | 16.9              | 51.9                     |  | 24.4   |
| ratio total investment/population CURRENT  | 37.8  | 31.9  | 47.5   | 77.1   | 52.5   | 28.5  | 140.0  | 12.5  | 34.8   | 64.6  | 35.0   | 27.8              | 47.0                     | 68.3   | 25.5   |
| ratio total investment/population EXPECTED   | 38.4  | 32.1  | 20.8   | 0.77   | 73.8   | 28.8  | 140.0  | 11.8  | 36.3   | 64.6  | 35.0   | 27.8              | 47.0                     | 0.79   | 30:0   |
|  |   |   |  |  |  |   |  |   |  |   |  |                   |                          |  |  |

| IIWWITD Article 17 accecment  | latvia   | lithuania  | Inxembourg                   | Maita   | Netherlands  | Poland   | Portugal  | Romania  | Slovakia   | Slovenia  | Snain   | Sweden  | United   | FU 28       | FU 15       | FU 13       |
|---|--|--|------------------------------|---|--|--|---|--|--|---|---|---|--|-------------|-------------|-------------|
| Number of collecting system and IAS works planned (expired deadlines) 2016 ->                   |  |  | 9                            | various   |  | 1,119  |   | 191  | 02   | 18  | 486   |   | Kingdom<br>5   | 3,209       | 1.417       | 1.792       |
| Number of WIMTD works about a denired deadlines 2015  | ~  |  | ~                            | ancinex   |  | 813  | 20  | -  | 103  | u   | 486   | 11  | 11   | 4.787       | 2000        | 1 230       |
| Multiple of www.rr works planned (expired oceanings) 2020—7                                     |  | Ī  | ,                            | 900   | T  | 9  | 3   | 1 542  | 200  | 3   | P   | :   | 4  | 2024        | c.          | 1,435       |
| Number of collecting system Works planned (pending) 2016>                                       | 20 1   |  |                              |   |  | 0  |   | /15/1  | 8 2  | 11  |   |   |  | 181,2       | 0           | 2,181       |
| Number of WW IP Works planned (pending deadlines) 2016>   | 6  |  |                              |   | 1  | -  |   | L,sus  | 37   | 07  |   |   |  | 777         | 5           | 1,172       |
| Load entering the planed UWWTP (p.e.)   | 276,284  | Ī  | 150,125                      |   | 1  | +  | 1,738,651   | 14,418,778   | 992,483  | 529,511   | 16,168,999  | 181,350   | 760,504  | 93,675,291  | 35,006,755  | 58,668,536  |
| Organic design capacity UWWTP (as planned) (p.e.)   | 346,322  |  | 470,000                      |   |  | 31,736,204   | 2,290,771   | 17,951,923   | 1,024,460  | 582,880   |   | 256,400   | 1,003,029  | 97,356,613  | 28,789,238  | 68,567,375  |
| Forecast cost investment needed for the collecting system (as in the national plan) (million €) | 64   |  | 219                          |   |  | 4,365  | 9   | 9,663  | 894  | 356   | 4,988   |   | 6,850  | 35,032      | 15,074      | 19,958      |
| Forecast cost investment needed for the UWWTP (as in the national plan) (million £)             | 0  |  | 88                           |   |  | 1,739  | 116   | 2,299  | 306  | 64  | 4,997   | 121   | 42   | 14,207      | 8,032       | 6,175       |
| Amount of (planned) EU funding needed for collecting systems (million €)                        |  |  |                              |   |  |  | 4   | 5,845  | 796  | 184   |   |   |  | 10,197      | 1,614       | 8,583       |
| Amount of (planned) EU funding needed for WWTP (million €)                                      |  |  |                              |   |  |  | 76  | 923  | 262  | 40  |   |   |  | 2,492       | 515         | 1,977       |
| Name of EU fund planned to be used  |  |  |                              |   |  |  | COHESION<br>FUNDS   | Cohesion<br>funds AND<br>European<br>Regional<br>Development<br>Fund                                 | Cohesion<br>funds AND<br>European<br>Regional<br>Development<br>Fund | COHESION<br>FUNDS AND<br>RD FUNDS                         |   |   |  |             |             |             |
| Past yearly investment collecting system (new and renewal) [million £]                          | 25   | 79   | 73                           | 7   | 974  | 1,198  |   | 1,075  | 19   | 77  |   |   | 844  | 11,810      | 8,436       | 3,373       |
| Past yearly investment treatment plant (new and renewal) (million €)                            | 10   | 28   | 20                           | 23  | 338  | 485  |   | 316  | 0  | 46  | 366   | 35  | 504  | 6,424       | 5,007       | 1,418       |
| Current yearly investment collecting system (new and renewal) (million €)                       | 52   | 18   | 62                           | 2   | 1,122  | 006  | 4   | 1,354  | 188  | 118   | 195   |   | 844  | 12,946      | 9,302       | 3,644       |
| Current yearly investment treatment plant (new and renewal) (million €)                         | 2  | 13   | 15                           | 2   | 238  | 407  | 46  | 420  | 0  | 91  | 295   | 20  | 504  | 6,457       | 5,044       | 1,413       |
| Expected yearly investment collecting system (new and renewal) (million €)                      | 21   | 28   | 93                           | 2   | 1,003  | 899  | 3   | 750  | 138  | 36  | 683   |   | 745  | 12,411      | 9,654       | 2,757       |
| Expected yearly investment treatment plant (new and renewal) (million £)                        | 0  | 10   | 43                           | 2   | 340  | 354  | 29  | 156  | 25   | 14  | 763   | 20  | 135  | 6,522       | 5,507       | 1,015       |
| Evolution of the investments (PAST to CURRENT)  | 1  | 1  | 1                            | 1   | î  | 1  | 7   | 1  | 1  | 1   | 1   |   | Î  | 1           | 1           | 1           |
| Evolution of the investments (CURRENT to EXPECTED)  | 1  | 1  | 1                            | 1   | Î  | 1  | 1   | 1  | 1  | 7   | 1   | Î   | 7  | 1           | 1           | 1           |
| Method used for the cakulation of current / expected investment                                 | PAST: average 100-2014 CUE: average 205-2016 EXPT: average | P AS T. average<br>2008-<br>20 ff (previous)<br>CUT & De 2015<br>EXP CT : average<br>2016-2018 | 204/2015average<br>2015-2016 | PAST: average<br>2009-2011<br>(previous)<br>CUIPPEENT:<br>average 2012-<br>2020 (previous)<br>EXPT : average<br>2016-2020 | Ave age 2010-<br>2012average 2016-<br>2015average 2015 n<br>2020 | 2010-2012<br>(previous<br>reporting) / 2013-<br>2015 (previous<br>reporting) / 2015-<br>reporting) | PAST: Average<br>2002-2012<br>CU: 2015-2016<br>EXPT: 2017- 2018 | AST: Average<br>2010-2014<br>CUR: ave rage<br>2015-<br>2015 (previous)<br>EXPT: average<br>2017-2023 | PAST: Average<br>2002-2012<br>CUL 2013-2015<br>EXPT: 2015- 202       | PAST: Average<br>2010-2014<br>CJ. 2015<br>EXPT: 2016-2021 | PAST: 2014 PRINGUS CUR: average 2015: 3046 E.XP: average 2017: - 2021 not included increased in the | CUR average 2015-2020 EXP: average 2015-2020 Investments only related to compliance achievements et al. | PAST: average<br>2010-2014<br>CLJ average 2010-<br>2014<br>EXP: Average<br>2015-2021 |             |             |             |
| Total organic design capacity (p.e.) 2014)  | 2,240,079  | 3,579,383  | 945,200                      | 720,000   | 21,806,765   | 49,645,180   | 16,593,694  | 19,653,409   | 7,299,471  | 2,206,973   |   | 13,635,195  | 91,202,408   | 687,666,125 | 557,117,292 | 130,548,833 |
| Total organic design capacity (p.e.) (expected)   | 2,249,163  | 3,580,000  | 1,065,905                    | 600,000   | 21,800,000   | _  | 16,561,230  | 11,215,860   | 8,421,375  | 2,801,852   |   | 13,635,195  | 88,586,890   | 693,231,125 | 567,311,543 | 125,919,582 |
| Generated load agglomerations   | 1,549,335  | 2,652,090  | 606,215                      | 513,001   | 18,225,775   | 38,536,550   | 12,029,570  | 20,924,781   | 4,656,291  | 1,462,223   | 61,860,028  | 12,523,628  | 70,882,026   | 603,704,748 | 498,253,432 | 105,451,316 |
| IAS agglomeration   | 44,290   | 124,629  | 4,291                        | 0   | 0  | 3,350,373  | 0   | 138,617  | 766,082  | 91,220  | 782,998   | 0   | 370,425  | 14,756,036  | 8,172,754   | 6,583,282   |
| Discharged without treatment before connection  | 0  | 0  | 0                            | 0   | 0  | $\overline{}$  | 060'9   | 8,118,057  | 19,312   | 126,801   | 325,018   | 0   | 0  | 10,960,120  | 929,297     | 10,030,823  |
| Total load entering (2014)  | 1,300,457  | 2,529,423  | 601,924                      | 513,001   | 17,995,880   | 100  | 12,004,870  | 12,897,262   | 3,870,897  | 1,243,726   | 60,488,649  | 12,524,158  | 70,455,641   | 567,798,995 | 482,177,320 | 85,621,675  |
| Ratio load entering the planned UWWTP/total generated load                                      | 17.8%  | 960'0  | 24.8%                        | 960:0   | 960:0  | 68.1%  | 14.5%   | 68.9%  | 21.3%  | 36.2%   | 26.1%   | 1.4%  | 1.1%   | 15.5%       | 7.0%        | 55.6%       |
| Primary   | , tr   |  |                              | 2   | Ť  | 14   | 7   | 1094   | 4K   |   | 42.2  |   | 2  | 2 408       | 3           | 2002        |
| More stringent nitrogen   |  |  |                              |   |  |  | 1   |  | 89   | 4   |   |   | 1  | 112         | 21          | 16          |
| More stringent phosphorus   |  |  |                              |   |  |  |   |  |  |   | 55  | 7   | 7  | 98          | 84          | 2           |
| More stringent microbiology   |  |  |                              |   |  |  | 7   | 10   |  |   | 2   |   |  | 40          | 18          | 22          |
| More stringent nitrogen phosphorus  | 3  |  | 3                            |   |  | 335  | 3   | 175  | 23   | 18  |   | 4   |  | 177         | 28          | 713         |
| More stringent nitrogen phosphorus microbiology   |  |  |                              |   |  |  | 1   | 0  |  | 2   |   |   |  | 20          | 18          | 2           |
| More stringent nitrogen microbiology  |  |  |                              |   |  |  | 1   | 13   |  |   | 2   |   | 1  | 43          | 30          | 13          |
| More stringent phosphorus microbiology  |  |  |                              |   |  |  |   |  |  |   | 1   |   |  | 9           | 3           | 3           |
| More stringent unknown or other   |  |  |                              | 1   |  |  |   |  |  |   |   |   |  | 13          | 1           | 12          |
| more stringent (total)  | 3  | 0  | 3                            | 1   | 0  | 335  | 13  | 198  | 88   | 24  | 89  | 11  | 6  | 1091        | 233         | 858         |
| TOTAL treatment   | 89   |  | 3                            |   |  | 813  | 50  | 1304   | 134  | 26  | 485   | 11  | 11   | 3,754       | 757         | 2,997       |
| Population (million) (Eurostat 2014, Eurostat 2016)   | 2.0  | 2.9  | 9.0                          | 0.4   | 17.0   | 38.0   | 10.3  | 19.8   | 5.4  | 2.1   | 46.4  | 6.6   | 65.3   | 510.0       | 405.6       | 104.4       |
| ratio total investment/population PAST  | 18.0   | 47.4   | 161.5                        | 67.5  | 77.3   | 44.3   |   | 70.4   | 12.3   | 9.65  | 5.7   | 3.6   | 20.6   | 35.8        | 33.1        | 45.9        |
| ratio total investment/population CURRENT   | 28.7   | 10.6   | 133.7                        | 10.1  | 80.1   | 34.4   | 4.8   | 89.8   | 34.6   | 101.3   | 10.6  | 2.0   | 20.6   | 38.0        | 35.4        | 48.4        |
| ratio total investment/population EXPECTED  | 10.8   | 13.0   | 237.2                        | 10.1  | 79.1   | 26.9   | 3.1   | 45.9   | 37.1   | 24.2  | 31.1  | 2.0   | 13.5   | 37.1        | 37.4        | 36.1        |

# 5. List of relevant acronyms, abbreviations and symbols used in the Report

# Report **EU-European Union EUR-euros** IAS-individual or other appropriate systems AT-Austria BE-Belgium BG-Bulgaria CY-Cyprus CZ-Czech Republic DE-Germany DK-Denmark EE-Estonia EL-Greece ES-Spain FI-Finland FR-France HR-Croatia **HU-Hungary** IE-Ireland IT-Italy LT-Lithuania LV-Latvia LU-Luxembourg

MT-Malta

NL-Netherlands
PL-Poland
PT-Portugal
RO-Romania
SE-Sweden
SI-Slovenia
SK-Slovakia
UK-United Kingdom
N-nitrogen
P-phosphorus
p.e.-population equivalents
SIIF-structured implementation and information framework
TFEU-Treaty on the Functioning of the European Union
UWWTD-Urban Waste Water Treatment Directive

WFD-Water Framework Directive