TARGETS OF THE PROTOCOL ON WATER AND HEALTH

SPAIN

2017
TARGET AREA I - Art. 6, 2 (a) Quality of the drinking water supplied
TARGET AREA II - Art. 6, 2 (b) Reduction of the scale of outbreaks and incidents of water-related disease
TARGET AREA III - Art. 6, 2 (c) Access to drinking water
TARGET AREA IV - Art. 6, 2 (d) Access to sanitation
TARGET AREA VI - Art. 6, 2 (e2) Levels of performance of collective systems and other systems for sanitation
TARGET AREA VII - Art. 6, 2 (f1) Application of recognized good practices to the management of water supply
TARGET AREA VIII - Art. 6, 2 (f2) Application of recognized good practice to the management of sanitation
TARGET AREA X - Art. 6, 2 (g) The occurrence of discharges of: (i) Untreated waste water; and (ii) Untreated storm water overflows from waste-water collection systems to waters within the scope of this Protocol
TARGET AREA XI - Art. 6, 2 (h) Quality of discharges of waste water from waste-water treatment installations to waters within the scope of this Protocol
TARGET AREA XII - Art. 6, 2 (i1) Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations
TARGET AREA XIII - Art. 6, 2 (i2) Quality of wastewater used for irrigation purposes
TARGET AREA XIV - Art. 6, 2 (j1) Quality of waters which are used as sources for drinking water
TARGET AREA XV - Art. 6, 2 (j2) Quality of waters used for bathing
TARGET AREA XVIII - Art. 6, 2 (l) Identification and remediation of particularly contaminated sites
TARGET AREA XIX - Art. 6, 2 (m) Effectiveness of systems for the management, development, protection and use of water resources
TARGET AREA XX - Art. 6, 2 (n) Frequency of the publication of information on the quality of the drinking water supplied and of other waters relevant to the protocol

Ministerio de Sanidad, Servicios Sociales e Igualdad
Dirección General de Salud Pública, Calidad e Innovación
Subdirección General de Sanidad Ambiental y Salud Laboral
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ESPAÑA
TARGET AREA I - Art. 6, 2 (a) Quality of the drinking water supplied

A. BACKGROUND RATIONALE

The aim is that the supplied drinking water is safe and clean and do not content any microorganism, parasite or substance in a quantity or concentration that may pose a risk to human health, in addition to meeting with everything specified in the regulations.

B. CURRENT SITUATION AND ISSUES

The data quality of water for human consumption that are reported in SINAC [national drinking water information system], http://sinac.msssi.es, represent 91% of the Spanish population census. Data are collected not only from urban population (over 5,000 inhabitants) but were also collected data about the quality of drinking water in rural population (less than 5,000 inhabitants). SINAC have more than 33 million data actually. The sanitary quality of drinking water in recent years has been:

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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe water for consumption</td>
<td>99.1%</td>
<td>99.6%</td>
<td>99.5%</td>
<td>99.3%</td>
<td>99.3%</td>
<td>99.3%</td>
<td>99.5%</td>
<td>99.5%</td>
</tr>
</tbody>
</table>

The compliance to the current regulations, taking in account groups of parameters have been:

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbiological</td>
<td>99.7%</td>
<td>99.8%</td>
<td>99.1%</td>
<td>99.4%</td>
<td>99.4%</td>
<td>99.7%</td>
<td>99.1%</td>
<td>99.7%</td>
</tr>
<tr>
<td>Chemicals</td>
<td>99.7%</td>
<td>99.7%</td>
<td>99.3%</td>
<td>99.5%</td>
<td>99.6%</td>
<td>99.5%</td>
<td>99.8%</td>
<td>99.6%</td>
</tr>
<tr>
<td>Pesticides</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
<td>99.9%</td>
</tr>
<tr>
<td>Organoleptic</td>
<td>99.8%</td>
<td>99.8%</td>
<td>99.7%</td>
<td>99.8%</td>
<td>99.8%</td>
<td>99.8%</td>
<td>99.8%</td>
<td>99.7%</td>
</tr>
<tr>
<td>Quality indicators</td>
<td>98.4%</td>
<td>98.7%</td>
<td>97.7%</td>
<td>98.1%</td>
<td>97.7%</td>
<td>98.5%</td>
<td>98.6%</td>
<td>98.2%</td>
</tr>
<tr>
<td>Radioactivity</td>
<td>99.9%</td>
<td>99.3%</td>
<td>96.8%</td>
<td>98.5%</td>
<td>98.8%</td>
<td>97.2%</td>
<td>98.9%</td>
<td>99.1%</td>
</tr>
</tbody>
</table>

Compliance for controlled parameter according to current regulations in 2015:
As in previous years, the parameters with lower percentage are due to the characteristics of the ground or the soil such as sulphate, chloride, sodium, activity alpha total, fluoride, arsenic, iron.

Added to those we have residual free chlorine, Colony count at 22 °C and other microbiological, aluminium, pH and trihalomethanes as incidents in drinking water treatment.

Due to incidents in agricultural practices, sometimes appear nitrates at groundwater and in some areas also herbicides.

These are the three most common causes of non compliance for water intended for human consumption over the years.

The compliance of the sampling frequencies at routine controls for 2015 has been:

<table>
<thead>
<tr>
<th>Population size</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;5,000</td>
<td>94%</td>
</tr>
<tr>
<td>≤5,000</td>
<td>81%</td>
</tr>
<tr>
<td>501 - 5,000</td>
<td>92%</td>
</tr>
<tr>
<td>51 - 500</td>
<td>89%</td>
</tr>
<tr>
<td>≤50</td>
<td>61%</td>
</tr>
</tbody>
</table>

**Legal/ regulatory actions:**

- Current regulations are:
  - Royal Decree 140/2003 of 7 February, by which health criteria for the quality of water intended for human consumption are established.
  - Order SCO 1591/2005, of 30 May, on the national drinking water information system (SINAC).
  - Order SSI/304/2013, of 19 February, on substances for treatment of water intended for human consumption.
  - Real Decreto 314/2016, de 29 de julio, por el que se modifican el Real Decreto 140/2003, de 7 de febrero, por el que se establecen los criterios sanitarios de la calidad del agua de consumo humano, el Real Decreto 1798/2010, de 30 de diciembre, por el que se regula la explotación y comercialización de aguas minerales naturales y aguas de manantial envasadas para consumo humano, y el Real Decreto 1799/2010, de 30 de diciembre, por el que se regula el proceso de elaboración y comercialización de aguas preparadas envasadas para el consumo humano.


**C. TARGETS AND TARGET DATES**

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Report information about the quality of drinking water by the managers of the supply zones over 50 people, according to the current legislation and SINAC.</td>
<td>2015</td>
<td>Water suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Authorities (regional level)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Ministry</td>
</tr>
<tr>
<td>2.</td>
<td>Increase coverage of about 97% of the Spanish population</td>
<td>2015</td>
<td>Water suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Authorities (regional level)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Ministry</td>
</tr>
<tr>
<td>3.</td>
<td>Increase compliance in the sampling frequency by 10% in each range of population.</td>
<td>2015</td>
<td>Water suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Authorities (regional level)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Ministry</td>
</tr>
<tr>
<td>4.</td>
<td>Keep compliance quality of drinking water above 99%</td>
<td>2015</td>
<td>Water suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Authorities (regional level)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Health Ministry</td>
</tr>
<tr>
<td>5.</td>
<td>Develop a software tool for the development of Water Safety Plans</td>
<td>2017</td>
<td>Health Ministry</td>
</tr>
</tbody>
</table>
D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improved usability and accessibility of the information system SINAC 2013</td>
<td>2013</td>
<td>Health Ministry</td>
</tr>
<tr>
<td>2.</td>
<td>Increased surveillance and sanitary inspection</td>
<td>2014</td>
<td>Health Authorities</td>
</tr>
<tr>
<td>4.</td>
<td>Working Group (active since 2012) for the development of the tool and guide.</td>
<td>2014</td>
<td>Health Ministry</td>
</tr>
<tr>
<td>5.</td>
<td>Publicise and inform water suppliers about the WSP managing tool.</td>
<td>2015</td>
<td>Health Ministry Health Authorities</td>
</tr>
</tbody>
</table>

E. INDICATORS

1. Number of Water Supply Zones (WSZ)
2. Number of infrastructures
3. Number and type of sampling points
4. Number and type of analysis reports
5. Number and type of parameters controlled
6. Number of parameter determinations reported
7. Number of monitoring laboratories
8. % of compliance of analysis reports
9. % of compliance by parameter group
10. % of compliance of population interval with the sampling frequency
11. INFORMATION BY PARAMETER
   a. Number of samples, total and for each type of sampling point (SP), with annual evolution in the last 3 years.
   b. Number of WSZs that have controlled an specified parameter, and the correspondent population, differences between populations of more than 5000 hb and less than 5000 hb.
   c. Determinations by type of analysis, annual changes in the past 3 years and determinations of that parameter per 10,000 population.
   d. Ranges of values, means, maximum, minimum, mode and median values. With graphics.
   e. By type sampling point averages with statistical analysis based on statistical differences and size of WSZ.
   f. Compliance with legislation (WSZ), population and evolution of annual determinations in the last 3 years
   g. Compliance according to the size of the WSZ and type of SP
   h. Number of non compliances, WSZ and population affected.
   i. Number of WSZ and affected people with non compliance in a parameter, and number of non compliances (1 or more than 1) for each parameter.

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

- National Report: annual, last 3 months of the year:  
  o http://www.msssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_temat/Publicaciones/home.htm

- Report for the European Commission: every 3 years, last report 2011-2013.:  
  o http://www.eionet.europa.eu/reportnet
TARGET AREA II - Art. 6, 2 (b) Reduction of the scale of outbreaks and incidents of water-related disease

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (b), of the Protocol requires the setting of targets and target dates related to the reduction of the scale of outbreaks and incidents of water-related disease. Article 8 specifies the national and local actions to be taken to develop surveillance and response systems. Safe drinking and bathing water is vital for the health of the population, particularly children. The number of outbreaks of water-related disease provides an indication of the quality of the drinking or bathing water and is linked to the performance of the water supply and the upstream sanitation systems.

B. CURRENT SITUATION AND ISSUES

The epidemiological surveillance of water outbreaks in Spain is carried out through the National Epidemiological Surveillance Network (RENAVE). Autonomous Communities notify the National Epidemiological Centre of the outbreaks and epidemiological situations related to any cause (etiology) or transmission mechanism that occur on its territory.

Legal/regulatory actions:
Royal Decree 2210/1995, of 28th December, by which the National Epidemiological Surveillance Network is created.

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Reduction in the number of outbreaks notified regarding drinking water.</td>
<td>2017</td>
<td>Drinking Water suppliers Health Authority Ministry of Health</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improve the reporting of waterborne outbreaks</td>
<td>2015</td>
<td>Health Authority</td>
</tr>
</tbody>
</table>

E. INDICATORS

No of water outbreaks related to bacterial etiology and caused by viruses and parasites

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

Reporting compulsorily notifiable diseases
Royal Decree 2210/1995, of 28th December, by which the National Epidemiological Surveillance Network is created.
TARGET AREA III - Art. 6, 2 (c) Access to drinking water

A. BACKGROUND RATIONALE

Access to safe drinking water for everyone is among the most important objectives of the Protocol (art.6, para. 1), and is fully in line with the recognition of water as a basic human right by the United Nations General Assembly 9 and the Human Rights Council. This includes the setting of targets and target dates as to the area of territory, or the population sizes or proportions, which should be served by collective systems for the supply of drinking water or where the supply of drinking water by other means should be improved. The issue of access is not only linked to physical accessibility, but also to economic accessibility (affordability) on the macro and micro levels and to non-discrimination (art. 5, subpara. (l)). The amount of water supplied shall be sufficient to cover the hygienic and sanitary needs of the population and for the development of supplied area; the minimum objective should be 100 liters per capita per day.

B. CURRENT SITUATION AND ISSUES

Spanish Official data show that 99.99 percent of population has access to drinking water with an average amount of 130 liters per capita per day. It has been achieved a decrease in consumption after saving campaigns of water household consumption, due to reiterated drought situations in some regions.

Legal/ regulatory actions:

Royal Decree 140/2003, of 7 February by which health criteria for the quality of water intended for human consumption are established.

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To maintain a minimum water supply in drought periods</td>
<td>2017</td>
<td>Drinking water suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ministry of Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ministry of Health</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Awareness campaign on saving water aimed the general public and schools</td>
<td>2017</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ministry of Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ministry of Education</td>
</tr>
</tbody>
</table>

E. INDICATORS

1. Daily average provision per capita in period of drought
2. Annual daily average provision per capita

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

National Report: Annual, in the fourth quarter of each year
http://www.msssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_temat/Publicacioneses/home.htm
TARGET AREA IV - Art. 6, 2 (d) Access to sanitation

A. BACKGROUND RATIONALE

Provision of sanitation to everyone is among the most important objectives of the Protocol (art. 6, para.1), and a human right recognized by the United Nations General Assembly and the Human Rights Council. Article 6, paragraph 2 (d), requires the setting of targets and target dates related to the area of territory, or the population sizes or proportions, which should be served by collective systems of sanitation or where sanitation by other means should be improved.

B. CURRENT SITUATION AND ISSUES

Given that the European legislation aims to protect and achieve a good status for all waters, the reduction of the pollution caused by urban waste waters seems essential.

Regarding sanitation, Spain had a national plan that covered the period 1995-2005 and aimed to guarantee that both the treatment and quality of discharges met the terms of the European legislation. An analyses and evaluation of its impact was carried out and used as basis to draw up the current (2007-2015) National Plan for Water Quality and establish the actions to be taken.

Access to sanitation is considered within the National Plan for Water Quality (PNCA) in the following terms:

- To contribute to the compliance in 2015 with the environmental objectives set for water bodies according to the Water Framework Directive (WFD).

The National Plan for Water Quality (PNCA) covered the period from 2007 to 2015, coinciding with the deadline set by the European Water Framework Directive to achieve a “good status” for all waters.

The national legislation establishes requirements and deadlines for:

- Collective systems
- Secondary treatment of urban waste water
- Treatment of urban waste water discharged in sensitive areas

From that date on the program CRECE (Plan of Measures to enhance the growth, the competitiveness and the efficiency) has taken over the mission to meet these objectives. In order to better carry on this goal the government is revising the agreements with the regional governments with powers in water quality.

Legal/ regulatory actions:

- Royal Decree- Law 11/1995, of 28 December, which sets the standards for the treatment of urban waste water.
- Royal Decree 509/1996, of 15 March, which details the standards for the treatment of urban waste water. It has been modified by:
  - Royal Decree 2116/1998, of 2 October, which establishes the standards that have to be applied for the treatment of urban waste water.
  - Royal Decree 1290/2012, of 7 September, which establishes the standards that have to be applied for the treatment of urban waste water.

As a general overview in 2014 97.2% of Spanish population is connected to water sanitation networks, from which 96.9% with further water treatment before river disposal.
C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation (Directive 91/271/EEC, articles 3, 4, 5, 7 and Annex I) are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| 1. | All agglomerations must be provided with collecting systems for urban waste water,  
- at the latest by 31 December 2000 for those with a population equivalent (p.e.) of more than 15000, and  
- at the latest by 31 December 2005 for those with a p.e. of between 2000 and 15000.  
Collection systems should be provided at the latest by 31 December 1998 for agglomerations of more than 10000 p.e. when urban waste water discharge into receiving waters which are considered “sensitive areas”. | 31 December 2000  
31 December 2005  
31 December 1998 | General Directorate of water  
Regional governments  
River Basin Authorities |
| 2. | Urban waste water entering collecting systems shall before discharge be subject to secondary treatment or an equivalent treatment as follows:  
- at the latest by 31 December 2000 for all discharges from agglomerations of more than 15000 p.e.,  
- at the latest by 31 December 2005 for all discharges from agglomerations of between 10000 and 15000 p.e.,  
- at the latest by 31 December 2005 for discharges to fresh-water and estuaries from agglomerations of between 2000 and 10000 p.e. | 31 December 2000  
31 December 2005  
31 December 2005 | General Directorate of water  
Autonomous Communities  
River Basin Authorities |
| 3. | Discharges from urban waste water treatment plants shall satisfy the relevant requirements set in the Directive (Annex I) | 31 December 1998 | |
| 4. | Urban waste water entering collecting systems shall be subject to appropriate treatment (treatment by which after water discharged allows the receiving waters to meet the relevant quality objectives and other relevant provisions of the European legislation) in the following cases:  
- for discharges to fresh-water and estuaries from agglomerations of less than 2.000 p.e.,  
- for discharges to coastal waters from agglomerations of less than 10.000p.e. | 31 December 2000  
31 December 2005 | |

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
Regional governments |
| 2. | Program CRECE | As needed | General Directorate of water  
Regional governments |

E. INDICATORS

- Percentage of the population with access to sanitation including small decentralized sewerage systems, and also septic and safe excreta disposal, for urban, rural and total population.

- Population connected to wastewater collection and treatment systems. Eurostat, as the statistical office of the European Union, provides statistics at European level. Member States send biennially yearly data regarding resident population with respect to wastewater treatment.

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

Spain, as a Member State of the European Economic Area, has to report every two years the information regarding the implementation and compliance with the Directive concerning urban waste water treatment to the European Commission. This report includes the data collected by competent authorities regarding the monitoring results of
waters subject to discharges from urban waste water treatment plants and amount and composition of sludges disposed of to surface waters (article 15), situation on the disposal of urban waste water and sludge (article 16) and implementation program (article 17).
This information is uploaded to the Central Data Repository (CDR) which is part of the ReportNet architecture that aims to support and improve data and information flows. The Central Data Repository collects data reports on the environment submitted by Member States. For each country collection the data reports are arranged under the relevant reporting obligations or agreements (Eionet>CDR>Spain>European Union (EU), obligations> Urban Waste Water Treatment Directive monitoring (91/271/EEC) [Art 15]).

On the other hand, Joint Monitoring Programme (JMP) for Water Supply and Sanitation monitors the proportion of the population with access to safe drinking water expressed as the percentage of people using improved drinking water sources or delivery points. JMP is the officially designated monitoring programme by which progress towards the Millennium Development Goal (MDG) relating to drinking-water and sanitation is being assessed. However, JMP neither includes the daily availability of water at home nor the quality of the water delivered.
TARGET AREA VI - Art. 6, 2 (e2) Levels of performance of collective systems and other systems for sanitation

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (e), of the Protocol requires the setting of targets and target dates related to the levels of performance to be achieved by collective systems and by other means of water supply and sanitation.

B. CURRENT SITUATION AND ISSUES

The level of performance of collective systems and other systems for sanitation is considered within the National Plan for Water Quality (PNCA) in the following terms:

- To contribute to the compliance in 2015 with the environmental objectives set for water bodies by the Water Framework Directive.

The last National Plan for Water Quality (PNCA) covered the period 2007-2015, coinciding with the deadline established by the Water Framework Directive to achieve the environmental objectives. From that date on the program CRECE (Plan of Measures to enhance the growth, the competitiveness and the efficiency) has taken over the mission to meet these objectives. In order to better carry on this goal the government is revising the agreements with the regional governments with powers in water quality.

Prior to 2005 there was another plan which covered the period 1995-2005 and aimed to guarantee that both the treatment and the quality of the discharge met the terms of the European legislation. Once it finished, an analyses and evaluation of its impact was carried out and used as basis to draw up the current Plan and set the actions to be taken. It should be noted that there are other obligations to which Spain is committed such as the Barcelona Convention (Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean) which oblige the contracting Parties to set measures to eliminate or reduce the pollution from land-based sources. The MED POL Programme within the Mediterranean Action Plan for the Barcelona Convention assists Mediterranean countries in the formulation and implementation of pollution monitoring programmes, including pollution control measures and the drafting of action plans aiming to eliminate pollution from land-based sources.

As a general overview in 2014 97.2% of Spanish population is connected to water sanitation networks, from which 96.9% with further water treatment before river disposal.

Legal/ regulatory actions:

- Royal Decree- Law 11/1995, of 28 December, which sets the standards for the treatment of urban waste water.
- Royal Decree 509/1996, of 15 March, which details the standards for the treatment of urban waste water. It has been modified by:
  - Royal Decree 2116/1998, of 2 October, which establishes the standards that have to be applied for the treatment of urban waste water.
  - Royal Decree 1290/2012, of 7 September, which establishes the standards that have to be applied for the treatment of urban waste water.
- Plan CRECE

C. TARGETS AND TARGET DATES
The targets set in Spain according to current legislation (Directive 91/271/EEC, articles 4, 5, 7 and Annex I) are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| 1.  | Urban waste water entering collecting systems shall before **discharge be subject to secondary treatment or an equivalent treatment** as follows:  
- at the latest by 31 December 2000 for all discharges from agglomerations of more than 15000 p.e.,  
- at the latest by 31 December 2005 for all discharges from agglomerations of between 10000 and 15000 p.e.,  
- at the latest by 31 December 2005 for discharges to fresh-water and estuaries from agglomerations of between 2000 and 10000 p.e.  
Urban waste water entering collecting systems shall before discharge into sensitive areas be subjected to more stringent treatment for all discharges from agglomerations of more than 10000 p.e. | 31 December 2000 | General Directorate of water  
Autonomous Communities  
River Basin Authorities |
| 2.  | Urban waste water entering collecting systems shall be subject to appropriate treatment (treatment by which after discharge allows receiving waters to meet the relevant quality objectives and other relevant provisions of the European legislation) in the following cases:  
- for discharges to fresh-water and estuaries from agglomerations of less than 2000 p.e.,  
- for discharges to coastal waters from agglomerations of less than 10000 p.e. | 31 December 2005 | General Directorate of water  
Autonomous Communities  
River Basin Authorities |

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
Autonomous Communities |
| 2.  | Program CRECE | As needed | General Directorate of water  
Autonomous Communities |

E. INDICATORS

- **Volume of water treated in Autonomous Communities and cities.**
  An annual Survey on water supply and sewerage is carried out by the National Statistics Institute (INE). Information requested in this questionnaire refers to activities related to collecting, purchasing, selling and supplying or distributing water at a low level in addition to collecting and treating waste water, undertaken by companies or institutions in the same Autonomous Community.

- **Degree of compliance with Directive 91/271/EC of the pollutant load of treated urban waste water (% p.e.).**
  The Ministry of Agriculture, Food, and Environment considers the degree of compliance with the provisions of Directive 91/271/EC on urban waste water treatment as a percentage of equivalent population (% p.e.) with wastewater treatment over the total amount of existing equivalent population.

- **Treatment capacity of wastewater treatment plants.**
  Eurostat, as the statistical office of the European Union, provides statistics at European level. Member States send biennially yearly data regarding numbers and capacities of wastewater treatment plants (number of treatment plants, design capacity BOD (1,000 kg O₂/ day), actual occupation BOD, effluent BOD...). Statistical unit are the countries and in future also River Basin Districts (RBD) and River Basin District subunits.

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

Every two years a report regarding the implementation and compliance with the Directive concerning urban waste water treatment (UWWT Directive) must be sent to the European Commission. This information is submitted through the Central Data Repository (CDR). Data is included within the reporting obligation for UWWT Directive - Article 15 (Eionet>CDR>Spain>European Union (EU), obligations> Urban Waste Water Treatment Directive monitoring (91/271/EEC) [Art 15]).

Other requests related with this point include the Programme for the Assessment and Control of Marine Pollution in the Mediterranean Region (MED POL), the scientific and technical component of the Mediterranean Action Plan established under the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention). It is responsible for the implementation of the Land-Based Sources, Dumping...
and Hazardous Wastes Protocols. It publishes guidelines on sewage treatment and disposal and monitors the application of these guidelines throughout the Mediterranean region. At present, MED POL assesses sewerage and performance of sewage systems in all Mediterranean cities with populations of more than 2,000 inhabitants.
TARGET AREA VII - Art. 6, 2 (f1) Application of recognized good practices to the management of water supply

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (f1), of the Protocol requires the setting of targets and target dates related to the application of recognized good practices in the management of water supply and sanitation. Thus, emphasis is put on good but not necessarily the best practices, which have to be adapted to the local circumstances (not necessarily internationally recognized) and to implementation.

B. CURRENT SITUATION AND ISSUES

The current situation of good practices in the management of water supply is:

- Most supplies over 5,000 inhabitants are certified by the ISO 9001 quality assurance.
- 81% of Spanish municipalities, corresponding to 94% of the counted population, have reported information on the characteristics of their infrastructure and quality of drinking water since 2003 in SINAC.
- Some of the supplies more than 50,000 inhabitants are being certified by ISO 22,000: food safety management system and hazard analysis and critical control points applied to a drinking water supply.
- The Ministry of Health and the Spanish drinking and waste water service operators Association (AEAS) are developing a tool for the implementation of the Water Safety Plans.

Therefore the situation of good practices in the Spanish supplies is or they are already implemented or under development.

Legal/ regulatory actions:

- Royal Decree 140/2003, of 7 February by which health criteria for the quality of water intended for human consumption are established.
- SCO Order 1591/2005 of 30 May about the national drinking water information system, Drinking Water Information System.

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Improvement of the management of the supplies from catchment, treatment plants, storage and water distribution through Water Safety plans</td>
<td>2017</td>
<td>Drinking Water suppliers, Health Authority, Ministry of Health, Ministry of Environment</td>
</tr>
<tr>
<td>2.</td>
<td>Improvement of the drinking water quality control</td>
<td></td>
<td>Drinking Water suppliers, Health Authority</td>
</tr>
<tr>
<td>3.</td>
<td>Improvement of the transmission of information to citizens.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Implement of WSP in supplies more than 5000 inhabitants</td>
<td>2015</td>
<td>Drinking Water suppliers, Health Authority, Ministry of Health, Ministry of Environment</td>
</tr>
<tr>
<td>No.</td>
<td>Measures and activities</td>
<td>Time Frame</td>
<td>Responsibility</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------------------</td>
<td>------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>2.</td>
<td>Implement of WSP in supplies less than 5000 inhabitants</td>
<td>2020</td>
<td>Drinking Water suppliers&lt;br&gt;Health Authority&lt;br&gt;Ministry of Health&lt;br&gt;Ministry of Environment</td>
</tr>
</tbody>
</table>

E. **INDICATORS**

- Number of supplies with implemented WSP (more than 5000 hb)
- Number of supplies with implemented WSP (less than 5000 hb)
- Number of times the Information System web site is accessed every year by public ([www.sinac.msssi.es](http://www.sinac.msssi.es))

F. **RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING**

- National Report: Annual, in the fourth quarter of each year:
  - [http://www.msssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_temat/Publicaciones/home.htm](http://www.msssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_temat/Publicaciones/home.htm)
TARGET AREA VIII - Art. 6, 2 (f2) Application of recognized good practice to the management of sanitation

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (f), of the Protocol requires the setting of targets and target dates related to the application of recognized good practices in the management of water supply and sanitation. Thus, emphasis is put on good but not necessarily the best practices, which have to be adapted to the local circumstances (not necessarily internationally recognized) and to implementation.

B. CURRENT SITUATION AND ISSUES

The European legislation concerning urban waste water treatment, and its transposition to the Spanish law, specifies that collecting systems shall take into account waste water treatment requirements and that their design, construction and maintenance shall be undertaken in accordance with the best technical knowledge not entailing excessive costs.

Regarding sanitation, Spain has developed the National Plan for Water Quality (PNCA). Its main goal is not only to fulfill the legal requirements set on urban waste water treatment but also to contribute to meeting in 2015 the environmental objectives set for water bodies according to the WFD. In that respect, the measures established in the Plan take into account recognized good practice.

Periodically a review of the state of sanitation will be carried out and, when necessary, future plans will be developed in order to comply or even improve the legal requirements set in that account.

Legal/ regulatory actions:

- Royal Decree- Law 11/1995, of 28 December, which sets the standards for the treatment of urban waste water.
- Royal Decree 509/1996, of 15 March, which details the standards for the treatment of urban waste water. It has been modified by:
  - Royal Decree 2116/1998, of 2 October, which establishes the standards that have to be applied for the treatment of urban waste water.
  - Royal Decree 1290/2012, of 7 September, which establishes the standards that have to be applied for the treatment of urban waste water.
- From that date on the program CRECE (Plan of Measures to enhance the growth, the competitiveness and the efficiency) has taken over the mission to meet these objectives. In order to better carry on this goal the government is revising the agreements with the regional governments with powers in water quality.

C. TARGETS AND TARGET DATES

The target set in Spain according to current legislation (Directive 91/271/EEC, Annex I) is:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Waste water treatment requirements and their design, construction and maintenance shall be undertaken in accordance with the best technical knowledge not entailing excessive costs</td>
<td>Since approval of the legislation</td>
<td>General Directorate of water - Autonomous Communities - River Basin Authorities</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:
<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Development of the measures established in the National Plan for Water Quality</td>
<td>2007-2015</td>
<td>- General Directorate of water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Autonomous Communities</td>
</tr>
<tr>
<td>2.</td>
<td>Program CRECE</td>
<td>As needed</td>
<td>- General Directorate of water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Autonomous Communities</td>
</tr>
</tbody>
</table>

E. **INDICATORS**

Not applicable.

F. **RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING**

Not applicable.
TARGET AREA X - Art. 6, 2 (g) The occurrence of discharges of: (i) Untreated waste water; and (ii) Untreated storm water overflows from waste-water collection systems to waters within the scope of this Protocol

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (g), of the Protocol requires the setting of targets and target dates related to the occurrence of discharges of untreated wastewater. Access to sanitation is covered above under the target set out in paragraph 2 (d); thus, the target in 2 (g) concentrates on the (non-) treatment of wastewater.

B. CURRENT SITUATION AND ISSUES

According to European legislation (Directive 91/271/EEC) the discharge of untreated waste water is not allowed. In addition, the Royal Decree 849/1986, of 11 April, passing the Regulation on Hydraulic Public Property establishes that all activity subject to cause pollution or degradation of the public hydraulic property and, in particular, the discharge of waters and residual products which pollute continental waters, requires an administrative authorization. This authorization will be granted when the discharge of waste waters is collecting to a treatment plant that ensures that the degree of treatment is suitable to the quality of the receiving area.

Furthermore the Directive 91/271/EEC, establishes that national authorities shall take measures to limit pollution of receiving waters from storm water overflows via collecting systems under unusual situations, such as heavy rain. Due to these needs the Royal Decree 849/1986, of 11 April, passing the Regulation on Hydraulic Public Property and the Royal Decree-Law 11/1995 were modified in order to include measures and specific conditions to prevent pollution from storm waters.

Royal Decree 1290/2012 introduced new legislation on minimum water treatment for storm waters.

When necessary, new plans will be developed in order to comply both with European and National requirements.

Legal/ regulatory actions:

- Royal Decree- Law 11/1995, of 28 December, which sets the standards for the treatment of urban waste water.
- Royal Decree 849/1986, of 11 April, passing the Regulation on Hydraulic Public Property.
- Royal Decree 606/2003, of 23 de May, which modified the Royal Decree 849/1986.
- "Zero Tolerance" Plan on water discharges.
- Royal Decree 1290/2012 on minimum treatment for storm waters.

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Control of all discharges and management of discharge authorization.</td>
<td>Since the approval of the legislation</td>
<td>- General Directorate of water - Autonomous Communities - River Basin Authorities</td>
</tr>
<tr>
<td>2</td>
<td>Prosecution of discharges without authorization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Establishment of measures to limit pollution of receiving waters from storm water overflows.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Development/ Maintenance of the National Discharge Census</td>
<td>2007</td>
<td>General Directorate of water - Autonomous Communities - River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Implementation/ Maintenance of the “Zero Tolerance” Plan</td>
<td>2009</td>
<td>General Directorate of water - Autonomous Communities - River Basin Authorities</td>
</tr>
<tr>
<td>3.</td>
<td>Inspection actions by the river basin authorities to control all discharges</td>
<td>Annually</td>
<td>River Basin Authorities</td>
</tr>
<tr>
<td>4.</td>
<td>Development of the measures established in the National Plan for Water Quality regarding storm water overflows</td>
<td>2007-2015</td>
<td>General Directorate of water - Autonomous Communities</td>
</tr>
<tr>
<td>5.</td>
<td>Program CRECE</td>
<td>As needed</td>
<td>General Directorate of water - Autonomous Communities</td>
</tr>
</tbody>
</table>

E. INDICATORS

- Number of discharge authorizations
  The Ministry of Agriculture, Food, and Environment publishes each year the number and volume of discharge authorizations granted by the Autonomous Communities and River Basin Authorities. There are two reports depending on whether the information refers to discharges to the sea (Maritime-Terrestrial Public Property) or to continental waters that constitute the Hydraulic Public Property.

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND REPORTING SYSTEMS

The update of the discharge census and the monitoring actions set by Competent Authorities aim to ensure that all discharges are known and controlled. Given that all discharges must have an authorization, those without permit will be prosecuted.

Regarding urban waste waters, biannual reports to the European Commission within the reporting obligation for UWWT Directive - Article 15 provide information on the treatment applied to wastewaters.
TARGET AREA XI - Art. 6, 2 (h) Quality of discharges of waste water from waste-water treatment installations to waters within the scope of this Protocol

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (h), of the Protocol requires the setting of targets and target dates related to the quality of discharges of wastewater from wastewater treatment installations to waters within the scope of the Protocol. This indicator refers explicitly to the quality of wastewater discharges from wastewater treatment systems that are often not reported on and often do not comply with the legal requirements.

B. CURRENT SITUATION AND ISSUES

The European legislation concerning urban waste water treatment, and its transposition to the Spanish law, specifies the treatment that must be applied to urban waste water discharges. The compliance with the current legislation was the main goal of the National Plan for Water Quality 2007-2015 (PNCA). Within the plan it was included the coordination with the “Zero Tolerance on water discharges” Plan, that requires an authorization for every discharge including those from water treatment plants. From that date on the program CRECE (Plan of Measures to enhance the growth, the competitiveness and the efficiency) has taken over the mission to meet these objectives. In order to better carry on this goal the government is revising the agreements with the regional governments with powers in water quality.

Legal/regulatory actions:

- Royal Decree- Law 11/1995, of 28 December, which sets the standards for the treatment of urban waste water.
- Royal Decree 509/1996, of 15 March, which details the standards for the treatment of urban waste water. It has been modified by:
  - Royal Decree 2116/1998, of 2 October, which establishes the standards that have to be applied for the treatment of urban waste water.
  - Royal Decree 1290/2012, of 7 September, which establishes the standards that have to be applied for the treatment of urban waste water.
- Program CRECE (Plan of Measures to enhance the growth, the competitiveness and the efficiency)

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation (Directive 91/271/EEC, Annex I) are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>For discharges from urban waste water treatment plants with secondary treatment or an equivalent treatment:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Targets</td>
</tr>
<tr>
<td>-----</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Chemical oxygen demand (COD)</td>
</tr>
<tr>
<td></td>
<td>Total suspended solids</td>
</tr>
</tbody>
</table>

(\textsuperscript{1}) Reduction in relation to the load of the influent.  
(\textsuperscript{2}) The parameter can be replaced by another parameter: total organic carbon (TOC) or total oxygen demand (TOD) if a relationship can be established between BOD\textsubscript{5} and the substitute parameter.  
(\textsuperscript{3}) This requirement is optional.

Analyses concerning discharges from lagooning shall be carried out on filtered samples; however, the concentration of total suspended solids in unfiltered water samples shall not exceed 150 mg/l.

2. For discharges from urban waste water treatment plants to sensitive areas which are subject to eutrophication (human-induced enrichment with nutrients):

Table 2: Requirements for discharges from urban waste water treatment plants to sensitive areas which are subject to eutrophication as identified in Annex II.A (a). One or both parameters may be applied depending on the local situation. The values for concentration or for percentage of reduction shall apply.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Concentration</th>
<th>Minimum percentage of reduction (1)</th>
<th>Reference method of measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total phosphorus</td>
<td>2 mg/l P (10,000 – 100,000 p.e.)</td>
<td>80</td>
<td>Molecular absorption spectrophotometry</td>
</tr>
<tr>
<td>Total nitrogen (\textsuperscript{\textcircled{1}})</td>
<td>15 mg/l N (10,000 – 100,000 p.e.)</td>
<td>70-80</td>
<td>Molecular absorption spectrophotometry</td>
</tr>
</tbody>
</table>

(\textsuperscript{1}) Reduction in relation to the load of the influent.  
(\textsuperscript{2}) Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic n + NH\textsubscript{3}), nitrate (NO\textsubscript{3}) nitrogen and nitrite (NO\textsubscript{2}) nitrogen.  
(\textsuperscript{3}) Alternatively, the daily average must not exceed 20 mg/l N. This requirement refers to a water temperature of 12 °C or more during the operation of the biological reactor of the waste water treatment plant. As a substitute for condition concerning the temperature, it is possible to apply a limited time of operation, which takes into account the regional climatic conditions. This alternative applies if it can be shown that paragraph 1 of Annex I.D is fulfilled.

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Development of the measures established in the National Plan for Water Quality</td>
<td>2007-2015</td>
<td>- General Directorate of water - Autonomous Communities</td>
</tr>
<tr>
<td>No.</td>
<td>Measures and activities</td>
<td>Time frame</td>
<td>Responsibility</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------</td>
<td>------------</td>
<td>----------------</td>
</tr>
</tbody>
</table>
| 2.  | Program CRECE          | As needed  | - General Directorate of water  
|    |                        |            | - Autonomous Communities   |

**E. INDICATORS**

- Degree of compliance with Directive 91/271/EC of the pollutant load of treated urban waste water (% pe). The Ministry of Agriculture, Food, and Environment publishes the degree of compliance with the provisions of Directive 91/271/EC on urban waste water treatment as a percentage of equivalent population (% p.e.) with wastewater treatment over the total amount of existing equivalent population.

**F. RELEVANT REGIONAL OR GLOBAL OBLIGATIONS AND REPORTING SYSTEMS**

The European Wastewater Directive 91/271/EEC sets standards for BOD, COD and total suspended solids. For discharges in sensitive areas, it also requires compliance with standards for nitrogen and phosphorus. Information is uploaded to the Central Data Repository (CDR), where data reports on the environment are submitted and data collections are arranged under the relevant reporting obligations or agreements (Eionet>CDR>Spain>European Union (EU), obligations> Urban Waste Water Treatment Directive monitoring (91/271/EEC) [Art 15]).

Other European obligations such as the Integrated Pollution Prevention and Control (IPPC) Directive 96/61/EC includes an indicative list of the main polluting substances to be taken into account if they are relevant for fixing emission limit values (Eionet>CDR>Spain>European Union (EU), obligations> E-PRTR data reporting (Art. 7) or E-PRTR practice and measures (Art.16)).

Regarding dangerous substances, given their danger to human health and to ecosystems, there is also the Directive 2006/11/EC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community which contains two lists of families and groups of dangerous substances. It requires the implementation of measures to eliminate or reduce pollution of the waters by such substances. Authorizations of discharges and specific programmes to reduce the occurrence of some substances in water are obligatory and emission standards have to be established. Regular reports are sent to the European Commission on this account (Implementation Report Dangerous substances). As the Water Framework Directive covers all impacts, including dangerous substances, data is submitted within that report.
TARGET AREA XII - Art. 6, 2 (i1) Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations

A. BACKGROUND RATIONALE

There is a big legislation effort developed in this area due both to the transposition of the EU legislation on the field and the national guidelines and improvement measures put in place. From 2011 there has been a new quantitative and qualitative national and regional legislative texts trying to improve the previous situation and to adapt to the new European legislative frame.

B. CURRENT SITUATION AND ISSUES

Last solid data arrive until the end of 2012, showing big efforts and legislative modifications in order to achieve the ambitious European goals. Royal Decree 1310/1990 on Use of Sewage Sludge on Agriculture, is improving the release of information from the treatment plans both in quantity and quality, being these plans obliged to inform each year of the work carried out. Also they must inform on the final destination of the Sewage Sludge, improving therefore, the transparency of the whole process.

Legal/ regulatory actions:

- Royal Decree 1310/1990 on Use of Sewage Sludge on Agriculture
- Ministerial Order AAA/1072/2013 Standardizing Sewage Sludge Management for agriculture use.

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| 1.  | 85% of Sewage sludge valorization in agriculture  
     | 15% incineration | 2020 | National and regional governments |

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| 1.  | New web tools  
     | Inter-administrations coordination  
     | Standardization tools and guidelines  
     | Basic legislation revision  
     | Studies on new treatments  
     | Improve the inspection role | From 2013 on | National and Regional governments |
TARGET AREA XIII - Art. 6, 2 (i2) Quality of wastewater used for irrigation purposes

A. BACKGROUND RATIONALE

The second part of article 6, paragraph 2 (i), of the Protocol requires the setting of targets and target dates related to the quality of wastewater used for irrigation purposes, taking into account the WHO/UNEP/FAO Guidelines for the safe use of wastewater and excreta in agriculture and aquaculture.

The Guidelines define verification as the application of methods, procedures, tests and other evaluations, in addition to those used in operational monitoring, to determine compliance with the system design parameters and/or whether the system meets specified requirements (e.g. microbial water-quality testing for E. coli or helminth eggs, microbial or chemical analysis of irrigated crops) (see Guidelines, vol. 1, p. 32). The Guidelines describe the minimum verification monitoring recommended to assess microbial performance targets for wastewater and excreta use in agriculture and aquaculture under conditions of urban and rural application of wastewater.

B. CURRENT SITUATION AND ISSUES

In 2007 the Spanish Government established the basic conditions for the reuse of water, specifying the water quality required for treated wastewaters according to the uses considered. The quality criteria for the reuse of water for irrigation purposes, according to Spanish regulations for the reuse of water are established in the Royal Decree 1620/2007 which entered into force on 7 December of 2007. The public health authorities were also involved in those aspects related to water reuse that were not provided for in technical specifications and that may pose a risk to public health.

The addition of the quality criteria applicable to the reuse of reclaimed water depends on its final use. These criteria must be considered as the minimum compulsory for its final use.

In recent years, estate, regional and local public administrations have conducted programmes and plans for the use of reclaimed water within their respective jurisdictions. And, the number of authorizations for discharges involving an authorization for the regeneration of the water and the number of procedures for obtaining a water reuse concession have increased significantly since the adoption of the cited regulation.

Legal/regulatory actions:

- Royal Decree 1620/2007, of 7 December, which sets the legal framework for the reuse of treated wastewater (Official publication: BOE nº. 294. 8/12/2007).
- Program CRECE, (Plan of Measures to enhance the growth, the competitiveness and the efficiency).

C. TARGETS AND TARGET DATES

The quality targets set in Spain according to current legislation (Royal Decree 1620/2007) are:
# SUMMARY OF REQUIRED QUALITY FOR IRRIGATION PURPOSES

<table>
<thead>
<tr>
<th>Intended use of water</th>
<th>Maximum acceptable value (MAV)</th>
<th>Other criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intestinal Nematodes¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Escherichia Coli</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suspended solids</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turbidity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other criteria</td>
<td></td>
</tr>
</tbody>
</table>

## 1. Urban

### 1.a. Residential. Irrigation of private gardens
- Intended use of water: 1 egg/10 L
- Maximum acceptable value (MAV): 0 (CFU²/100 mL)
- Suspended solids: 10 mg/L
- Turbidity: 2 NTU³

### 1.b. Services. Landscape irrigation of urban areas (parks, sports grounds and similar)
- Intended use of water: 1 egg/10 L
- Maximum acceptable value (MAV): 200 CFU/100 mL
- Suspended solids: 20 mg/L
- Turbidity: 10 NTU

## 2. Agricultural

### 2.a. Crop irrigation using a system whereby reclaimed water comes into direct contact with edible parts of crops to be eaten raw
- Intended use of water: 1 egg/10 L
- Maximum acceptable value (MAV): 100 CFU/100 mL
- Suspended solids: 20 mg/L
- Turbidity: 10 NTU

### 2.b.1. Irrigation of crops for human consumption using application methods that do not prevent direct contact of reclaimed with edible parts of the plants, which are not eaten raw but after an industrial treatment process
- Intended use of water: 1 egg/10 L
- Maximum acceptable value (MAV): 1,000 CFU/100 mL
- Suspended solids: 35 mg/L
- Turbidity: No set limit

### 2.b.2. Irrigation of pasture land for milk- or meat-producing animals
- Intended use of water: 1 egg/10 L
- Maximum acceptable value (MAV): 10,000 CFU/100 mL
- Suspended solids: 35 mg/L
- Turbidity: No set limit

## 3. Recreational

### Golf course irrigation
- Intended use of water: 1 egg/10L
- Maximum acceptable value (MAV): 200 CFU/100 mL
- Suspended solids: 20 mg/L
- Turbidity: 10 NTU

## 4. Environmental uses

### 4.a. Irrigation of woodland, green areas and other spaces not accessible to the public
- No set limit
- No set limit
- 35 mg/L
- No set limit

### 4.b. Silviculture
- No set limit
- No set limit
- 35 mg/L
- No set limit

---

¹At least the following genera must be included in all quality categories: Ancylostoma, Trichuris and Ascaris.

²Colony forming units.

³Nephelometric turbidity units.

⁴Included in the based effluent disposal permit: discharge of these contaminants to the environment must be limited. In the case of hazardous substances, use of reclaimed water must comply with environmental quality standards.
**D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES**

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| 1.  | Development of the measures established in the National Plan for Water Quality | 2007-2015 | - General Directorate of water  
- Autonomous Communities  
- Public or private service providers |
| 2.  | Program CRECE           | 2016-on    | - General Directorate of water  
- Autonomous Communities |

**E. INDICATORS**

- Volume of reused water in Autonomous Communities and cities.  
  The result of the annual Survey on Water Supply and Sewerage is published by the National Statistics Institute (INE). For every Autonomous Communities and cities it provides the volume of water reused.

**F. RELEVANT REGIONAL OR GLOBAL OBLIGATIONS AND REPORTING SYSTEMS**

Information related with the volume of water treated in order to be reused is published in the National Statistics Institute (INE) website.
TARGET AREA XIV - Art. 6, 2 (j1) Quality of waters which are used as sources for drinking water

A. BACKGROUND RATIONALE

The first part of article 6, paragraph 2 (j), of the Protocol requires the setting of targets and target dates related to the quality of waters used as sources for drinking water. Raw water quality is the key factor to ensure drinking water safety as protection of the source represents the first and basic barrier in a multibarrier approach. Protection of raw water sources should be considered important, since:
(a) Prevention of pollution is often cheaper and easier than treatment;
(b) Even advanced treatment technology does not necessarily ensure 100 per cent safety for drinking water, as there is always a risk of failure in the treatment process.

B. CURRENT SITUATION AND ISSUES

The targets regarding drinking water are related to those established in articles 6 and 7 of Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for Community action in the field of water policy (WFD):
- Identification and register, as protected areas, of waters used for the abstraction of drinking water by the revision of available water registers in the river basins, including:
  - all bodies of water used for the abstraction of water intended for human consumption providing more than 10 m³ a day as an average or serving more than 50 persons, and
  - those bodies of water intended for such future use.
- Assessment and implementation of the water quality monitoring programmes of waters used for drinking water abstraction.
  The monitoring sites are set in those water bodies which provide more than 100 m³ a day as an average.
In accordance with the article 7 of WFD, the quality criteria of waters used as sources for drinking water will meet the objectives set for all of the surface water bodies and the Member States shall ensure that under the water treatment regime applied, and in accordance with Community legislation, the resulting water will meet the requirements of Directive 80/778/EEC as amended by Directive 98/83/EC.
The analyzed parameters are all those that pose a risk to water quality. They are selected among those regulated by the drinking water Decree and the Water Pollutants and Priority Substances Decree (Royal Decree 140/2003 of 7 February, and Royal Decree 60/2011 of 22 January).
Before these current objectives had been fixed, these water bodies were monitored according to the parameters established in the Spanish regulations derived from Directives 75/440/EEC and 79/869/EEC, concerning the quality required of surface water intended for the abstraction of drinking water in the Member States (already repealed) and transferred to Spanish legislation.

Drinking water supply will be guaranteed if good water quality is achieved. For that reason Spain aims to meet the objective set for water bodies, reaching at least for a good water status, and to avoid its deterioration.

Legal/regulatory actions:
- Amendments of Royal Legislative Decree 1/2001, of 20 July, approving the consolidated text of the Water Law, the Public Water Rules and Regulations of Water Planning.
- Royal Decree 60/2011, of 22 January, on environmental quality standards in the field of water policy.
- Royal Decree 907/07, of 6 July, with the Spanish Regulation for Water Planning.
- Order ARM/2656/2008, of 10 September, where Water Planning Instructions are approved.
- Royal Decree 1541/94, of 8 July, amending Annex No. 1 of the Regulation of the public water administration and water planning, approved by Royal Decree 927/1988, of July 29.
- Application of criteria for water quality established in the Royal Decree 140/2003, of 7 February, establishing the health criteria for water quality for human consumption.
C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation (Water Framework Directive, article 6 and 7 and Royal Decree 1541/94, article 1) are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Identification and register, as protected areas, of waters used for the abstraction of drinking water</td>
<td>2009</td>
<td>- General Directorate of Water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Autonomous Communities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Assessment and implementation of the water quality monitoring programmes of waters used for drinking water abstraction</td>
<td>2007</td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>3.</td>
<td>Surface waters used for the abstraction of drinking water or intended for such use in the future are classified in three groups according to the degree of treatment that should be given to make them drinkable: • Category A1. Simple physical treatment and disinfection. • Category A2. Normal physical treatment, chemical treatment and disinfection. • Category A3. Intensive physical and chemical treatment, extended treatment and disinfection. Quality levels set on River Basin Management Plans for surface water intended for drinking water production may not be less stringent than those established above, except if a special treatment is provided that makes water suitable to drink.</td>
<td>Since the approval of the legislation</td>
<td>- River Basin Authorities</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Creation and update of a register of protected areas which will include waters used for the abstraction of drinking water</td>
<td>2009</td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Implementation of the water quality monitoring programmes</td>
<td>2007</td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>3.</td>
<td>Revision of monitoring programmes in order to comply with legal requirements and/or improve the control over waters used for the abstraction of drinking water</td>
<td>Every 6 years</td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>4.</td>
<td>Provision of measures in River Basin Management Plans in order to prevent the deterioration of the quality of water used for this purpose, thus contributing to reduce the level of purification treatment required to produce drinking-water sources</td>
<td>Every 6 years</td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>5.</td>
<td>Periodic report of analytic results on waters abstracted for this purpose to Health Authorities</td>
<td>Periodic</td>
<td>- River Basin Authorities</td>
</tr>
</tbody>
</table>

E. INDICATORS

Not applicable.

F. RELEVANT REGIONAL OR GLOBAL OBLIGATIONS AND REPORTING SYSTEMS

Information related with the Water Framework Directive 2000/60/EC is submitted to the European Commission using the Central Data Repository (CDR) of the European Environment Information and Observation Network (EIONET). Both the revision of monitoring programmes and the update of the register of protected areas are included within the River Basin Management Plan which is uploaded every 6 years.

Another legal obligation considered, which is related with groundwaters, is the Directive 2006/118/EC developed in response to the requirements of Article 17 of the Water Framework Directive (establishment of measures to prevent and control groundwater pollution) which is reported within the Water Framework Directive report.

The Ministry of Health, Social Services and Equality has developed the National Information System of Water for Human Consumption (SINAC) which collects data on the characteristics of the supply and quality of drinking water supplied to the Spanish population. It is an information system available both for citizens and professionals that may consult, obtain or introduce, depending on the profile of the user, information to or from the system.
A. BACKGROUND RATIONALE

The second part of article 6, paragraph 2 (j), of the Protocol requires the setting of targets and target dates related to the quality of waters used for bathing. Bathing waters differ significantly from country to country. Thus, each Government should classify its bathing waters (inland and coastal waters) and set standards for the different categories.

Due to the importance of the use of bathing water areas for human health, it is necessary to establish the quality health standards at national scale. These criteria will be applied to bathing waters and in those cases where there is not a specific bathing prohibition or a permanent advice against it.

B. CURRENT SITUATION AND ISSUES

Targets are set according to the Directive 2006/7/EC, of 15 February, concerning the management of bathing water quality, repealing Directive 76/160/EEC, and transposed by Royal Decree 1341/2007, of 11 October, concerning the management of bathing water quality.

A system of bathing water profiles, appropriate to provide a better understanding of risks, is used as basis for management measures. Bathing water profiles were established for the first time before the start of the 2009 bathing season. The deadline for developing profiles of all identified bathing waters is by the 24th of March each year.

The bathing water profile contains:

- A description of the physical, geographical and hydrological characteristics of the bathing water, and of other surface waters in the catchment area of the bathing water concerned, that could be a source of pollution, which are relevant to the purpose of Directive 2006/7/EC and as provided for in Directive 2000/60/EC.
- An identification and assessment of causes of pollution that might affect bathing waters and impair bathers’ health.
- An assessment of the potential for proliferation of cyanobacteria
- An assessment of the potential for proliferation of macro-algae and/or phytoplankton
- If the assessment of causes of pollution shows that there is a risk of short-term pollution, the following information is required:
  - the anticipated nature, frequency and duration of expected short-term pollution
  - details of any remaining causes of pollution, including management measures taken and the time schedule for their elimination
  - management measures taken during short-term pollution and the identity and contact details of bodies responsible for taking such action,
- The location of the monitoring point.

All bathing waters are required to be classified as ‘sufficient’ by 2015. National and regional authorities were involved in the implementation of the above targets.

The revised Bathing Water Directive entered into force on 24 March 2006. The overall objective of the revised Directive remains the protection of public health whilst bathing, but it also offers an opportunity to improve management practices at bathing waters and to standardise the information provided to bathers across Europe.

Legal/ regulatory actions:

- Amendments of Royal Legislative Decree 1/2001, of 20 July, approving the Water Law.
- Royal Decree 1341/2007, October 11, concerning the management of bathing water quality.

Management measures and information actions:

- Bathing Water Profiles of all every bathing waters which were established for the first time before the start of the 2009 bathing season.
- NAYADE. National Information System of Bathing Waters

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Register of all bathing waters, according to 2006/7/CE Directive (bathing water) and supply more information so the public can choose where to bathe. Development of the National Information System of Bathing Waters (NAYADE: <a href="http://www.nayade.msssi.es">www.nayade.msssi.es</a> )</td>
<td>2007</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>2.</td>
<td>Development of Bathing Water Profiles by the Spanish river basin authorities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>To improve the infrastructures where the quality of the bathing water is insufficient or health risks have been detected.</td>
<td>2017</td>
<td>Ministry of Environment Municipalities</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To facilitate the improvement in wastewater treatment and outfalls</td>
<td>2017</td>
<td>Ministry of Environment Municipalities</td>
</tr>
</tbody>
</table>

E. INDICATORS

• Nº of inland bathing waters classified as ‘excellent’.
• Nº of coastal bathing waters classified as ‘excellent’.

F. RELEVANT GLOBAL AND REGIONAL OBLIGATIONS AND RECOMMENDATIONS ON REPORTING

- National Report: Annual, in the first quarter of each year, last one, 2012
  [http://www.mssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_t emat/Publicaciones/home.htm](http://www.mssi.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/acceso_por_temat/Publicaciones/home.htm)
- Report for European Commission: Annual, 2013:
TARGET AREA XVIII - Art. 6, 2 (I) Identification and remediation of particularly contaminated sites

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (I), of the Protocol requires the setting of targets and target dates related to the identification and remediation of particularly contaminated sites that adversely affect waters within the scope of this Protocol or are likely to do so, and that thus threaten to give rise to water-related diseases.

B. CURRENT SITUATION AND ISSUES

The second River Basin Management Plans have updated the existing inventory of pressures (water discharges, water uses, dam and reservoirs authorizations, works, public domain uses, etc.).

On the one hand the surface water bodies under different group of pressures (WFD definition), it is clear the most important pressures affecting the highest number of water bodies are the hydro morphological ones (53%), followed by the one source pollution (43%) and diffuse pollution sources (41%). The over abstraction pressures affected 29% of the surface water bodies.

On the other hand, ground waters suffer from diffuse pollution as the main pressure (55%), the second source is the one source pollution type and the over abstraction (28%).

Programs of measures aim to set actions to improve the current situation of water bodies into the target situation described in art. 4 of the WFD.

Legal/ regulatory actions:

- Royal Decree 1/2016 passing the second cycle River Basin Management Plans (RBMP) containing the programs of measures.
- WFD
- TRLA Royal Decree 1/2001 (Water Act)

C. TARGETS AND TARGET DATES

The targets set in Spain according to current legislation are:

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Those of the RBMP, objectives under article 4 of the WFD</td>
<td>2016-2021</td>
<td>Central Government</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

The main measures taken in Spain are classified as follows:

a) measures under the WFD to reach the environment objectives.
b) investments to improve water resources to satisfy water demands.
c) measures to mitigate effects of extreme events (droughts and floods).
d) governance and knowledge related measures.
e) Other investments required.

The more expensive measures have been:

- Reduce one source pollution points.
- Reduce over abstraction pressures.
- Reduce morphological pressures.
- Measures to increase water resources.
E. INDICATORS

The indicators used to picture the effect of the WFD implementation are the assessment of the RBMP and the improvement of the water bodies under pressure. Usually the studies carried out by the RB Authorities and results of the monitoring programmes are also used as indicators.
TARGET AREA XIX - Art. 6, 2 (m) Effectiveness of systems for the management, development, protection and use of water resources

A. BACKGROUND RATIONALE

Article 6, paragraph 2 (m), of the Protocol requires the setting of targets and target dates related to the effectiveness of systems for the management, development, protection and use of water resources, including the application of recognized good practice to control pollution from sources of all kinds. In addition, according to article 6, paragraph 5 (b), Parties shall establish water management plans in transboundary, national and/or local contexts, preferably on the basis of catchment areas or groundwater aquifers. The public shall be involved.

In accordance with article 5 of the Protocol: (a) water resources shall be managed in a sustainable way (art. 5, para. (d)); (b) action to manage water resources should be taken at the lowest appropriate administrative level (article 5, para. (f)); (c) efficient use of water should be promoted through economic instruments and awareness-raising (art. 5, para. (h)); and (d) water resources should, as far as possible, be managed in an integrated manner on the basis of catchment areas, with the aim of linking social and economic development to the protection of natural ecosystems and of relating water resource management to regulatory measures concerning other environmental mediums. Such an integrated approach should apply across the whole catchment area, whether transboundary or not, including its associated coastal waters, the whole of a groundwater aquifer or the relevant parts of such a catchment area or groundwater aquifer (art. 5, para. (j)).

Moreover, article 13 of the Protocol encourages Parties to establish, with other Parties bordering the same transboundary waters, joint or coordinated water management plans.

B. CURRENT SITUATION AND ISSUES

Management, protection and use of water resources are encompassed within the objectives marked by the Water Framework Directive. This European requirement establishes that water management is to be carried out at river basin district level, including coastal waters, through the development of river basin management plans and programmes of measures.

The Directive establishes a general objective, which is to achieve by 2015 the good status in all water bodies in Europe. In the case of surface water bodies, this means that good ecological status and good chemical status have to be achieved. Regarding artificial and heavily modified water bodies, a good ecological potential and a good chemical status have to be reached. And, with respect to groundwater bodies, a good quantitative and chemical status has to be achieved.

In some cases, the normative allows to establish objectives that are different to the main one. In those water bodies, in which general environmental objectives are not achieved, it is possible to establish exceptions; there are four possible exceptions:

- The deadlines established may be extended (for reasons of technical feasibility, disproportionate costs, or because natural conditions do not allow timely improvement in the status of the body of water) for the purposes of phased achievement of the objectives for bodies of water.
- The environmental objectives may be less stringent.
- Temporary deterioration in the status of bodies may be allowed.
- Failure to achieve good status as a result of new modifications of the physical characteristics of a surface water body or alterations of the level of bodies of groundwater or new sustainable human development activities.

Several exceptions have been applied in Spain both in surface water bodies and groundwater bodies. Management process is cyclical (every 6 years) and the main tool to achieve the goals is the “River Basin Management Plan”. The first management cycle covered the following issues: identification of River Basin Districts (RBD) and Authorities, characterization of river basin regarding pressures, impacts and economic analysis, finalization and publication of the river basin management plan including the program of measures by 2009; to establish operational programmes of measures by 2012 and to meet environmental objectives by 2015.

Once the first management cycle finished, a second management cycle begin; during this cycle river basin management plans and programmes of measures will be reviewed. In January 2016 most of the River Basin...
Management Plans of the second cycle were passed reviewing the previous ones and meeting the requirements of the European Commission.

On the other hand, there are also agreements with neighboring countries to manage international river basin districts, such as the Spanish-Portuguese Albufeira Convention and the Spanish-French Toulouse Convention. Besides, other international treaties are focused on the maintenance and improvement of different aquatic ecosystems taking into consideration health and environmental issues. These international treaties are also contributing to fulfill the requirements of the health-environment nexus (such as the OSPAR convention on the North Atlantic Ocean, the Barcelona Treaty on the Mediterranean Sea and others).

Apart from the WFD there are other regulations related to water quality. Some of which have been already been detailed in other sections, others such as the Nitrate Directive 91/676/EEC or the Integrated pollution prevention and control Directive 2008/1/EC also contribute to control and avoid or reduce the contamination of water resources.

Legal/ regulatory actions:

- Law 62/2003, of 30 December 2003, on fiscal measures, administrative measures and social order, which modified the text of the Water Law, approved by Royal Legislative Decree 1/2001, of 20th July. (Transposition of the Water Framework Directive through the article 129).
- Royal Decree 125/2007, which established the territorial jurisdiction of the RBD.
- Royal Decree 126/2007, which determinates the Committee of Competent Authorities.
- Order ARM/2656/2008, of 10th September, in which Water Planning Instructions are approved.

C. TARGETS AND TARGET DATES

The targets set to current legislation (Water Framework Directive, article 3, 5, 7, 8, 11 and 13)

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Achievement by 2015 of a good status in all water bodies.</td>
<td>2015</td>
<td>General Directorate of water, Autonomous Communities, River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Identification of River Basin Districts (RBD) and Authorities</td>
<td>2004</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>Characterization of the river basin and analysis of pressures, impacts and economic analysis</td>
<td>2005</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>Establishment of programmes for the monitoring of water status</td>
<td>2007</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>Creation of a register of protected areas</td>
<td>2009</td>
<td>- General Directorate of water, Autonomous Communities, River Basin Authorities</td>
</tr>
<tr>
<td>6.</td>
<td>Publication of the River Basin Management Plans (RBMP), including the program of measures</td>
<td>2009</td>
<td>- General Directorate of water, Autonomous Communities, River Basin Authorities</td>
</tr>
<tr>
<td>7.</td>
<td>Analysis of the progress in the implementation of the programme of measures planned</td>
<td>2012</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>Compliance with future planning cycles</td>
<td>Every 6 years</td>
<td>-</td>
</tr>
<tr>
<td>9.</td>
<td>Coordination between countries when dealing with international river basin districts</td>
<td>2009</td>
<td>General Directorate of water, River Basin Authorities</td>
</tr>
</tbody>
</table>

D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

In order to achieve the targets the following measures are proposed:

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Complementary studies will be carried out, before the development of the RBMP, to increase the knowledge on the basin (analysis of existing monitoring networks in order to adapt them to the WFD requirements, studies to determine the environmental requirements for river flows...).</td>
<td>As needed, every 6 years</td>
<td>General Directorate of water, Autonomous Communities, River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Development and follow up of the RBMP and review of the program of measures.</td>
<td>Every 6 years</td>
<td>- General Directorate of water, Autonomous Communities, River Basin Authorities</td>
</tr>
<tr>
<td>3.</td>
<td>Creation of International Conventions with neighboring countries and coordination of working groups</td>
<td>Regularly</td>
<td>General Directorate of water, River Basin Authorities</td>
</tr>
</tbody>
</table>

E. INDICATORS
• Water quality: on the basis of national systems of water classification, percentage of water falling into each defined class (e.g., in classes I, II, III, etc. for non-EU countries; for EU countries, percentage of surface water bodies with high, good, moderate, poor and bad ecological status; percentage of water bodies with good or poor chemical status; and percentage of groundwaters of good or poor status).

• Water quantity: water exploitation index at the national and river-basin levels for each sector (agriculture, industry, domestic): mean annual abstraction of freshwater by sector divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.

F. RELEVANT REGIONAL OR GLOBAL OBLIGATIONS AND REPORTING SYSTEMS

Information related with the Water Framework Directive 2000/60/EC is submitted to the European Commission using the Central Data Repository (CDR) of the European Environment Information and Observation Network (EIONET). River Basin Management Plan must be published every 6 years and uploaded to the Central Data Repository within the three months of their publication. Other relevant directives mentioned, such as the Directive 2008/1/EC concerning integrated pollution prevention and control or the Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources, are also available in this repository (CDR) under their own obligation report.
TARGET AREA XX - Art. 6, 2 (n) Frequency of the publication of information on the quality of the drinking water supplied and of other waters relevant to the protocol

A. BACKGROUND RATIONALE

Countries shall set the frequency of the publication of information on the quality of the drinking water supplied and of other waters relevant to the targets set in the intervals between the publication of information on the collection and evaluation of data on the progress towards the targets. Such publication should take place at least every three years.

B. CURRENT SITUATION AND ISSUES

There are requirements to report information to the European Commission under different Directives, as well as other obligations with the European Environmental Agency and other international organizations. Within the scope of this Protocol some of the obligations are:


Urban Wastewater Treatment Directive 91/271/EEC: a two yearly report to verify the compliance of the discharges from urban waste water treatment plants with the emission control standards.

Bathing Water Directive 2006/7/EC: annual report of an inventory of identified bathing waters and the results of the monitoring and with the bathing water quality assessment.

Water Framework Directive 2000/60/EC: to comply with this Directive there are several requests of information within a planning cycle. Every 6 years a River Basin Management Plan must be drawn up for every river basin district.

Nitrate Directive 91/676/EEC: every four years a report with monitoring results, preventive actions taken to reduce the pollution caused by nitrates from agricultural sources, vulnerable zones... is sent to the European Commission.

Moreover, public access to environmental information is an issue addressed by the European Union (Directive 2003/4/EC). Member States must provide the information requested as well as determine the practical arrangements under which such information is effectively made available. These arrangements shall guarantee that the information is effectively and easily accessible and progressively becomes available to the public through public telecommunications networks, including publicly accessible lists of public authorities and registers or lists of environmental information held by or for public authorities.

Acting in accordance with these requirements there are different information systems which provide information of the quality of both drinking and bathing waters. The National Information System of Water for Human Consumption (SINAC) offers quality data of the water provided for each province, municipality and area. On the other hand the National Information System of Bathing Waters (NAYADE).

C. TARGETS AND TARGET DATES

<table>
<thead>
<tr>
<th>No.</th>
<th>Targets</th>
<th>Target dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Comply with the reporting obligations set in the current legislation to international organizations</td>
<td>As required by obligation</td>
<td>- General Directorate of water</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Autonomous Communities</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Supply and/ or publication of existing information, when possible.</td>
<td>When required, it should be made available:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- As soon as possible or, at the latest, within one month after the receipt by the public authority</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>- Within two months after the receipt of the request if the volume and the complexity of the information is such that the one-month period referred to in cannot be complied with.</td>
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</tr>
<tr>
<td>3.</td>
<td>Comply with the reporting obligations set in the current legislation to international organizations regarding Drinking Water Directive</td>
<td>As required by obligation</td>
<td>Ministry of Health</td>
</tr>
</tbody>
</table>
D. PROPOSED MEASURES TO ACHIEVE TARGETS AND TARGET DATES

<table>
<thead>
<tr>
<th>No.</th>
<th>Measures and activities</th>
<th>Time frame</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Establishment of procedures between different administrative bodies to comply with different requirements set by the existing obligations</td>
<td>As necessary</td>
<td>- General Directorate of water&lt;br&gt;- Autonomous Communities&lt;br&gt;- River Basin Authorities</td>
</tr>
<tr>
<td>2.</td>
<td>Maintenance and further improvements of the existing information systems, or creation of new systems if necessary.</td>
<td>As needed</td>
<td>- General Directorate of water&lt;br&gt;- Autonomous Communities&lt;br&gt;- River Basin Authorities</td>
</tr>
<tr>
<td>3.</td>
<td>Establishment of procedures within the different organisms in order to supply information to applicants.</td>
<td>2003</td>
<td>- General Directorate of water&lt;br&gt;- Autonomous Communities&lt;br&gt;- River Basin Authorities</td>
</tr>
<tr>
<td>4.</td>
<td>Mantenimiento de SINAC y NAYADE como herramienta de recogida de información</td>
<td>Continuously</td>
<td>Ministry of Health&lt;br&gt;Water Suppliers&lt;br&gt;Regional authorities</td>
</tr>
</tbody>
</table>

E. INDICATORS

- Annual Report on Quality of drinking water for human consumption in Spain
- Annual Report of bathing water quality in Spain
- Bathing Water Quality Reporting under Directive 2006/7/EC
- Drinking Water Quality Reporting under Directive 98/83/EC

F. RELEVANT REGIONAL OR GLOBAL OBLIGATIONS AND REPORTING SYSTEMS

The European Commission has developed the Central Data Repository (CDR) which is part of the ReportNet architecture that aims to support and improve data and information flows. The Central Data Repository collects data reports on the environment submitted by Member States. In this website information submitted is public and can be viewed by any user (when no restriction is set by the Member State). For each country collection the data reports are arranged under the relevant reporting obligations or agreements. The reports mentioned above can be consulted in this website:

- Drinking Water Directive 98/83/EEC: Eionet>CDR>Spain>European Union (EU), obligations>
- Urban Wastewater Treatment Directive 91/271/EEC: Eionet>CDR>Spain>European Union (EU), obligations>
- Bathing Water Directive 2006/7/EC: Eionet>CDR>Spain>European Union (EU), obligations>
  Bathing Water Directive 2006/7/EC Report
- Nitrate Directive 91/676/EEC: Eionet>CDR>Spain>European Union (EU), obligations>

On the other hand, the National Information System of Water for Human Consumption (SINAC) and the National Information System of Bathing Waters (NAYADE) are available to the public and can be consulted in the website of the Ministry of Health, Social Services and Equality.

The Ministry of Agriculture, Food and Environment also publishes information in their website such as the Public Bank of Environmental Indicators (BPIA), the Annual Report of Indicators, the Statistical Yearbook or the number of authorizations per year in public property (both hydraulic and maritime – terrestrial). Citizens may also require information on other subjects through the Environmental Information Office.