

***THE PROTOCOL ON  
WATER AND HEALTH  
4<sup>TH</sup> REPORTING***

**SPAIN**



**2019**



## **Ministry of Health, Consumer Affairs and Social Welfare**

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## **Template for summary reports in accordance with article 7 of the Protocol on Water and Health**

## Part one. General aspects

1. Were targets and target dates established in your country in accordance with article 6 of the Protocol?

*Please provide detailed information on the target areas in part two.*

YES  NO  IN PROGRESS

*If targets have been revised, please indicate the date of adoption and list the revised target areas. Please provide detailed information in part two.*

**Even though the existing legislation covers up most of the points established in the Protocol, a Spanish Plan is being drawn with the coordination of all public authorities involved.**

2. Were targets and target dates published and, if so, how?

*Please explain whether the targets and target dates were published, made available to the public (e.g., online, official publication, media) and communicated to the secretariat.*

**Considering that the Plan is still under development, no publication has been done. Nevertheless, most of the targets are already implemented in the Spanish legislation.**

**In the case of drinking and bathing water, the information is available in the following websites:**

- **Drinking water:**

<http://www.mscbs.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/publicaciones.htm>

- **Bathing water:**

<http://www.mscbs.gob.es/profesionales/saludPublica/saludAmbLaboral/calidadAguas/aguasBanno/publicaciones.htm>

3. Has your country established national or local arrangements for coordination between competent authorities for setting targets? If so please describe, including information on which public authority(ies) took the leadership and coordinating role, which public authorities were involved and how coordination was ensured.

**The coordination between the Ministry of Health, Consumer Affairs and Social Welfare and the Ministry for the Ecological Transition has been necessary to set the targets, and it must continue in order to achieve their implementation.**

**With regard to water and health matters, the Spanish government has transferred the competency of several areas to Autonomous Communities and Local entities, so a coordination process has to be undertaken whenever these matters are**

addressed. Therefore, special efforts must be done in order to coordinate the public authorities involved.

- 1) At national level: between Ministries.
- 2) Coordination between national level and regional level in drinking and bathing water: through '*Comisión de Salud Pública*' and '*Ponencia de Salud Pública*'.
- 3) Coordination between regional level and local level.

The Spanish Ministry of Health collects information about drinking water through the National Drinking Water Information System (SINAC), it is a system of information relating to supply zones and monitoring of the quality of water intended for human consumption. The water supplier, the town council and the health authority are obliged to provide the SINAC with data in this system.

<http://sinac.msc.es/SinacV2/>

Also, the Spanish Ministry of Health collects information about bathing water (water quality and characteristics of the beach as well as the conditions that can affect the quality of bathing water points) through the National Bathing Water Information System (NÁYADE), regional authority are obliged to provide data in this system.

<https://nayade.msssi.es>

The information regarding swimming pools (water and air quality) is collected in the National Information System called SILOÉ.

<https://siloe.msssi.es>

4. Was a programme of measures or action plan developed to support implementation of the targets? If so, please briefly describe that programme or plan, including how financial implications were taken into account.

**Still in progress**

5. What has been done in your country to ensure public participation in the process of target setting in accordance with article 6, paragraph 2, and how was the outcome of public participation taken into account in the final targets set?

**Public participation is required by the European Water Framework Directive in order to approve River Basin Management Plans, where objectives are set for water resources and measures established.**

**In the European Union it is considered of the utmost importance to involve stakeholders, citizens, non-governmental organisations (NGOs) or local communities, by consultation processes or active participation, through the complaints procedures, in the legislation implementation process when environment issues are involved to achieve greater transparency in the establishment of objectives.**

In the process of elaboration of the national legislation referred in answer 4, through the public hearing procedure through associations such as consumer associations.

6. Please provide information on the process by which this report has been prepared, including information on which public authorities had the main responsibilities and what other stakeholders were involved.

The Ministry of Health, Consumer Affairs and Social Welfare , responsible for health matters at a national level and the Ministry for the Ecological Transition, responsible for environmental issues are to be accounted for as the organisms to lead the development of the Plan that will comply with the Protocol on Water and Health.

The competent departments in each Ministry studied the legislation and set targets in accordance to Spanish laws and detailed or proposed further targets if necessary.

Considering that some of the competencies regarding the subject approached has been transferred to regional or local administration the data had to be harvested from different sources.

Using the information generated in the implementation of current legislation.

The Spanish Ministry of Health collects information about drinking water through the National Drinking Water Information System (SINAC), it is a system of information relating to supply zones and monitoring of the quality of water intended for human consumption. The water supplier, the town council and the health authority are obliged to provide the SINAC with data in this system.

<https://sinac.msssi.es>

Also, the Spanish Ministry of Health collects information about bathing water (water quality and characteristics of the beach as well as the conditions that can affect the quality of bathing water points) through the National Bathing Water Information System (NÁYADE), regional authority are obliged to provide data in this system.

<https://nayade.msssi.es>

The information regarding swimming pools (water and air quality) is collected in the National Information System called SILOÉ.

<https://siloe.msssi.es>

7. Please report any particular circumstances that are relevant for understanding the report, including whether there is a federal and/or decentralized decision-making structure.

The guarantee of drinking water supply is decentralized, at local level.

## Part two. Targets and target dates set and assessment of progress

### I. Quality of the drinking water supplied (art. 6, para. 2 (a))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

The target is to provide safe and clean drinking water, without any content of microorganism, parasitic or substance in a quantity or concentration that could pose a risk to human health, in addition to complying with the current legislation.

- To 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.
  - To increase coverage of about 97% of the Spanish population
  - To increase compliance in the sampling frequency by 10% in each range of population.
  - To keep compliance quality of drinking water above 99%
  - To develop a software tool for the development of Water Safety Plans
  - To prepare the Water Safety Plan in each of the supply zones over 50 people
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

#### Legal/regulatory actions:

- Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.
- 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.
- Royal Decree 902/2018 20th of July amending Royal Decree 140/2003, of 7th February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE

A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

Publicise and inform water suppliers about the WSP managing tool through SINAC.

There are difficulties in rural areas supply, i.e., the ones supplying towns of less than 5.000 inhabitants.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

- Frequent use of the information system (SINAC) via internet in the last 16 years by over a 8,500 professional to inform of the quality of drinking water and the characteristics of supplies covering more than 84.5% of the Spanish population. (please note there are a decrease in coverage related to the data reported in 2013. This decrease is due to a improvement in the data collection system and does not respond to a real coverage decrease. 2013 data maybe not so accurate as expected before this changes).
- Increase of the information collected regarding drinking water quality and the characteristics of supplies over the last 16 years.
- Increase of the compliance with sampling frequency standards according to the current legislation.
- Maintenance of the compliance of over 99% of the water supplied with the current legislation.
- Improvement of the warning system in SINAC
- Corrective measures are taken in a short term basis of time after the detection of incidents in recent years.
- A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).
- Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.
- Currently, WSP are implemented in water supplies that supply more than 50.000 inhabitants.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Through legislation, joint work with the Ministry of Health, Autonomous Communities, City Councils, water suppliers and the available tools (SINAC) contributes to provide safe and clean drinking water, without any content of microorganism, parasitic or substance in a quantity or concentration that could pose a risk to human health.



5. If you have not set a target in this area, please explain why.

## II.Reduction of the scale of outbreaks and incidents of water-related disease (art. 6, para. 2 (b))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

### Reduction in the number of outbreaks notified regarding drinking water.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

### Improve the reporting of waterborne outbreaks.

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

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

- In Spain, just like in other developed countries, over the years it has been observed a decline in the notification of water outbreaks related to bacterial etiology and an increase in notification of outbreaks caused by viruses and parasites. This is probably due to the improvement of laboratory diagnosis and of notification process, along with other factors such as resistance of these pathogens (mainly norovirus and some protozoa) to water chemical disinfection processes.
- The number of outbreaks notified regarding drinking water were 6 less than 1% on average during 2016. It reflects a high quality of the water standards and control.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The notification of outbreaks of waterborne diseases indicates us the areas of work in which we have to maintain the quality acquired over years and those that can improve safer and cleaner drinking water supply, without any content of

microorganism, parasitic or substance in a quantity or concentration that could pose a risk to human health.

5. If you have not set a target in this area, please explain why.

### III. Access to drinking water (art. 6, para. 2 (c))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

**To maintain a minimum water supply in drought periods.**

**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.**

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
  - **Royal Decree 140/2003, of 7 February by which health criteria for the quality of water intended for human consumption are established.**
  - **Royal Decree 902/2018 20th of July amending Royal Decree 140/2003, of 7th February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE**
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
  - **Spanish Official data show that 99.99 percent of population has access to drinking water with an average amount of 130-140 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.**
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

**In this case, directly to achieve universal and equitable access to drinking water at an affordable price for all in accordance with objective 6 of the Agenda.**

Access to drinking water in Spain is close to 99.99% of the population. All the municipalities have public fountains of drinking water in their shanty towns. It also exists, for families below the poverty line, social bonds.

5. If you have not set a target in this area, please explain why.

#### IV. Access to sanitation (art. 6, para. 2 (d))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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. The streamlining of the different Directives comes up as a necessity.

Access to sanitation was considered within the National Plan for Water Quality (PNCA 2007-2015) in the following terms:

- To comply with the requirements of the Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment.
- 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:

- Collecting systems (article 4 of Royal Decree- Law 11/1995 and article 2 of Royal Decree 509/1996)
- Secondary treatment for urban waste water (article 5 of Royal Decree- Law 11/1995 and article 5 Royal Decree 509/1996)
- More stringent treatment for urban waste water discharging into sensitive areas (article 7 of Royal Decree- Law 11/1995 and article 6 of Royal Decree 509/1996)

Once the previous plan finished (it covered the period 1995-2005 and aimed to guarantee that both the treatment and quality of the discharge meet 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 Plan and establish the actions to be taken.

Recently, the Spanish Ministry for the Ecological Transition has developed the Plan DSEAR (acronym of Spanish National Plan for Sanitation, Waste Water Treatment,

Efficiency, Energy Saving and Reuse) which was submitted for public consultation on 9<sup>th</sup> October 2018. The main aim of this Plan is to reinforce those areas that were not achieved in the former National Plan for Water Quality (PNCA).

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5 of the Protocol).

**Legal/ regulatory actions:**

- Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment.
- 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.
- National Plan for Water Quality 2007-2015 (PNCA). The National Plan for Water Quality 2007-2015 includes more than 2,100 measures regarding sanitation and depuration, with an approximate cost of 19,000 million Euros.
- Plan DSEAR (2018) which analyses the role of sanitation and waste water treatment in the current framework of the circular economy, taking into consideration key terms such as resource efficiency, energy saving and reuse of regenerated waste water.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

According to the objectives included in the national legislation, a list of activities was achieved, such as: systems extension and improvement of manifolds and emissaries, modification and improvement of the existing facilities; adjustment of the collecting systems and treatments given the increase of flow rates and pollutants loads reached; incorporation of secondary treatment in facilities that just have primary treatment; and inclusion of more stringent treatment for nutrient reduction in existing facilities discharging into sensitive areas.

The percentage of the Spanish population connected to sewage has significantly increased from 91% in 2006 to 99% in 2016. The remaining unconnected population is widely dispersed in the territory in agglomerations of less than 2,000 inhabitants.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## **V.Levels of performance of collective systems and other systems for water supply (art. 6, para. 2 (e))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

### **Targets:**

- **Improvement of the management of the supplies from catchment, treatment plants, storage and water distribution.**
- **Improvement of the drinking water quality control.**
- **Improvement of the transmission of information to citizens.**

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5 of the Protocol).

### **Legal/regulatory actions:**

- **Royal Decree 140/2003, of 7<sup>th</sup> 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 (SINAC).**
- **Royal Decree 902/2018 20<sup>th</sup> of July amending Royal Decree 140/2003, of 7<sup>th</sup> February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE**

**A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).**

**Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.**

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Frequent use of the information system (SINAC) via internet in the last 16 years by over a 8,500 professional to inform of the quality of drinking water and the characteristics of supplies representing more than 84.5% of the Spanish population. (In 2015-2016, an evaluation of the data collected in the SINAC was performed with the development of a second updated versión of the system. As the system is improved, the data is more reliable)

Increase of the information collected regarding drinking water quality and the characteristics of supplies over the last 16 years.

Increase of the compliance with sampling frequency standards according to the current legislation.

Maintenance of the compliance of over 99% of the water supplied with the current legislation.

Improvement of the warning system in SINAC

Corrective measures are taken in a short term basis of time after the detection of incidents in recent years.

A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

Currently, WSP are implemented in water supplies that supply more than 50.000 inhabitants.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The target and its assessment, is contributed to provide safe and clean drinking water, without any content of microorganism, parasitic or substance in a quantity or concentration that could pose a risk to human health.

5. If you have not set a target in this area, please explain why.

## VI. Levels of performance of collective systems and other systems for sanitation (art. 6, para. 2 (e))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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

- To fulfill with the requirements of the Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment.
- To contribute to the compliance in 2015 with the environmental objectives set for water bodies by the Water Framework Directive.

The European Directive concerning urban waste water treatment establishes that member states shall ensure that 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 15,000 p.e. (population equivalent).
- at the latest by 31 December 2005 for all discharges from agglomerations of between 10,000 and 15,000 p.e.
- at the latest by 31 December 2005 for discharges to fresh-water and estuaries from agglomerations of between 2,000 and 10,000 p.e.

It also specifies in Annex 1 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, notably regarding:

- Volume and characteristics of the urban waste water.
- Prevention of discharges, emissions and losses.
- Limitation of pollution of receiving waters due to storm overflows.

The 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.

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.

Currently, the Plan DSEAR is being fostered to strengthen those areas that were not sufficiently developed.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

See point 2 in Section “IV. Access to sanitation”.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

The efforts to reduce pollution and protect the environment from the adverse effects of urban waste water discharges have paid off. Since the adoption of the National Plans, both the performance of collecting systems and of treatment plants have increased significantly. Even more so if the situation previous to the adoption of the Protocol is taken into consideration.

The percentage of the Spanish population connected to sewage has significantly increased from 91% in 2006 to 99% in 2016. The remaining unconnected population is widely dispersed in the territory in agglomerations of less than 2,000 inhabitants.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## VII. Application of recognized good practices to the management of water supply (art. 6, para. 2 (f))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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.
- Information has been reported on the characteristics of their infrastructure and quality of drinking water since 2003 in SINAC. This information in 2017 covered to the 84.5% of the counted population.
- 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.



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

**Targets:**

- Improvement of the management of the supplies from catchment, treatment plants, storage and water distribution.
- Improvement of the drinking water quality control.
- Improvement of the transmission of information to citizens.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

**Legal/regulatory actions:**

- Royal Decree 140/2003, of 7<sup>th</sup> 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 (SINAC).
- Royal Decree 902/2018 20<sup>th</sup> of July amending Royal Decree 140/2003, of 7<sup>th</sup> February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE

A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
  - Frequent use of the information system (SINAC) via internet in the last 16 years by over a 8,500 professional to inform of the quality of drinking water and the characteristics of supplies representing more than 84.5% of the Spanish population. (In 2015-2016, an evaluation of the data collected in the SINAC was performed with the development of a second updated versión of the system. As the system is improved, the data is more reliable)
  - Increase of the information collected regarding drinking water quality and the characteristics of supplies over the last 16 years.

- Increase of the compliance with sampling frequency standards according to the current legislation.
- Maintenance of the compliance of over 99% of the water supplied with the current legislation.
- Improvement of the warning system in SINAC
- Corrective measures are taken in a short term basis of time after the detection of incidents in recent years.
- A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

- Currently, WSP are implemented in water supplies that supply more than 50.000 inhabitants.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

**The target and its assessment, is contributed to provide safe and clean drinking water, without any content of microorganism, parasitic or substance in a quantity or concentration that could pose a risk to human health.**

5. If you have not set a target in this area, please explain why.

## VIII. Application of recognized good practice to the management of sanitation (art. 6, para. 2 (f))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

See point 2 in Section “IV. Access to sanitation”.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

## IX. Occurrence of discharges of untreated wastewater (art. 6, para. 2 (g) (i))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to the Directive 91/271/EEC, the discharge of untreated wastewater 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 contaminate continental waters, requires administrative authorization. This authorization will be given 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.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

### Legal/ regulatory actions

- Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment.
- 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.
- National Plan for Water Quality 2007-2015 (PNCA).
- “Zero Tolerance” Plan on water discharges.

Currently the Ministry of Agriculture, Food and Environment is developing a National Discharge Census where all data related with discharge authorization will be compiled. The data will come from the River basin authorities that must register and control all the authorization, in their own Discharge Authorizations Census.

Following the “polluter pays principle”, a tariff will be set for every discharge according to the volume of water discharged, the nature, characteristics and degree of pollution of the discharge and the status of the receiving water. According to the pollution load established on the administrative authorization a particular coefficient is applied to the discharge tariff and legal measures are undertaken. Non-authorized discharges are prosecuted.

Inspection actions are carried out by the river basin authorities in order to control all discharges.

The compliance with the current legislation concerning wastewater treatment is the main goal of the National Plan for Water Quality 2007-2015 (PNCA). Within the plan it is included the coordination with the “Zero Tolerance” Plan on water discharges, that requires an authorization for every discharge even those from water treatment plants.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

The development of the National Discharge Census and the “Zero Tolerance” Plan on water discharges imply that all emissions will be known and controlled. Discharges of wastewater without their proper authorization are not allowed and authorized discharges have the treatment to be applied set when registered.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

## **X.Occurrence of discharges of untreated storm water overflows from wastewater collection systems (art. 6, para. 2 (g) (ii))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

According to the Directive 91/271/EEC, 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 have been modified in order to include measures and specific conditions to prevent pollution from storm waters.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

These national regulations have established the requirements applied to industrial and urban discharges to prevent pollution from storm water.

The petitioner of the discharge authorization shall describe the characteristics of the sewage systems and spillways, and the measures, actions and installations provided to limit pollution from storm water. In the case of requests by local and autonomous regions, the statement shall also include measures to maximize the volume transport to the sewage treatment plants and runoff and reduce the impact of floods on sanitation systems in rain events.

As a consequence, the discharge authorization shall establish the measures, actions and installations for regulating storm water overflows from wastewater, as well as control elements thereof, necessary to limit the pollution that they produce and achieve the environmental objectives of the receiving waters.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

According to the deadline established in the national regulation, the River Basin District should have an inventory of overflow points from wastewater collection systems which will form part of the inventory of the type and magnitude of the significant anthropogenic pressures of the water bodies.

The measures and specific conditions to prevent pollution from storm water, taking into account technical standards, shall be incorporated in the discharge authorization, both new and already existing ones.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## XI. Quality of discharges of wastewater from wastewater treatment installations (art. 6, para. 2 (h))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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 requirements establish are:

- For discharges from urban waste water treatment plants with secondary treatment or an equivalent treatment:

Parameters	Concentration	Minimum percentage of reduction <sup>(1)</sup>	Reference method of measurement
Biochemical oxygen demand (BOD <sub>5</sub> at 20° C) without nitrification <sup>(2)</sup>	25 mg/l O <sub>2</sub>	70-90 40 under Article 4 (2)	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-day incubation at 20 ° C ± 1° C, in complete darkness. Addition of a nitrification inhibitor
Chemical oxygen demand (COD)	125 mg/l O <sub>2</sub>	75	Homogenized, unfiltered, undecanted sample Potassium dichromate
Total suspended solids	35 mg/l <sup>(3)</sup> 35 under Article 4 (2) (more than 10,000 p.e.) 60 under Article 4 (2) (2,000-10,000 p.e.)	90 <sup>(3)</sup> 90 under Article 4 (2) (more than 10,000 p.e.) 70 under Article 4 (2) (2,000-10,000 p.e.)	- Filtering of representative sample through a 0.45 µm filter membrane. Drying at 105 °C and weighing - Centrifuging of a representative sample (for at least five mins with mean acceleration of 2,800 to 3,200 g), drying at 105 °C and weighing
<p><sup>(1)</sup> Reduction in relation to the load of the influent.  <sup>(2)</sup> 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<sub>5</sub> and the substitute parameter.  <sup>(3)</sup> This requirement is optional.</p>			
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.			

- 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.

Parameters	Concentration	Minimum percentage reduction <sup>(1)</sup> of	Reference method of measurement
Total phosphorus	2 mg/l P (10,000 – 100,000 p.e.) 1 mg/l P (more than 100.000 p.e.)	80	Molecular absorption spectrophotometry
Total nitrogen <sup>(2)</sup>	15 mg/l N (10,000 – 100,000 p.e.) 10 mg/l P (more than 100,000 p.e.) <sup>(3)</sup>	70-80	Molecular absorption spectrophotometry

<sup>(1)</sup> Reduction in relation to the load of the influent.

<sup>(2)</sup> Total nitrogen means: the sum of total Kjeldahl-nitrogen (organic n + NH<sub>3</sub>), nitrate (NO<sub>3</sub>) nitrogen and nitrite (NO<sub>2</sub>) nitrogen.

<sup>(3)</sup> 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.

The compliance with the current legislation is the main goal of the National Plan for Water Quality 2007-2015 (PNCA). Within the plan it is included the coordination with the “Zero Tolerance on water discharges” Plan, that requires an authorization for every discharge including those from water treatment plants.

- Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

See point 2 in Section “IV. Access to sanitation”.

- Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

Spain has made a major effort in improving the percentage of population connected to sewage systems in the last years. In 2006, around 6 million people were estimated to be unconnected to sewage systems –mostly from small and isolated populations– whereas this number was less than 1 million in 2016.



4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## **XII. Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations (art. 6, para. 2 (i))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

### XIII. Quality of wastewater used for irrigation purposes (art. 6, para. 2 (i))

For each target set in this area:

- Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

The quality criteria for the reuse of water for irrigation purposes, according to Spanish regulations for the reuse of water (Royal Decree 1620/2007 of 7 December), which entered into force on 7 December of 2007, is as follows:

#### SUMMARY OF REQUIRED QUALITY FOR IRRIGATION PURPOSES

Intended use of water	Maximum acceptable value (MAV)				
	Intestinal Nematodes <sup>1</sup>	Escherichia Coli	Suspended solids	Turbidity	Other criteria
<b>1. Urban</b>					
1.a. Residential. Irrigation of private gardens	1 egg/10 L	0 (CFU <sup>2</sup> /100mL)	10 mg/L	2 NTU <sup>3</sup>	Other contaminants <sup>4</sup> .
1.b. Services. Landscape irrigation of urban areas (parks, sports grounds and similar)	1 egg/10 L	200 CFU/100 mL	20 mg/L	10 NTU	Legionella spp 100 CFU/L (risk of aerosolization)
<b>2. Agricultural</b>					
2.a. Crop irrigation using a system whereby reclaimed water comes into direct contact with edible parts of crops to be eaten raw	1 egg/10 L	100 CFU/100mL Based on a 3-class sampling plan.	20 mg/L	10 NTU	Other contaminants. Legionella spp 1000 CFU/L (risk of aerosolization)
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	1 egg/10 L	1,000 CFU/100 mL Based on a 3-class sampling plan.	35 mg/L	No set limit	Other contaminants. Taenia saginata and Taenia solium: 1 egg/L (when irrigating pasture land for milk- or meat producing animals)
2.b.2. Irrigation of pasture land for milk- or meat-producing animals					Pathogens (Salmonella, etc)
2.c.1. Localized irrigation of tree crops whereby reclaimed water is not allowed to		1			Other contaminants

Intended use of water	Maximum acceptable value (MAV)				
	Intestinal Nematodes <sup>1</sup>	Escherichia Coli	Suspended solids	Turbidity	Other criteria
come into contact with fruit for human consumption  2.c.2. Irrigation of ornamental flowers, nurseries greenhouses whereby reclaimed water does not come into the crops	1 egg/10 L	10,000 CFU/100 mL	35 mg/L	No set limit	Legionella spp 100 CFU/L (risk of aerosolization)
<b>3. Recreational</b>					
Golf course irrigation	1 egg/10L	200 CFU/100 mL	20 mg/L	10 NTU	Other contaminants.  Legionella spp. 100 CFU/L (risk of aerosolization)
<b>4. Environmental uses</b>					
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	Other contaminants.
4.b. Silviculture					

<sup>1</sup>At least the following genera must be included in all quality categories: Ancylostoma, Trichuris and Asacaris.

<sup>2</sup>Colony forming units.

<sup>3</sup>Nephelometric turbidity units.

<sup>4</sup> Included 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.

The National Water Council and regional and local authorities were involved in drawing up these regulations.

More complete and detailed regulations were necessary to ensure that appropriate solutions were found concerning water reuse. Thus, 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 public health authorities were also involved in those aspects related to water reuse that are 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 on its final use.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

**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)**

**Informational actions:**

- **Guide to the application of Spanish legal framework for reuse of treated water (2010) Ministry of environment, rural and marine affairs.**

**Management measures:**

- **Implementation of the procedures to obtain the permit for the reuse of treated wastewater required by law.**
- **Development of the analytical control to check the compliance with the requirements set for the use of treated water. Establishment of minimum sampling and testing frequencies for each parameter.**
- **Approval of the governmental initiatives or plans to promote the reuse of water and a more efficient use of water resources.**

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

**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 regulations cited.**

**The National Plan for Water Quality (PNCA) covers the period from 2007 to 2015 and has an approximate cost of 19,007 million Euros. The main goals of this plan are to comply with the requirements of the Directive concerning urban waste water treatment and to help in the compliance in 2015 with the environmental objectives set for water bodies according to the Water Framework Directive.**

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

## **XIV. Quality of waters which are used as sources for drinking water (art.6,para. 2 (j))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

The targets in this area 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):

- Target 1. 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 m<sup>3</sup> a day as an average or serving more than 50 persons, and

- those bodies of water intended for such future use.

- Target 2. 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 m<sup>3</sup> 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 analysed 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.

National and regional authorities were involved in the implementation of the above targets.

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

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

a) 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 10th September, where Water Planning Instructions are approved.
- 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.

b) Management measures and information actions:

A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

Currently, WSP are implemented in water supplies that supply more than 5000 inhabitants.

Exchange of information with health authorities on the data derived from the identification and the register, as protected areas, of the bodies of water used for the abstraction of drinking water.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

- Improvement of the Monitoring Programs of chemical quality of waters used as sources for drinking water, specifically in all bodies of water that provide an average of over 100 m<sup>3</sup> per day. The total number of stations in this program in 2011 amounted to 1,365.
- Improvement of the Register System in all river basins and the information provided by the managers of drinking water supplies through the National Information System of Water for Human Consumption (SINAC).

- Definition of the most important potential hazards for the different stages of collection and treatment of water intended for human consumption, including events and scenarios that may affect water quality and the estimation of the level of risk for each hazard based on the likelihood and severity of the consequences.

A Guide recommendations for possible incidents with description of corrective and preventive measures and early detection procedures was developed in joint work between Ministry of Health, Ministry for the Ecological Transition and Spanish drinking and waste water service operators Association (AEAS).

Those actors collaborated with the Ministry of Health to develop a tool for the implementation of the Water Safety Plans that it is currently working, since 2018.

Currently, WSP are implemented in water supplies that supply more than 50.000 inhabitants.

- The surveillance and sanitary inspection increased considerably between 2013 and 2017. In 2013, the number of analytical bulletins was around 700.000 while in 2017, this number achieved more than 1.000.000.
- The Health Ministry maintains regularly sessions with Autonomous Communities and local entities to improve, develop and inform of SINAC and to assess the necessities of new national legislation or amend the existing one.
- Water suppliers have a fluent communication with Health Ministry and Health Authorities through SINAC platform, email and websites. All information concerning, is uploaded on the institutional Ministry website.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

Spain thus contributes to the achievement of Goal 6 of the 2030 SDA, guaranteeing, through management and inspection, high consumption drinking water to a massive part of the Spanish population, both in rural and urban areas.

5. If you have not set a target in this area, please explain why.

## XV. Quality of waters used for bathing (art. 6, para. 2 (j))

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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. Target date: 2007

Development of Bathing Water Profiles by the Spanish river basin authorities.

To improve the infrastructures where the quality of the bathing water is insufficient or health risks have been detected. Target date: 2017

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

### Legal actions:

Royal Decree 1341/2007, of 11 October, regarding the quality management of bathing water.

Establishment of Information System of bathing water called NÁYADE: (<https://nayadeciudadano.msssi.es/>). Náyade is a health information system that collects data on the quality of bathing water and the characteristics of beaches, both continental and maritime. It started working since 2008.

The number of areas where bathing is allowed, according to current legislation, has increased from 1,876 in 2013 to 1,941 in 2017, also increasing the number of bulletins from 22,889 to 23,969 in said period, ensuring adequate control of the old bathing areas and the new ones.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

In the last 20 years there has been an improvement in bathing water quality

- Improved methods of analysis of the control parameters.
- Imported reporting information. Information is available about water quality and characteristics of the beach as the conditions that can affect the quality of more than 2,000 bathing water points.
- Improved access of information to citizens through NÁYADE.
- Promotion of bathing water areas, health classification of bathing water is essential for classification of beaches for blue flags. [www.adeac.es](http://www.adeac.es).



The data collected shows a very good quality of the coastal bathing areas, qualifying, in the year 2017, approximately 90% as excellent and 5% as good.

In terms of inland water bathing areas, the percentage of bathing waters suitable for use, according to current legislation, is approximately 90% in 2017.

The percentage of excellent inland waters was almost 50% for that year. This keeps the same trend from 2013 to 2017.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

The effective control of the objectives and indicators set by Spain provides the conservation of the Ocean and seas that surround the Iberian Peninsula as well as its marine resources for sustainable development according to Goal 14.

The conservation of inland waters, with the monitoring and control of their associated infrastructures, provide protection and promotion of the sustainable use of the ecosystems associated with the banks of rivers and lakes in accordance with Goal 15 of the Agenda.

5. If you have not set a target in this area, please explain why.

## **XVI. Quality of waters used for aquaculture or for the production or harvesting of shellfish (art. 6, para. 2 (j))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

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.

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.

- Target 1. Register of all bathing waters, as protected areas, according to article 6 of Water Framework Directive and supply more information so the public can choose where to bathe. Development of the National Information System of Bathing Waters (Náyade)

**- Target 2. Development of Bathing Water Profiles by the Spanish river basin authorities:**

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 20th 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.

**- Target 3. Application of new water quality criteria and the pass/fail approach to classification based on four classes: poor/sufficient/good/excellent.**

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.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

**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.
- Amendments of Royal Decree 849/1986, of April 11, to regulate of Hydraulic Public Domain.

**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
- Assessment of Cyanobacteria in inland bathing waters. Associated risks. Environmental risk management in inland bathing waters. Publication of a Spanish national guideline for assessing cyanobacteria blooms in inland waters: “Catalogue of planktonic cyanobacteria potentially toxic in Spanish continental waters (2011 )”

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

- Over the last 20 years there has been an improvement of the quality of continental and coastal bathing waters.
- Improvement of the analytical method of the control parameters.
- Improvement of the notifications of information. Quality information of water and beach characteristics is available, as well as of the determinants that can modify the quality, in more than 2,000 bathing water points.
- Improvement of citizens access to information through NAYADE.
- Classification of most Spanish bathing water above the “sufficient” status.

The 2012 season was the second in which the criteria of the new legislation on bathing water have been applied. For that season’s classification the values of the parameters E. coli and Intestinal enterococci from the three preceding bathing seasons were used, following the methods of assessment defined in Annexes I, II and IV of RD 1341/2007.

**Classification of Spanish bathing water in 2012 season:**

In inland waters, the distribution according to the classification of annual sampling points (230 sp) has been rated: Excellent: 54.0% Good: 25.4%, Sufficient: 8.0%, Poor: 12.7%.

In marine waters, the distribution according to the classification of annual sampling points (1,926 sp) has been rated: Excellent: 88.9%; Good: 5.7%; Sufficient: 2.9%, Poor: 2.5%.

- **Preparation of Environmental profiles of all bathing waters. Assessment of the potential for proliferation of Cyanobacteria-2009 Bathing Season. Cyanobacterial monitoring and Chlorophyll a analysis in bathing sites.**

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## **XVII. Application of recognized good practice in the management of enclosed waters generally available for bathing (art. 6, para. 2 (k))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

**Establishment of basic health-technician criteria related to water and air quality of swimming pools in order to protect the health of users facing potential physical, chemical or microbiological hazards, due to use of swimming pools.**

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

**Multiple regional regulations.**

**Royal Decree 742/2013 of September 27, which establishes the technical-sanitary criteria for swimming pools**

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

**Improvement in the management of health risks related to the use of swimming pools.**

**In 2015, the Spanish Ministry for Health, Consumption and Social Welfare started the development of a software tool in order to facilitate the preparation of a Water Safety Plan for all Spanish public pools. This tool contributes to the improvement of risk management in pools, water parks, spas: establishment of corrective measures and application of preventive measures.**

**The information regarding swimming pools (water and air quality) is collected in the National Information System called SILOÉ.**

<https://siloe.msssi.es>

«Aquatic incident notification system (AQUATICUS)» is a system for the notification and registration, by the autonomous communities and Cities of Ceuta and Melilla, of the incidence situations that occur in swimming pools as well as in other bathing areas and other aquatic environments.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

By 2030, provide universal access to green areas and safe, inclusive and accessible public spaces, in particular for women and children, the elderly and people with disabilities.

5. If you have not set a target in this area, please explain why.

## **XVIII. Identification and remediation of particularly contaminated sites (art.6, para. 2 (I))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.

5. If you have not set a target in this area, please explain why.

## **XIX. Effectiveness of systems for the management, development, protection and use of water resources (art. 6, para. 2 (m))**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.

Management, protection and use of water resources are encompassed within the objectives established by the European 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, the good ecological potential and good chemical status have to be reached. And, with respect to groundwater bodies, the good quantitative status and good chemical status have 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 established 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 to the physical characteristics of a surface water body or alterations to 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 covers the following deadlines: identification of River Basin Districts (RBD) and Authorities, characterization of river basin regarding pressures, impacts and economic analysis, finalisation 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 second management cycle is finished (2015-2021), a third management cycle (2021-2027) will begin; during this cycle river basin management plans and programmes of measures will be reviewed.

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, whose objectives have been detailed in other sections.

2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).

**Legal/ regulatory actions:**

- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
- 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.

Each river basin authority establishes a plan and a program of measures for each River Basin District.

During such an ambitious planning process, it has been proven complex to coordination all the stakeholders and difficult to meet the deadlines established.

3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.

In the last years, Spain has been making a great effort in the development of the river basin management plans compliant with article 13 of the WFD. The second cycle of river basin management is in progress and the third cycle is now starting. The main objectives in this third cycle is to achieve a better understanding of the economic issues on water management and also to perform a streamlining process with the current European and international policies on climate change and energy.

4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.

## **XX. Additional national or local specific targets**

1. Please describe the current target and target date. Please provide information on the background (including the baseline/starting point and reference to existing national and international legislation) and justification for the adoption of the target.
2. Please describe the actions taken (e.g., legal/regulatory, financial/economic, informational/educational and management measures) to reach the target (see also article 6, paragraph 5, of the Protocol).
3. Please assess the progress achieved from the baseline towards meeting the target as well as any challenges encountered.
4. Please describe how the target set under this area contributes to fulfilling global and regional commitments, in particular the 2030 Sustainable Development Agenda.
5. If you have not set a target in this area, please explain why.



## Part three. Common indicators<sup>1</sup>

### I. Quality of the drinking water supplied

#### 1. Context of the data

1. What is the population coverage (in millions or per cent of total national population) of the water supplies reported under sections 2 and 3 below?

*The rationale of this question is to understand the population coverage of the water quality data reported under sections 2 and 3 below.*

*Please describe the type of water supplies for which data is included in the following tables, and the population share covered by these supplies.*

*Please also clarify the source of the water quality data provided (e.g., data from regulatory authorities).*

**The population covered in 2017 by water supplies was the 84.5% of the counted population (39.327.833) of the reference population published by the National Institute of Statistics.**

**The relevant information on water quality, has been extracted from the National Information System of Consumption Water (SINAC).**

2. Please specify from where the water quality samples reported in sections 2 and 3 below are primarily taken (e.g., treatment plant outlet, distribution system or point of consumption).

*The rationale of this question is to understand where the samples were primarily taken from for the water quality data reported in sections 2 and 3 below.*

**For drinking water, 10,047 supply areas were surveyed in 2017. By volume of water distributed per day, 40.6% of the supply areas correspond to the range of 10 to 100 m<sup>3</sup>, while 41.2% correspond to the range of 10,000 to 100,000 m<sup>3</sup> with 16,207,014 people surveyed.**

**The areas of supply greater than 5,000 inhabitants represent 10% and 87% of the population surveyed while the supply areas less than or equal to 5,000 inhabitants correspond to 90% and 13% of the population**

3. In sections 2 and 3 below, the standards for compliance assessment signify the national standards. If national standards for reported parameters deviate from the World Health Organization (WHO) guideline values, please provide information on the standard values.

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<sup>1</sup> In order to allow an analysis of trends for all Parties under the Protocol, please use wherever possible 2005 — the year of entry into force of the Protocol — as the baseline year.

The rationale of this question is to understand any possible differences between the national standards for microbiological and chemical water quality parameters and the respective WHO guideline values.<sup>2</sup>

## Annex I

### Parameters and Parametric Values.

#### A. Microbiological Parameters.

	Parameter	Parametric Value	Notes
1	<i>Escherichia coli</i>	0 CFU/100 ml	
2	Enterococci	0 CFU/100 ml	
3	<i>Clostridium perfringens</i> (including spores)	0 CFU/100 ml	1 and 2

#### NOTES:

- (1) When the determination is positive and the turbidity is greater than 5 NTU, cryptosporidium or other microorganisms or parasites must be investigated in the water ex ETAP or reservoir, if the health authority deems it appropriate.
- (2) Until the 1 of January 2004 *Clostridium sulfite reductase* could be measured instead of *Clostridium perfringens*. The conditions described in note 1 and the parametric value will be the same for both.

#### B.1. Chemical parameters.

	Parameter	Parametric Value	Notes
4	Antimony	5.0 µg/l	
5	Arsenic	10 µg/l	
6	Benzene	1.0 µg/l	
7	Benzo(α)pyrene	0.010 µg/l	
8	Boron	1.0 mg/l	
9	Bromate	10 µg/l	1
10	Cadmium	5.0 µg/l	
11	Cyanide	50 µg/l	
12	Copper	2.0 mg/l	
13	Chromium	50 µg/l	
14	1,2-Dichloroethane	3.0 µg/l	
15	Fluoride	1.5 mg/l	
16	Polycyclic aromatic hydrocarbons (PAH) Sum of: Benzo(b)fluoranthene Benzo(ghi)perylene Benzo(k)fluoranthene Indeno(1,2,3-cd)pyrene	0.10 µg/l  µg/l µg/l µg/l	
17	Mercury	1.0 µg/l	
18	Microcystin	1 µg/l	2

<sup>2</sup> The latest edition of the WHO *Guidelines for Drinking-water Quality* is available at: [http://www.who.int/water\\_sanitation\\_health/publications/dwq-guidelines-4/en/](http://www.who.int/water_sanitation_health/publications/dwq-guidelines-4/en/).

	Parameter	Parametric Value	Notes
19	Nickel	20 µg/l	
20	Nitrate	50 mg/l	3
21	Nitrites	0.5 mg/l	3 and 4
22	Pesticides - Total	0.50 µg/l	5 and 6
23	Individual pesticide Except for the case of: Aldrin Dieldrin Heptachlor Heptachlor epoxide	0.10 µg/l  0.03 µg/l 0.03 µg/l 0.03 µg/l 0.03 µg/l	6
24	Lead	10 µg/l	
25	Selenium	10 µg/l	
26	Trihalomethanes (THMs): Sum of: Bromodichloromethane Bromoform Chloroform Dibromochloromethane	100 µg/l µg/l µg/l µg/l µg/l	7 and 8
27	Trichloroethene + Tetrachloroethene	10 µg/l	

**NOTES:**

- (1) It shall be measured when ozone is used in the purification of drinking water and it shall be measured at least in the water ex ETAP.
- (2) It shall be only measured if there is reason to suspect of eutrophication in water from the catchment, microcystin shall be measured in the water ex ETAP or water tower.
- (3) The condition that  $[\text{nitrate}]/50 + [\text{nitrite}]/3 < 1$ , the square brackets signifying the in mg/l for nitrate (NO<sub>3</sub>) and nitrite (NO<sub>2</sub>), must be met.
- (4) Necessary only when chloramination is used as a disinfectant.
- (5) The sum of all pesticides defined in Article 2 (10), which are likely to be present in water.
- (6) The Autonomous Communities shall ensure that necessary measures are taken in order to make them available to the health authority and the suppliers of the water supply, the list of plant protection pesticides mainly used in each one of the seasons against agricultural plagues and that they may be present in the water resources likely to be used for the production of water intended for human consumption.
- (7) Shall be measured when chlorine or its derivatives are used in the purification treatment.  
  
If chlorine dioxide is used, chlorites in the water ex ETAP or water tower shall be measured.
- (8) Whenever the levels are above the parametric value, 2,4,6-trichlorofenol or other by-products of the disinfection shall be measured in the water ex ETAP or water tower.

## B.2. Chemical Parameters that are monitored according to specifications of the product.

	Parameter	Parametric Value	Notes
28	Acrylamide	0.10 µg/l	1
29	Epichlorohydrin	0.10 µg/l	1
30	Vinyl chloride	0.50 µg/l	1

### NOTE

- (1) These parametric values refer to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

The company that commercialises these products shall provide water suppliers and the fitters of the installations within the premises with the documentation that credits the maximum release of the commercial product that is in contact with the water intended for human consumption when it is used according to the specifications of use provided by the manufacturer.

## C. Indicator parameters.

	Parameter	Parametric Value	Notes
31	Coliform bacteria	0 CFU/100 ml	
32	Colony count 22 °C	100 CFU/1 ml	
33	Aluminum	200 µg/l	
34	Ammonium	0.50 mg/l	
35	Total organic carbon	No abnormal change	1
36	Residual combined chlorine	2.0 mg/l	2, 3 and 4
37	Residual free chlorine	1.0 mg/l	2 and 3
38	Chloride	250 mg/l	
39	Colour	15 mg/l Pt/Co	
40	Conductivity	2,500 µS/cm at 20°C	5
41	Iron	200 µg/l	
42	Manganese	50 µg/l	
43	Odour	3 at 25°C Index of dilution	
44	Oxidisability	5.0 mg O <sub>2</sub> / l	1
45	pH: Minimum parametric value Maximum parametric value	6.5 pH units 9.5 pH units	5 and 6
46	Taste	3 at 25 °C Index of dilution	
47	Sodium	200 mg/l	
48	Sulphate	250 mg/l	
49	Turbidity: At the ex ETAP and/or reservoir In the distribution network	1 NTU 5 NTU	

### NOTES:

- (1) Total organic carbon shall be measured for supplies of more than 10,000 m<sup>3</sup> a day otherwise oxidisability shall be measured.
- (2) The parametric values refer to levels in the distribution network. These parameters could be also analysed in situ. In a food-production undertaking, this parameter need not be measured in water of the food processes
- (2) It shall be analysed when chlorine or its by-products are used in the water purification treatment. If chlorine dioxide is used, chlorites shall be measured in the water ex ETAP.
- (3) It shall be measured only when chloramination is used as a disinfectant.
- (5) The water should not be corrosive nor contain incrusting substances. The result to calculate the Index of Langelier should be included between +/- 0.5.
- (6) For a food-production undertaking, the minimum value may be reduced to 4.5 pH units.

## 2. Bacteriological quality

4. Please indicate the percentage of samples that fail to meet the national standard for Escherichia coli (E.coli). Parties may also report on up to three other priority microbial indicators and/or pathogens that are subject to routine water quality monitoring.

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
<i>E. coli</i>	Total	0.24% (2007)	0.39% (2011)	0.18% (2017)
	Urban (>5000 inhabitants)		-	0.03%
	Rural (<5000 inhabitants)		-	0.43%
<i>Enterococci</i>	Total	0.2% (2007)	1.70% (2011)	0.33% (2017)
	Urban		-	0.10%
	Rural		-	0.61%
<i>Clostridium perfringens</i>	Total	0.41% (2007)	-	0.19% (2017)
	Urban		-	0.11%
	Rural		-	0.34%
<i>Additional parameter 3:</i>	Total			
	Urban			
	Rural			

### 3. Chemical quality

5. Please report on the percentage of samples that fail to meet the national standard for chemical water quality with regard to the following parameters:
- (a) Arsenic;
  - (b) Fluoride;
  - (c) Lead
  - (d) Nitrate.
6. Please also identify up to three additional chemical parameters that are of priority in the national or local context.

<i>Parameter</i>	<i>Area/category</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Arsenic	Total	0.05% (2007)	1.46% (2011)	0.7% (2017)
	Urban (>5000 inhabitants)		-	0.07%
	Rural (<5000 inhabitants)		-	1.3%
Fluoride	Total	0.33% (2007)	2.55% (2011)	0.38% (2017)
	Urban		-	0.11%
	Rural		-	0.73%
Lead	Total	0.18% (2007)	0.17% (2011)	0.29% (2017)
	Urban		-	0.30%
	Rural		-	0.28%
Nitrate	Total	1.75% (2007)	2.58% (2011)	2.18% (2017)
	Urban		-	
	Rural		-	
THM	Total	9.48% (2014)	0.55% (2011)	1.12% (2017)
	Urban		-	1.09%
	Rural		-	1.15%
Iron	Total		0.84% (2011)	-
	Urban			
	Rural			

## II. Outbreaks and incidence of infectious diseases related to water

Disease	Incidence rate per 100,000 population (all exposure routes)			Number of outbreaks (confirmed water-borne outbreaks)		
	Baseline (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)	Baseline (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Shigellosis	0.49 (2009)	0.40(2013)	0.63(2016)	5(2009)	8(2013)(not related to water)	3 (2016)
Enterohaemorrhagic <i>E. coli</i> infection	0 (2010)	0 (2013)	0 (2016)	0 (2010)	0 (2013)	0 (2016)
Typhoid fever	0.16 (2009)	0 (2013)	0.12(2016)	3(2009)	0(2013)	0(2016)
Viral hepatitis A	5.94 (2009)	1.42(2013)	2.8(2016)	97(2009)	56(2013)(2 related to water)	3 (2016)
Legionellosis	2.5 (2009)	1.77(2013)	2.03(2016)	57(2010)	11(2013)	21 (2016)
Cryptosporidiosis	57 cases (2010)	107cases (2013)	243 cases (2016)	0(2010)	1(2013)	1 (2016)
Additional disease 1:						
Additional disease 2:						
Additional disease 3:						

## III. Access to drinking water

Percentage of population with access to drinking water	Baseline value (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Total	99.99% (2006)	99.99% (2010)	99.99(2017)
Urban (>5000 inhabitants)	100%	100%	100%
Rural (<5000 inhabitants)	99%	99%	99%

Estimates provided by the WHO/United Nations Children's Fund (UNICEF) Joint Monitoring Programme (JMP) for Water Supply and Sanitation. *JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.*

National estimates. *Please specify how "access" is defined and what types of drinking-water supplies are considered in the estimates in your country.*

*In particular, please specify if the above percentage on "access to drinking water" refers to access to (tick all applicable):*

Improved drinking water sources (as per JMP definition)

- Supplies located on premises
- Supplies available when needed
- Supplies that provide drinking water free from faecal contamination

#### IV. Access to sanitation

Source of data: Biennial questionnaire Q2017 pursuant to article 15 of the Directive 91/271/EEC concerning urban waste water treatment. Aggregated data (rural + urban).

Percentage of population with access to sanitation	Baseline value (specify year)	Value reported in the previous reporting cycle (specify year)	Current value (specify year)
Total		97.62%	95.06%
Urban			
Rural			

- Estimates provided by JMP. JMP definitions are available at <http://www.wssinfo.org/definitions-methods/watsan-categories>.
- National estimates. Please specify how "access" is defined and what types of sanitation facilities are considered in the estimates in your country.

In particular, please specify if the above percentage on "access to sanitation" refers to access to (tick all applicable):

- Improved sanitation facilities (as per JMP definition)
- Facilities not shared with other households
- Facilities from which excreta is safely disposed in situ or treated off site

#### V. Effectiveness of management, protection and use of freshwater resources

##### 1. Water quality

1. On the basis of national systems of water classification, please indicate the percentage of water bodies or the percentage of the volume (preferably) of water<sup>3</sup> falling under each defined class (e.g., for European Union countries and other countries following the

<sup>3</sup> Please specify.



European Union Water Framework Directive<sup>4</sup> classification, the percentage of surface waters of high, good, moderate, poor and bad ecological status, and the percentage of groundwaters/surface waters of good or poor chemical status; for other countries, in classes I, II, III, etc.).

**(a) For European Union countries and other countries following the European Union Water Framework Directive classification**

*(i) Ecological status of surface water bodies*

Information provided is referred only to two categories or ecological status: “good or better” and “moderate or worse”. The results are derived from the combination of different indicators, varying in each water body.

<i>Percentage of surface water classified as:</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
High or good status		50,27% (year 2009)	56.41% (year 2015)
Moderate, poor or bad status		49,73% (year 2009)	43.59% (year 2015)
Total number/volume of water bodies classified		4243 (year 2009)	5015 (year 2015)
Total number/volume of water bodies in the country		5150 (year 2009)	5122 (year 2015)

*(ii) Chemical status of surface water bodies*

<i>Percentage of surface water bodies classified as</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Good status		91.57% (year 2009)	92.65% (year 2015)
Poor status		8.43% (year 2009)	7.35% (year 2015)
Total number/volume of water bodies classified		3250 (year 2009)	4831 (year 2015)
Total number/volume of water bodies in the country		5150 (year 2009)	5122 (year 2015)

<sup>4</sup> Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

(iii) Status of groundwaters

<i>Percentage of groundwaters classified as</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Good quantitative status		72.2 % (year 2009)	75.4 % (year 2015)
Good chemical status		66.1 % (year 2009)	65.02 % (year 2015)
Poor quantitative status		27.8 % (year 2009)	24.6 % (year 2015)
Poor chemical status		33.9 % (year 2009)	345.98 % (year 2012)
Total number/volume of groundwater bodies classified		737 (year 2009)	729 (year 2015)
Total number/volume of groundwater bodies in the country		737 (year 2009)	729 (year 2015)

(b) For other countries

(i) Status of surface waters

<i>Percentage of surface water falling under class<sup>a</sup></i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
I			
II			
III			
IV			
V			
<b>Total number/volume of water bodies classified</b>			
<b>Total number/volume of water bodies in the country</b>			

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

(ii) *Status of groundwaters*

<i>Percentage of groundwaters falling under class<sup>a</sup></i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
I			
II			
III			
IV			
V			
<b>Total number/volume of groundwater bodies classified</b>			
<b>Total number/volume of groundwater bodies in the country</b>			

<sup>a</sup> Rename and modify the number of rows to reflect the national classification system.

2. Please provide any other information that will help put into context and aid understanding of the information provided above (e.g., coverage of information provided if not related to all water resources, how the quality of waters affects human health).

**2. Water use**

3. Please provide information on the water exploitation index at the national and river basin levels for each sector (agriculture, industry, domestic), i.e., the mean annual abstraction of freshwater by sector divided by the mean annual total renewable freshwater resource at the country level, expressed in percentage terms.

<i>Water exploitation index</i>	<i>Baseline value (specify year)</i>	<i>Value reported in the previous reporting cycle (specify year)</i>	<i>Current value (specify year)</i>
Agriculture			
Industry <sup>a</sup>			
Domestic use <sup>b</sup>			

<sup>a</sup> Please specify whether the figure includes both water abstraction for manufacturing industry and for energy cooling.

<sup>b</sup> Please specify whether the figure only refers to public water supply systems or also to individual supply systems (e.g., wells).

## Part four. Water-related disease surveillance and response systems

1. In accordance with the provisions of article 8 of the Protocol:

Has your country established comprehensive water-related disease surveillance and early warning systems according to paragraph 1 (a)?

YES  NO  IN PROGRESS

Has your country prepared comprehensive national or local contingency plans for responses to outbreaks and incidents of water-related disease according to paragraph 1 (b)?

YES  NO  IN PROGRESS

Do relevant public authorities have the necessary capacity to respond to such outbreaks, incidents or risks in accordance with the relevant contingency plan according to paragraph 1 (c)?

YES  NO  IN PROGRESS

2. If yes or in progress, please provide summary information about key elements of the water-related disease surveillance and outbreak response systems (e.g., identification of water-related disease outbreaks and incidents, notification, communication to the public, data management and reporting). Please also provide reference to existing national legislation and/or regulations addressing water-related disease surveillance and outbreak response.

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.

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

The Center for Coordination of Health Alerts and Emergencies (CCAES), created in 2004 is a Center dependent on the General Directorate of Public Health, Quality and Innovation (DGSPCI) of the Ministry of Health, whose function is to coordinate the management of information and support the response to situations of alert or national or international health emergency that pose a threat to the health of the population. National System of Early Warning and Rapid Response (SIAPR)). The CCAES is also the unit responsible for the preparation and development of preparedness and response plans to address public health threats.

- ORDER SCO / 564/2004, of 27 of February, by which the system of coordination of alerts and emergencies of Health and Consumption is established.

- **ORDER SCO / 3870/2006, of December 15, which designates the General Directorate of Public Health, Quality and Innovation (DGSPCI) as the National Liaison Center for the IHR.**

3. Please describe what actions have been taken in your country in the past three years to improve and/or sustain water-related disease surveillance, early warning systems and contingency plans, as well as to strengthen the capacity of public authorities to respond to water-related disease outbreaks and incidents, in accordance with the provisions of article 8 of the Protocol.

**Up to date, the CCAES prepares and responds primarily to biological risks and to those of unknown origin and has begun work on other types of risks.**

**Enforcement and participation in simulations at national and international level.**

**Preparation and advice against risks of intentional origin (Bioterrorism).**

**Monitoring and support in the investigation of outbreaks, epidemics and / or any public health threat that occurs at a national or international level.**

**Preparation of guides and protocols.**

## **Part five. Progress achieved in implementing other articles of the Protocol**

Please provide a short description of the status of implementation of articles 9 to 14 of the Protocol, as relevant.

*Suggested length: up to two pages*

## Part six. Thematic part linked to priority areas of work under the Protocol

### 1. Water, sanitation and hygiene in institutional settings

1. In the table below, please provide information on the proportion of schools (primary and secondary) and health-care facilities that provide basic water, sanitation and hygiene (WASH) services.

<i>Institutional setting</i>	<i>Current value (specify year)</i>
<i>Schools</i>	
Basic sanitation service	
Basic drinking-water service	100 (2019)
Basic hygiene service	
<i>Health-care facilities</i>	
Basic sanitation service	
Basic drinking-water service	100 (2019)
Basic hygiene service	

2. Has the situation of WASH in schools been assessed in your country?

YES  NO  IN PROGRESS

3. Has the situation of WASH in health-care facilities been assessed in your country?

YES  NO  IN PROGRESS

4. Do approved policies or programmes include actions (please tick all that apply):

- To improve WASH in schools  
 To improve WASH in health-care facilities

5. If yes, please provide reference to main relevant national policy(ies) or programme(s).

### 2. Safe management of drinking-water supply

6. Is there a national policy or regulation in your country, which requires implementation of risk-based management, such as WHO water safety plans (WSPs), in drinking water supply?

YES  NO  IN PROGRESS

7. If yes, please provide reference to relevant national policy(ies) or regulatory documentation.

- **Royal Decree 140/2003, of 7 February by which health criteria for the quality of water intended for human consumption are established.**
- **Royal Decree 902/2018 20th of July amending Royal Decree 140/2003, of 7th February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE**

8. In the table below, please provide information on the percentage of the population serviced with drinking-water under a WSP.

*Please indicate the source of data. If data is not available, please put (-).*

<b>Percentage of population</b>	<b>Current value (specify year)</b>
<b>Total</b>	<b>2017 58%</b>



### 3. Equitable access to water and sanitation

9. Has the equity of access to safe drinking-water and sanitation been assessed?

YES  NO  IN PROGRESS

10. Do national policies or programmes include actions to improve equitable access to water and sanitation (please tick all that apply):

- To reduce geographical disparities
- To ensure access for vulnerable and marginalized groups
- To keep water and sanitation affordable for all

11. If yes, please provide reference to main relevant national policy(ies) and programme(s).

- [Royal Decree 140/2003, of 7 February by which health criteria for the quality of water intended for human consumption are established.](#)
- [Royal Decree 902/2018 20th of July amending Royal Decree 140/2003, of 7th February by which health criteria for the quality of water intended for human consumption are established. Spanish laws transposing Directive 2015/1787, amending Annexes II y III of Directive 98/83/CE](#)

## Part seven. Information on the person submitting the report

### National Focal Points of the Protocol on Water and Health from Spain

<b>Ministry of Health, Consumer Affairs and Social Welfare</b>	<b>Ministry for the Ecological Transition</b>
First National Focal point	First National Focal point
<p><b>Ms. Covadonga Caballo Dieguez</b>            Deputy Director General            General Subdirectorato for            Environmental Health and            Occupational Health            General Directorate of Public Health,            Quality and Innovation            Ministry of Health, Consumer Affairs            and Social Welfare</p> <p>C / Paseo del Prado 18-20            28071 Madrid (Spain)            Phone: +34 91 596 20 85/ 84            E-mail: sgsasl@mscbs.es</p>	<p><b>Mr. Eduardo Orteu Berrocal</b>            Chief of International Affairs of the Water            Directorate            Ministry for the Ecological Transition</p> <p>Pl. San Juan De La Cruz, S/N            28071 Madrid (Spain)            Phone: +34 91 597 6676            E-mail: eorteu@mapama.es</p>
Second National Focal Point	Second National Focal Point
<p><b>Mr. David Cáceres</b>            Technical            General Subdirectorato for            Environmental Health and            Occupational Health            General Directorate of Public Health,            Quality and Innovation            Ministry of Health, Consumer Affairs            and Social Welfare</p> <p>C / Paseo del Prado 18-20            28071 Madrid (Spain)            Phone: +34 91 596 20 85/ 84            E-mail: sgsasl@mscbs.es</p>	<p><b>Ms. Pilar González Zárate</b>            Head of Service            Ministry for the Ecological Transition</p> <p>Pl. San Juan De La Cruz, S/N            28071 Madrid (Spain)            Phone: +34 597 6170            E-mail: pgzarate@mapama.es</p>



**Name and address of national authority:**

Ministry of Health, Consumer Affairs and Social Welfare  
C / Paseo del Prado 18-20,  
28071 Madrid (Spain)

**Date**



**Signature:**

**Pilar Aparicio Azcárraga**

**9<sup>th</sup> May  
2019**

**Director General of Public Health, Quality and  
Innovation**