

**Economic and Social Council**Distr.: General
15 November 2019

English only

Economic Commission for Europe**World Health Organization
Regional Office for Europe****Meeting of the Parties to the Protocol on
Water and Health to the Convention on
the Protection and Use of Transboundary
Watercourses and International Lakes****Fifth session**

Belgrade, 19–21 November 2019

Item 5(a) of the provisional agenda.

**Review of past activities and discussion of future activities in
the different areas of work: improving governance for water and
health: support for setting targets and implementing measures****Regional report on the status of implementation of the
Protocol*****Prepared by the joint secretariat with the assistance of the German
Environment Agency***Summary*

According to its terms of reference, the Working Group on Water and Health is responsible for overseeing and directing the activities carried out under the programme of work and for examining experience and drawing up draft recommendations. It also advises the Meeting of the Parties regarding the further development of the programme of work and its adaptation to changing circumstances. At its eleventh meeting (Geneva, 3–4 April 2019), the Working Group requested that the present regional report on the status of implementation of the Protocol be prepared by the joint secretariat for submission to the fifth session of the Meeting of the Parties (see ECE/MP.WH/WG.1/2019/2-EUPCR/1611921/2.1/2019/WGWH/06, forthcoming).

The report summarizes information on the status of implementation of the Protocol from 32 out of the 33 national summary reports submitted within the fourth reporting exercise by Parties to the Protocol and other States. The document aims to assist Parties in assessing implementation of the Protocol and facilitate preparation and adoption by the Meeting of the Parties of the programme of work for 2020–2022 (ECE/MP.WH/2019/3-EUPCR/1814149/1.2/2019/MOP-5/0).

* The present document is being issued without formal editing.



I. Procedural aspects of the fourth reporting exercise

1. According to article 6 of the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, within two years of becoming a Party, each Party must establish and publish national and/or local targets and target dates in order to achieve or maintain a high level of protection of human health and well-being.
2. Article 7 of the Protocol requires Parties to collect and evaluate data on their progress towards achieving targets set and on how that progress has contributed towards preventing, controlling or reducing water-related disease. In accordance with the guidelines established by the Meeting of the Parties, every three years Parties have to submit to the joint secretariat summary reports of the data collected and evaluated and the assessment of the progress achieved.
3. At its fourth session (Geneva, 14–16 November 2016), by its decision IV/1 on reporting in accordance with article 7 of the Protocol, the Meeting of the Parties adopted the revised guidelines and template for summary reports (see ECE/MP.WH/13/Add.2-EUPCR/1611921/2.1/2016/MOP-4/06/Add.2). The present report follows the structure of the revised template.
4. The present report analyses 32 summary reports¹ submitted by all 26 Parties to the Protocol and 6 other States.²
5. The reports were of varying length, level of detail and quality. It was not within the mandate of the joint secretariat to verify the information provided. Thus, the present document should be read with these limitations in mind and should not be regarded as an exhaustive review of the status of implementation of the Protocol.

II. Executive summaries

6. 24 countries provided an executive summary, in accordance with the revised template, focusing on the national situation regarding water, sanitation and health, the legal frameworks in place and the status of implementation of their targets. Executive summaries were useful to provide an overview of the national situation and to place the targets set in the bigger picture. Most of the executive summaries did not focus on success stories and achievements as recommended in the reporting template.
7. The executive summary of the Netherlands that highlights current achievements, such as nearly 100 per cent of access to drinking water and sanitation, and addresses emerging issues such as climate-resilient water management and sanitation, may thus be considered a good practice.

III. General aspects of the target setting process

8. All 32 reporting countries provided information on their targets and target dates set. In some instances, including for some Parties, it was not clear if targets had been set specifically under the Protocol. Some countries provided information on ongoing actions and related legislation in the specific target area but did not outline specific targets.
9. Countries were also at different stages of target setting, revision and publication of their targets (see table 1 below).³

1 All summary reports submitted by Parties are available from www.unep.org/env/water/protocol_fourth_reporting_cycle.html.

2 33 reports were submitted in total. The report of Andorra, however, was submitted on 6 August 2019 and therefore could not be taken into account in the analysis.

3 For the status of target setting by Parties and other States, also information available to the secretariat was taken into account.

Table 1
General aspects of the target setting process

<i>Topic</i>	<i>Status</i>	<i>Number of countries</i>
Target setting status	Targets set	14
	Revision in progress	7
	Target setting in progress	4
	No targets set	7
Publication of targets	Published	19
	Not published	7
	No information provided	6

10. In terms of institutional arrangements, dedicated intersectoral working groups were established in most countries, working at both national and subnational levels, depending on the government structure. The process of target setting and reporting proved particularly challenging in case of Federal States (e.g. Belgium, Bosnia and Herzegovina, Germany).

11. The countries that set targets under the Protocol tailored them to match their needs, focusing on certain target areas of their priority. Most of the targets set focused on drinking water quality, followed by access to water and sanitation, water-related disease and outbreak reduction and prevention, and good practices for the management of water supply. The fewest number of targets were set on wastewater used for irrigation purposes, quality of waters used for aquaculture and identification and discharge of untreated storm water.

12. Measures to implement the targets were primarily integrated in the national legislation. Often the transposition of European Union (EU) law into national legislation was referred to as part of the process to achieve the targets.

13. Targets set strongly support other water, sanitation and health-related processes, namely the 2030 Agenda for Sustainable Development, the Ostrava Declaration on Environment and Health, the World Health Assembly resolutions 64/24 “Drinking-water, Sanitation and Health” and 72/7 “Water, sanitation and hygiene in health care facilities”, and the “Health 2020, a European policy framework and strategy for the 21st century” of the WHO Regional Office for Europe. Such international commitments embody the intersectoral, whole-of-government approach promoted by the Protocol.

14. With regard to public participation in target setting and reporting processes, 21 Parties and two other States described concrete activities to ensure public involvement, with Finland, France and the Republic of Moldova providing extensive information. Most countries, however, refer to the involvement of experts and relevant stakeholders rather than actively including the general public, that is generally informed about the targets following their publication on online platforms. Thus, public participation in Protocol activities appears rather passive, indicating the need to identify effective means to increase interest and boost the engagement of the public.

IV. Targets, target dates and assessment of progress

15. The present chapter summarizes information reported under each target area, highlighting progress achieved, good practices and challenges. As mentioned above, one of the weaknesses of some national summary reports is that countries do not clearly distinguish between targets set under the Protocol and their national objectives and others refer to the applicable legislation only, which ultimately hinders the statistical analysis provided in Table 2 below.

Table 2
Overview of target set and assessment of progress

<i>Target area title and number</i>	<i>Overall number of targets set</i>	<i>Number of countries that set targets or are in progress</i>		<i>Number of countries reporting progress on implementing targets</i>	
		<i>Parties</i>	<i>Other States</i>	<i>Parties</i>	<i>Other States</i>
Quality of the drinking-water supplied	65	23	4	15	2
Reduction in the scale of outbreaks and incidents of water-related disease	35	19	4	13	1
Access to drinking-water	40	22	3	16	2
Access to sanitation	48	22	3	13	1
Levels of performance of collective systems and other systems for water supply	30	15	0	14	0
Levels of performance of collective systems and other systems for sanitation	26	15	1	4	0
Application of recognized good practices to the management of water supply	36	17	0	14	0
Application of recognized good practice to the management of sanitation	22	15	0	13	0
Occurrence of discharge of untreated wastewater	30	18	2	13	2
Occurrence of discharge of untreated storm water overflows from wastewater collection systems	18	15	1	9	0
Quality of discharge of wastewater from wastewater treatment installations	27	18	2	15	1
Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations	26	14	1	13	1
Quality of wastewater used for irrigation purposes	11	5	1	4	1

<i>Target area title and number</i>	<i>Overall number of targets set</i>	<i>Number of countries that set targets or are in progress</i>		<i>Number of countries reporting progress on implementing targets</i>	
		<i>Parties</i>	<i>Other States</i>	<i>Parties</i>	<i>Other States</i>
Quality of waters which are used as sources for drinking-water	33	17	3	11	2
Quality of waters used for bathing	34	21	4	13	2
Quality of waters used for aquaculture or for the production or harvesting of shellfish	16	10	0	5	0
Application of recognized good practice in the management of enclosed waters generally available for bathing	22	17	1	10	1
Identification and remediation of particularly contaminated sites	31	16	1	9	0
Effectiveness of systems for the management, development, protection and use of water resources	37	17	2	13	2
Additional national or local specific targets	34	13	1	0	7

A. Quality of the drinking-water supplied (art. 6, para. 2 (a))

16. Many countries are close to achieving their targets, in particular those related to improving management measures and to the revision of legislation, as for example in Czechia, Germany, Luxembourg, the Netherlands and the Republic of Moldova. The targets that are not yet achieved are related to levels of non-compliance of drinking-water samples with microbiological and chemical standards.

17. Countries referred to drinking-water quality deteriorating in buildings and distribution systems (Hungary, the Netherlands) as an often-overlooked risk factor and as a challenge. Drinking-water quality in small supply systems in rural areas is described as another main challenge (Armenia, Hungary, Norway, Ukraine).

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

18. The majority of targets set in this area cover legislation revision, strengthening surveillance and monitoring, capacity building and safeguarding the quality of drinking water to prevent water-related diseases.

19. Outbreak surveillance systems that notify and report an incident are best practices to record cases and avoid outbreaks of water-related diseases (Georgia, Norway).

20. Some countries stated that water-related diseases are often occurring in small scale water supply systems. Other challenges mentioned included health-care facilities as a reservoir and transmitter of nosocomial pathogens and potential threat to the environment (Croatia, Hungary), water quality in buildings in relation to legionella and appearance of new infectious diseases, such as malaria, due to climate warming (Ukraine).

C. Access to drinking-water (art. 6, para. 2 (c))

21. 6 countries have not set targets explaining that full access to drinking-water is already achieved (for example, Germany and Israel).

22. The majority of targets cover access to sufficient drinking-water in terms of quality and quantity. Targets also aim at ensuring access in rural areas or in educational facilities, which requires infrastructural measures and capacity building. In Bosnia and Herzegovina, for example, difference between coverage in urban and rural areas is considerable (90 and 25 per cent respectively).

23. Hungary revised the tariff system to guarantee affordability and at the same time full cost recovery in water supply systems and established a program for improving infrastructure to increase access to water supply and sewage infrastructure. The Republic of Moldova highlighted vulnerable groups as a priority in its national development strategy. Switzerland proposed updating strategies to improve water supply in emergency situations.

24. Access to drinking-water in rural areas is one of the major challenges reported with problems like difficulty of connecting remote areas and lack of adequate funding, particularly for remote locations in Bosnia and Herzegovina, Finland and Ukraine.

D. Access to sanitation (art. 6, para. 2 (c))

25. Seven countries did not set targets explaining that full access to sanitation is already achieved (Germany, Switzerland).

26. Targets address mainly construction and improvement of sewerage systems and wastewater treatment plants and access to sanitation facilities and improving legal frameworks and funding.

27. Best practices include municipalities' contribution to pollution costs and a pilot project of connecting disadvantaged regions to sewage systems (Hungary).

28. The main challenge is the lack of adequate funding to cover the high investment costs necessary to upgrade or build the sanitation infrastructure and ensuring that the cost of connection to the sewer system is affordable for low-income households.

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

29. The majority of targets focus on developing water supply infrastructure, implementing legal and regulatory frameworks, and guaranteeing sufficient quantity of water which requires adequate legal framework, financial investments and building capacity.

30. In terms of good practices, Croatia established a water loss reduction programme; Finland is conducting research on climate change vulnerability of groundwater and adaption of water infrastructure; and Germany is improving the database for assessing level of performance of water quality in public small-scale water supplies. In Luxembourg an early warning system was established to stop drinking-water supply in case of accidental pollution.

31. Challenges comprise high water losses (Bosnia and Herzegovina, Norway), the use of asbestos cement in the distribution systems and the lack of financial investments in the public infrastructure.

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

32. The targets mainly address infrastructure development and legal or regulatory measures in order to ensure water quality of receiving surface waters bodies.

33. Croatia, for example, referred to challenges such as insufficient monitoring of leakage from wastewater collection systems and emergency pipe bursts.

34. Best practices include establishment of wastewater fees to maintain the old and finance new pipelines, focus on climate change adaptation, attention to release of pharmaceuticals and micropollutants, and antimicrobial resistance.

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

35. The targets set focus mainly on securing water quality from source to tap through enhancing legislation and applying management measures. Countries focus on adopting Water Safety Plans or hazard analysis and critical control points (Belgium, Hungary, Serbia, Luxembourg), establishing water protection zones (Belarus, Switzerland) and building capacity of small-scale supplies operators (Hungary, Lithuania).

36. In terms of best practices, Finland reports close collaboration between authorities, water suppliers and wastewater operators to allow rapid exchange of information, shared training programmes and guidance material. Portugal aims at reducing energy consumption in water supplies by performing audits, adopting energy efficiency measures and producing renewable energy. Switzerland safeguards groundwater reserves for future drinking-water needs by designating protection areas and encouraging sustainable use of nutrients in agriculture.

37. Challenges are mainly related to lack of capacity in small-scale supplies, contaminating activities and premise plumbing systems.

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

38. Targets set referred mainly to developing adequate legislation and maintaining the sanitation infrastructure through attracting financial investments.

39. As a good practice, Finland reported launching a web-based Sanitation Safety Plan tool to enable easy, practical and uniform risk management and to prevent health hazards and environmental degradation by sewerage and wastewater treatment. Luxembourg and Belgium (Walloon region) established a bilateral convention to conduct joint sanitation projects and to exchange information. Portugal aims at producing energy in wastewater infrastructures. In Switzerland, a general drainage plan is the basis for extension, adaptation, maintenance and repair of the public sewage networks to guarantee effective wastewater disposal.

I. Occurrence of discharge of untreated wastewater (art. 6, para. 2 (g) (i))

40. The majority of targets focus on the construction or maintenance of wastewater treatment plants, the prevention of discharge of untreated wastewater into the environment and providing access to sewage systems through improved infrastructure and legislation revision. 6 countries reported to have fully achieved previously set targets on prevention of untreated wastewater discharge, even if this partly required costly investments (for example, in the case of Norway). The need for replacing old sewage systems is also described as a challenge.

41. In terms of good practices, Finland takes into account occasional discharges in each treatment plant's environmental permit when assessing compliance with permit regulations.

J. Occurrence of discharge of untreated storm water overflows from wastewater collection systems (art. 6, para. 2 (g) (ii))

42. The targets set by countries focus on improving infrastructure to reduce the number of storm water discharges and establishing specific legal requirements.

43. Finland describes frequent exceptionally heavy rains increasing the risk of overflows of untreated wastewater from sewers, pumping stations and treatment plants as a climate-change related challenge. The country fosters storm water management on communal level by using innovative on-site methods, rather than investing in expensive centralized sewerage systems and treatment plants.

44. A best practice example from the Netherlands describes municipal sewage plans with specific requirements for collection and transport of urban wastewater, collection and treatment of rainwater and locations of storm water outlets and overflows to surface water bodies. These support prevention or minimization of adverse effects on groundwater.

K. Quality of discharge of wastewater from wastewater treatment installations (art. 6, para. 2 (h))

45. Targets focus on protecting water quality of the receiving water bodies by establishing legal and regulatory requirements and conducting monitoring.

46. In terms of best practice, Belgium (Flanders region) uses permits for discharge of dangerous substances to reduce industrial pollution.

L. Disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations (art. 6, para. 2 (i), first part)

47. Targets set mostly refer to the legal and regulatory aspects of the management and use of the sewage sludge that is not allowed in some countries (for example, Belgium and the Netherlands).

48. As a good practice, Germany and Switzerland adopted stricter requirements for soil-related sewage sludge use, including comprehensive requirements for the phosphorus recovery from sewage sludge and sludge incineration ash.

M. Quality of wastewater used for irrigation purposes (art. 6, para. 2 (i), second part)

49. Targets set are mainly related to legislation and regulation development and revision.

50. Israel installed new GIS software to document the effluent irrigated areas and is considering building reservoirs for low quality effluent until it can be pumped back into the wastewater treatment plant. Portugal, where reuse is becoming important due to climate change, developed a guide for implementation and management of water reuse projects using risk-assessment methodology and applying a multi-barrier approach for risk reduction.

N. Quality of waters which are used as sources for drinking-water (art. 6, para. 2 (j), first part)

51. Targets set focus on improving monitoring and management measures and establishing a legal framework for protecting the quality of raw water that is used for drinking-water supply and preventing water quality deterioration through environmental protection.

52. Some countries focus on concrete measures such as establishing stricter standards for the use of pesticides and an obligatory risk assessment for surface water extraction areas, defining the status of groundwater bodies (Finland), and developing a tool box for the

assessment of groundwater wells (Israel). In Israel, special attention is given to the protection of sea water as it is used as a source for drinking-water through desalination. In Norway, more attention is paid to the protection of drinking-water by municipalities.

53. Challenges described include a lack of financial resources for monitoring, especially in smaller water supplies, as well as the lack of data regarding the status of groundwater bodies and risk. Also, the growth of cyanobacteria in water reservoirs causes problems for sources of drinking-water.

O. Quality of waters used for bathing (art. 6, para. 2 (j), second part)

54. Targets set mainly address compliance with legal and regulatory frameworks, monitoring water quality and registration and management of bathing water sites. The latter mainly comprises providing information on safe use to the general public.

55. In terms of good practices, Finland is taking structured action in this area, including bathing water monitoring, interpreting the results, classification of the status, and providing an online bathing water profile describing the status and factors affecting its quality. Luxembourg is conducting intense monitoring and also provides information about bathing sites. Spain has established a national information system of bathing waters to improve citizens' access to information.

56. Challenges include outbreaks caused by noroviruses and campylobacter, cyanobacteria, heavy rains, floods, wastewater accidents and the public using non-identified bathing sites. In addition, bathing water quality varies greatly during the day and general monthly monitoring frequency does not allow detecting all risks.

P. Quality of waters used for aquaculture or for the production or harvesting of shellfish (art. 6, para. 2 (j), third part)

57. Targets set by countries for which aquaculture is of relevance are mostly related to establishing legal frameworks and implementing management measures.

58. Finland's aquaculture, for example, is considered in the marine strategy to protect the Baltic Sea. Research on the assessment of areas contaminated with norovirus is conducted in the Netherlands, to possibly consider norovirus as a parameter for water monitoring.

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

59. Targets focus mainly on ensuring bathing water quality by setting standards and monitoring compliance. For example, Czechia published a manual on good practices for operating swimming pools and Switzerland established a bathing water ordinance.

60. In terms of good practices, Finland established a proficiency test for responsible staff. Spain initiated development of a software tool to facilitate the preparation of a safety plan for all public pools.

61. Protecting swimming pools' users' health and outbreaks of pseudomonas and legionella are described as a challenge.

R. Identification and remediation of particularly contaminated sites (art. 6, para. 2 (l))

62. The majority of targets set focus on increasing assessment and management measures by establishing an appropriate legal framework. Examples of success stories include Finland, where more than 250 remediation projects are initiated annually – mainly related to changes in land use in urban areas or to the need for preventing deterioration of groundwater quality. Norway considers the runoff from contaminated sites in their action plans within the

implementation of the EU Water Framework Directive. Serbia set up a register of concentrated pollutant sources that include industrial and municipal sewage systems and leachate from landfill waste.

63. As an example of challenge, Lithuania refers to remediation of brownfields in urban areas and the need of risk reduction to groundwater resources used for drinking-water production, and Finland describes high investments.

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

64. The majority of targets set focus on establishing a legal framework that requires management measures of water resources. The legal amendments are often related to the EU Water Framework Directive, particularly to developing river basin management plans.

65. With respect to best practices, Croatia provides regular information to the public about water use and supports the participation of institutions from the water management sector in the process of preparing regulations and standards. Czechia encourages research on the relation between farming, soil quality, climate conditions, the use of plant protection products and their occurrence in water. The country also fosters the protection of soil properties and improves the education and communication between stakeholders. Luxembourg conducts studies for decision-makers focusing on the determination of future needs for drinking-water quantity.

66. Challenges described in the Netherlands include the management of new substances, such as pharmaceuticals, microplastics and nanoparticles that can affect water quality, for both surface water and groundwaters. Also, the effects of climate change, such as prolonged droughts, increased rainfalls and increased peak discharges and rises in water temperature will be an issue. Switzerland also reports that ensuring sufficient, ecologically valuable aquatic environments is very challenging, especially due to the resistance in agricultural sector.

T. Additional national or local specific targets

67. Most of the additional targets aim at information and awareness raising and at promoting the use of digital solutions, for instance through creating web portals. For example, Finland established an open online water utility database on drinking-water, wastewater and performance indicators. Germany published a children's book and a brochure to inform the general public on drinking and bathing water, in particular considering children's health. Slovakia is targeting public awareness in relation to natural healing and mineral waters. Czechia reports on training programs for water and public health managers and supports research and development on the issues of drinking-water quality and cost-effectiveness in water supply and wastewater treatment. Hungary and Lithuania focus on addressing the water management aspects of adaptation to climate change, in particular in relation to droughts.

U. Targets set in relation to the technical areas of work of the Protocol

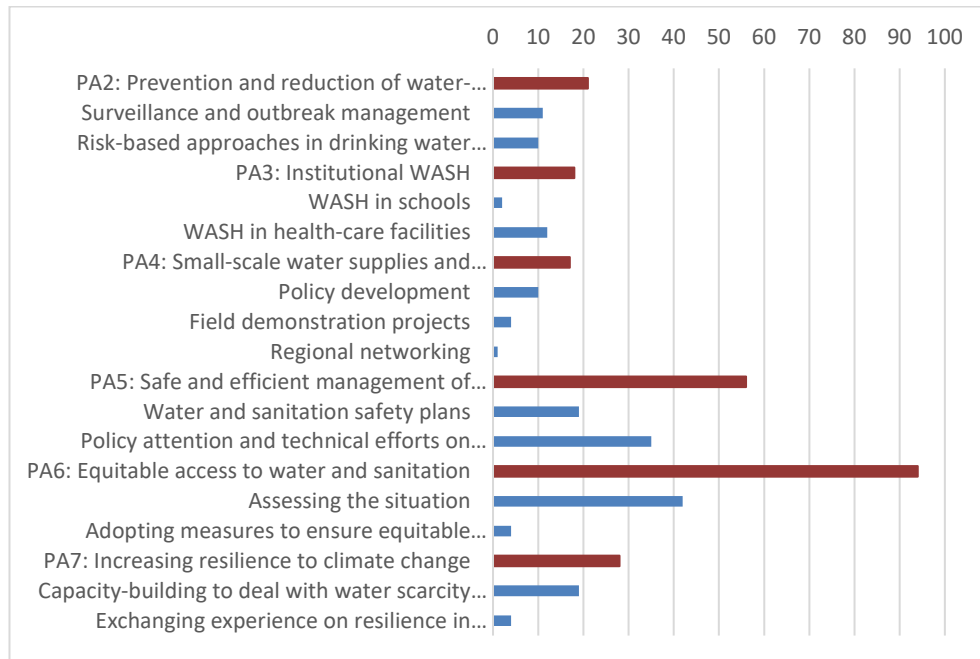
68. Most of the targets set by countries are in line with the technical areas of work under the Protocol, i.e. prevention and reduction of water-related diseases, institutional water, sanitation and hygiene, small-scale water supplies and sanitation, safe and efficient management of water supply and sanitation systems, equitable access to water and sanitation and increasing resilience to climate change, which underlines the close linkage between setting targets and technical activities under the Protocol (see Figure 1).

69. Most of the targets set were related to the work on equitable access to water and sanitation and safe and efficient management of water supply and sanitation (mostly tackling sanitation). Some target priorities intersect, for instance, equitable access and small-scale water supplies and sanitation are both addressed when the aim is to cover the whole

population with drinking-water, and small systems in rural areas are having difficulties in delivering safe services.

Figure 1

Number of targets set related to the technical areas of work under the Protocol



V. Targets on emerging issues

70. Many countries claimed the negative impact of changing climate on water resources as a priority issue that will likely become more urgent. Therefore, countries reported on building a knowledge base about regional conditions and preparing for future scenarios, including regarding water management and resilience of infrastructure. These efforts in ensuring water quality, quantity and resilience of sanitation in the context of floods and water scarcity are expected to further intensify in the coming years.

71. In line with the above, a number of countries also set focusing on climate change adaptation and emerging issues related to water, sanitation and health such as wastewater reuse, recovery of phosphorus from sewage sludge and micropollutants.

72. Countries that have high standards for drinking water quality increasingly focus on monitoring micropollutants such as pharmaceuticals, personal care products, pesticides, plasticizers or detergents. France, for example, developed a National action plan on micropollutants in water, focusing on substances having adverse effects on the environment and that are likely to cause contamination of water resources, including water intended for human consumption. Actions include research on micropollutants in raw water and treated wastewater as well as monitoring of priority emergency substances in catchments used to supply drinking-water.

73. Switzerland undertook an assessment of surface waters in terms of ecotoxicological effects of micropollutants. Based on the results of this assessment a national action plan for risk reduction and the sustainable use of pesticides was developed. This includes a balanced use of nutrients, crop rotation, a limited selection and specific application of pesticides and direct payments to support farmers with an incentive to provide specific ecological services. Switzerland also aims at upgrading selected wastewater treatment plants to reduce the quantity of organic trace elements.

74. Israel has been safely reusing a large share of treated wastewater for agricultural purposes (currently, 86 per cent of effluent is reclaimed for irrigation). To this end, specific effluent quality standards and treatment regulations were established.

75. Belgium has conducted research to assess the influence of climate change on salination and sea levels rise, and Ukraine plans to develop a program for wastewater reuse considering climate change.

V. Common indicators⁴

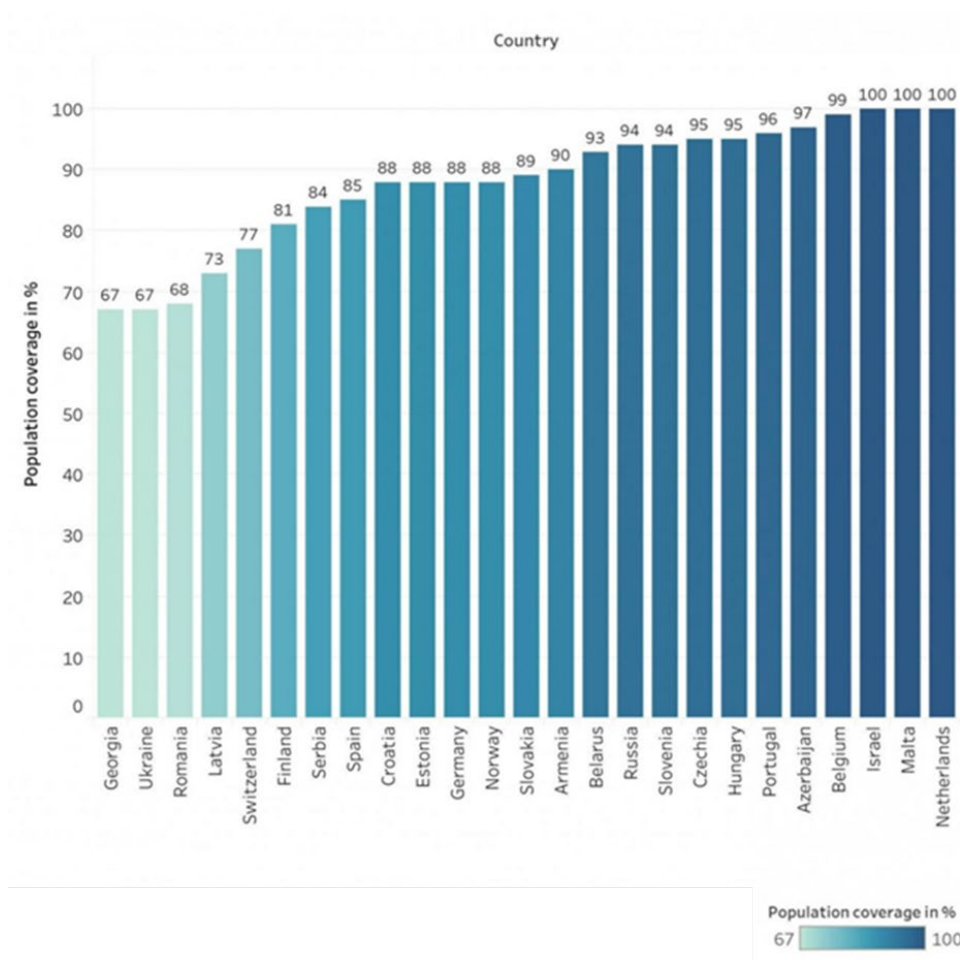
A. Quality of the drinking-water supplied

1. Context of the data

76. In order to classify and evaluate the data, the template for summary reports required countries to provide information on the population coverage (in millions or per cent of total national population) of the water supplies reported in this section, on the type of water supplies, and on the source of the water quality data reported. Out of 25 countries that quantified the population coverage in per cent of their total national population, the highest coverage of 100 per cent was reported by Israel, Malta and the Netherlands, while the lowest coverage of 67 per cent was reported by Georgia and Ukraine (see Figure 2). In Georgia, for example, 38 per cent of the population has access to centralized water supply systems and the remaining 29 per cent has access to other local supply systems.

Figure 2

Population coverage of the water supplies for which water quality data is provided



77. 25 countries specified the primary sampling point for water quality monitoring, which is an improvement compared to the previous reporting cycle: 77 per cent mentioned the point

⁴ For the assessment of improvement or deterioration of drinking-water quality, the entire data set of the 3rd and 4th reporting cycle was used.

of consumption, 47 per cent the outlet of the treatment plant and 40 per cent the distribution system. 17 per cent took samples at catchments and 7 per cent at the treatment plant inlet.

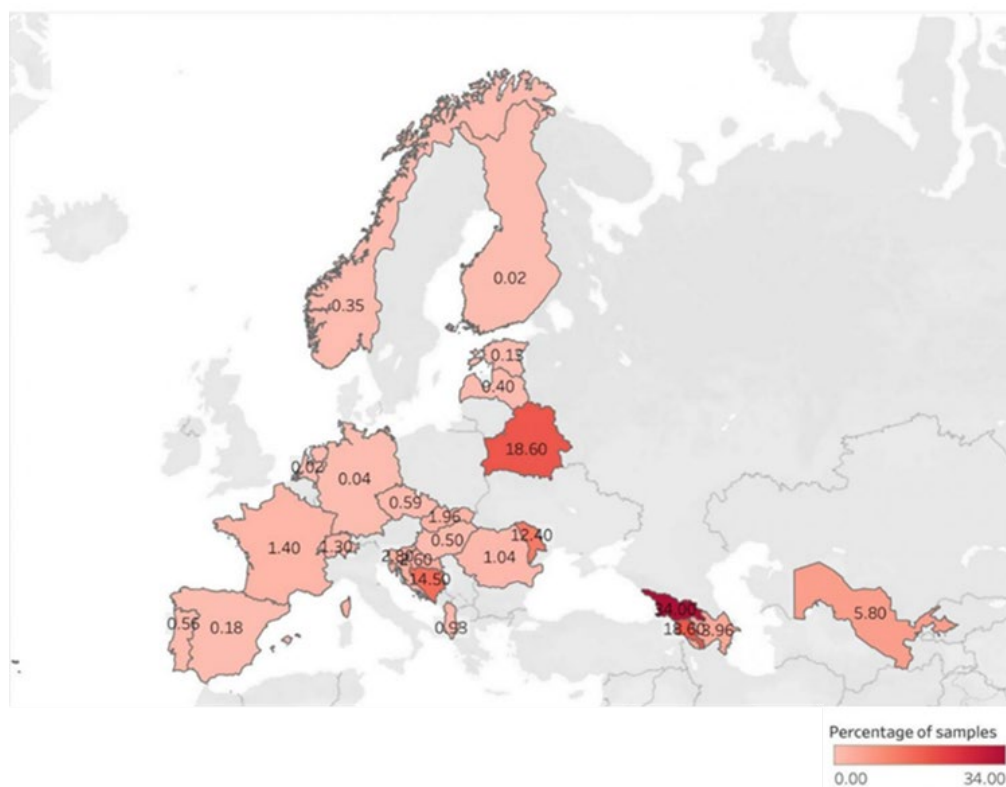
78. In the following paragraphs, improvement or deterioration of the compliance rate is defined as a value that differs more than 1% from the last reported value. The evaluation of the bacteriological and chemical quality of the drinking-water supplied is based on the countries' national standards which may deviate from the WHO guideline values. Therefore, the results from countries with different standards cannot be compared directly.

2. Bacteriological quality

79. The bacteriological quality of the drinking-water supplied is based on the percentage of samples that do not meet the national limit value for *Escherichia coli* (*E. coli*) and up to three other priority microbial indicators and/or pathogens that are subject to regular monitoring. As shown in Figure 3 below, 28 countries provided data on *E. coli* and 22 of them reported high compliance (>95 per cent of samples) with the national standards. Non-compliance of more than 5 per cent is reported by Armenia (19 per cent), Belarus (19 per cent), Bosnia and Herzegovina (15 per cent), Georgia (34 per cent), the Republic of Moldova (12 per cent) and Uzbekistan (6 per cent).

Figure 3

Bacteriological quality of supplied drinking-water. Percentage of samples exceeding the national standard of *E. coli*



80. Nine countries provided segregated data on *E. coli* for urban and rural areas showing that the share of non-compliant samples is substantially higher in rural areas as compared to urban areas (up to 3 per cent (Serbia)).

81. In 11 countries the data displays improvements of compliance rates, although only in three cases the improvement is more than 1 per cent compared to the previous report (Azerbaijan, Croatia, Republic of Moldova). In eight countries the compliance rates decreased and in three countries the change was more than 1 per cent (Armenia, Georgia, Uzbekistan).

82. 20 countries provided compliance data on Enterococci. 17 of them reported high compliance with the national standards (>95 per cent of the samples) and increased

compliance rates shown for 11 countries. Non-compliance of more than 5 per cent is reported by Bosnia and Herzegovina (12 per cent), Latvia (6 per cent) and the Republic of Moldova (12 per cent).

83. Four countries provided segregated data for urban and rural areas, with the percentage of samples that did meet the national standards for Enterococci being higher in urban areas.

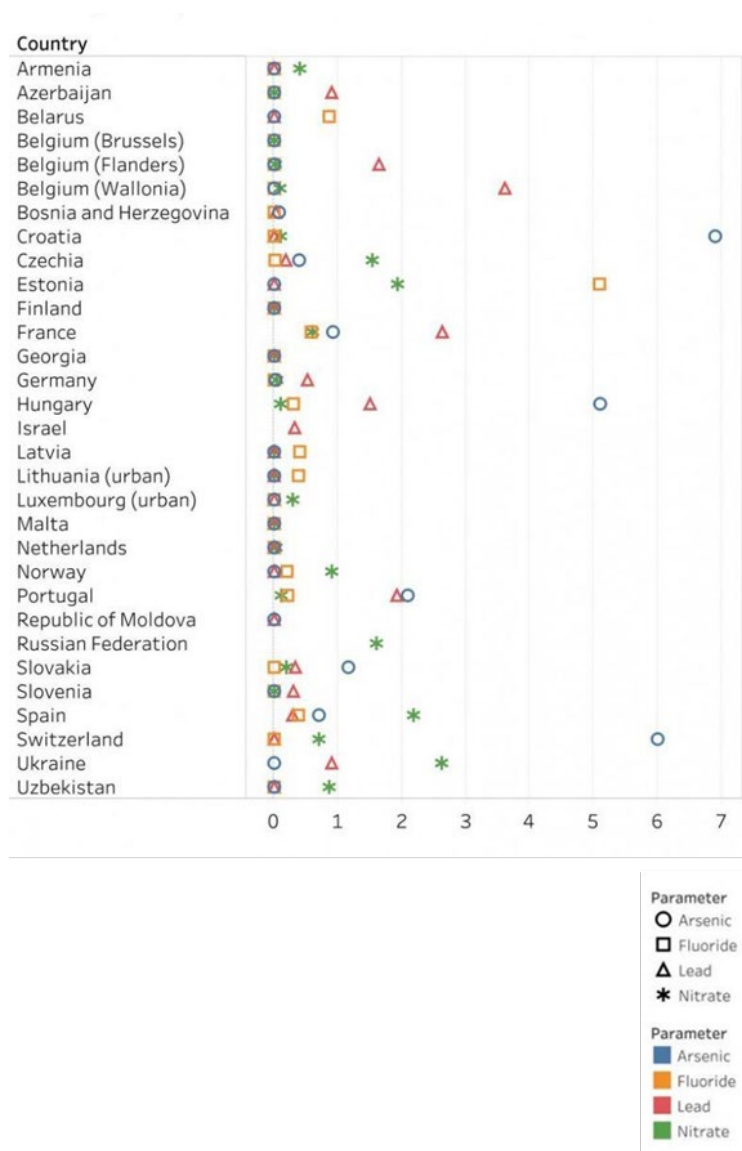
84. Countries also provided data on 12 other indicators and pathogens such as, Clostridium perfringens, which was the parameter mostly reported on amongst the additional parameters subject to routine water quality monitoring.

3. Chemical quality of the drinking-water supplied

85. The percentage of samples that fail to meet the national standards for the four chemical parameters of arsenic, fluoride, lead and nitrate is the basis of the chemical assessment of the drinking-water quality. In addition, countries were asked to identify up to three additional chemical parameters that were of priority in their national or local context. Current levels of non-compliance are shown in Figure 4.

Figure 4

Chemical quality of supplied drinking-water. Percentage of samples that fail to meet the national standards



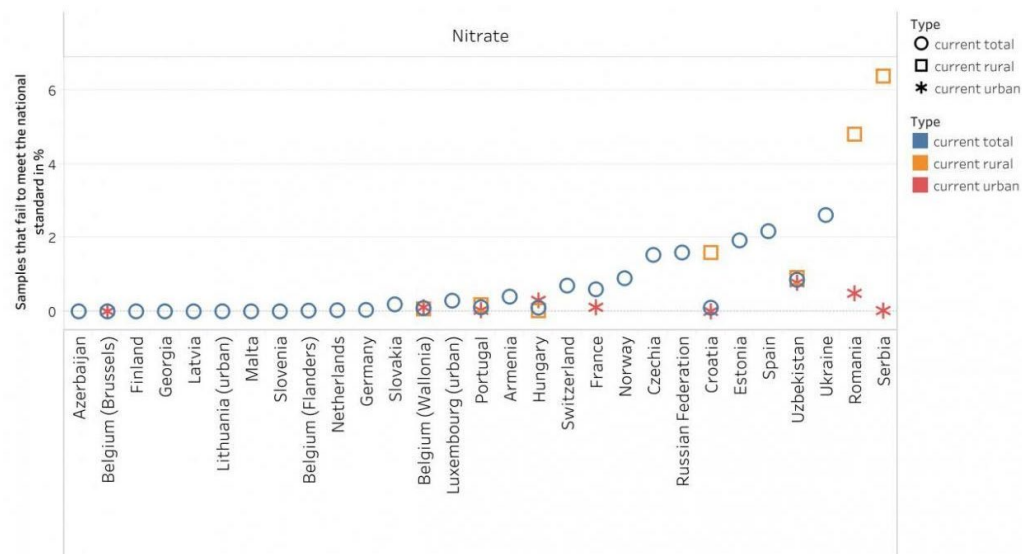
86. Most countries reported high compliance (>95.0% of the samples) with the national standards regarding arsenic, lead, fluoride and nitrate (see Figure 5). For countries that

reported separately on urban and rural areas, there were distinctly higher compliance rates in urban than in rural areas (particularly Romania and Serbia). In general, compliance rates increased for one or more of the mentioned parameters as compared to the previous reporting cycle (e.g. arsenic – France, Croatia). However, in some cases compliance decreased (e.g. nitrate – Estonia).

87. The reporting countries also provided data on 71 other parameters such as iron, manganese, nitrite and sulphate. Some remarkable changes that can be highlighted concern improvements of non-compliance of ammonium in the Republic of Moldova and of iron and manganese in Belarus as compared to the previous reporting cycle.

Figure 5

Chemical quality of supplied drinking-water. Segregated data on nitrate in urban and rural areas



B. Outbreaks and incidence of water-related infectious diseases

88. Countries reported on Shigellosis, Entero-haemorrhagic *E. coli* infection, Typhoid fever, Viral Hepatitis A, Legionellosis and Cryptosporiosis. To describe changes over time, a notable change of incidence is defined as >10 cases per 100,000 population compared to the previous report or last known value (see Figures 6 and 7). It should be noted that an increase in incidences as compared to the previous reporting cycle does not necessarily mean that the situation worsened. It could also mean that the surveillance system got better. In order to identify a trend or verify whether a changed incidence is caused by a deterioration of the situation or better monitoring, an individual analysis would need to be carried out by each country.

Figure 6
Incidence of water-related infectious diseases in cases per 10,000 population

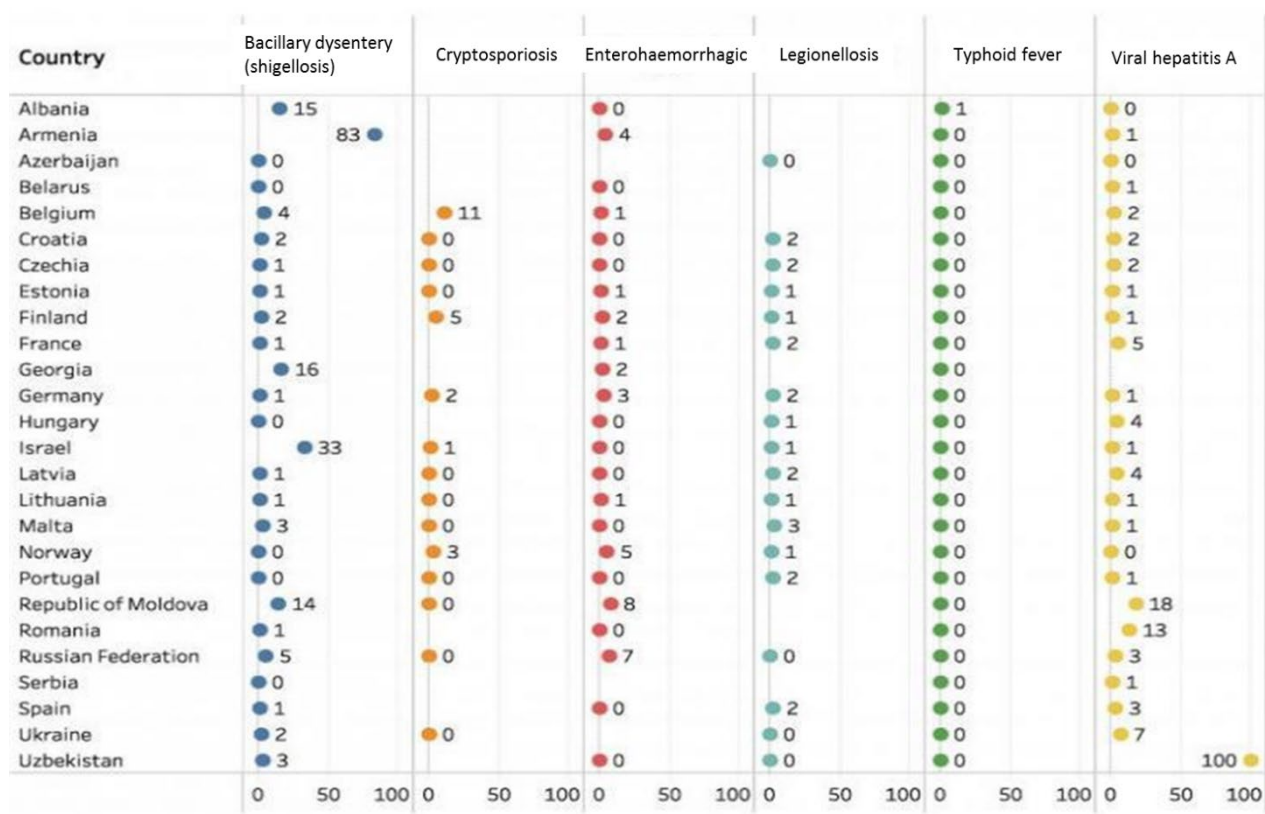
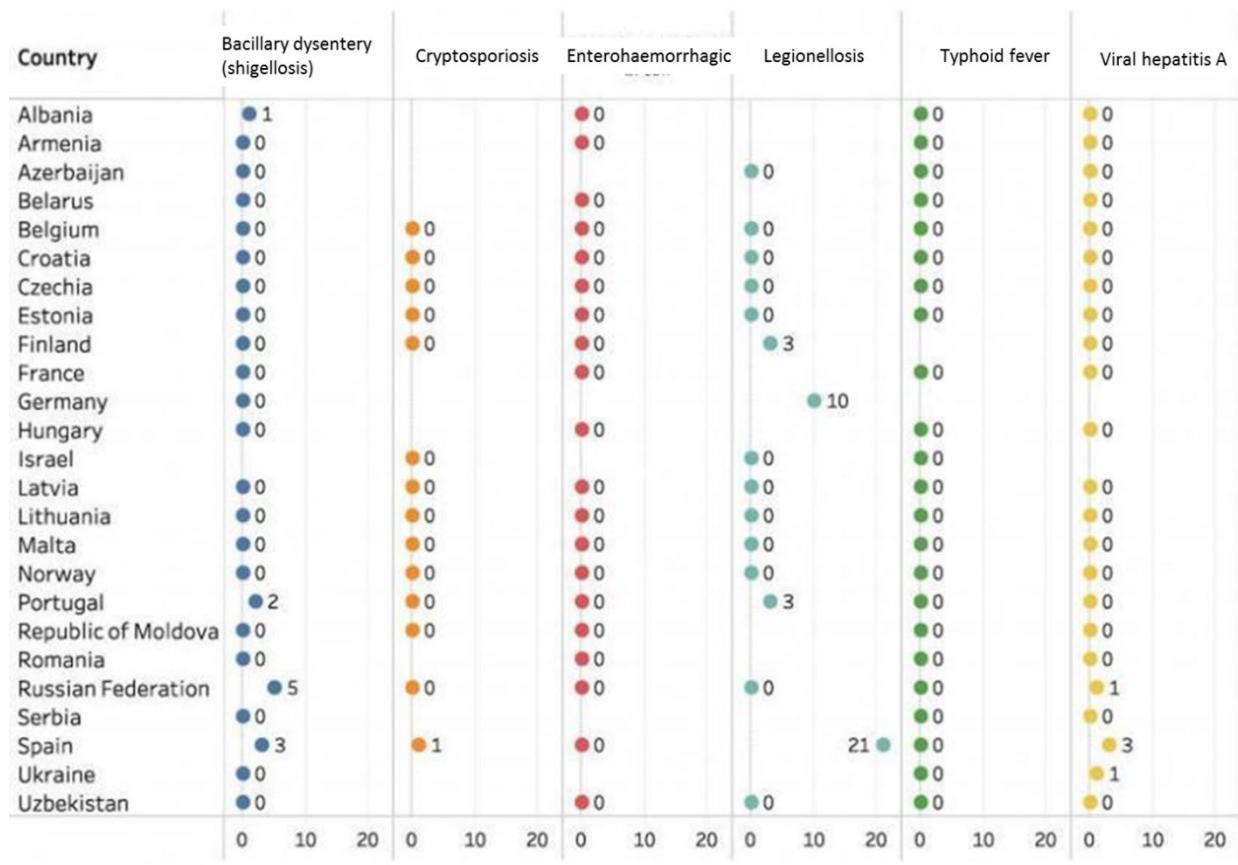


Figure 7
Number of outbreaks of water-related infectious diseases in absolute numbers



89. 26 countries provided data on the incidence of Shigellosis and four of them reported a value over 10 per 100,000. In 17 countries the incidence increased since the previous report, in one of them notably (Armenia). In eight countries a decrease of incidence was reported, in two of them notably (Georgia, Israel). Only four of 24 countries experienced outbreaks of Shigellosis (Albania, Portugal, Russian Federation, Spain).

90. The incidence of Entero-hemorrhagic *E. coli* infection was reported by 23 countries but never higher than 10 per 100,000. No outbreaks were reported.

91. 26 countries reported values below 1 per 100,000 on the incidence of Typhoid fever. No outbreaks were reported.

92. Out of 25 countries gave reporting incidence of Viral Hepatitis A, three reported values over 10 per 100,000 population. In 13 of those countries the incidence increased since the last report, in one of them notably (Uzbekistan). Romania and Hungary reported a notable decrease (>10 cases) (). Out of 23 countries reporting outbreaks of Viral Hepatitis A, Spain is the country with the highest number of outbreaks (three).

93. Incidence was below 3 per 100,000 in all 18 countries reporting on Legionellosis. However, the number of outbreaks among 16 reporting countries was ≥ 10 in Germany and Spain, without distinguishing sources of exposure.

94. Out of 14 reporting countries, only Spain experienced an outbreak of Cryptosporiosis and of 15 countries reporting on incidence, Belgium reported >5 per 100,000.

95. 19 countries provided data on other diseases such as cholera (no outbreaks) and Giardiasis (noticeable values reported by Georgia and Uzbekistan).

C. Access to drinking-water

96. 30 countries provided data on the percentage of population with access to drinking-water and only four of them reported access below 80 per cent. 23 countries segregated between access in urban and rural areas. Two countries provided no total value but segregated values for urban and rural areas (Netherlands, Ukraine). The access to drinking-water in urban areas was reported to be ≥ 95 per cent in all countries that provided data. In rural areas the access was generally lower and below 50 per cent in the Republic of Moldova, Romania and Ukraine. Overall the data shows a substantial progress over time.

D. Access to sanitation

97. 30 countries provided data on access to sanitation, in 11 of which access was below 80 per cent. 20 countries segregated between urban and rural areas, with the percentage of access being (above 80 per cent in urban areas except Albania and Uzbekistan), while access in rural areas was below 80 per cent in 11 countries, in six of which under 30 per cent. Two countries provided no total value but segregated values for urban and rural areas (Netherlands, Ukraine). In general, data indicates an increase of access over time.

98. As shown in Figure 8 below, countries used different definitions of access to drinking water and access to sanitation. The evolution regarding access to drinking-water and sanitation since 2016 is shown in Figure 9, while Figure 10 displays data on access to drinking-water and sanitation for the total population (percentage). Figure 11 provides segregated data on access to drinking-water and sanitation for urban and rural population.

Figure 8
 Definition of access to drinking water and sanitation

	Drinking Water				Sanitation		
	Improved drinking water sources (as per JMP definition)	Supplies available when needed	Supplies located on premises	Supplies that provide drinking water free from faecal contamination	Improved sanitation facilities (as per JMP definition)	Facilities from which is safely disposed in situ or treated off site	Facilities not shared with other households
Albania	●	●	●	●	■	■	■
Armenia	●	●	●	●	■	■	■
Azerbaijan	●	●	●	●	■	■	■
Belgium	●	●	●	●	■	■	■
Czechia	●	●	●	●	■	■	■
Estonia	●	●	●	●	■	■	■
Finland	●	●	●	●	■	■	■
France	●	●	●	●	■	■	■
Georgia	●	●	●	●	■	■	■
Germany	●	●	●	●	■	■	■
Hungary	●	●	●	●	■	■	■
Israel	●	●	●	●	■	■	■
Latvia	●	●	●	●	■	■	■
Lithuania	●	●	●	●	■	■	■
Netherlands	●	●	●	●	■	■	■
Norway	●	●	●	●	■	■	■
Portugal	●	●	●	●	■	■	■
Republic Moldova	●	●	●	●	■	■	■
Romania	●	●	●	●	■	■	■
Serbia	●	●	●	●	■	■	■
Slovenia	●	●	●	●	■	■	■
Spain	●	●	●	●	■	■	■



Figure 9
 Evolution with regard to access to drinking-water and sanitation since 2016. Total values of access as percentage of the population

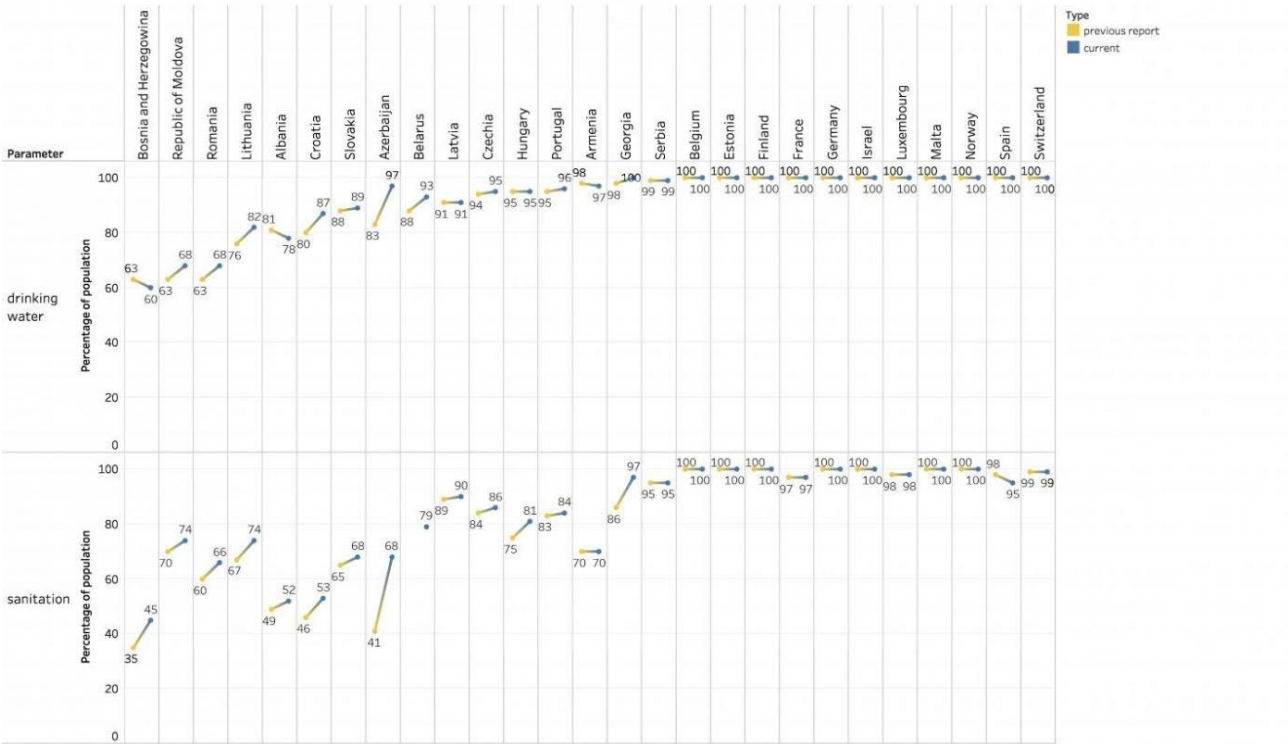


Figure 10
 Access to drinking water and sanitation. Total value of access as percentage of the population

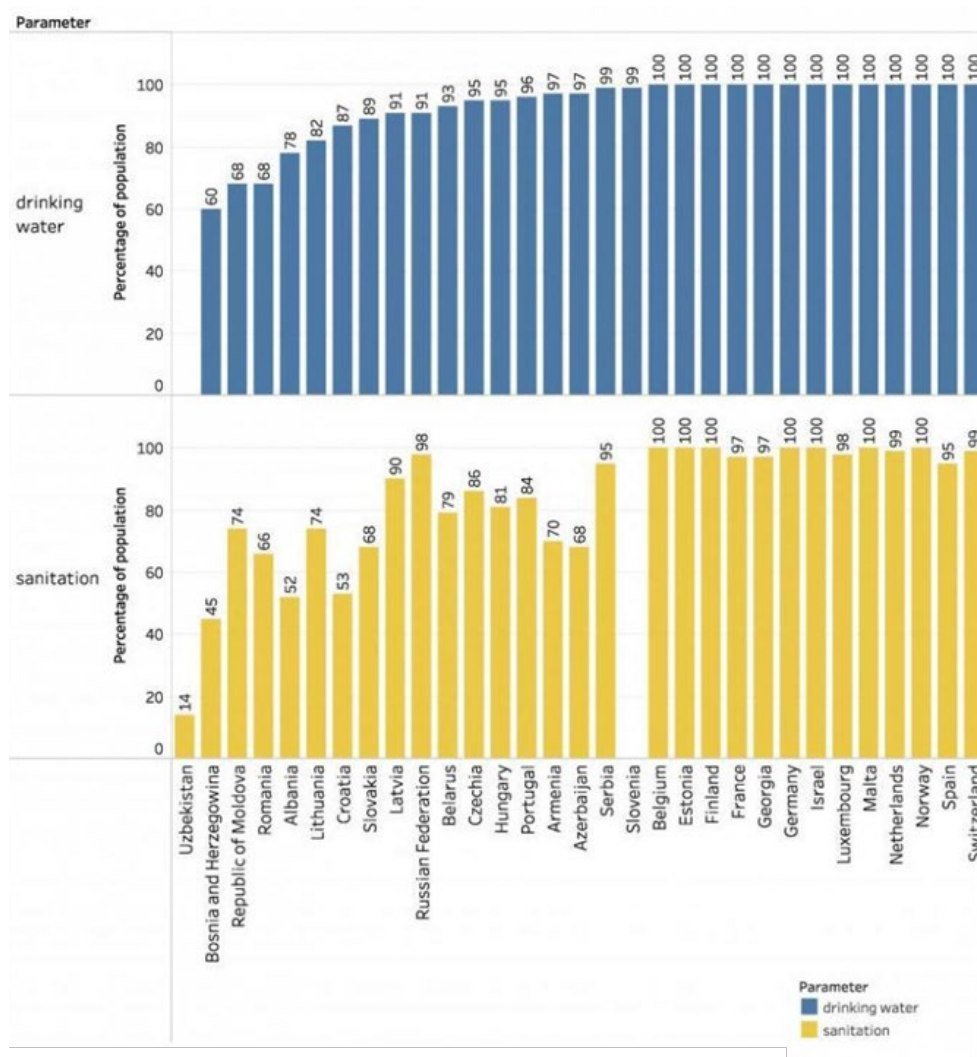


Figure 11
 Access to drinking-water and sanitation. Segregated in urban and rural population



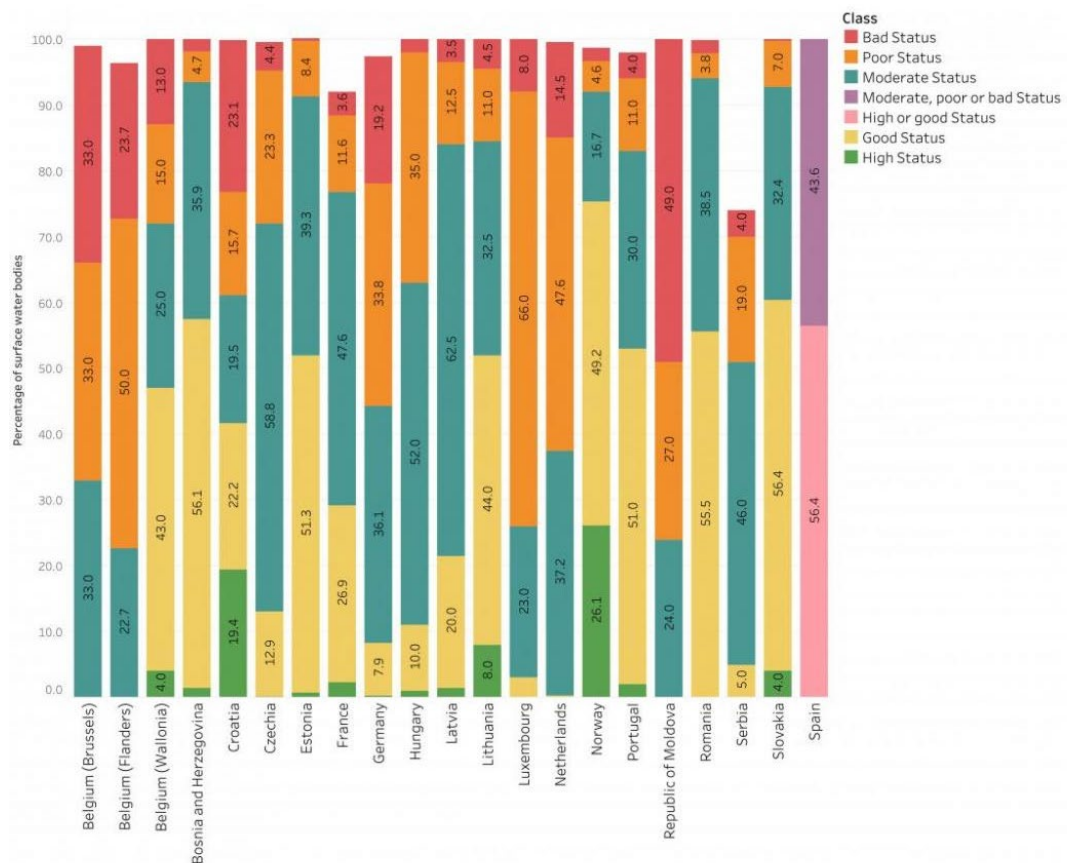
E. Effectiveness of management, protection and use of freshwater resources

1. For European Union countries and other countries following the European Union Water Framework Directive classification

Water quality – ecological status

99. The available data shows a considerable variance in the ecological status of surface water bodies in reporting countries, ranging from the category of “high/good” to “moderate/poor/bad” status (see Figure 12). There is, however, a predominantly good chemical status of both surface water bodies (not always 100 per cent of all water bodies of a given country were assessed) and groundwater and good quantitative status of groundwater. Only a small number of countries differentiated between rivers and lakes or artificial and natural water bodies.

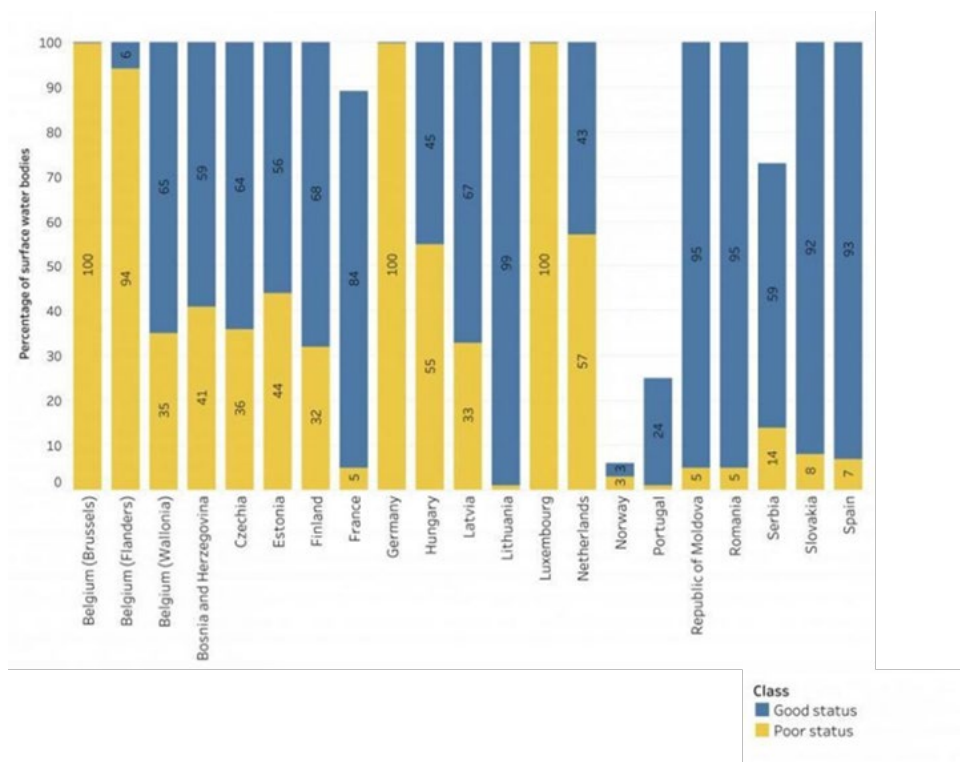
Figure 12
Ecological status of surface water bodies



Water quality – chemical status

100. 19 countries provided data on the chemical status of their surface water bodies (not always 100 per cent of all water bodies of a given country were assessed) by classifying them as being in a “good” or “bad” status (see Figure 13). In 13 of them the percentage of surface water bodies with a good status prevailed. Finland, Germany and Latvia specified that they took into account ubiquitous substances like mercury, which led to higher percentage of surface water bodies with a poor status.

Figure 13
Chemical status of surface water bodies



Water quality – status of groundwater

101. 16 countries provided data about the chemical status (see Figure 14) and 17 about the quantitative status of groundwater (see Figure 15). Except for Czechia, Luxembourg, all of them reported a larger percentage of groundwater with good chemical status. The quantitative status of the groundwater (not always 100 per cent of all water bodies of a given country were assessed) of all reporting countries is mainly good.

Figure 14
Chemical status of groundwater

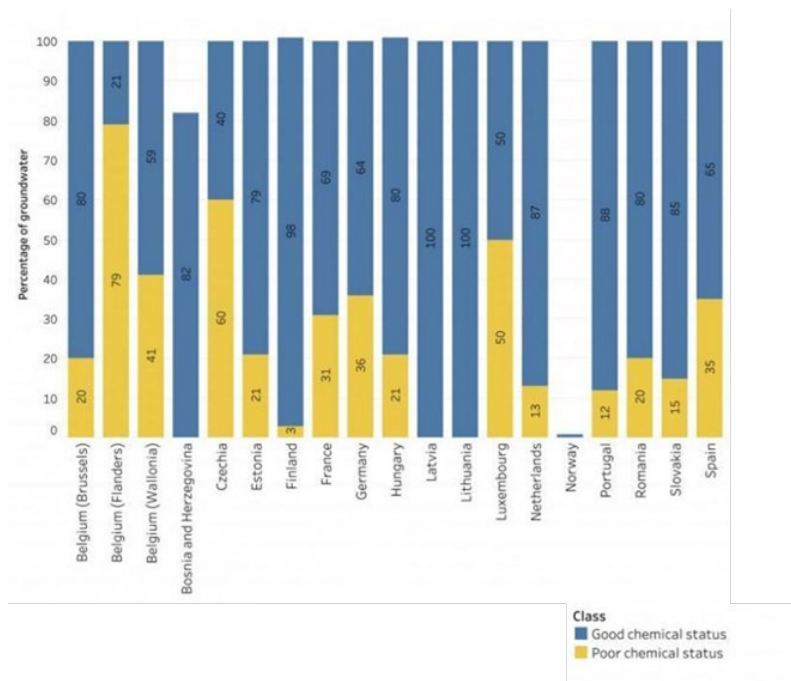
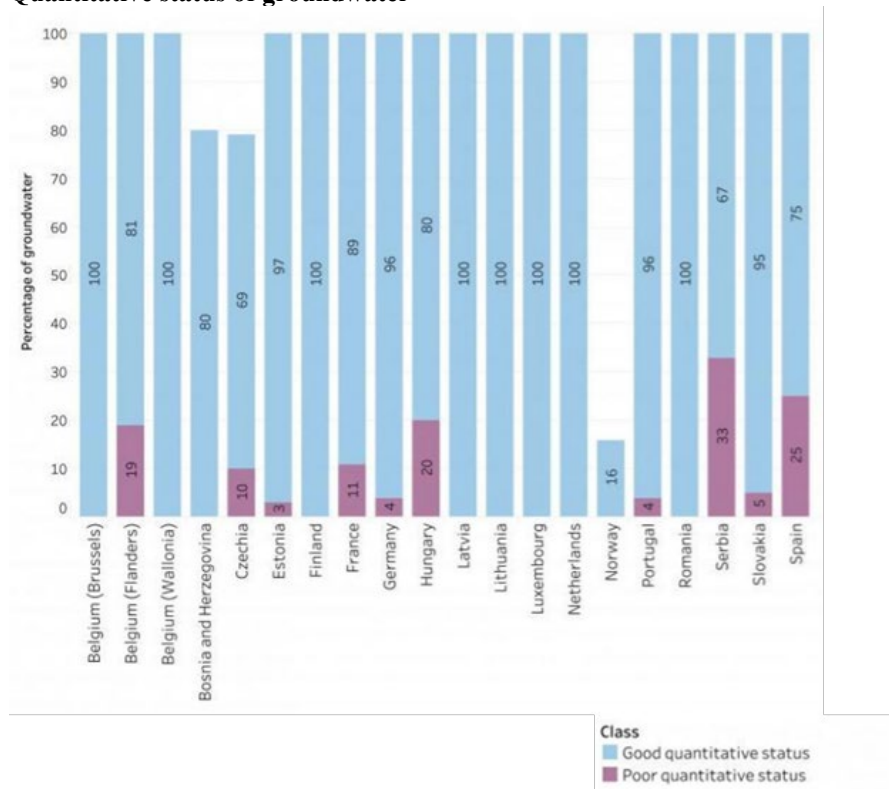


Figure 15
Quantitative status of groundwater



2. For other countries

Water quality – status of surface water and groundwater

102. Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Israel, Russian Federation and Ukraine provided data not according to the EU Water Framework Directive classification.

103. Belarus referred to the national State Water Cadaster for information on surface waters and stated that groundwater quality deterioration in natural conditions was observed, as compared to 2018, and the groundwater status for Israel also shows deterioration compared with previous reports.

104. The Russian Federation distinguishes between waterbodies of 1st category (water for drinking, household use and food industry), 2nd category (water for recreation) and seas. Within the 1st category, the share of samples exceeding microbiological indicators set under hygienic standards increased since 2015. Within the 2nd category, the share of samples slightly decreased. The appearance of exceeding parasitological indicators also improved. The share of groundwater resources that do not meet sanitary and epidemiological requirements slightly decreased since 2015.

105. Ukraine provided segregated data for 8 river basins. While the status of surface water bodies did not change significantly since 2016, the data on groundwater indicated deterioration.

Water use

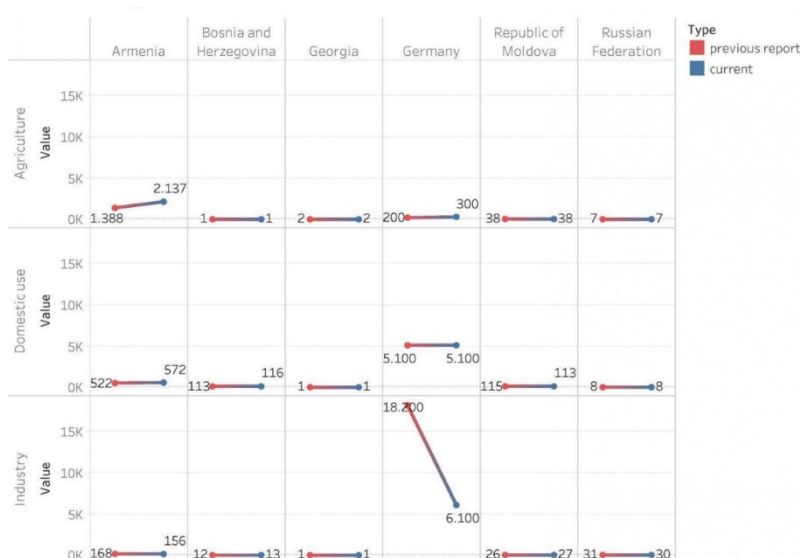
106. A total of 26 countries provided information on the water exploitation index at the national and river basin levels for three sectors (agriculture, industry, domestic). Due to different interpretation of the questions and different units used, comparing data is difficult. However, it was possible to determine that the industry sector was the most water-intensive in 10 countries, agriculture in eight countries and domestic use in seven reporting countries.

107. Armenia reported increase of water exploitation in agriculture and domestic use sectors, whereas Azerbaijan and Bosnia and Herzegovina reported increase in all three sectors.

108. Several countries, however, reported a decrease of water exploitation in one or more sectors since the previous reporting cycle.

109. Figure 16 shows water exploitation by sector for reporting countries using m³/year as a measurement unit.

Figure 16
Water exploitation by sector in million m³/year



VI. Water-related disease surveillance and response systems⁵

110. All reporting countries provided information on water-related disease surveillance and 28 of them reported to have a water related disease surveillance and early warning system in place. Bosnia and Herzegovina had not yet established such a system, Switzerland was in progress and Luxembourg did not provide information.

111. 24 countries reported to have a national or local contingency plan in place to respond to outbreaks and incidents and four were in progress of establishing such plans.

112. 24 countries reported that their public authorities had the capacity to respond to outbreaks, incidents or risks in accordance with the relevant contingency plans while three countries were in progress of building capacity.

113. Main key elements of water-related disease surveillance and outbreak response systems reported included a rapid investigation system for outbreaks (Albania, Netherlands, Norway and Slovenia); mandatory reporting of water related diseases (Albania, Finland, Netherlands and Slovenia) and providing special guidance on drinking-water quality in an emergency and specific measures to prevent outbreak spreading (Finland).

114. In terms of good practices, Norway has three different systems: one for the notification of infectious diseases, one for monitoring their number and an alert system for outbreaks of water- and food related diseases that facilitates information sharing, collaboration and coordination among the stakeholders, including municipalities, during an outbreak investigation.

⁵ For the purpose of assessing water-related disease surveillance and response systems, 31 of the 32 reported were considered as information provided by one country was insufficient to carry out a country-wide analysis.

115. Capacity building measures included producing guidelines for public health authorities (Albania, Finland, Germany), establishing information systems (Albania, Portugal) and legal frameworks and registering legionellosis (Belarus, Estonia, Latvia, Netherlands).

Table 3
Status of establishing and improving water-related disease surveillance and response system

<i>Topic</i>	<i>Status</i>	<i>Number of countries</i>
Water-related disease surveillance system	Established	28
	In progress	1
	Not established	1
	No information	1
National or local contingency plans	Prepared	24
	In progress	4
	Not prepared	1
	No information	2
Capacity building	Yes	24
	In progress	3
	No	1
	No information	3

VII. Progress in achieving articles 9-14 of the Protocol

116. 25 countries provided information on the implementation of articles 9 to 14 (some focusing on specific articles and a few providing detailed information on all of them (Latvia).

117. In terms of best practices, Albania established promotional campaigns and educational curricula on hygiene, health and the environment (article 9); Azerbaijan conducts targeted training programs for citizens, in particular low-income social groups, on using modern technology for information communication (article 10); Germany reported participation in six international river basin commissions/bodies and four bilateral transboundary waters' commissions, where cooperation covers all water management issues, e.g. surface and groundwater quality, water ecology, flood protection, warning and alarm systems in case of accidents (article 11). Germany also contributed to international cooperation, joint and coordinated international action, and international support for national action (articles 11, 12 and 14) through supporting international capacity-building efforts as a co-lead Party for the area of small-scale water supplies and sanitation under the programme of work of the Protocol. Serbia and Slovakia also incorporate requirements on transboundary water cooperation into their bilateral and multilateral agreements with neighboring countries (article 13).

VIII. Thematic part linked to priority areas of work under the Protocol

A. Water, sanitation and hygiene in institutional settings

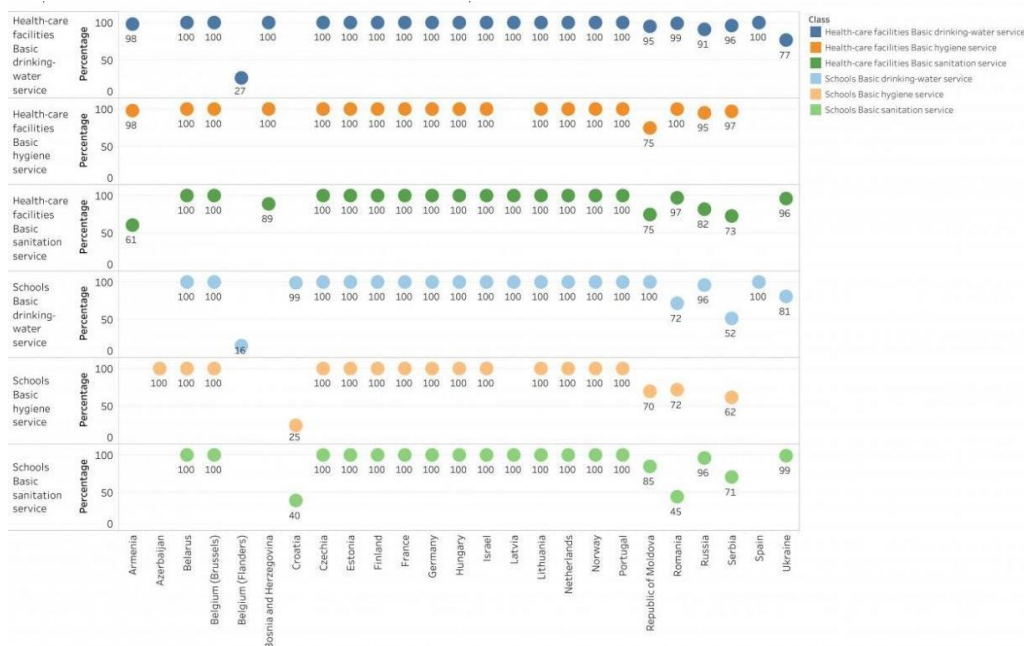
118. 22 countries provided information on the proportion of schools and health-care facilities that provide basic water, sanitation and hygiene (WASH) services in the new thematic part of the reporting template (see Figure 17).

119. Regarding the proportion of schools that provide basic drinking-water services it was close to 100 per cent in six reporting countries. Basic hygiene and sanitation services in schools were less than 100 per cent in six countries. Croatia reported the lowest values for provision of basic hygiene and sanitation services (less than 50 per cent).

120. As for basic drinking-water services in health-care facilities, eight countries did not reach 100 per cent of service provision. 100 per cent of provision of basic hygiene services was not reached by three countries and six countries did not reach 100 per cent of provision of basic sanitation services. The lowest percentages were reported by Armenia concerning basic sanitation services (61 per cent) and by the Republic of Moldova concerning basic hygiene services (75 per cent). The situation was generally better in health-care facilities as compared to schools.

Figure 17

Proportion of schools and health-care facilities that provide WASH



121. The countries were also asked to inform about their current status on the assessment of WASH in schools and health-care facilities (see Figure 18). 19 countries reported that they carried out such an assessment, two were in progress and seven countries did not assess the situation in schools. In terms of health-care facilities, 17 countries had assessed the situation, four were in progress and seven did not carry out such an assessment. Overall, approximately one two thirds of all countries submitting a report did provide data on this subject, including on policies and programmes with specific actions on the topic. 12 countries stated that their approved policies or programmes included actions to improve WASH in schools and health-care facilities. Croatia had in place a specific programme for WASH in schools and France a programme for WASH in health-care facilities.

Figure 18
Status of assessing WASH in schools and health-care facilities



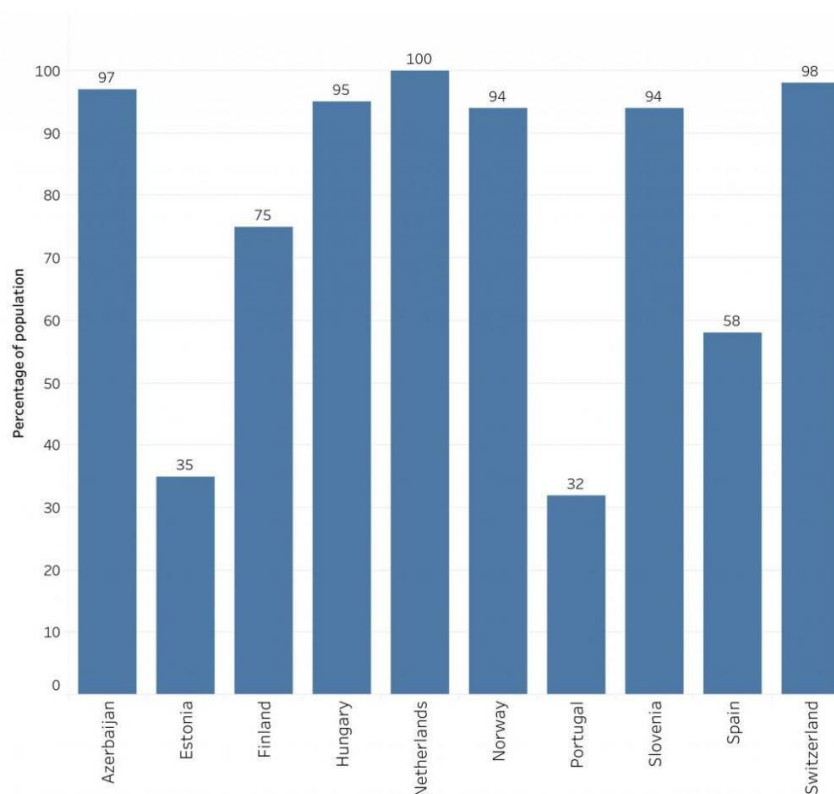
122. Countries generally followed the World Health Assembly resolution 72/7 as 70 per cent of countries stated that they had assessed the WASH situation in schools and/or health care facilities. Also, a total of 20 targets on institutional WASH were set by countries.

B. Safe management of drinking-water supply

123. 28 countries provided data about the management of their drinking-water supply. In 18 countries there was a national policy or regulation requiring implementation of risk-based management approaches such as water safety plans (WSPs). In seven countries developing such national policy or regulation was in progress, and four countries did not have it in place.

124. Ten countries provided data on the percentage of the population supplied with drinking-water under a WSP (see Figure 19). In six countries such percentage was above 80 per cent.

Figure 19
Percentage of population serviced with drinking-water under a WSP



C. Equitable access to water and sanitation

125. Most countries provided data about equitable access to water and sanitation in their countries (see Figure 20). 15 countries reported having assessed the equity of access, five were in progress (Croatia, Czechia, Georgia, Romania, Slovenia) and seven countries did not undertake such an assessment (Albania, Germany, Latvia, Norway, Russian Federation, Switzerland, Uzbekistan).

126. A total of 20 countries reported having national policies or programmes in place addressing the following specific dimensions of equitable access: geographical disparities (15 countries), vulnerable groups (13 countries) and affordability of water and sanitation services (15 countries).

Figure 20
Status of equitable access assessment and equity dimensions covered by national policies or programmes

	Assessment of equity	Ensure access for vulnerable groups	Keep affordability	Reduce geographical disparities
Albania	+			
Armenia	●	●	●	●
Azerbaijan	●	●	●	●
Belarus	●	●	●	●
Belgium (Brussels)	+		●	
Belgium (Flanders)	●	●	●	
Croatia	▲			●
Czechia	▲			
Estonia	●			
Finland	●		●	●
France	●		●	●
Georgia	▲	●	●	●
Germany	+			
Hungary	●		●	●
Israel	●			
Latvia	+			
Lithuania	●	●	●	●
Netherlands	●	●	●	
Norway	+	●		
Portugal	●		●	●
Republic of Moldova	●	●		
Romania	▲	●	●	●
Russia	+			
Serbia	●	●	●	●
Slovenia	▲	●	●	●
Spain	●	●	●	●
Switzerland	+			
Ukraine	●			●
Uzbekistan	+			



IX. Overall evaluation, lessons learned and conclusions

127. Most of the targets set under the Protocol relate to the work on safe and efficient management of water supply and sanitation (mostly tackling sanitation) and equitable access to water and sanitation. In some countries, equity-related targets specifically address rural areas and they are linked with the area of work of small-scale water supplies and sanitation. Increasingly, countries also focus on capacity building, as well as on management measures to improve the quality of drinking water and water resources at source.

128. Targets further relate to some emerging issues, most notably the increasing effects of climate change. Many countries identified tackling the impacts of a changing climate on water resources as a priority issue that will likely become more and more urgent. Therefore,

they reported on building knowledge base about regional conditions and preparing for future scenarios, including by looking at infrastructure resilience and at how to incorporate climate change projections in water and sanitation management.

129. In their reports, many countries extensively described improvements in the legal framework, which appear to be considered as a first step for targets' implementation. Such improvements are often aimed at incorporating into national law international obligations, such as the relevant Directives of the European Union.

130. Several reports refer to the lack of funding and limited financial capacity as a challenge for implementing targets, especially those related to infrastructure development.

131. In terms of common indicators, the data shows that drinking water quality has substantially improved as compared to the third reporting cycle, according to both bacteriological and chemical parameters. Most countries reported high compliance with their national standards. Nevertheless, most countries did not provide segregated data on urban and rural which may result in hiding inequities. In the few cases where segregated data was provided, it showed that rural areas continue to have water of a lower quality. Countries are encouraged to provide a more complete set of data, including disaggregated data, in the future reporting cycles.

132. The occurrence of water-related diseases is a major indicator for the effectiveness of measures taken to improve water and sanitation. Overall, although there were several countries reporting a slight increase of incidence, most reports indicate that outbreaks and incidence of water-related diseases are reducing in the countries. However, for the majority of countries, the data provided was not supported by the analysis of measures taken and health outcomes.

133. Regarding access to water and sanitation, the overall data reveals significant improvements as compared to the previous reporting cycle, especially in access to sanitation. However, it is striking that far fewer people have access to sanitation than to drinking-water, especially in rural areas, showing a greater need for action.

134. The data on effective management, protection and use of freshwater resources shows that the quality of surface water resources in the pan-European region is uneven. According to chemical parameters, the quality of surface water resources is good in most countries. The ecological status, however, ranges from good to bad. The majority of reporting countries defines its surface water bodies as having predominantly a high, good, or at least moderate status, but several countries indicate that over 50% of their surface water bodies have an ecological status which is either poor or bad. This is indicating a challenge as the ecological status assesses the structure and functioning of surface water ecosystems and it shows the influence of pressures such as pollution and habitat degradation on the resource.

135. Groundwater resources, on the other hand, are generally in good status in most reporting countries, according to both chemical and quantitative parameters.

136. The data on water use is less conclusive, since several countries did not provide all information requested in the reporting template and thus comparability is limited. Still, the data shows that the majority of reporting countries reduced its water exploitation since the previous reporting cycle. In several countries, industry is the most water-intensive sector, followed by agriculture and domestic use.

137. With respect to the implementation of article 8 of the Protocol, most countries reported to have water-related disease surveillance in place as part of their overall surveillance system. They also have a contingency plan and the necessary capacity from the relevant authorities to respond to outbreaks. A few countries established mandatory reporting of water-related diseases.

138. International cooperation on water, sanitation and health takes place between some countries of the pan-European region, particularly in the context of international river basin commissions and other bodies. In some cases, which can be considered as a good practice, it covers several aspects of water management, including surface and groundwater quality, water ecology, flood protection, warning and alarm systems in case of accidents.

139. With respect to thematic areas of work under the Protocol, most reporting countries have taken steps to assess and improve the situation of WASH in schools and health-care facilities, linked to the area of work of institutional WASH under the Protocol. The data shows that, in general, the situation is better for WASH in health-care facilities than for WASH in schools.

140. The majority of countries have also reported the uptake in policy and practice of risk-based management approaches in drinking water supply, such as water safety plans.

141. As regards equitable access to water and sanitation, many countries have assessed the equity situation and have developed relevant policies, mostly focused on reducing geographical disparities and ensuring the affordability of services.

142. The application of principles of universality, equity, safety and prevention, which are enshrined in the Protocol and its programme of work and reflected in most reports, proves the strong alignment of the Protocol with international commitments such as the 2030 Agenda for Sustainable Development. By way of illustration, targets set on equitable access to water and sanitation and other related activities contribute to the achievement of Sustainable Development Goals and of the Ostrava Declaration on Environment and Health, which stresses the importance of equity, social inclusion and gender equality in environmental and health policies and with respect to access to natural resources.

143. The majority of the countries also stated that targets set in the respective target setting areas contribute to achieving the 2030 Agenda, in particular Goal 3 on good health and well-being and Goal 6 on clean water and sanitation, but also Goal 9 on industry, innovation and infrastructure and Goal 11 on sustainable cities and communities. In some cases, countries also indicated a link to Goals 4 on quality education, 15 on life on land, 12 on responsible consumption and production, 14 on life below water, 16 on peace, justice and strong institutions, 5 on gender equality, 13 on climate action, 1 on ending poverty, and 17 on partnerships (in decreasing order of occurrence within the reports).
