



Institute of Public
Health of Serbia

Transposition of the EU Directive on the quality of water intended for human consumption in Serbia: exciting practice and challenges

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Existing legal framework related to drinking water quality in Serbia/1

- * **Law on Waters** ("Official Gazette of RS", no. 30/2010, 93/2012, 101/2016, 95/2018) – all aspect of water management, share of roles and responsibilities between sectors – health sector responsible for drinking water quality surveillance/monitoring
- * **Law on Food Safety** ("Official Gazette of RS", No. 41/2009) - water is a food, provide basis for drinking water monitoring and rulebook
- * **Law on Health Care** ("Official Gazette of RS", no. 25/2019) – hygiene and epidemiological systematic surveillance/monitoring of drinking water quality, assessment of the impact of environmental pollution on population's health, basis for legal acts on food safety, items of general use and drinking water;
- * **Law on the Health safety of Items for General Use** ("Official Gazette of RS", No. 14/2022) – materials that come into contact with water
- * **Law on Public Health** – institutions responsible for drinking water quality monitoring – the network of institutes of public health

Existing legal framework related to drinking water quality in Serbia/2

- * **Law on the protection of the population against communicable diseases** ("Official Gazette of the RS", No. 125/2004) – general preventive measures for the protection of the population against infectious diseases...safe drinking water to be supplied to the population
- * **Law on sanitary inspection** ("Official Gazette of the RS", No. 125/2004) – sanitary surveillance over water utility companies, including drinking water quality
- * **Law on communal activities** ("Official Gazette of the RS", No. 88/2011 and 104/2016) – local self-government unit is responsible for safe drinking water supply to the population

Existing legal framework related to drinking water quality in Serbia/3

- * **Rulebook on the method of determining and maintaining sanitary protection zones for water supply sources** ("Official Gazette of RS", No. 92/2008)
- * **Rulebook on the hygienic correctness of drinking water** ("Official Gazette of the FRY", no. 42/98 and 44/99) - quality parameters, frequency of sampling and testing, scope of laboratory testing
- * **Rulebook on the manner of taking samples and methods for laboratory analysis of drinking water** ("Official list of the SFRY", no. 33/87)
- * **Rulebook on disinfection and drinking water testing** ("Sl. Gazette SRS", No. 60/81)

Implementation of the Protocol on Water and Health

- * **Ratification of the Protocol on Water and Health** - Law on the Confirmation of the Protocol on Water and Health, 2013 (Official Gazette of the Republic of Serbia, No. 01/2013)
- * **Coordination mechanism** – intersectoral Joint Body for the Protocol implementation
- * **Baseline analysis** – basis for **prioritization**
- * **Prioritization - National targets** and target dates (Article 6)
- * **Official validation of the National targets** (one of the targets-harmonization with the EU DW Directive)



Institutional set up for drinking water quality surveillance in Serbia

Responsible ministry: Ministry of Health

Programme of General interest:

Monitoring of the environmental risks factors relevant for health: drinking water quality, surface water quality that is used as sources

Is being conducted by the Institute of Public Health of Serbia with the network of 24 local institutes of public health – 25 accredited laboratories ISO 17025 and authorized by the MoH, reporting every 6 months



Rulebook on the hygienic correctness of drinking water vs. EU Directive (recast)

Item	Serbian regulation	EU DWD
coverage	More than 20 people or 5 households, supply from the own water facilities of legal entities and entrepreneurs that produce and/or sell foodstuffs and supply of public facilities (educational organizations, tourist-hospitality, traffic, etc.); public standpipes	More than 10 m ³ a day as an average or serving fewer than 50 persons, unless the water is supplied as part of a commercial or public activity.
Parametric values	Nitrite – 0.03 mg/L, F-1.2 mg/L, Pb-10 µg/L, Cd-3 µg/L, Cr-50 µg/L, missing Legionella, Antimony, PFAS, Uranium, Microcystin-LR	Nitrite – 0.5 mg/L, F-1.5 mg/L, Cd-5 µg/L Cr-25 µg/L Pb-5 µg/L (January, 2036)
Scope of parameters	A (basic), B (extended), C (full scope) and hygienic-epidemiological indications	A and B, additional monitoring is carried out on a case-by-case basis
Frequency	Equivalent inhabitants - consumption of water 150L/day, more frequent; specific for schools 4 testing of basic scope (one should be 15 days before onset of the new school years. For	Produced water per m ³ /day within the supply zone; risk assessment of domestic distribution systems...focus on monitoring of priority premises.

Rulebook on the hygienic correctness of drinking water vs. EU Directive (recast)

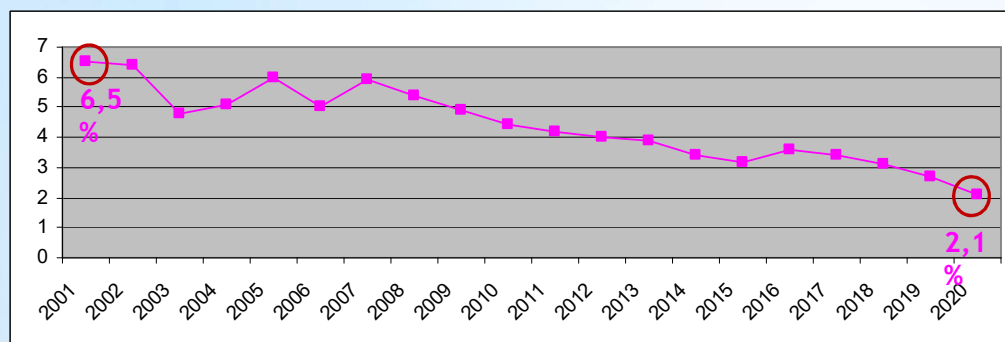
Item	Serbian regulation	EU DWD
Sampling points	DW source –raw water, reservoirs, distribution network (no. of sampling points depends on equiv. Inhab.), tankers, standpipes	Throw-out water supply chain- from catchment to consumer
Point of compliance	At sampling points	Point of consumption-tap, tanker, food business

Drinking water data

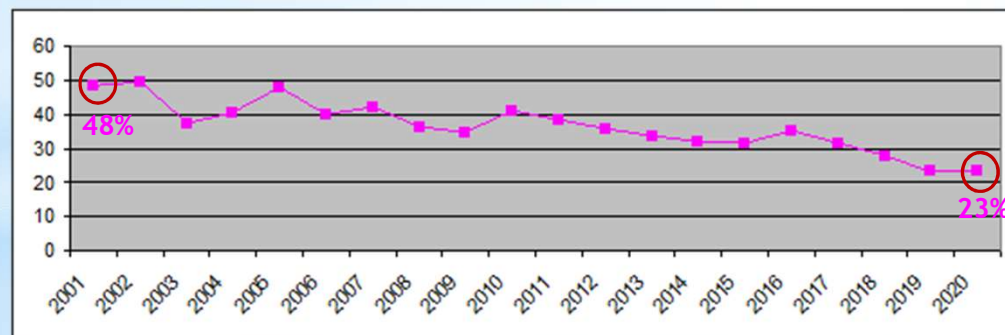
Use of drinking water sources		Serbia		
SRB_2019_MICS		UNICEF		
Survey with microdata		Multiple Indicator Cluster Surveys		
Definitions	Facility type estimates	Urban	Rural	National
	Improved	99.9	99.7	99.8
	All piped	98.1	83.3	91.9
	Non-piped	1.8	16.4	7.9
	Surface water	0.0	0.0	0.0
	Service level estimate			
	Accessibility			
On premises	On premises	98.5	94.7	96.9
Within 30 minutes	Within 30 minutes	99.3	99.3	99.3
	Availability	93.4	90.8	92.4
Available during last month	Sufficient	93.4	90.8	92.4

Facility type estimates	Urban	Rural	National
Tap water	83.0	73.4	79.0
House connections	82.3	70.7	77.5
Piped water into dwelling	82.1	69.2	76.7
Piped water to yard/plot	0.2	1.5	0.7
Public tap, standpipe	0.7	2.6	1.5
Other	0.0	0.2	0.1
Facility type estimates	Urban	Rural	National
Ground water	1.7	15.2	7.3
Protected ground water	1.7	14.9	7.2
Unprotected ground water	0.0	0.3	0.2
Protected wells or springs	1.7	14.9	7.2
Private			
Public			
Other			
Unprotected wells or springs	0.0	0.3	0.2
All wells	0.9	13.1	6.0
Tubewell, borehole	0.6	2.4	1.4
Traditional wells	0.3	10.7	4.6
Protected well	0.3	10.5	4.5
Unprotected well	0.0	0.2	0.1
All springs	0.8	2.2	1.4
Protected spring	0.8	2.0	1.3
Unprotected spring	0.0	0.1	0.1

Drinking water quality in the Republic of Serbia for the period 2001-2020/microbiological aspect

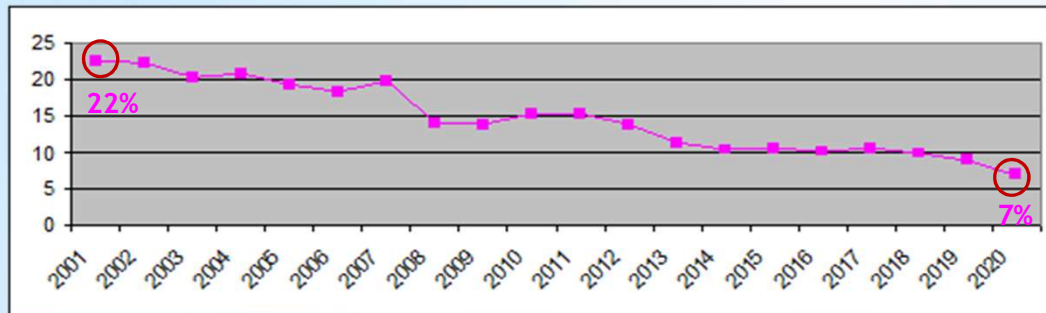


Graph 1 Percentage of drinking water samples do not comply with the national standards for microbiological aspect in Serbia, 2001–2020.



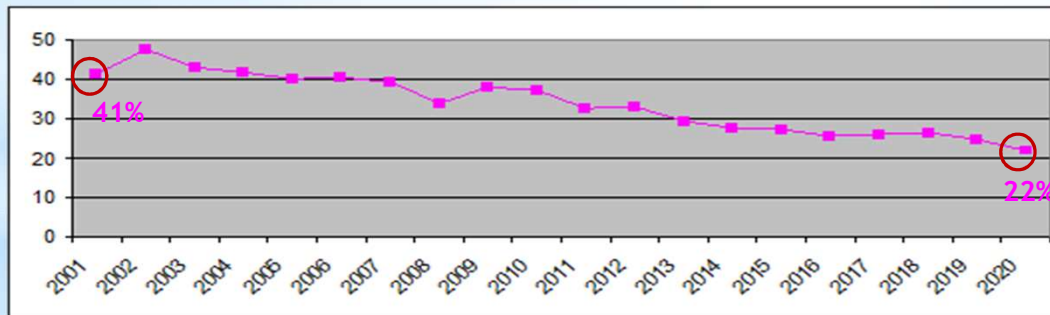
Graph 2 Percentage of public utility companies with microbiological non-compliance gather than 5%, 2001–2020.

Drinking water quality in the Republic of Serbia for the period 2001-2020/physico-chemical aspect



Graph 3 Percentage of drinking water samples do not comply with the national standards for physico-chemical aspect in Serbia, 2001–2020.

Most prevailing non-compliance: turbidity, manganese, nitrate, nitrite, organic matters and in Vojvodina region arsenic



Graph 4 Percentage of public utility companies with physico-chemical non-compliance gather than 20%, 2001–2020.

Drinking water quality in rural areas

Rapid assessment of drinking water quality and sanitary conditions in rural water supply systems (2016)

Total sample size: n=1,344
PS: 1,168 sample taken
PS: 1,136 inspected

Figure 3. Compliance with National standards for *Escherichia coli* in SSWS (PS) in Serbia (%)

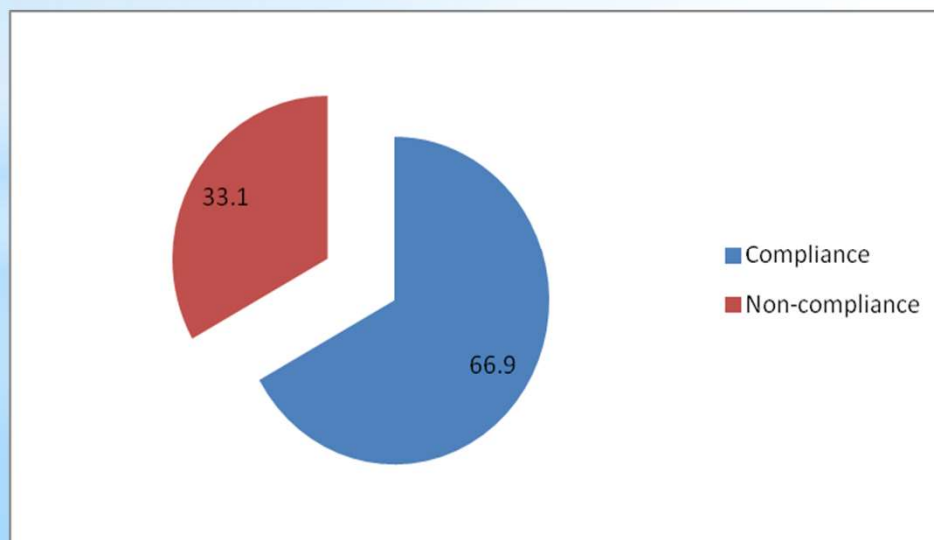
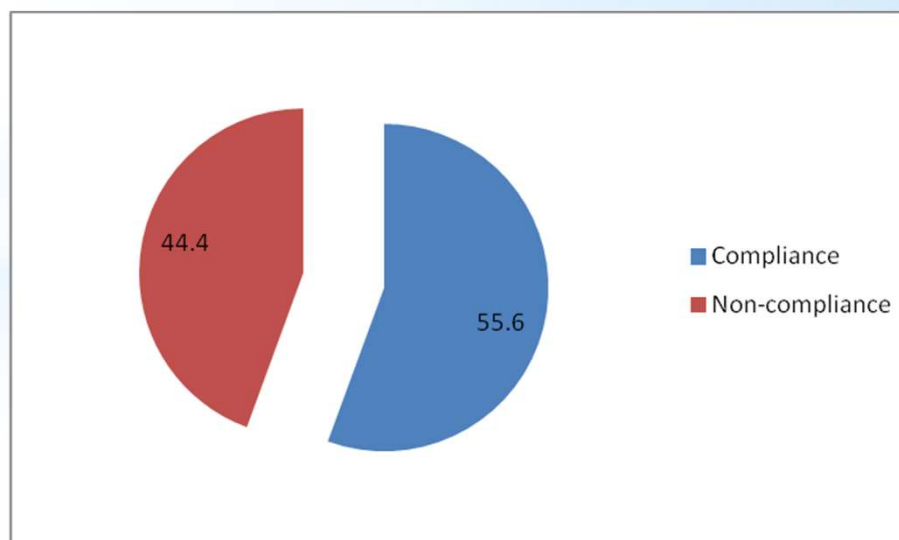


Figure 4. Compliance with National standards for all physico-chemical parameters in SSWS (PS) in Serbia (%)



Transposition of the EU Directive on the quality of water intended for human consumption in Serbia/1

- The explanatory screening for Chapter 27 - September, 2014.
- Bilateral screening for Chapter 27 - November, 2014.
- Negotiating chapter 27 (part of Cluster 4 - Green Agenda and Sustainable Connectivity) - opened in 2021.
- Serbian negotiation group/team – multisectoral (almost all ministries and other institutions)
- Harmonisation of Serbian national regulation on drinking water quality with previous EU Directive (COUNCIL DIRECTIVE 98/83/EC on the quality of water intended for human consumption) was started in 2010
- National working group led by the Ministry of Health
- Process was interrupted several times – determining of the type of legal act and revising of other related water legal acts were challenging (Rulebook vs. Law), amending and recast of EU DWD

Transposition of the EU Directive on the quality of water intended for human consumption in Serbia/2

- In the meantime, amended EU DWD and recast of EU DWD
 - COMMISSION DIRECTIVE (EU) 2015/1787 of 6 October 2015 amending Annexes II and III to Council Directive 98/83/EC on the quality of water intended for human consumption – introduction of the WHO water safety planning approach
 - Recast - DIRECTIVE (EU) 2020/2184 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2020 on the quality of water intended for human consumption – challenging issues:
 - Risk assessment and risk management of the catchment areas for abstraction points of water intended for human consumption
 - Risk assessment of domestic distribution systems
 - Minimum hygiene requirements for materials that come into contact with water intended for human consumption
 - Derogations
 - Supply zone
 - Minimum requirements for treatment chemicals and filter media that come into contact with water intended for human consumption
 - Access to water intended for human consumption

The existing elements for risk assessment and risk management of the supply systems in Serbia/1

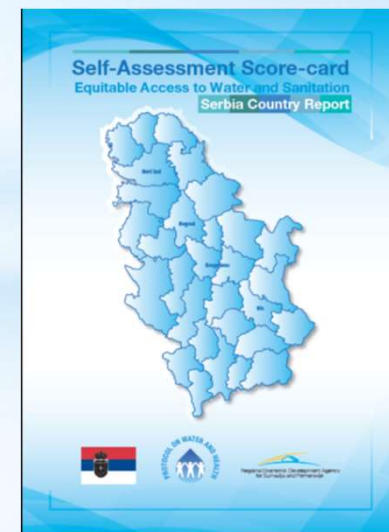
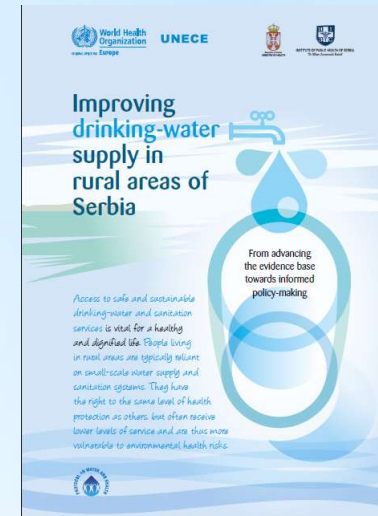
Existing national policy and regulation including drafted regulations:

- **Risk management approach** in providing **safe drinking water**:
 - **mandatory HACCP** implementation in food production – Law on food safety (“Official gazette RS”, no 41/2009, Article 47 and 48)
 - **risk assessment** and updated Emergency Response Plan for water supply and sewer companies – Law on emergencies ("Official Gazette of RS", No. 93/2012)
- WHO supported workshop on the road map for the WSP uptake and implementation (August , 2018)
- Project on piloting iWSSP (integrative management) in small water supply systems – 2 pilot locations with different management set up (2021-2022)- in partnership with Royal National Institute for Public Health and the Environment, Nederland, funded by German Advisory Assistance Programme (AAP)

The existing elements for risk assessment and risk management of the supply systems in Serbia/2

* Outcomes of systematic analysis for closing knowledge and data gaps and as a basis for identifying support needs for WSP implementation:

- **Baseline analysis of drinking water quality and sanitary conditions in small systems of rural areas (2016)** – A national systematic survey in all rural areas using WHO RADWQ methodology (supported by WHO/UNECE, IPHs network)
- **Self assessment of equitable access to water and sanitation with Action plan** – UNECE score-card (supported by UNECE and MoE)
- **Directive Specific Implementation Plan (DSIP)** – to identify legal, institutional and technical measures, including financial needs assessment to ensure compliance with the EU directives related to water and wastewater (EPTISA project).



The existing elements for risk assessment and risk management of the supply systems in Serbia/3

Audit of WSP effectiveness:

- Drinking water quality surveillance programme (compliance monitoring) – is being conducted by the IPHs network with reporting
- Sanitary surveillance and other external audit– Sanitary inspection and other relevant regulatory bodies (compliance with relevant regulations)
- Internal formal and informal audit (operational monitoring) of applied quality standards in Public Utility Company in drinking-water production, as well as external audit (e.g. for those have accredited laboratories according to ISO 17025)

Current stage of transposition

- National working group re-established in February 2023 by the Ministry of Health - 2 assistant ministers for sanitary inspection and public health, representatives of IPHS network (hygiene specialist), representatives of three waterworks
- Decision brought on the type of the legal document - Law on drinking water for human consumption (for the first time)
- Intensive work of several months, still lot of to be done and resolved

Current stage of transposition

Main challenges:

- Risk assessment and risk management of the catchment areas for abstraction points - share of roles and responsibilities and financing (in current practice partially covered by sanitary protection zones, drinking water sources monitoring, surface water quality monitoring intended for water supply (programme activity of the MoH and IPH network, surface and groundwater monitoring programme on the quality and ecological status of the waters by SEPA)
- Risk assessment of domestic distribution systems - implementation in the field, financing, trainings
- Minimum hygiene requirements for materials that come into contact with water intended for human consumption and Minimum requirements for treatment chemicals and filter media that come into contact with water intended for human consumption - partially covered by the Law on the Health safety of Items for General Use
- Derogations and water supply zones - not implemented so far
- Access to water intended for human consumption - more than 1500 public standpipes and public wells; under the Protocol assessed the policy background and the baseline situation on access to water and Action plan for improvement developed
- Lack of human resources in water sector



THANK YOU!