

Implementation of the Protocol on Water and Health in Switzerland

Status report 2022-2024
in accordance with Article 7 of the Protocol



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Preamble

The Protocol on Water and Health is an international instrument aimed at improving water management to reduce and prevent the spread of water-related diseases. Good management of the entire water cycle is vital to ensure that water intended for human consumption is of good quality and does not endanger consumers' health. The implementation of this Protocol, which has been ratified by Parliament, is primarily the responsibility of the Federal Food Safety and Veterinary Office and the Federal Office for the Environment. These two bodies work closely together in this field and inform the public on the progress made every three years.

This report shows many facets of water management that can affect human health in various ways. This holistic approach shows that many groups are involved in ensuring that the guarantees required by the Protocol are fulfilled. Only concerted action among these groups will allow solutions to be found to the current issues related to drinking water and sanitation.

This report has been made possible thanks to the cooperation between the cantonal inspection authorities and the water suppliers. In a decentralised system like the one in Switzerland, it is these organisations which have the relevant information to enable an objective evaluation of the situation. We would like to express our sincere thanks for their active participation.

This report also looks to the future. It contains a list of objectives showing the intentions of groups responsible for drinking water and sanitation regulation in the years to come.

We hope that the presented items will give readers a good overview of all the work being done to ensure sustainable water and sanitation management in Switzerland.

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Executive summary

Switzerland ratified the Protocol on Water and Health of the United Nations Economic Commission for Europe (UNECE) and the World Health Organization Regional Office for Europe (WHO-EURO) in 2006. Switzerland's national targets were published in 2017 in line with the requirements stipulated in Article 6 paragraph 2 of the Protocol. These targets contribute towards upholding the commitments made by Switzerland within the Sustainable Development Goals (SDGs), in particular Goal No. 6 (clean water and sanitation).

Section 2 of this report is based on these targets. This time, just like in previous years, Switzerland's report describes the relevant targets taking into account current legal provisions, those that are awaiting a political decision as well as other possible objectives, which are still under discussion among relevant stakeholders. This differentiation indicates that all the aspects of Article 6 paragraph 2 of the Protocol have been analysed and prioritised, resulting in a substantive programme of work for all the stakeholders involved in Switzerland.

The targets related to access to water and sanitation have been largely achieved in both urban and rural areas.

As regards access to sanitation, it should be noted that more than 97 per cent of the Swiss population is connected to a central wastewater treatment plant. It can thus be concluded that this target has also been reached. In 2016, the Swiss Parliament decided to put in place a new generation of wastewater treatment plants, which would be capable of eliminating micro-pollutants. The aim of this investment programme is to protect aquatic life and drinking water resources and to fulfil Switzerland's responsibility towards downstream riparian neighbours. To this end, around 140 wastewater treatment plants in Switzerland have to take measures to eliminate micro-pollutants. By the end of 2024, 37 wastewater treatment plants had already implemented the necessary measures.

As regards the quality of drinking water, the data gathered came from 25 cantons and therefore covers 96 per cent of the population in Switzerland.

The cantonal food enforcement authorities reported that, for the past three years, they had not registered any cases in which the maximum limits for fluoride and chromium VI had been exceeded. However, the maximum limits had been exceeded for the following indicators: arsenic (0.44% of the samples), lead (0.23%), iron (1.1%), nitrate (0.55%) and nitrite (0.02%). In each specific case, the water distributors took the necessary corrective measures in order to ensure compliance with the legal requirements.

With regard to active substances of plant protection products (PPPs), drinking water quality can generally be assessed as good in terms of exceeding maximum limits. However, contamination with chlorothalonil metabolites remains a problem. Water suppliers have largely implemented potential short- to medium-term measures to minimise or prevent undesirable exceedances of maximum limits of chlorothalonil metabolites in drinking water. While further measures, such as technical treatment, should be seen as a last resort, they should not be ruled out, as consumers have a right to drinking water that complies with food safety legislation at all times (see Federal Council report on Postulate 20.4087). Metabolites that are not classified as relevant for drinking water are still measured, but no longer included in this report.

The major challenges regarding water management and sanitation are related to multidisciplinary areas. The diverging interests associated with the utilisation of the soil oblige the relevant stakeholders to seek compromise solutions through negotiations. The compliance with the protection zones is becoming increasingly problematic due to the rise in the population. Regional planning could possibly remedy this situation. 80 per cent of Switzerland's drinking water originates from a groundwater source, and 20 per cent from lake water. The evolution of this situation is under scrutiny by the enforcement authorities in order to prevent any possible threats to the health of consumers. Poorly degradable substances used in the area of contribution may be transported into the drinking water catchment. These substances must be regularly analysed and, if necessary, measures must be taken on the disruptor, i.e. on the installation or activity responsible for the presence of such substances in the groundwater. In 2021, federal laws were amended to reduce the risks from the use of pesticides. Furthermore, an amendment to the law is in progress which will require areas of contribution to be designated for all groundwater wells of regional importance, as well as other groundwater wells where there is a risk of contamination.

Switzerland is in a privileged situation in many aspects related to the water supply, noting that the water demand (abstraction, irrigation, etc.) represents only approximately 4 per cent of the annual precipitation in the entire country. Nevertheless, sometimes regional problems arise in agriculture due to lack of water.

Switzerland fulfils the essential requirements of the Protocol on Water and Health and, just like in the past, our country remains committed to sharing the Swiss experience in the management of water and sanitation with other countries in the European Region.

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1. General aspects

1.1. Publication of national targets

Switzerland set its targets under the Protocol on Water and Health¹ in 2017. These targets were approved by the competent federal offices and publicised in the internet.² These evaluations have been conducted on the basis of these targets, which are set out in Section 2 of this document.

1.2. Coordination among the competent authorities

The Swiss authorities have not set up an additional coordination group dedicated to activities related to the Protocol, as this comes within the remit of the Federal Food Safety and Veterinary Office (FSVO). The federal and cantonal authorities regularly attend meetings of the working groups described in Section 5.6.

The purpose of the work done by these various working groups is to ensure excellent drinking water quality and optimum wastewater management for the long term. The work done will be described in detail in Section 3.

1.3. Strategic planning of the federal authorities in relation to water

In the areas of water protection and sanitation, which come under the responsibility of the Federal Office for the Environment (FOEN), various projects and strategies concerned with issues of water and health and launched independently of the Protocol are ongoing. These serve to analyse the challenges and options for action facing water suppliers and sanitation over the coming decades. The precautions taken by the communes and cantons to guarantee drinking water supplies in severe shortages are being assessed.

In respect of micropollutants in waters, the Swiss government is monitoring both local and diffuse contamination. The Waters Protection Act, revised in 2016, provides for selected wastewater treatment plants to be equipped with a fourth treatment stage to remove micropollutants. A number of pesticides that contaminated waters in the past have been made subject to usage restrictions or bans in recent years, and in 2017 the Federal Council enacted the Action Plan for Risk Reduction and Sustainable Use of Plant Protection Products. In 2021, Parliament adopted further water quality improvement measures to complement those already initiated. For example, wastewater treatment plants will remove even more nitrogen and micropollutants from wastewater in the future. The pesticide risks to surface waters and groundwater pollution are to be reduced by 50 per cent by 2027 compared to the average for 2012-2015. To prevent contamination of groundwater by mobile and persistent substances more effectively in the future, areas of contribution must be defined, in particular for all contaminated and regionally important groundwater wells.

Environmental targets for the agricultural sector have been specified jointly by the FOEN and Federal Office for Agriculture (FOAG) on the basis of existing law.³ These include targets in the area of Water.

The national research programme 61 *Sustainable Water Management*, which addresses the future challenges for Swiss water management, particularly in connection with climate change, has been completed⁴ (see Section 1.10).

¹ Protocol of 17 June 1999 on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (SR 0.814.201); <https://unece.org/environment-policy/water/protocol-on-water-and-health/about-the-protocol/introduction>

² <https://www.blv.admin.ch/trinkwasser>

³ FOEN and FOAG (2008) Umweltziele Landwirtschaft. Hergeleitet aus bestehenden rechtlichen Grundlagen. <https://www.bafu.admin.ch/bafu/en/home/topics/biodiversity/publications-studies/publications/umweltziele-landwirtschaft.html>

⁴ <http://www.nfp61.ch>

1.4. Legislation on the provision of drinking water and sanitation

At federal level, water use and management and associated issues are primarily regulated in the Federal Constitution of the Swiss Confederation (Cst.; SR 101), the Federal Act on the Protection of Waters (Waters Protection Act, WPA; SR 814.20) and the Waters Protection Ordinance (WPO; SR 814.201), the Federal Act on Foodstuffs and Utility Articles (Foodstuffs Act, FoodA; SR 817.0), the corresponding implementing ordinances and the Ordinance on Guaranteeing Supplies of Drinking Water in Situations of Severe Shortage (DWSO; SR 531.32).

Accordingly, in Switzerland, many of the legal bases required for meeting the obligations arising from the ratification of the Protocol are already in place. Like all legal amendments in Switzerland, these legal bases are subject to optional referendum and have been confirmed accordingly.

1.4.1 Federal Constitution

According to Article 76 of the Cst. the Confederation shall, within the scope of its powers, ensure the economical use and the protection of water resources and lay down principles on the conservation and exploitation of water resources. It shall legislate on water protection (Art. 76 para. 1-3 Cst.). The cantons shall manage their water resources and may levy charges for the use of water subject to the limits imposed by federal legislation (Art. 76 para. 4 Cst.). According to Article 97 of the Cst. the Confederation shall take measures to protect consumers, and according to Article 118, it shall legislate on the use of foodstuffs.

1.4.2 Provisions at national level

The Waters Protection Act (WPA) and the Waters Protection Ordinance (WPO) constitute the **water protection legislation** of Switzerland at national level. The Waters Protection Act contains provisions on comprehensive and use-related measures for protecting waters. In addition to a general prohibition on the pollution of waters (Art. 6 WPA) and other regulations for maintaining the quality of waters, the Waters Protection Act also regulates the spatial planning related to the protection of waters. The law provides for the designation of water protection areas, groundwater protection zones and groundwater protection areas, in which measures are taken to protect water catchments in both quantitative and qualitative respects. Sanitation is governed by the principle that contaminated wastewater may only be discharged into waters after being treated. The disposal of wastewater is managed, among other things, by a drainage plan.

The Ordinance on Guaranteeing **Supplies of Drinking Water in Situations of Severe Shortage** (DWSO) regulates the supply of drinking water in cases of severe shortage, triggered by events such as cyber attacks, sabotage, extreme weather, earthquakes, mobile network failures, blackouts and power shortages. It states that the cantons and water suppliers should take precautions to ensure that the regular drinking water supplies are maintained for as long as possible, that any shortcomings are rapidly resolved and that sufficient quantities of drinking water are available at all times.

Since drinking water is considered a foodstuff in Switzerland, it is covered by the **legislation on foodstuffs**, i.e. the Foodstuffs Act and the corresponding ordinances. Drinking water is covered by the Ordinance on Foodstuffs and Utility Articles (FUAO; SR 817.02), the FDHA Ordinance on Hygiene when handling Foodstuffs (FDHA Hygiene Ordinance, HyO; SR 817.024.1) and the FDHA Ordinance on Drinking Water and Water in Public Baths and Shower Facilities (DWBSO, SR 817.022.11). Quality requirements for drinking water are set out in the DWBSO. Additionally, a key element of the Foodstuffs Act, namely self-monitoring, also applies to water supplies. According to Art. 74 et seq. of the FUAO, important instruments of self-monitoring are: (a) the assurance of good practices (Good Hygiene Practice, Good Manufacturing Practice), (b) the application of procedures based on principles of the HACCP concept, (c) traceability and (d) the sampling and analysis of foodstuffs and utility articles.

Finally, the purpose of the Federal Act on **Spatial Planning** (Spatial Planning Act, SPA, SR 700) is to protect natural resources (soil, air, water, forests and landscape) and to guarantee the basis for the provision of sufficient supplies for the country (Art. 1). According to Art. 93 of the Federal Act on Agriculture (Agriculture Act, AgricA, SR 910.1), investment projects relating to water supply and sanitation infrastructure in rural regions (in particular in mountain regions) can also be financially supported.

1.4.3 Cantonal and communal provisions

Cantonal and communal provisions can supplement and specify the federal legislation. Some cantons have laws and ordinances which are especially concerned with water use or water supply, while in other cantons, the water supply is regulated differently, for example in the cantonal Fire Protection Ordinance. Details concerning the water supply are also often regulated at communal level.

Sanitation at cantonal level is regulated in enforcement provisions to the national Waters Protection Act, which implement the national water protection legislation at cantonal level. These provisions are usually specified in the form of an introductory act to the national Waters Protection Act. Here too, the provisions vary from canton to canton.

1.5. Relevant international agreements

At international level, Switzerland has entered into legally binding commitments within the framework of its membership of international water protection commissions. In addition to its efforts to maintain the quality of its own waters, Switzerland fulfils its responsibilities by actively participating in international commissions, specifically the International Commission for the Protection of the Rhine (ICPR)⁵, the International Commission for the Protection of Lake Constance (IGKB)⁶, the International Commission for the Protection of Lake Geneva (CIPEL)⁷, the Joint Commission for the Protection of Swiss-Italian Waters (CIPAIS)⁸ and the Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPAR)⁹ (see Section 5.7.2).

1.6. Cost-benefit analysis of projects undertaken

1.6.1 Wastewater treatment

A survey conducted in 2020 into the costs and quality of service of public wastewater management in Switzerland showed that the quality of wastewater treatment had improved again in the last ten years, while reducing the costs per connected resident. In particular, nitrogen elimination was further expanded. However, this continues to be at a low level of around 50 per cent. Elimination of micropollutants was introduced at several plants. The current expansion programme will be completed in 2040, by which time all plants meeting the current legal criteria must have introduced this new process stage. With a few exceptions, all communes now have a General Drainage Plan (GDP), while sanitation has become more professionally run.

1.6.2 Water supply

A water supply benchmarking study¹⁰ showed that the relevant factor affecting the cost of drinking water in CHF/m³ is the specific network output in m³/km x year.¹¹ This is why large water supplier with a dense connection structure tend to offer their customers lower fees and charges than smaller ones, even though they incur higher water acquisition and treatment costs. The fee structure of Swiss water supplies is highly variable. Charges paid at regular intervals usually comprise a fixed standing charge and a price based on volume.

The Swiss Gas and Water Industry Association (SGWA) has issued recommendations on the funding of water supplies (W1006), laying down principles for cost calculation and for the calculation of fees and charges based on usage. As water suppliers have high fixed costs, the recommendations are that 50 to 80 per cent of the costs should be covered by standing charges and 20 to 50 per cent by prices based on volume. Water suppliers are generally supposed to be not-for-profit bodies. This means that the fees they charge must cover all their costs, but they must not actually make a profit.

⁵ www.iksr.org/en/

⁶ www.igkb.org

⁷ www.cipel.org/en/

⁸ www.cipais.org

⁹ www.ospar.org

¹⁰ Kappeler J. (2010). Benchmarking für Wasserversorgungen: Erkenntnisse für die Branche. gwa 4: 305-314

¹¹ If losses are very high for equivalent amounts of water entering the network, then the cost per cubic metre rises accordingly.

1.7. Public participation

The political system in Switzerland is characterised by direct democracy and federalism. The people's right of co-determination includes voting, initiative, referendum and petition rights.¹² Accordingly, the Swiss population is actively involved in framing legislation. This is achieved at national and cantonal level via compulsory and optional referendums and by people's initiatives. Likewise at cantonal and communal level, the population frequently decides on specific projects, e.g. budgets, project loans, etc.

1.8. Production of the status report

Responsibility for the management of the Protocol on Water and Health has been handed over to the FSVO. This federal office, which is responsible for drinking water legislation in particular, is in charge of coordinating the implementation of the Protocol in Switzerland. The FOEN was called on to make a significant contribution to the production of this report, as it is responsible for issues relating to water management and sanitation. Other cantonal bodies, primarily the cantonal laboratories, were also involved in providing the information needed to produce this report. A list of the persons involved is given at the end of the report (see Section 7).

1.9. Decentralised water management

It is important to stress that, under Switzerland's federal system, water belongs to the cantons, which can delegate their powers to the communes which normally act as water suppliers. The communes are required to comply with statutory federal requirements and are overseen by the cantonal authorities (consumer department or environmental department) responsible for ascertaining whether the self-monitoring system set up by each water supplier is acceptable.

1.10. Emerging challenges in water management

1.10.1 Climate change and water

As part of the project Effects of climate change on Swiss water bodies (Hydro-CH2018),¹³ the effects of climate change on Switzerland's water supplies and water bodies up until 2100 were investigated. The Swiss Climate Change Scenarios CH2018¹⁴ served as a climatological basis. The key results are documented in this project's synthesis report and are summarised here.

As an alpine country, Switzerland is affected by climate change more than average. Climate change alters the entire water balance, but especially the seasonal distribution of water resources in surface waters and groundwater. Low water levels will become more frequent and water bodies warmer. Drought will increase, especially in summer. The change in water availability may lead to conflicts over use. This particularly affects the sectors of flood protection, municipal water management, water-related biodiversity, crop irrigation, thermal water usage and artificial snow-making. However, as the results of the National Research Programme 61¹⁵ show, besides the effects of climate change, settlement development and changes in land use also show great effects on waters and water resources.

¹² The Swiss Confederation – a brief guide: <https://www.bk.admin.ch/bk/en/home/dokumentation/the-swiss-confederation--a-brief-guide.html>

¹³ <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/effects-of-climate-change-on-swiss-water-bodies.html>

¹⁴ https://www.nccs.admin.ch/dam/nccs/de/dokumente/web-site/klima/CH2018_Technical_Report.pdf.download.pdf/CH2018_Technical_Report.pdf

¹⁵ <http://www.nfp61.ch/>

1.10.1.1 Switzerland's climate adaptation strategy – water sub-strategy

The Federal Council's strategy for adapting to climate change was adopted in 2012 and covers in one part the targets and basic principles of adaptation.¹⁶ The first action plan for adaptation to climate change was prepared for the period 2014-2019,¹⁷ followed by the second action plan for adaptation to climate change for the period 2020-2025.¹⁸ The federal government is currently updating its adaptation strategy and drawing up a new action plan, which will also comprise measures to protect water resources and aquatic habitats. In 2023, the federal government also published the interdepartmental 2050 Climate Strategy for Agriculture and Food, which includes measures for careful management of water resources. To adapt to the challenges of drought, the Federal Council decided on 18 May 2022 to set up a national early detection and warning system for drought, which will be operated by the federal government from spring 2025. The early detection and warning system aims to monitor the current drought situation on an ongoing basis, predict future developments, issue drought warnings, and to provide relevant information and data on drought centrally. In June 2024, Parliament recognised further need for action in water management and instructed the Federal Council to draw up the strategy 'Water management – periods of drought, heavy rainfall, quality of water supply, protection of aquatic habitats'.

The revised CO₂ Act, which entered into force on 1 January 2025, now makes it possible for the federal government to support measures to protect against and adapt to the impact of climate change. The priorities will be growing heat stress, increasing periods of summer drought, the growing risks of natural hazards, and changes to habitats and species composition. On the one hand this will involve supporting the widespread implementation of proven, effective adaptation measures. On the other, innovative approaches will be backed by cantons, regions, towns and communes to highlight ways of responding to the new risks posed by climate change.

1.10.1.2 Planning and managing water resources

Even as Europe's *water tower*, Switzerland can still be affected by local temporary water shortage problems, as demonstrated by those in the summers of 2018 and 2022. On top of this, buildings in groundwater protection zones and areas are increasingly endangering water security.

Such problems can be tackled in good time and disputes over water supply avoided with the proactive regional planning of water resources. The FOEN is providing practical guidelines for dealing with these water shortage problems that come in three modules¹⁹ and are based on the guiding principles of river basin management (see Section 2.19). The practical guidelines are directed at cantonal authorities, regional stakeholders in the Swiss water sector, communes, water suppliers and, last but not least, engineers and technical consultancies. Among other things, they explain potential regional approaches for tackling land use disputes between water catchment areas and buildings in groundwater protection zones or for withdrawing water for irrigation during droughts.

1.10.2 Micropollutants in waters

Since 2018, the Swiss long-term monitoring programme NAWA TREND has been studying micropollutant residues in watercourses. This involves taking three-day to two-week composite samples at a total of 38 sites and testing them for 48 pesticides, 22 pharmaceutical products and 5 other substances.

Since 2020, ecotoxicologically based limits have been in force for 19 pesticides and 3 pharmaceutical products. Limits for other substances are currently being developed. These ecotoxicologically based limits take into account the different toxicities of the substances. As the effects of micropollutants also depend on the duration of exposure, each of the 22 substances has a limit for short-term exposure (must never be exceeded) and a

¹⁶ <https://www.bafu.admin.ch/bafu/en/home/topics/climate/publications-studies/publications/adaptation-climate-change-switzerland-2012.html>

¹⁷ <https://www.bafu.admin.ch/bafu/en/home/topics/climate/publications-studies/publications/anpassung-klimawandel-schweiz-2014.html>

¹⁸ <https://www.bafu.admin.ch/bafu/en/home/topics/climate/publications-studies/publications/anpassung-klimawandel-schweiz-aktionsplan-2020-2025.html>

¹⁹ <https://www.bafu.admin.ch/bafu/en/home/topics/water/info-specialists/measures-for-water-protection/high-level-instruments/water-resource-management.html>

limit for long-term exposure (must not be exceeded on average over two weeks). Based on the water quality assessment using these figures, efficient measures to improve water quality must be implemented in affected waters if the requirements are not met.

1.10.2.1 Micropollutants from municipal drainage

Treated communal wastewater in the densely populated parts of Switzerland makes a significant contribution to water contamination by micropollutants. This input is to be minimised by expanding existing wastewater treatment plants to include an additional stage with more advanced techniques such as powdered activated carbon adsorption or ozonation. This can significantly improve water quality.²⁰

The federal government's plan for implementation stipulates that the largest wastewater treatment plants (WWTPs), large WWTPs in the drainage basin of lakes and other WWTPs for waters that are heavily polluted with wastewater are to be upgraded with additional processes to eradicate micropollutants. A special grant has been made to cover 75 per cent of the start-up costs thanks to an amendment to the Waters Protection Act: all Swiss WWTPs pay a levy based on the number of customers they have. The necessary legal basis for this was adopted by the Swiss Federal Assembly in spring 2014. The statutory provisions came into force on 1 January 2016. The targeted upgrade of WWTPs will be implemented by 2040. By then, over 70 per cent of communal wastewater in Switzerland will be treated for micropollutants. Around 140 of the approximately 700 WWTPs in Switzerland are likely to be upgraded, pushing the cost of sanitation in Switzerland up by around 12 per cent.

1.10.2.2 Micropollutants in waters from diffuse sources

The measurement data show that many Swiss watercourses are polluted by micropollutants from diffuse inputs. These inputs are often highly dynamic and mean that ecotoxicologically derived limits and quality criteria are repeatedly being exceeded, particularly in small watercourses. Pesticide contamination is significantly lower in the large rivers. In most of these waters, no pesticides exceeded the limits.²¹

In groundwater, pesticides rarely exceed the limits. Groundwater quality, on the other hand, is significantly impaired by pesticide metabolites, especially by metabolites of the fungicide chlorothalonil, as shown by studies of the National Groundwater Monitoring Network NAQUA.²² The Swiss Plateau, where there is a great deal of agricultural activity, is particularly affected. Along watercourses and in settlement areas, other micropollutants also occur in groundwater, originating from industry and contaminated sites as well as from business and household, such as per- and polyfluoroalkyl substances (PFAS).

Efficient measures to improve water quality must be implemented in the affected waters. The National Action Plan for Risk Reduction and the Sustainable Use of Pesticides, adopted by the Federal Council on 6 September 2017, plays a crucial role in this regard. In 2021, Parliament passed the *Federal Act on the Reduction of Risks from the Use of Pesticides*, introducing further water quality improvement measures to complement those already in place. For example, the pesticide risks to surface waters and groundwater contamination must be reduced by 50 per cent by 2027 compared to the average for 2012-2015. This target has been met in groundwater since 2020.²³ Since groundwater generally remains underground for several years to decades, there will be a delay before the improvement in water quality is reflected in groundwater measurements. In addition, the licensing of pesticides that repeatedly and widely exceed the limits will be reviewed in future and adjusted so as to prevent limits being exceeded. Henceforth, in areas of contribution of drinking water abstraction points, pesticides may be used only if their use does not lead to concentrations of active substances and degradation products exceeding 0.1 µg/l in groundwater. As only a few areas of contribution have been defined, a deadline is to be introduced by which areas of contribution must be defined for all regionally important

²⁰ FOEN (2012) Micropollutants in municipal wastewater (summary). Processes for advanced removal in wastewater treatment plants. <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/micropollutants-municipal-wastewater-summary.html>

²¹ FOEN (2022) Waters in Switzerland. State and measures. <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/publikationen-studien/publikationen-wasser/gewaesserbericht.html>

²² <https://www.bafu.admin.ch/bafu/en/home/topics/water/info-specialists/state-of-waterbodies/state-of-groundwater/groundwater-quality/plant-protection-products-in-groundwater/chlorothalonil-metabolites-in-groundwater.html>

²³ <https://www.blw.admin.ch/de/risikoindiaktoren-pflanzenschutzmittel-neuer-vorschlag>

groundwater wells and for all groundwater wells at risk. The Federal Council will present bills to this effect to Parliament.

1.11. New challenges in drinking water

1.11.1 Plant protection products: active ingredients and metabolites

As metabolites of plant protection products (PPPs) are widely measured in groundwater (see Section 1.10.2.2), the situation in drinking water continues to be surveyed. The new figures (see Section 3.3.1.4) show how nationwide contamination with PPPs and their relevant metabolites has evolved in drinking water in the fifth reporting period. The situation with regard to chlorothalonil metabolites continues to pose a challenge. Since the publication of the fifth status report, the Federal Council has also commented on the issue of remediation of contaminated drinking water and on the financing of measures.²⁴

²⁴ Federal Council report on Postulate 20.4087 Clivaz 'Contamination of drinking water with chlorothalonil: response and financing of necessary remediation' of 29 January 2025. <https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/lebensmittelsicherheit/stoffe-im-fokus/pflanzenschutzmittel/chlorothalonil.html>

2. Targets and target achievement: review of the current situation

The following subsections correspond to those set out in the guidelines on reporting and achieving targets,²⁵ which follow Article 6 paragraph 2 of the Protocol.²⁶ The targets described in the following subsections are structured differently. The following classification applies:

Target (A): A target that was discussed and laid down definitively by the federal offices and established on a legal basis.

Proposed target (B): A target decided by the authorities but which will require the law to be amended. However, not all the steps associated with amending the corresponding act or ordinance (consultation process, referendum, possible vote) have yet been completed.

Possible target (C): A target proposed by an authority but which has not yet been discussed with all the stakeholders concerned.

2.1. Quality of drinking water supply [Art. 6, Paragraph 2 (a)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Setting of national evaluations based on optimal drinking water data management (C).	1.1.2020	FSVO	National evaluation on drinking water

Possible target: Setting of national evaluations based on optimal drinking water data management.

Background: Art. 5 of the DWBSO states that any party supplying drinking water to consumers via a water supply plant must provide consumers with comprehensive information about the quality of the drinking water at least once a year. The SGWA offers interested water suppliers the opportunity to publish their quality data at www.trinkwasser.ch.

The information supplied by the cantonal enforcement authorities is published in 20 separate annual reports.

Target achievement: The Food Chain Strategy stipulates that the federal government and the enforcement authorities must carry out detailed analysis of drinking water quality throughout Switzerland. To this end, the Commission for Drinking and Bathing Water led by the Swiss Association of Cantonal Chemists defines the optimal analysis based on the available data.

This target contributes to the fulfilment of target 6.1 of the 2030 Sustainable Development Agenda.

2.2. Reduction of the scale of outbreaks and incidents of water-related disease [Art. 6, Paragraph 2 (b)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Developing a reporting system for incidents and outbreaks of disease caused by water, in collaboration with the reporting systems for infectious diseases (B)	1.1.2022	FSVO in collaboration with FOPH	No. of registered cases for drinking water

A form for declaring cases to the FSVO allows to gather data on clusters (outbreaks) linked to drinking water, and a specific form for the reporting of outbreaks linked specifically to legionella was created in 2023 (see

²⁵ UNECE/WHO-EURO (2010) Guidelines on the setting of targets, evaluation of progress and reporting under the Protocol on Water and Health. <https://unece.org/environment-policy/publications/guidelines-setting-targets-evaluation-progress-and-reporting-under>

²⁶ Protocol of 17 June 1999 on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (SR 0.814.201); <https://unece.org/environment-policy/water/protocol-on-water-and-health/about-the-protocol/introduction>

Section 3.2). The development of a reporting system for incidents and outbreaks of disease caused by water therefore constitutes one possible target.

Proposed target: Developing a reporting system for incidents and outbreaks of disease caused by water.

Background: Since water-related diseases are extremely rare in Switzerland, this target has not thus far been considered a priority.

2.3. Access to drinking water [Art. 6, Paragraph 2 (c)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Creating emergency infrastructure to improve water supply in exceptional situations. Revision of the Ordinance on the Guaranteed Supply of Drinking Water in Emergencies (B)	2019	FOEN	Approval of the new ordinance

Since the whole population of Switzerland has access to drinking water (see Section 3.4), the definition of targets in this area is not a priority. Proposed targets relate to improving the security of drinking water supplies in normal operations and devising measures in situations of severe shortage, e.g. cyber attacks, sabotage, extreme weather events, earthquakes, mobile network failures, blackouts and power shortages.

Proposed target: Devising emergency strategies to improve water supply in exceptional situations.

Background: The existing strategies to guarantee drinking water supplies in situations of severe shortage are only partially in place. The droughts in recent years, although not a situation of severe shortage, have given an indication of the resilience of the supply network. Those cantons that have carried out regional water supply planning have been able to identify areas with gaps that require measures such as increased interconnection. Overall, the situation is improving, but much more needs to be done. For cases of severe shortage, the Ordinance has introduced additional regulations that must now be implemented by the cantons, communes and water authorities.

Target achievement: The new Ordinance on Guaranteeing Supplies of Drinking Water in Situations of Severe Shortage (DWSO) came into force with effect from 1 October 2020. The federal government will conduct further surveys of the cantons to determine the extent to which that Ordinance is being enforced.

2.4. Access to sanitation [Art. 6, Paragraph 2 (d)]

Defined target (classification)	Deadline	Responsibility	Target indicator
97% of the Swiss population is connected to a central wastewater treatment plant (WWTP). No further targets	Target completed	FOEN	% of the Swiss population connected to a central wastewater treatment plant

Wastewater infrastructure was, for the most part, constructed during the second half of the 20th century. This involved passing legislation and federal subsidies were required in order to implement it. Today, over 97 per cent of the Swiss population is connected to a central wastewater treatment plant (WWTP). The target has therefore been achieved and there is no need to define further targets.

2.5. Levels of performance in water supply [Art. 6, Paragraph 2 (e)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Conserving the value of infrastructure (water supply network, catchment, reservoirs, laboratories) (A) Encouraging regional planning and cross-linking of water suppliers (C)	Ongoing	FOEN	Implementation of regional plans for water supply

Target: Conserving the value of infrastructure (water supply network, catchment, reservoirs and labs).

Background: The necessary drinking water supply infrastructure is widely available. Expanding and maintaining this in a targeted way will be a priority in future. The public drinking water supply system is self-financing as a basic principle, i.e. its funding is secure in the long term as required by law. Value conservation is generally covered by charges, although federal legislation makes no provision to this effect. In hill and mountain areas, water supplies of agricultural importance receive financial support. Cantonal regulations are of major importance and the water suppliers also follow the guidelines and recommendations issued by professional associations.

This target contributes to the fulfilment of target 6.1 of the 2030 Sustainable Development Agenda.

Target achievement: Long-term task. Depending on the sector, recommendations for the management of infrastructure will be developed by the competent authorities. A cross-sector recommendation for the strategic planning, creation and conservation of communal network infrastructure was compiled in 2014 by various professional associations working with the FOEN.²⁷

Possible target: Encouraging regional planning and cross-linking of water suppliers.

Background: There are no provisions whatsoever in Switzerland regarding planning for water supply infrastructure. The cantons are therefore implementing this in very different ways. Many water suppliers are coming under increasing pressure as a result of the high density of use in Switzerland. People are increasingly giving up on drinking water catchments due to conflicts with settlements or transport infrastructure over use. This pressure will increase further.

Regional planning needs to identify strategically important drinking water catchments and groundwater resources that must be protected in any conflicts over use as a matter of priority. In order to resolve conflicts over use at planning level as early as possible, groundwater protection zones in drinking water catchments and groundwater protection areas for important groundwater resources must be embedded in spatial planning. Links should likewise be forged between water suppliers across different communes in order to minimise the effects of disruptions and to mobilise additional capacities if need be.

This target contributes to the fulfilment of targets 6.4, 6.5 and 6b of the 2030 Sustainable Development Agenda.

Target achievement: Various cantons are stipulating a regional plan for water supply and have made cross-links. In the absence of federal regulations, other cantons have not taken any precautionary measures whatsoever in this regard.

²⁷ Organisation Kommunale Infrastruktur und Wasser-Agenda 21 (2014) Handbuch Infrastrukturmanagement – Empfehlungen für die strategische Planung, Erstellung und Werterhaltung kommunaler Netzinfrastrukturen. <https://wa21.ch/themen/infrastrukturmanagement/handbuch/>

2.6. Levels of performance in sanitation [Art. 6, Paragraph 2 (e)]

Defined target (classification)	Deadline	Responsibility	Target indicator
In order to protect plants and animals in waters as well as in drinking water resources, the largest WWTPs, large WWTPs in the drainage basin of lakes and other WWTPs for waters that are polluted are to be upgraded with additional processes targeted at eradicating organic trace elements (A)	Long-term task 2040	FOEN	No. of WWTPs upgraded
Ensuring the value of infrastructure is conserved (sewerage system, sewage treatment plants) (B)	Ongoing		Not applicable
Promoting the regionalisation of municipal drainage (C)	Ongoing		Not applicable

Target: In order to protect plants and animals in waters as well as drinking water resources, the largest WWTPs, large WWTPs in the drainage basin of lakes and other WWTPs for waters that are polluted are to be upgraded with additional processes targeted at eradicating organic trace elements.

Background: WWTPs that were originally constructed to eliminate nutrients in wastewater only partially remove, or do not remove at all, organic trace elements such as chemical products in daily use, pharmaceuticals or pesticides. These micropollutants enter watercourses and lakes along with the treated wastewater, where they can harm the aquatic flora and fauna and impair the quality of the drinking water reserves, particularly when surface waters polluted with treated wastewater infiltrate groundwater. Upgrading selected WWTPs is intended to reduce the quantity of organic trace elements entering waters. Parliament endorsed this approach and approved nationwide funding for these measures on 21 March 2014 by amending the Waters Protection Act (WPA). These statutory provisions came into force on 1 January 2016.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: The legislation came into force on 1 January 2016. 37 WWTPs have already been upgraded, while more than 45 are undergoing work or have concrete planning projects in place. At present, it is thought that measures to eradicate organic trace elements will need to be taken in around 140 WWTPs by 2040. To finance the measures, a fund has been set up that is supported by Swiss WWTPs and that will run until 2040. All of the relevant measures must have been launched by this point.

Proposed target: Ensuring the value of infrastructure is conserved (sewerage system, sewage treatment plants).

Background: The value of wastewater infrastructure in Switzerland is CHF 77 billion. Communal infrastructure is widespread and expanding and maintaining this in a targeted way will be a priority in future.

This target contributes to the long-term fulfilment of target 6.2 of the 2030 Sustainable Development Agenda.

Target achievement: Depending on the sector, recommendations for the management of infrastructure will be developed by the competent authorities. A cross-sector recommendation for the strategic planning, creation and conservation of communal network infrastructure was compiled in 2014 by various professional associations working with the FOEN.²⁸ This will be a long-term task for the cantons, so there is little point in defining targets.

Possible target: Promoting the regionalisation of municipal drainage.

This target is currently being discussed and prepared by the federal offices concerned. At cantonal level, regionalisation measures are already being implemented in some cases.

²⁸ Organisation Kommunale Infrastruktur und Wasser-Agenda 21 (2014) Handbuch Infrastrukturmanagement – Empfehlungen für die strategische Planung, Erstellung und Werterhaltung kommunaler Netzinfrastrukturen. <https://wa21.ch/themen/infrastrukturmanagement/handbuch/>

Background: The organisation of wastewater management in Switzerland is characterised by federalism, direct democracy and municipal autonomy. Small-scale organisational structures (usually communes), a *militia* political system with inadequately qualified personnel and a lack of continuity contrast with the growing complexity of the regulations and additional challenges such as cost control, infrastructure maintenance and the management of micropollutants.²⁹

This target contributes to the fulfilment of target 6b of the 2030 Sustainable Development Agenda.

Target achievement: The Swiss Water Association (VSA) immediately included the topic in its guidelines for General Drainage Plans (GDPs), explicitly recommending regionalisation. Regionalisation is a continuous process: at the start of 2024, there were 696 WWTPs with a capacity exceeding 200 population equivalents in operation. Since 2016, 74 WWTPs have been abolished and instead connected to a more powerful WWTP. This will be a long-term task for the cantons. The practicality of regionalisation depends on (local) economic, geographical and technical aspects. It is therefore not appropriate to define a national target.

2.7. Application of recognised good practice to the management of the water supply [Art. 6, Paragraph 2 (f)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Producing good practice guidelines in accordance with the HACCP concept defined in Art. 78 of the Ordinance on Foodstuffs and Utility Articles (A)	2018	FSVO	No. of non-conformities during cantonal inspections by the DW Inspectorates
Preparing and distributing drinking water in line with the detailed guidelines issued by the SGWA trade association, the FSVO and the FOEN (B)	Ongoing		

Target: Producing good practice guidelines in accordance with Art. 80 of the Ordinance on Foodstuffs and Utility Articles (FUAO).

Background: Article 80 of the FUAO envisages the drawing up by the food industry of guidelines for good practice, which will then need to be approved by the FSVO. Guidelines like these can replace self-monitoring systems and a guideline for drinking water should help water suppliers (particularly small and medium-sized suppliers) to observe the basic rules of hygiene and apply the HACCP principles specified for the catchment, preparation and distribution of water.

This target contributes to the fulfilment of target 6.1 of the 2030 Sustainable Development Agenda.

Target achievement: The target has been achieved. As of February 2023, the Swiss Gas and Water Industry Association (SGWA) published the FSVO-approved guidelines for good practice in drinking water supplies (*Leitlinie für eine gute Verfahrenspraxis in Trinkwasserversorgungen*)³⁰ in an updated version with additional treatment methods.

Proposed target: Preparing and distributing drinking water in line with the detailed guidelines issued by the SGWA trade association, the FSVO and the FOEN.

Background: The FSVO has already issued documents describing recognised treatment processes and substances for drinking water. The regulations of the SGWA association include guidelines for monitoring quality in the drinking water supply³¹ and quality assurance in groundwater protection zones.³² The FOEN has also issued various implementation guidelines explaining in concrete terms the legal bases and thus serving as a practical aid for water suppliers. There are still certain areas, however, where further documents should be

²⁹ BG Consulting Engineers (2008) for the FOEN: Organisation of wastewater disposal. Bern

³⁰ SGWA, Richtlinie W12: Leitlinie für eine gute Verfahrenspraxis in Trinkwasserversorgungen, 2023. <https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/rechts-und-vollzugsgrundlagen/hilfsmittel-und-vollzugsgrundlagen/leitlinien-gute-verfahrenspraxis.html>

³¹ SGWA, Richtlinie W1 für die Qualitätsüberwachung in der Trinkwasserversorgung, 2005

³² SGWA, Richtlinie W2 zur Qualitätssicherung in Grundwasserschutzszonen, 2005

provided, for example guidelines or recommendations for water treatment. Furthermore, the corresponding specialist groups must be informed about the existing documents so that these are also put into practice.

This target contributes to the fulfilment of target 6.1 of the 2030 Sustainable Development Agenda.

Target achievement: The target for large water suppliers is largely achieved. No statements can currently be made at national level about small and medium-sized water suppliers.

Defined target (classification)	Deadline	Responsibility	Target indicator
In accordance with the Waters Protection Act, allowing over-extraction of groundwater resources to occur for limited periods only (A)	Ongoing	FOEN	Not applicable
Implementation of the recommendation for strategic planning of the water supply, published by the SGWA. (A)	Ongoing		Not applicable
Designating water protection areas and groundwater protection zones as defined in the water protection legislation and the FOEN implementation guidelines in order to protect the quality and quantity of the groundwater, while systematically enforcing the restrictions on use within the groundwater protection zones and areas in accordance with the Waters Protection Ordinance and, where applicable, more comprehensive regulations for groundwater protection zones (enforcement of groundwater protection planning). (A)	Ongoing		% of the population provided by protected catchment, in compliance with the national legislation
Safeguarding groundwater reserves for future water requirements. The cantons designate appropriate groundwater protection areas (future reserves) to safeguard the water supply for future generations (A)	Ongoing		Not applicable
Sustainable agricultural production; conserving natural resources. (A)	Ongoing		Not applicable

Target: In accordance with the Waters Protection Act, allowing over-extraction of groundwater resources to occur, at most, for limited periods only.

Background: In order to preserve groundwater resources in the long term, the Waters Protection Act only allows short-term periods of over-extraction.

This target contributes to the fulfilment of target 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: The cantons monitor the situation and record the corresponding data. The degree of implementation varies between the cantons.

Target: Support for strategic planning of the water supply.

Background: To date, Switzerland has no agreed requirements for planning the water supply. The federal government has no regulatory authority in this regard. The SGWA association has therefore developed a useful working instrument in the form of a recommendation for strategic planning of the water supply (*Empfehlung zur strategischen Planung der Wasserversorgung*, published 2009: W1005). This recommendation takes into account all the aspects relevant in planning a water supply, including groundwater protection zones and their regulation. In addition to technical aspects, it also covers economic, organisational and structural issues. To support/coordinate the general water supply planning (GWP), the SGWA additionally published recommendation W1011 *Muster-GWP* in 2019.

This target contributes to the fulfilment of target 6b of the 2030 Sustainable Development Agenda.

Target achievement: The guideline has been published. The publication is intended primarily for political and financial decision-makers, the respective managers at water suppliers, representatives of engineering offices and teachers.

Target: Designating water protection areas and groundwater protection zones as defined in the water protection legislation and the FOEN implementation guidelines in order to protect the quality and quantity of the groundwater, while systematically enforcing the restrictions on use within the groundwater protection zones and areas in accordance with the Waters Protection Ordinance and, where applicable, far-reaching regulations for groundwater protection zones (enforcement of groundwater protection planning).

Background: Groundwater protection planning has been anchored in law since 1972.

This target contributes to the fulfilment of targets 6.4 and 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: The cantons enforce these regulations. The degree of implementation varies between the cantons. A survey conducted in the cantons in 2017-2018³³ provided an overview of the situation regarding the protection of groundwater in Switzerland. It demonstrates that approximately 80 per cent of the drinking water supplied to the population comes from groundwater with correctly dimensioned protection zones (60 per cent) or from lake water (20 per cent). Conflicts of use in groundwater protection zones are observed throughout Switzerland. Rectifying these conflicts is a major task for the cantons. The development of the situation will constitute an indicator.

Target: Safeguarding groundwater reserves for future water requirements. The cantons designate appropriate groundwater protection areas (future reserves) to safeguard the water supply for future generations.

Background and target achievement: The different information collected to date demonstrates that there are sufficient groundwater resources available to supply the population with drinking water. More than 400 groundwater protection zones have already been designated. A further, more precise survey of the groundwater protection zones will be conducted.

This target contributes to the fulfilment of targets 6.4 and 6.6 of the 2030 Sustainable Development Agenda.

Target: Sustainable agricultural production; conserving natural resources.

Background: The federal constitution states that agriculture should pursue sustainable and market-oriented production in order to make a substantial contribution to reliably supplying the population and conserving natural resources. The federal government provides support in this context. One important instrument in agricultural policy with a bearing on water quality is proof of ecological performance (PEP), which is required in order to receive direct payments. It covers aspects of environmental law enforcement, e.g. a balanced use of nutrients (Art. 14, Paragraph 1 WPA, Annex 2.6 Clause 3.1 Ordinance on Risk Reduction related to the Use of certain particularly dangerous Substances, Preparations and Articles [Chemical Risk Reduction Ordinance, ORR-Chem); SR 814.81]), and in some areas goes further, e.g. by requiring crop rotation and a limited selection and targeted application of pesticides. Ecological direct payments provide farmers with an incentive to provide specific ecological services that go beyond generally applicable environmental laws.

Through the Federal Act on Reducing the Risks associated with Pesticide Use, Parliament strengthened the protection of water bodies in general and their use as drinking water resources in 2021. For example, the risks to water bodies associated with the use of PPPs are to be reduced by 50% by 2027, compared with the 2012-2015 period. Nutrient losses are to be reduced by 15% by 2030. As a result, the Federal Council prohibited farms eligible for direct payments from using PPPs with an increased risk potential for surface water or groundwater from 1 January 2023. Use is only possible if the product cannot be substituted by an active substance with lower risk potential. Technical measures must also be implemented to reduce drift and run-off from agricultural land. The existing support for production with less or no PPP use was expanded. The provisions on the obligation to report sales and professional use of PPPs were fleshed out. All washing areas for PPP

³³ FOEN (2018) Protection of Switzerland's groundwater wells – Status of implementation. Report on the survey of the cantonal offices. https://www.bafu.admin.ch/dam/bafu/de/dokumente/wasser/fachinfo-daten/schutz_der_grundwasserfassungen_in_der_schweiz_stand_des_vollzugs.pdf.download.pdf/BAFU_Nov_18_Schutz_der_Grundwasserfassungen_in_der_Schweiz.pdf

sprayers must be inspected initially and then at least every four years by 31 December 2026.³⁴ In 2022, the Federal Council presented a report on the future direction of agricultural policy.³⁵ It sets out how Switzerland's agricultural and food sector can in future make an even greater contribution to food security. The entire food system, from production to consumption is included in the considerations. In its vision for 2050, the Federal Council shows how Switzerland's agriculture and food sectors can achieve this goal. Work is currently under way on the situation analysis for agricultural policy after 2030.

This target contributes to the fulfilment of targets 2, 6.3 and 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: Compared with the reference period 2012-2015, the risk for organisms in surface water was a good third lower in 2023. This reduction is due in particular to the estimated contribution of the renovation of washing areas, the decline in sales figures for plant protection products, and the withdrawal of licences for certain high-risk insecticides. In 2022, the number of exceedances of the ecotoxicological limit values at the measurement locations in surface waters declined versus the previous years. Measurements in the coming years will show whether this encouraging trend is confirmed. A large proportion of these exceedances was caused by active substances for which authorisation has since been withdrawn, or whose use has been banned since 1 January 2023 for farms eligible for direct payments if substitution with other active substances with a lower risk potential is possible.³⁶ However, many surface waters, predominantly small ones, are still so heavily polluted with agricultural pesticides (see Section 1.10.2) that the living conditions required for sensitive aquatic organisms to survive are compromised.

The indicator for the risk of plant protection product inputs in groundwater was ca. 80% lower in 2023 than in the reference period of 2012-2015. The withdrawal of authorisation for individual PPPs and a reduction in the use of herbicides have contributed to this decrease. Because groundwater usually spends several years underground, there will be a lag before the reduced risk shows up in groundwater monitoring.³⁷

The nitrogen balance surplus was 7.6% lower in 2022 than in the reference period 2014-2016. The measures adopted by Parliament and planned by the Federal Council, if systematically implemented in terms of pesticides from 2023, will lead to a further reduction of the nitrogen balance surplus. The achievement of targets also depends on the future measures to be taken by the relevant sectors.

³⁴ Federal Council (2024) Action plan on plant protection products and Federal Act on Reducing the Risks associated with Pesticide Use. Interim report on implementation 2017-22. <https://www.news.admin.ch/news/message/attachments/87492.pdf>

³⁵ Federal Council (2022) Future direction of agricultural policy. https://www.parlament.ch/centers/eparl/_layouts/15/DocIdRedir.aspx?ID=MAUWFQFXFMCR-2-51143

³⁶ Federal Council (2024) Action plan on plant protection products and Federal Act on Reducing the Risks associated with Pesticide Use. Interim report on implementation 2017-22. <https://www.news.admin.ch/news/message/attachments/87492.pdf>

³⁷ Federal Council (2024) Action plan on plant protection products and Federal Act on Reducing the Risks associated with Pesticide Use. Interim report on implementation 2017-22. <https://www.news.admin.ch/news/message/attachments/87492.pdf>

2.8. Application of recognised good practice to the management of sanitation [Art. 6, Paragraph 2 (f)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Recognised practice for communal sanitation is defined in, and ensured by, the FOEN recommendations and Swiss Water Association (VSA) guidelines. For industrial wastewater, the latest technology according to the Waters Protection Ordinance and the decisions and recommendations of international water protection commissions apply (A)	Completed	FOEN	Recommendations published
Draining the total sealed surface area in housing areas according to GDPs (A)	Ongoing		Not applicable

Target: Recognised practice for communal sanitation is defined in, and ensured by, the FOEN recommendations and Swiss Water Association (VSA) guidelines. For industrial wastewater, the latest technology according to the Waters Protection Ordinance and the decisions and recommendations of international water protection commissions apply.

Background: The FOEN works with professional associations to develop implementation aids for various aspects relating to sanitation. If necessary, the FOEN also issues its own guidelines, such as the *Groundwater protection guidelines*.³⁸

Various guidelines and recommendations have also been issued in connection with international agreements such as the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic or the International Commission for the Protection of the Rhine (ICPR).³⁹

This target contributes to the fulfilment of targets 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: The cantons monitor the situation and possess corresponding data. The VSA carried out a comprehensive survey in 2021 in order to obtain an overview of the key data relating to sanitation at the national level. The report on costs and services relating to sanitation entitled *Kosten und Leistungen der Abwasserentsorgung* summarises the results.⁴⁰

Target: Draining the total sealed surface area in housing areas according to GDPs.

Background: The General Drainage Plan (GDP) is the communes' central planning instrument for municipal drainage and forms the basis for the extension, adaptation, maintenance and repair (preservation) of the public sewage network. It should guarantee adequate water protection in communes and effective draining of housing areas. Every commune is required by law to produce a GDP. This process is subsidised by the federal government and by cantons. The subsidies are mostly dependent on compliance with binding deadlines.

This target contributes to the fulfilment of targets 6.3, 6.5 and 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: The creation of the GDPs has largely been completed. Only a few communes do not yet have a completed GDP.

³⁸ <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/wegleitung-grundwasser-schutz.html>

³⁹ <http://www.iksr.org/en/>

⁴⁰ <https://vsa.ch/Mediathek/kosten-und-leistungen-der-abwasserentsorgung-2/>

2.9. Discharges of untreated wastewater [Art. 6, Paragraph 2 (g) (i)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Not allowing contaminated wastewater to be discharged untreated or allowed to leach into water bodies in Switzerland (A)	Ongoing	FOEN	Not applicable

Target: Not allowing contaminated wastewater to be discharged untreated or allowed to leach into water bodies in Switzerland.⁴¹

Background: According to Article 5 of the Waters Protection Ordinance (WPO), the cantons are responsible for drawing up GDPs which guarantee adequate water protection in communes and effective municipal drainage (see Section 2.8).

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: Identifying and rectifying inappropriate sewer connections by means of GDPs. The GDPs therefore aid implementation of this ban. Varying degrees of progress have been made on implementing these measures to date, since an initial GDP was not completed at the same time in all cantons.

2.10. Storm water [Art. 6, Paragraph 2 (g) (ii)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Putting appropriate measures in place to prevent direct infiltration of agricultural pesticides and nutrients in runoff from farmyards and open fields and from drainage systems. (A)	2023	FOAG	Implementation of national pesticide action plan
Carrying out a data survey of untreated storm water overflows (C)	2021	FOEN	Completed by 2021

Target: Putting appropriate measures in place to prevent direct infiltration of plant protection products (PPPs) and nutrients in runoff from farmyards and open fields and from drainage systems.

Background: Enforcement of measures stipulated in the water protection legislation is regulated under Switzerland's federal system, i.e. differently in each of the 26 cantons. The federal government issues implementation guidelines with the aim of standardising and reinforcing implementation. In the agricultural sector, there are implementation guidelines on structural water protection, the use of PPPs, the use of nutrients and fertilisers, biogas plants and soil protection, and the legal basis for water protection and air pollution control. In addition, the federal government is strengthening enforcement by the cantons by supporting the Conference of Environmental Offices (KVU) in harmonising and promoting the basic inspections for the ecological performance certificate (ÖLN) in the area of water protection. These inspections will include the drainage of filling and washing areas for PPP spraying equipment. The action plan for risk reduction and sustainable use of PPPs adopted by the Federal Council in 2017 includes measures on farmyard and field road drainage and drainage systems. For example, to prevent the selective introduction of PPPs, the national government and cantons have been supporting such filling and washing areas since 2018 by providing structural improvement contributions. In 2020, the Conference of Agricultural Offices (KOLAS) and the KVU, together with the *Plant protection products and water bodies* platform, published the intercantonal recommendation for filling and washing stations. The obligation to inspect the drainage of filling and washing areas was introduced. This must be done for the first time by the end of 2026, and every four years thereafter. In addition, an obligation to equip spraying equipment with an automatic flushing system was introduced.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

⁴¹ Art. 7 Waters Protection Act, Art. 8 Waters Protection Ordinance

Target achievement: The inspecting of filling and washing stations for PPP sprayers had started in more than half of the cantons by 2020. If the adopted and planned measures for reducing emissions and the use of pesticides and for better protecting the waters are systematically implemented, they could make a significant contribution to achieving the target.

2.10.1 Discharges of untreated storm water overflows

Possible target: Carrying out a data survey of untreated storm water overflows.

Background: Detailed guidelines for the management of storm water in Switzerland have been issued by the VSA.⁴² As a general rule, non-polluted storm water must be allowed to infiltrate into the ground if permitted by local conditions. This practice will be introduced in stages in the course of drafting and updating the General Drainage Plans (GDPs). This will reduce the quantity of storm water in mixed water sewers in the long term and thus the frequency of discharges of untreated storm water overflows into waters. At the same time, however, it is important to ensure that the groundwater is not put at risk due to improper or unlawful leaching. However, no nationwide data are currently available on the frequency, quantities and pollution levels of discharges of untreated storm water overflows.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: New guidelines on discharges of storm water overflows into water bodies during rainy weather entitled *Abwassereinleitungen in Gewässer bei Regenwetter* have been produced, in which the design and dimensions of storm water relief systems and storm water tanks have been revised in line with a new, impact-oriented approach. The guidelines will be used for new infrastructure and, in particular, infrastructure requiring remediation. Data on discharges from combined sewer overflows are currently being collected as part of a national key indicator survey.

2.11. Quality of discharges from treatment plants [Art. 6, Paragraph 2 (h)]

Defined target (classification)	Deadline	Responsibility	Target indicator
100% of wastewater treatment plants fulfilling the requirements for discharges of communal wastewater specified in the Waters Protection Ordinance. Treating industrial wastewater according to the latest technology (A)	Ongoing	FOEN	Not applicable
Optimising central data capture with respect to wastewater treatment at federal level. (B)	2021		Not applicable

Target: One hundred per cent of wastewater treatment plants fulfilling the requirements for discharges of communal wastewater specified in the Waters Protection Ordinance. Treating industrial wastewater according to the latest technology.

Background and target achievement: By law, cantonal authorities verify periodically whether enterprises which discharge industrial wastewater into public sewers and wastewater treatment plants which discharge wastewater into public sewers or into a body of water are complying with the requirements. They adjust the authorisations if necessary and order the required measures. The cantons possess the corresponding data. The degree of target achievement has not so far been established at national level.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Proposed target: Optimising central data capture with respect to wastewater treatment at federal level.

Background: In Switzerland, some 700 central WWTPs treat the country's wastewater to a high technical standard. For this reason, the current emphasis is on preserving the value and performance of these plants and on optimising operational and organisational processes. It may be necessary to expand the capacity of the WWTPs and to incorporate further treatment stages in order to equip existing plants for the future (see

⁴² <https://vsa.ch/fachbereiche-cc/siedlungsentwaesserung/regenwetter/>

Sections 1.6.1 and 1.10.2.1). An implementation guideline defines the reporting of operational data from WWTPs, taking this into account.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: Based on the Federal Act on Geoinformation (GeolA), which has been in force since 2008, two data models (WWTP and GDP) were created in 2017, which establish binding federal legal standards at national level for the recording, modelling and exchange of federal government geodata. This will improve access for federal offices, the business community and the population to these data, which are recorded and managed at great expense. A first collection of data was completed in 2022.

2.12. Disposal or reuse of sewage sludge [Art. 6, Paragraph 2 (i), first part]

Defined target (classification)	Deadline	Responsibility	Target indicator
The agricultural use of sewage sludge has been banned in Switzerland since 2008	None	FOEN	Not applicable

The agricultural use of sewage sludge has been banned in Switzerland since 2008.⁴³ Sewage sludge is burned at incineration plants, cement works and waste incineration plants. The obligation to recover phosphorus from sewage sludge was set out in the Waste Ordinance (Ordinance on the Avoidance and Disposal of Waste, ADWO, SR 814.600) in 2016. For implementation, the cantons were granted a 10-year transition period until 1 January 2026. By adopting the parliamentary initiative 20.433 'Strengthening the Swiss circular economy' in 2024, Parliament also decided to enshrine the obligation to recover phosphorus in the Environment Protection Act, EPA, SR 814.01). In the EPA, Parliament has set out new requirements to implement the partial recovery of phosphorus from sewage sludge: if the volume of phosphorus stipulated by the Federal Council to cover domestic demand is recovered, sewage sludge may continue to be used as a substitute fuel. These amendments to the EPA require a change to the ADWO, which is due to enter into force in autumn 2025.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

2.13. Quality of wastewater used for irrigation purposes [Art. 6, Paragraph 2 (i), second part]

Defined target (classification)	Deadline	Responsibility	Target indicator
According to Art. 7 of the Waters Protection Act (WPA) and Art. 8 of the Waters Protection Ordinance (WPO), contaminated wastewater may not be used for irrigation purposes in Switzerland. Therefore no targets are set in this regard.	None	FOEN	Not applicable

According to Art. 7 of the Waters Protection Act (WPA) and Art. 8 of the Waters Protection Ordinance (WPO), contaminated wastewater may not be used for irrigation purposes in Switzerland. No targets are therefore set for this parameter.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

⁴³ Annex 2.6 ORRChem

2.14. Quality of waters used as sources for drinking water [Art. 6, Paragraph 2 (j), first part]

Defined target (classification)	Deadline	Responsibility	Target indicator
The quality of groundwater used or intended for use as drinking water meets the requirements of Annex 2 WPO (A)	None	FOEN	Not applicable
Reducing the nitrate levels in groundwater (projects according to Article 62a WPA) (A)	None	FOAG, FOEN	
Improving water protection enforcement: increasing information and supervision (B)	None		
Fulfilling the quality requirements of the Waters Protection Ordinance, Annex 2 (A)	None		
Comprehensively recording surface water quality in Switzerland by means of the harmonised <i>Methods for assessing the ecological status of rivers</i> and by corresponding methods for the lakes (A)	2022		

2.14.1 Groundwater

Target: The quality of groundwater used or intended for use as drinking water meets the requirements of Annex 2 WPO.

Background: The quality of waters is continuously being improved with all manner of measures, including planning-related water protection and nitrate or pesticide projects (see next target).

This target contributes to the fulfilment of target 6.1 of the 2030 Sustainable Development Agenda.

Target achievement: Nationwide, 80 per cent of drinking water is taken from groundwater and around 36 per cent of this is supplied without treatment.⁴⁴ Fifty-three per cent of the groundwater is treated using a simple, single-stage method (often a preventative measure, such as disinfection using chlorine or UV). The National Groundwater Quality Monitoring Network (NAQUA) is monitoring the extent to which the groundwater quality requirements set out in the Waters Protection Ordinance are being complied with at national level. Nitrates and various organic substances such as plant protection products or their metabolites and halogenated hydrocarbons are having a negative impact on groundwater quality at many measuring sites, mainly on the Swiss Plateau (see Section 3.6.1.2).

The implementation guideline on environmental protection in agriculture brings together the provisions of water protection legislation applicable to agriculture and explains unclear legal terms. These include the provisions for protecting groundwater. The implementation guideline reinforces implementation and achieves a more uniform standard throughout Switzerland. It contains various modules including construction-related environmental protection, nutrients and the use of fertilisers and pesticides.

If they breach the quality requirements for waters, cantons are obliged to clarify the extent and causes of the contamination, to determine possible measures and implement these if they are deemed reasonable and expedient. As in various other areas, the extent of enforcement varies widely from canton to canton. Some remediation projects receive funding from federal sources (Art. 62a WPA, contaminated sites, see following targets).

In addition, the Federal Act on the Reduction of Risks from the Use of Pesticides adopted in 2021 requires that groundwater contamination with pesticides and their degradation products be reduced by 50 per cent by 2027 compared to the average for 2012-2015. If limits for pesticides or their degradation products are repeatedly and widely exceeded, the products' licences must be reviewed and adjusted. In addition, only pesticides

⁴⁴ Freiburghaus M. (2021). W15001 Statistische Erhebungen der Wasserversorgungen in der Schweiz zum Betriebsjahr 2020. SGWA

whose use does not lead to concentrations of active substances and degradation products above 0.1 µg/l in groundwater may be used in areas of contribution.

Target: Reducing the nitrate levels in groundwater (projects according to Article 62a WPA)

Background: If nitrate concentrations in excess of 25 mg/l (the figure stipulated in Annex 2 WPO) are detected in a groundwater body used or intended for use as drinking water, the cantons are required to define the area of contribution, and draw up and implement remediation measures in accordance with the water protection legislation. Under Article 62a WPA, the federal government pays compensation for agricultural measures if they are not economically viable. Implementation takes the form of specific projects in affected catchment areas. The costs are compensated primarily by the federal government but, to a lesser extent, by the cantons, communes or water suppliers as well.

This target contributes to the fulfilment of targets 6.1 and 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: When implemented consistently, projects in accordance with Article 62a WPA prove successful. However, groundwater remediation of this kind can take several decades if the groundwater is retained for a long time. Once the target situation has been achieved, the measures must be maintained permanently. To this end, the target situation must be secured after the project development and remediation phase. Guidance on this was published in 2023.⁴⁵

Little use is made by the cantons of the option of conducting remediation projects in accordance with Art. 62a. In 2023, for example, only 24 nitrate projects were underway, for which the federal government paid CHF 2.5 million. The legal requirement of 40 mg/l nitrate in drinking water can also be met by abandoning the contaminated drinking water catchment area or combining polluted water with uncontaminated water from other sources.

The Federal Council is currently drawing up a proposal for the attention of Parliament, according to which, in the future, not only the areas of contribution of contaminated groundwater wells, but also the areas of contribution of all regionally significant and all vulnerable groundwater wells must be designated. This will facilitate the realisation of projects under Article 62a WPA. Other options to increase the effectiveness of the water protection programme are currently being reviewed.

Proposed target: Improving water protection enforcement: increasing information and supervision.

Background: In some areas, there is a backlog in the designation and management of groundwater protection zones. This proposed target was developed as part of the Federal Council's report on the management of local water shortages in Switzerland.⁴⁶

This target contributes to the fulfilment of target 6.6 of the 2030 Sustainable Development Agenda.

2.14.2 Surface waters

Target: Fulfilling the quality requirements of the Waters Protection Ordinance, Annex 2.

Background: Monitoring of the quality of surface waters is carried out by the cantons and coordinated at national level.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: Over 20 per cent of drinking water comes from surface waters, mainly from lakes and larger rivers. Drinking water supply from surface waters is monitored and is assured thanks to good treatment facilities.

Nutrient loads in surface waters have been greatly reduced since the 1970s due to intensive efforts to protect bodies of water. Water quality has improved significantly. The larger rivers now meet the legal requirements.

⁴⁵FOEN and FOAG (2023) Projects in agriculture in accordance with Article 62a WPA to meet water quality requirements. <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/publikationen-studien/publikationen-wasser/projekte-land-wirtschaft-artikel-62a-gschg.html>

⁴⁶ FOEN 2012: Umgang mit lokaler Wasserknappheit in der Schweiz. Federal Council's report on the postulate *Wasser und Landwirtschaft. Zukünftige Herausforderungen*. <https://www.bafu.admin.ch/bafu/en/home/topics/water.html>

However, nutrient levels in small and medium-sized watercourses not used for drinking water purposes still exceed the limits in 5 to 30 per cent of cases (see Section 3.6.1.1). In addition, several lakes are still over-fertilised.⁴⁷ In many lakes, the drop in phosphorus concentrations is resulting in improved oxygenation of the deep waters. This is an ongoing process. However, in over 46 per cent of the 26 largest lakes, the 4 mg of oxygen per litre requirement stipulated by the Waters Protection Ordinance is not yet being achieved, or is being achieved only thanks to artificial aeration. Even in lakes that have recovered, oxygen levels in the deep water may fall again in the future, as some lakes have poorer intermixing due to climate change (rising water temperatures).⁴⁸

The legal requirements for water quality with regard to organic micropollutants are generally met in lakes and large rivers. In small and medium-sized watercourses not used for drinking water purposes, however, these requirements are often exceeded (see Section 3.6.1.1).

Target: Comprehensively recording surface water quality in Switzerland by means of the harmonised methods for assessing watercourses (*Methoden zur Erhebung und Beurteilung der Fliessgewässer*) and by corresponding methods for the lakes.

Background: The harmonised *Methoden zur Erhebung und Beurteilung der Fliessgewässer*⁴⁹ provide standardised methods for investigating and assessing the state of watercourses in Switzerland. There is also a plan for investigating and assessing the state of the lakes. The methods record the structural and hydrological, biological, chemical and ecotoxicological aspects of water quality.

Target achievement: The methods for watercourses that have already been prepared will be applied by the cantons as part of the cantonal monitoring of waters. Since 2011, the methods have also been applied at national level at over 100 locations across Switzerland as part of the *National Surface Water Quality Monitoring Programme* (NAWA).⁵⁰ This project is intended to form the basis for documenting and evaluating the condition and development of Swiss surface waters at national level (initially only in watercourses, and subsequently in lakes as well).

In 2018, the NAWA was supplemented with the collection of data concerning micropollutants, particularly pesticides in small watercourses. In monitoring the quality of water resources, it is also important to ensure that laboratories capable of carrying out the water analyses are available in the long term.

2.15. Quality of waters used for bathing (rivers and lakes) [Art. 6, Paragraph 2 (j), second part]

Defined target (classification)	Deadline	Responsibility	Target indicator
Revising the existing recommendation on recording and assessing the quality of the water in bathing lakes and rivers, in line with EU Directive 2006/7/EC (B)	Earliest 2024	FOEN	Not applicable

Proposed target: Revising the existing recommendation on recording and assessing the quality of the water in bathing lakes and rivers, in line with EU Directive 2006/7/EC.

Background: Since the 1960s, efforts have been made in Switzerland to protect the health of bathers by the hygiene assessment of bathing lakes and rivers.

The quality of bathing water is monitored by the cantonal laboratories. In view of the experience acquired over the past few years in the practical implementation of hygiene assessments of bathing lakes and rivers, and in

⁴⁷ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/fachinformationen/zustand-der-gewaesser/zustand-der-seen/wasserqualitaet-der-seen.html>

⁴⁸ BAFU (2022) Gewässer in der Schweiz. Zustand und Massnahmen. <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/gewaesserbericht.html>

⁴⁹ <http://www.modul-stufen-konzept.ch>

⁵⁰ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/zustand/wasser--messnetze/nationale-beobachtung-oberflaechengewaesserqualitaet--nawa-.html>

view of developments in microbiological methods, it was decided to revise the Swiss recommendation⁵¹ on the basis of EU Directive 2006/7/EC.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: A working group, consisting of representatives of the FOPH, FOEN and the cantonal laboratories, has revised the recommendation of 1991 on the basis of EU Directive 2006/7/EC and in consultation with the cantonal laboratories.⁵² The data collected show that people need have no concerns about bathing in almost any lake or river in Switzerland. Thanks to a range of protective measures and major efforts in terms of wastewater treatment that have been undertaken in recent decades, the hygienic water quality in Swiss rivers and lakes is now very good.

2.16. Quality of waters used for aquacultures [Art. 6, Paragraph 2 (j), third part]

Defined target (classification)	Deadline	Responsibility	Target indicator
Since no significant aquacultures exist in Switzerland, no targets are set for this parameter.	None	FOEN	Not applicable

Since no significant aquacultures exist in Switzerland, no targets are set for this parameter.

2.17. Application of recognised good practice to the management of enclosed waters used for bathing [Art. 6, Paragraph 2 (k)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Lay down a Swiss Bathing Water Ordinance at national level (A).	2018	SFVO	Adoption of the new legislation

Target: Producing a Bathing Water Ordinance for Switzerland.

Background and target achievement: When the Foodstuffs Act was completely revised, a new Ordinance on Drinking Water and Water in Public Baths and Shower Facilities (DWBSO) was enacted. In particular, this sets out national requirements for water in public swimming baths, including whirlpools, thermal baths, mineral baths, salt-water baths, spa baths, therapeutic baths, children's paddling pools and similar facilities, as well as public swimming baths with biological regeneration. This ordinance entered into force on 1 May 2017.

⁵¹ SAEFL, Empfehlungen für die hygienische Beurteilung von See- und Flussbädern, 1991

⁵² FOEN, FOPH, Beurteilung der Badegewässer, Empfehlungen zur Untersuchung und Beurteilung der Badewasserqualität von See- und Flussbädern, 2013. <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/publikationen-studien/publikationen-wasser/beurteilung-der-badegewaesser.html>

2.18. Identification and remediation of particularly contaminated sites [Art. 6, Paragraph 2 (I)]

Defined target (classification)	Deadline	Responsibility	Target indicator
Recording, investigating and remediating contaminated sites. The cantons fulfil their obligations in accordance with the Contaminated Sites Ordinance concerning local pollutants that could jeopardise waters, soil and air (A)	2007	FOEN	All the polluted sites are registered
	2025		Investigations of the sites are finished
	2040		Remediation is finished

Target: Recording, investigating and remediating contaminated sites. The cantons fulfil their obligations in accordance with the Contaminated Sites Ordinance concerning local pollutants that could jeopardise waters.

Background: According to the Ordinance on the Remediation of Contaminated Sites (Contaminated Sites Ordinance, CSO; SR 814.680) and the Waters Protection Ordinance (WPO), if the cantons detect any pollutants originating from contaminated sites (landfills, industrial sites or sites of accidents) which could jeopardise waters, they must determine their causes and define and implement corresponding measures.

This target contributes to the fulfilment of target 6.3 of the 2030 Sustainable Development Agenda.

Target achievement: The management of contaminated sites in Switzerland is on target: both the federal government's and the cantons' registers of contaminated sites have been completed and are available on the Internet.⁵³ There are around 38,000 contaminated sites in total and approximately 4,000 of these may require remediation. There were originally over 16,000 sites which needed to be investigated; by the end of 2024, more than three quarters of them had already been investigated and classified by the authorities. More than 1,900 remediation projects – including major cases such as the landfill sites in Kölliken, Bonfol and Monthey (Pont Rouge landfill site) – have already been completed. The authorities are dedicating substantial resources to dealing with contaminated sites.⁵⁴

⁵³ <https://www.bafu.admin.ch/bafu/de/home/themen/altlasten/altlastenbearbeitung/stand-der-altlastenbearbeitung-in-der-schweiz/online-kataster-von-kantonen-und-bundesstellen.html>

⁵⁴ <https://www.bafu.admin.ch/bafu/de/home/themen/altlasten/fachinformationen/altlastenbearbeitung/stand-der-altlastenbearbeitung-in-der-schweiz.html>

2.19. Effectiveness of systems for managing, developing, protecting and using water resources [Art. 6, Paragraph 2 (m)]

Defined target (classification)	Deadline	Responsibility	Target indicator
The federal government promotes integrated river basin management (A) and aquatic restoration. Restoring one quarter of the heavily engineered waters back to natural conditions, as much as possible. Allocate adequate space to all waters, which may only be managed extensively (no fertilisers, no pesticides) and as ecological compensation areas (biodiversity promotion areas). In addition, mitigating the negative effects of hydroelectric power production (hydropeaking, bed-load balance, accessibility for fish) as far as possible within 20 years from 2011 (A)	2090 2030	FOEN	25% of waters in a bad morphological state must be re-stored All water bodies must be allocated adequate space for natural development Mitigate negative impact of hydropower production in a defined number of hydropower plants

Target: The federal government promotes integrated river basin management.

Background: Although Switzerland has not adopted the EU's Water Framework Directive (Directive 2000/60/EC), the federal government sees great potential benefit in the integrated management of water resources. As a member of various international commissions (see Section 5.7.2), Switzerland is working with its neighbouring countries and thus indirectly applies certain principles of the Water Framework Directive.⁵⁵ The aim in the long term is to produce a wide-ranging strategy for the management of water resources, waters and water infrastructure. The efforts to promote integrated water management are based on partnerships between the various users, which take into account all the interests of water management. Certain drainage basins are already being managed according to these principles.

This approach particularly highlights conflicting targets, e.g. the use of water to generate hydroelectric power versus the need to protect waters/landscapes, and the space needed for the waters to perform their function and for renaturing waters (see next target) versus agriculture, and, to a significantly lesser extent, protecting groundwater as a resource for drinking water. The principles of integrated river basin management, which take a wide-ranging, long-term and cross-sectoral approach, can provide greater freedom in the search for solutions in this context.

This target contributes to the fulfilment of target 6.5 of the 2030 Sustainable Development Agenda.

Target achievement: River basin management offers an opportunity for taking an efficient approach to new cross-sectoral challenges in the area of water management, whether these are related to climate change or the pressure resulting from settlements or use. Between 2008 and 2017, a national *Integrated River Basin Management*⁵⁶ working group coordinated activities in order to devise basic principles for integrated river basin management.

The federal government is taking action at various levels in order to get one step closer to implementing the principles of river basin management. This action has included supporting pilot projects at cantonal level. The principles were explained in a mission statement. A practical guideline fleshes out these principles, describes the methodical approach, illustrating this through case studies, and offers resources. In order to implement this, committed stakeholders are required at all levels who are willing to align their activities with the commonly devised targets for the river basin.

⁵⁵ <https://www.eea.europa.eu/soer/2010>

⁵⁶ <https://wa21.ch/themen/einzugsgebietsmanagement/>; <https://www.bafu.admin.ch/bafu/en/home/topics/water.html>

Some cantons have already enshrined the management of waters in river basins in their legislation, initiated corresponding processes and achieved success in implementing projects.

Target: Transforming some of the heavily engineered waters into as natural a condition as possible within a few generations, and defining an adequate area for all waters which may only be managed extensively (biodiversity contributions can be claimed for agricultural land). In addition, eliminating the negative effects on waters of hydroelectric power generation (hydropeaking, bed-load balance, accessibility for fish) as far as possible until 2030.

Background: The revitalisation of waters should restore their natural functions and strengthen their social benefit, while at the same time eliminating the major negative environmental effects arising from hydroelectric power generation (hydropeaking, inadequate connectivity and disrupted bed-load balance). These aims were formulated in a parliamentary counter-proposal to an initiative of the Swiss Federation of Anglers.

This target contributes to the fulfilment of target 6.6 of the 2030 Sustainable Development Agenda.

Target achievement: The revised Waters Protection Act came into force on 1 January 2011, with the corresponding changes to the Waters Protection Ordinance taking effect on 1 June 2011. In order to support the implementation of the new requirements, they were explained in detail in modular implementation guidelines (with modules covering the aspects of revitalisation, fish migration, hydropeaking and bed-load balance) and as a working aid (for the aquatic environment).⁵⁷ In 2014, the cantons completed their strategic planning. An important result of this work is the definition of the hydropower plants/obstacles for which rehabilitation measures (regarding hydropeaking, bed-load balance and accessibility for fish) need to be studied and implemented by 2030 and of those river stretches that should be primarily restored. Ensuring sufficient, ecologically valuable aquatic environments is proving to be very challenging, especially due to the resistance in agricultural circles.

The revision of the Waters Protection Act in 2011 represents one of the most important stages in Switzerland's water protection efforts. Currently about 40 per cent of the watercourses in central Switzerland, and more than 80 per cent in urban areas, are engineered. Energy is generated from more than 90 per cent of all usable waters. Water bodies should once again be given more space so that they can perform their natural functions. The changes to the Waters Protection Act are an important step towards ensuring that watercourses and lake shores in Switzerland can become more natural again and can contribute to maintaining biodiversity by becoming species-rich habitats. Moreover, this will increase the benefit they provide to the population in the form of recreation areas and tourist attractions.

2.20. Risk-based inspections of water suppliers

Defined target (classification)	Deadline	Responsibility	Target indicator
Implementation of a risk-based evaluation of the drinking water suppliers by the cantonal laboratories	Ongoing	FSVO	Implementation through the enforcement authorities

The supervisory authorities, acting through the Swiss Association of Cantonal Chemists, have published a plan for *Determining inspection frequencies in drinking water supplies based on the setting of static and dynamic criteria*.⁵⁸ This document describes the procedure for evaluating the risk associated with the supply of drinking water by the official supervisory authorities. It applies to all forms of drinking water distribution, irrespective of whether an HACCP process or Good Manufacturing Practice guidelines (SGWA Directive W 12) are used.

This target contributes to the fulfilment of target 6.6 of the 2030 Sustainable Development Agenda.

⁵⁷ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/fachinformationen/massnahmen-zum-schutz-der-gewaesser/renaturierung-der-gewaesser/vollzugshilfe--renaturierung-der-gewaesser-.html>

⁵⁸ <https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/lebensmittelsicherheit/verantwortlichkeiten.html>

3. Indicators

To achieve a degree of consistency throughout the UNECE/WHO-EURO region, the contracting parties of the Protocol reached an agreement to supply information on several indicators that were determined jointly. These indicators are closely related to the areas under Article 6 Paragraph 2 of the Protocol, for which targets should be set. Data for Switzerland regarding these indicators are presented below in the template for summary reports under the Protocol⁵⁹ on Water and Health and the guidelines for reporting and evaluation of progress.⁶⁰

3.1. Quality of the drinking water supplied

3.1.1 Framework conditions

The food control authorities in Switzerland analyse over 50,000 drinking water samples (official samples and self-inspection samples for water suppliers) each year and carry out regular inspections of water suppliers. They also obtain information about problems with drinking water via complaints from consumers. Even if the food control authorities do not supervise drinking water around the clock and carry out their inspections based on risk, they still have a good overview of the quality of the drinking water.

The data survey for the following parameters was sent to all cantonal food enforcement authorities. The survey did not ask for individual measurements, but rather for summary statements in relation to the water supplies. For example, in the case of microbiological contamination, respondents were asked how many water supplies had problems with faecal pathogens, i.e. *Escherichia coli* and enterococci, and how many drinking water consumers were affected by the contamination.

It was possible to compile data from 25 cantons. The information relates to 3,628 water facilities supplying 8.6 million residents, i.e. 96 per cent of the Swiss population. It is not possible to differentiate between urban and rural areas using the available data. However, such differentiation is not relevant for Switzerland, as access to water and sanitation is guaranteed for the entire population.

The results of this data survey can be compared with the estimates from the fifth reporting period.

3.1.2 Microbiological parameters

E. coli

- 25 of 25 cantons submitting reports with measurements, corresponding to 8.6 million inhabitants
- 72,454 measurements in 3 years
- 637 results above the maximum threshold = 0.88%
- 128,947 residents affected in the short term by levels above the maximum threshold per year = 1.5% of residents in the measurement area

Legal requirement: not detectable per 100 ml of water

Enterococci

- 25 of 25 cantons submitting reports with measurements, corresponding to 8.6 million inhabitants
- 72,453 measurements in 3 years
- 894 results above the maximum threshold = 1.2%
- 241,880 residents affected in the short term by levels above the maximum threshold per year = 2.8% of residents in the measurement area

Legal requirement: not detectable per 100 ml of water

⁵⁹ <https://unece.org/environmental-policy/conventions-and-protocols/sixth-reporting-exercise-under-protocol-water-and>

⁶⁰ UNECE/WHO-EURO (2010) Guidelines on the setting of targets, evaluation of progress and reporting under the Protocol on Water and Health. <https://unece.org/environment-policy/publications/guidelines-setting-targets-evaluation-progress-and-reporting-under> <https://unece.org/environment-policy/publications/guidelines-setting-targets-evaluation-progress-and-reporting-under>

Statements:

- Compared with the fifth reporting period, fewer results above the maximum threshold were measured in percentage points and fewer residents were affected
- In most cases, both parameters (*E. coli* and Enterococci) are measured simultaneously.
- Approximately 1.5-3% of residents were affected in the short term by levels above the maximum threshold. Suitable measures were taken and the situation was rectified within a short period of time.

Measures:

- Flushing the drinking water network
- Chlorination
- UV disinfection
- Requesting population to boil their drinking water temporarily ('boil water advisory')

Conclusion: The data situation allows a nationwide overview of the individual parameters tested. The microbiological quality can be rated very good and stable overall.

3.1.3 Chemical parameters**3.1.3.1 Arsenic**

- 18 of 25 cantons submitting reports with measurements, corresponding to 6.1 million inhabitants
 - 2,528 measurements in 3 years
 - 11 results above the maximum threshold = 0.44%
 - 3,833 residents affected in the short term by levels above the maximum threshold per year = 0.06% of residents in the measurement area
- Legal requirement: max. 10 µg/l

Statements:

- Compared with the fifth reporting period, fewer results above the maximum threshold in percentage point terms were recorded and fewer residents were affected
- Geogenic occurrences; new treatment projects were carried out

Measures:

- Treatment processes, e.g. arsenic filter
- Blending of different sources/dilution

3.1.3.2 Lead

- 17 of 25 cantons submitting reports with measurements, corresponding to 6.0 million inhabitants
 - 2,161 measurements in 3 years
 - 5 results above the maximum threshold = 0.23%
 - 79 residents affected in the short term by levels above the maximum threshold per year (< 0.01% of residents in the measurement area)
- Legal requirement: max. 10 µg/l

Statements:

- Compared with the fifth reporting period, in percentage point terms more results above the maximum threshold were recorded, but still at a very low level, and fewer residents were affected
- Causes: poor condition of the distribution network, problem in domestic distribution system

3.1.3.3 Iron

- 18 of 25 cantons submitting reports with measurements, corresponding to 6.1 million inhabitants
 - 3,140 measurements in 3 years
 - 35 results above the maximum threshold = 1.1%
 - 2,284 residents affected in the short term by levels above the maximum threshold per year = 0.04% of residents in the measurement area
- Legal requirement: max. 0.2 mg/l

Statements:

- Compared with the fifth reporting period, in percentage point term fewer results above the maximum threshold were recorded, and fewer residents were affected
- Causes: poor condition of the distribution network, corrosion

3.1.3.4 Chromium VI

- 12 of 25 cantons submitting reports with measurements, corresponding to 3.7 million inhabitants
 - 980 measurements in 3 years
 - No results above the maximum threshold
- Legal requirement: max. 20 µg/l

Statements:

- Like in the fifth reporting period, no results above the maximum threshold; fewer measurements conducted by comparison as the likelihood of results above the maximum threshold remains low

3.1.3.5 Fluoride

- 13 of 25 cantons submitting reports with measurements, corresponding to 7.0 million inhabitants
 - 10,532 measurements in 3 years
 - No results above the maximum threshold
- Legal requirement: max. 1.5 mg/l

Statements:

- Like in the fifth reporting period, no results were recorded above the maximum threshold
- The number of measurements and distribution over the population supplied lead to the conclusion that there is no risk in Switzerland and that reduced sampling is therefore possible (only few measurements required)

3.1.3.6 Nitrate

- 22 of 25 cantons submitting reports with measurements, corresponding to 8.1 million inhabitants
 - 18,983 measurements in 3 years
 - 105 results above the maximum threshold = 0.55%
 - 10,675 residents affected in the short term by levels above the maximum threshold per year = 0.13% of residents in the measurement area
- Legal requirement: max. 40 mg/l

Statements:

- Compared with the fifth reporting period, the results above the maximum threshold were about the same percentage, and the same percentage of residents were affected

Measures:

- Blending of different sources/dilution
- Resolving protection zone conflicts
- In addition, compensation for agricultural measures is possible in accordance with Article 62a WPA (see Section 2.14.1)

3.1.3.7 Nitrite

- 19 of 25 cantons submitting reports with measurements, corresponding to 6.3 million inhabitants
 - 12,096 measurements in 3 years
 - 2 results above the maximum threshold = 0.02%
 - 7 residents affected in the short term by levels above the maximum threshold per year (< 0.01% of residents in the measurement area)
- Legal requirement: max. 0.1 mg/l

Statements:

- Compared with the fifth reporting period, the results above the maximum threshold were about the same percentage, but far fewer residents were affected in absolute terms; fewer measurements were conducted by comparison as the likelihood of results above the maximum threshold remains low

Conclusion: The data allow for a nationwide overview of the individual parameters investigated. In terms of inorganic chemical parameters, the drinking water quality can be rated as quite good and stable.

3.1.4 Plant protection products (PPPs): active substances and their metabolites

3.1.4.1 PPP active substances

- 2 active substances with levels above the maximum (> 0.1 µg/l)
 - Maximum level exceedances between 0.08 and 0.54%
 - Between 0.01 and 0.09% of residents in the measurement area per year affected in the short term by levels above the maximum
- Legal requirement: max. 0.1 µg/l

PPP active substance	Cantons with measurements	Number of measurements	Measurements over the maximum levels		Residents affected in measurement area per year	
Bentazone	15	1,672	9	0.54%	3,704	0.09%
Lenacil	11	1,311	1	0.08%	267	0.01%

Statements:

- Like in the fifth reporting period, only few residents are affected by maximum levels being exceeded due to PPP active substances

Measures:

- Maximum level exceedances occurred due to cases of malfunction or insufficient resource protection, which have been rectified

3.1.4.2 Relevant PPP metabolites

7 relevant metabolites with levels over the maximum ($> 0.1 \mu\text{g/l}$) - Maximum level exceedances between 0.25 and 31% - Between 0.04 and 7.9% of residents in the measurement area per year affected in the short term by levels above the maximum Legal requirement: max. $0.1 \mu\text{g/l}$						
PPP metabolites, relevant	Cantons with measurements	Number of measurements	Measurements over the maximum levels		Residents affected in measurement area per year	
Chlorothalonil: R471811	19	3,189	979	31%	547,560	7.9%
Chlorothalonil: R417888	20	3,143	368	12%	198,913	2.7%
Chlorothalonil: SYN548580	2	82	2	2.4%	3,333	0.37%
S-Metolachlor: Metolachlor-ESA (CGA 354743)	15	2,203	43	2.0%	7,867	0.15%
S-Metolachlor: NOA 413173	8	1,284	17	1.3%	2,220	0.08%
Chlorothalonil: SYN507900	11	1,477	12	0.81%	15,667	0.58%
Chlorothalonil: SYN548008	1	401	1	0.25%	667	0.04%

Statements:

- Up to 8% of residents are affected by maximum levels being exceeded due to relevant metabolites
- In May 2024, the situation regarding the relevance of chlorothalonil metabolites in drinking water, which was still unclear compared to the fifth reporting period due to legal proceedings, was clarified, meaning that complaints have to be filed in the event of maximum level exceedances for these metabolites

Measures:

- Various such as mixing to comply again with maximum values
- More detailed measures are set out in the Federal Council report on Postulate 20.4087⁶¹

Conclusion: The data allow a nationwide overview of the individual parameters investigated. In terms of PPP active substances, the drinking water quality can be rated as good. However, contamination with chlorothalonil metabolites remains a problem. Water suppliers have largely implemented potential short- to medium-term measures in order to minimise or avoid undesirable maximum level exceedances of chlorothalonil metabolites in drinking water. While further measures, such as technical treatment, should be seen as a last resort, they should not be ruled out, as consumers have a right to drinking water that complies with food safety law at all times (see Federal Council report on Postulate 20.4087). Metabolites that are not classified as relevant to drinking water are still measured, but are no longer shown here.

⁶¹ Federal Council report on Postulate 20.4087 Clivaz 'Contamination of drinking water with chlorothalonil: response and financing of necessary remediation', 29 January 2025. <https://www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/lebensmittelsicherheit/stoffe-im-fokus/pflanzenschutzmittel/chlorothalonil.html>

3.1.5 Incidents

Definition: An incident is defined as a situation in which foodstuffs law requirements are not complied with for a certain period of time due to an occurrence, necessitating specific measures in order to restore perfect quality of the drinking water supply (it is entirely possible that one incident may require multiple analyses, inspections or measures).

- 17 out of the 25 cantons submitting reports managed incidents
- A total of 152 incidents were reported during the 3-year period

3.1.5.1 Incidents: faecal contamination

- 16 out of the 25 cantons submitting reports managed incidents caused by faecal contamination⁶²
- 124 of the 152 incidents in total = 82%
- 100 residents affected by each incident (median)

Statements:

- Main causes: storm, flooding, heavy rainfall, snow melting, agriculture, defective plants (disinfection)

Measures:

- Requesting population to boil their drinking water temporarily ('boil water advisory')
- Chlorination or UV disinfection
- Flushing/cleaning of reservoirs and distribution networks
- Repair of defective (parts of) plants
- Improving protection and protection zones (groundwater, wells)
- Taking the drinking water catchment area out of service temporarily

3.1.5.2 Incidents: smell/taste/appearance, chemical contamination

- 4 out of the 25 cantons submitting reports managed incidents involving smell/taste/appearance, chemical contamination
- 21 of the 152 incidents in total = 14%
- 100 residents affected by each incident (median)

Statements:

- Contamination: hydrocarbons, nitrate, aluminium, turbidity
- Causes: heavy rainfall, construction, line break, defective operation, sources without protection zones

Measures:

- Taking the drinking water catchment out of service temporarily
- Flushing

3.1.5.3 Incidents: plant protection products

- 1 out of the 25 cantons submitting reports managed incidents caused by plant protection products
- 2 of the 152 incidents in total = 1.3%
- 86,825 residents affected by each incident (median)

⁶² Two cantons reported five microbial incidents (= 3.3 %) not involving faecal indicators (maximum level exceedances for aerobic, mesophilic bacteria), where a median of 1,200 people were temporarily affected. Measures included flushing of networks.

Statements:

- The incidents involved chlorothalonil and S-metolachlor metabolites

Measures:

- Immediate measures: mixing, discarding
- Medium- and long-term measures: defect correction projects

3.2. Outbreaks of infectious diseases and incidents of water-related diseases

According to the guidelines for the sixth reporting exercise under the Protocol,⁶³ the following pathogens/diseases are taken into account for the occurrence of infectious diseases: cryptosporidiosis, EHEC, hepatitis A, Legionnaires' disease,⁶⁴ shigellosis and typhoid fever.

According to the FDHA Ordinance on the Reporting of Observations of Communicable Diseases in Humans (SR 818.101.126), all of these infectious diseases must be reported to the Federal Office of Public Health (FOPH) in Switzerland, with the exception of cryptosporidiosis. Diagnostic laboratories must report the detection of the pathogen in humans. There is also a reporting obligation for doctors, with the exception of shigellosis.

Overall, there was an increase in reported cases of EHEC and shigellosis, largely related to increased testing due to new technological methods and the associated increased frequency of case detection. The case numbers for hepatitis A have been stable over the past 10 years, apart from a brief increase in 2017 and 2018 following a Europe-wide outbreak among men who have sex with men (MSM). A longer-term rising trend in case numbers was noted for Legionnaires' disease. Typhus, on the other hand, occurs only rarely in Switzerland and is mainly imported from warm countries with low hygiene standards. The rising case numbers in 2024 can be interpreted in the context of the resumption of travel following the COVID-19 pandemic.

Pathogen/disease	Incidence (cases per 100,000 residents)		
	2005	2021	2024*
Cryptosporidiosis	-	-	-
EHEC	0.83	10.67	15.00
Hepatitis A	1.96	0.47	0.56
Legionnaires' disease	1.95	6.53	5.19
Shigellosis	4.62	1.13	2.14
Typhus	0.52	0.03	0.49

*Incidence calculated on basis of 2023 population data

Despite the nationwide flooding in summer 2024 and the associated risk of drinking water contamination, no increase in case numbers above the norm was detected during the period concerned.

There is no systematic nationwide overview in Switzerland on the number of water-borne outbreaks. Under the Ordinance on the Implementation of Foodstuffs Legislation (FLIO; SR 817.042), one outbreak was reported to the FSVO during the reporting period: water from the public network in a commune of 4,703 inhabitants, which until then had not been treated, was contaminated by *Shigella sonnei*, among others, causing at least 256 people to fall ill, of whom 3 had to be hospitalised. Flushing and disinfection through chlorination were carried out on the municipal water network, making the water fit for consumption again within the space of a week.

Conclusion: According to the national statistics on infectious diseases, water-related infectious diseases rarely occur in Switzerland. Nevertheless, water-related outbreaks do occur sporadically.

⁶³ <https://unece.org/environmental-policy/conventions-and-protocols/sixth-reporting-exercise-under-protocol-water-and>

⁶⁴ Legionnaires' disease: Legionella detected by laboratory chemical tests with clinical diagnosis of pneumonia

3.3. Wastewater monitoring of infectious diseases

Swiss and international projects have shown that the spread of the SARS-CoV-2 virus can be demonstrated by measuring the virus RNA in wastewater. The virus levels in wastewater correlated well with clinical case numbers. Since 2021, SARS-CoV-2 virus levels (viral load) have been determined in wastewater samples from a number of wastewater treatment plants (WWTPs) on an ongoing basis. In 2023, this wastewater monitoring was expanded to include influenza viruses A and B and RSV.^{65,66} Wastewater samples were tested for Mpox and antibiotic resistant bacteria as part of studies. In addition, a methodology was developed to detect and quantify polio virus, measles virus, mumps virus, and rubella virus in wastewater. Wastewater monitoring provides early indications on the evolution of disease prevalence and, where applicable, outbreaks..

In 2023, the National Council adopted the Postulate 22.4271 'Institutionalisation of wastewater monitoring and sequencing of pathogens for a safer Switzerland'. As part of the current revision of the Federal Act on Combating Communicable Human Diseases (Epidemics Act, EpA; SR 818.101), efforts are being made to legally enshrine the duty to cooperate regarding wastewater monitoring. In addition, the expansion of the monitoring to support early detection and monitoring of other pathogens is being reviewed. Owing to the pressure on the federal government to cut costs, however, there is no guarantee that wastewater monitoring will be continued in the coming years.

Conclusion: Wastewater monitoring of infectious diseases can provide early indications on the evolution and prevalence of diseases and where applicable outbreaks. There is currently no guarantee that this will continue, however.

3.4. Access to drinking water

Percentage of individuals with access to clean drinking water ⁶⁷	Value in 2005	Value in 2012	Value in 2021	Current value (2024)
Overall	100%	100%	100%	100%
In urban areas	100%	100%	100%	100%
In rural areas	100%	100%	100%	100%

Conclusion: The total urban and rural population of Switzerland has access to clean drinking water.
=> *Access to improved drinking water sources* (as per definition of the WHO/UNICEF Joint Monitoring Programme⁶⁸)

⁶⁵ <https://wise.ethz.ch/>

⁶⁶ <https://www.idd.bag.admin.ch/topics/respiratory-pathogens/statistic#waste-water>

⁶⁷ SGWA assessment

⁶⁸ <https://washdata.org/monitoring/drinking-water>

3.5. Connection to sanitation system

Proportion of individuals connected to a collective sanitation system ⁶⁹	Value in 2005	Value in 2012	Value in 2021	Current value (2024)
Overall	99%	99%	99%	99%
In urban areas	100%	100%	100%	100%
In rural areas	97% (collective systems) 2% (decentralised systems)	97% (collective systems) 2% (decentralised systems)	97% (collective systems) 2% (decentralised systems)	97% (collective systems) 2% (decentralised systems)

Conclusion: 99 per cent or more of the sewage is treated. All potential households are connected to a central sewage treatment plant or a decentralised treatment system.
=> *Access to improved sanitation facilities* (as per definition of the WHO/UNICEF Joint Monitoring Programme⁷⁰)

3.6. General condition of waters and water use

3.6.1 Water quality

3.6.1.1 Surface waters

Over the past few decades, the water quality of lakes and rivers has vastly improved in relation to nutrients, primarily thanks to the provision and improvement of wastewater treatment plants. Nevertheless, there are still shortcomings in the condition of surface waters, some of them significant. Specifically, these are due to the entry of micropollutants and, in isolated cases, nutrients. As a result, not all the waters are able to perform their key functions for people and ecosystems.

With its National Surface Water Quality Monitoring Programme (NAWA), the federal government and cantons have been running a joint monitoring programme to thoroughly examine the condition of watercourses⁷¹ since 2011. The programme includes monthly random sampling of over 100 streams and rivers for nutrient analyses, and biological investigations which are carried out every four years. Since 2018, NAWA has also been investigating micropollutant residues predominantly in small and medium-sized watercourses on the Swiss Plateau and in the valleys.⁷² The number of sites has increased continuously in recent years. Data from 28 sites are available for 2019, and a total of 38 sites have been available since 2022. Combined samples are taken every three days to two weeks and analysed for 48 pesticides, 22 pharmaceutical products and 5 other substances.

Nutrients: As regards nutrients, the trend since the 1970s can be demonstrated by a comparison of data from the periods 1976-1980 and 1996-2000 of the Hydrological Atlas of Switzerland (map sheet 7.6).⁷³ The assessment is carried out using the Modular Stepwise Procedure (MSP).⁷⁴

⁶⁹ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/dossiers/internationaler-tag-des-wassers-2017.html>

⁷⁰ <https://washdata.org/monitoring/sanitation>

⁷¹ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/zustand/wasser--messnetze/nationale-beobachtung-oberflaechengewaesserqualitaet--nawa-.html>

⁷² Doppler T., Dietzel A., Wittmer I., Grelot J., Kunz M. und Rinta P. (2020) Mikroverunreinigungen im Gewässermonitoring – Ausbau von NAWA TREND und erste Resultate. Aqua & Gas 7/8: 44-53.

⁷³ Jakob et al. (2004) Veränderung ausgewählter chemischer Parameter in Fließgewässern und Seen 1976-2000. https://hydrologischeratlas.ch/downloads/01/content/Tafel_76.pdf

⁷⁴ <http://www.modul-stufen-konzept.ch>

The following tables show the percentages of measuring sites in each MSP quality class; for each NAWA measurement, the mean has been taken of the annual values. When comparing values from previous periods (1976-1980 and 1996-2000), note the different make-up of the measuring sites, meaning that developments over time must be interpreted with caution. Despite this, there still is a stark decrease in nutrient pollution in watercourses.

Currently, around 97 per cent of measuring sites are in a very good or good condition, illustrating an improvement on the periods 1996-2000 (89 per cent of measuring sites) and 1976-1980 (66 per cent). Ammonium is harmful for aquatic organisms because higher temperatures and pH values speed up its transformation into ammonia, which is poisonous to fish. Ammonium enters waters at isolated points via wastewater discharges and diffusely from agriculture. The numerical requirements in accordance with Annex 2 of the Waters Protection Ordinance (equivalent to the class boundaries between good and fair according to the MSP) apply to watercourses.

Classification based on NH₄ nitrogen⁷⁵	Value (1976-1980) 117 measuring sites	Value (1996-2000) 117 measuring sites	Value (2011-2014) 111 measuring sites	Value (2015-2018) 115 measuring sites	Current value (2019-2022) 121 measuring sites
Very good	19% of measuring sites	52%	52%	54%	57%
Good	47% of measuring sites	37%	43%	41%	39%
Fair	13% of measuring sites	7%	3%	2%	1%
Unsatisfactory	0% of measuring sites	0%	1%	1%	1%
Poor	21% of measuring sites	4%	1%	1%	1%

Conclusion: The pollution of water courses by ammonium reduced until the late 1990s. It has hardly changed since the 2000s. Around 97 per cent of the measuring sites currently meet the value required by the WPO.

⁷⁵ <http://www.modul-stufen-konzept.ch>

The following table shows the classification based on nitrate-nitrogen, as an indicator of agricultural and residential nutrient pollution: A requirement of 5.6 mg/l N (equivalent to the class boundaries between good and fair according to the MSP) applies to nitrate (NO₃-N) in overground waters used for drinking water in accordance with Annex 2 WPO. Note that most of the watercourses studied are not used for drinking water.

Classification based on NO ₃ ni-trogen ⁷⁶	Value (1996-2000) 107 measuring sites	Value (2011-2014) 111 measuring sites	Value (2015-2018) 115 measuring sites	Current value (2019-2022) 121 measuring sites
Very good (<1.5 mg/l N)	43% of measuring sites	41%	42%	36%
Good (1.5-5.6 mg/l N)	45% of measuring sites	49%	43%	44%
Fair (5.6-8.4 mg/l N)	11% of measuring sites	7%	10%	15%
Unsatisfactory (8.4-11.2 mg/l N)	0% of measuring sites	1%	4%	3%
Poor (≥ 11.2 mg/l N)	1% of measuring sites	1%	1%	2%

Conclusion: Based on the available data it can be concluded that there has been no clear change regarding the pollution of watercourses by nitrate. Around 80 per cent of the measuring sites meet the value required by the WPO.

Micropollutants: Many waters of the Swiss Plateau and valleys are contaminated with micropollutants. 18 of the 22 micropollutants exceeded their ecotoxicological limits specified in the Waters Protection Ordinance. Only six of the 38 water bodies examined complied with the limits. Pesticide contamination is most pronounced in the small and medium-sized watercourses studied. In most of these waters, pesticides exceeded their ecotoxicological limits. Pesticide contamination in the large rivers is significantly lower. In these waters, no pesticides exceeded their limit values. Most of the three pharmaceuticals regulated by the WPO exceeded the limits in medium to large watercourses. The painkiller diclofenac caused by far the most cases of ecotoxicological limits being exceeded. Any exceeding of ecotoxicological limits means that sensitive animal and plant species are exposed to an excessive risk of damage from these substances.

Biology: Alongside nutrient pollution, the biological condition of watercourses has also improved over the last few decades, albeit only in some cases. Based on the indicators fish and aquatic plants, only around one third of the NAWA measuring sites were rated good or very good. The following table shows the classification of NAWA measuring sites for the bioindicators fish, invertebrates and aquatic plants from the surveys in 2012, 2015, 2019 and 2023 (each as a percentage of measuring sites). The shortcomings established can be traced back to water contamination due to substances entering the water, damming and hydroelectric power plants. In general, the condition of the waters at the NAWA measuring sites tends to rate worse the higher their proportion of wastewater and the higher the proportion of settlement and agricultural land in their drainage area or the worse their ecomorphological condition.

⁷⁶ <https://modul-stufen-konzept.ch/>

Classification based on bioindicators ⁷⁷	Fish				Invertebrates				Aquatic plants			
	2012 ⁷⁸	2015	2019	2023	2012	2015	2019	2023	2012	2015	2019	2023
Very good	0	2	2	2	10	9	36	30	22	9	9	10
Good	22	139	13	15	44	45	44	52	17	26	22	24
Fair	41	40	36	43	38	42	16	17	31	39	56	33
Unsatisfactory	33	38	45	34	8	3	3	0	26	22	13	33
Poor	4	6	4	6	0			1	4	4		

Conclusion: Measured against the biological parameters of fish, invertebrates and aquatic plants, up to 83 per cent of the watercourses studied do not satisfactorily fulfil their role as habitats for animals and plants.

Phosphorus usually limits algae growth in **lakes**. The more phosphorus enters the lakes, the higher the oxygen consumption as dead organic matter decomposes, which in eutrophic lakes has led to a lack of oxygen. Since the 1980s, the concentration of phosphorus in Swiss lakes has decreased, alleviating the problem of eutrophication in most lakes. However, in drainage basins with high livestock density or in a large settlement area, individual lakes are still too heavily polluted with phosphorus.

Despite a reduced input of phosphorus, the numerical requirements of the WPO – for the oxygen content never to fall below 4 mg/l at any depth of the lake – were not reached or only with the help of artificial aeration or circulation. This is due partly to the large volume of organic matter stored in the sediments that continues to consume oxygen as it decomposes. Even in lakes that have recovered, oxygen levels in the deep water may fall again in the future, as some lakes have less intermixing due to climate change (rising water temperatures).

Conclusion: Around 46 per cent of the 26 largest Swiss lakes currently do not fulfil the numerical requirement of 4 mg O₂/l at all times, or only do so thanks to artificial ventilation. The input of phosphorus from settlements and/or agriculture must be further reduced.

Among the small lakes analysed by the cantons, only around two-thirds are in a near-natural state with regard to nutrients.⁷⁹ At lower altitudes, half of the small lakes are over-polluted and over-fertilised. The main cause is high inputs of nutrients from agriculture.

3.6.1.2 Groundwater

In Switzerland, around 80 per cent of the total drinking water is obtained from groundwater.⁸⁰ Although groundwater in Switzerland is generally available in sufficient quantity, groundwater resources are under pressure, especially in Central Switzerland. Settlement growth and conflicts of use restrict usability, and pollutants from agriculture impair groundwater quality.

The National Groundwater Monitoring Network NAQUA collects groundwater quality data representative of the country⁸¹ as a whole. NAQUA comprises a total of 545 measuring sites and has been run in close cooperation by the FOEN and specialist cantonal agencies since 2002. The quality of groundwater is evaluated on the basis of nitrate, plant protection product residues, PFAS and volatile halogenated hydrocarbons (VHCs) in the context of the WHO Protocol.

⁷⁷ <https://modul-stufen-konzept.ch/>

⁷⁸ Fewer sites were evaluated in 2012, hence the direct comparison with these data is not possible.

⁷⁹ Binderheim E. (2019) Wie steht es um die Schweizer Kleinseen? Erfassung des trophischen Zustands. Aqua & Gas 6: 60-65.

⁸⁰ Freiburghaus M. (2009): Wasserbedarf der Schweizer Wirtschaft. Aqua & Gas 12: 1001-1009.

⁸¹ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/publikationen-studien/publikationen-wasser/ergebnisse-grundwasserbeobachtung-schweiz-naqua.html>

In 2022, **nitrate** concentrations were above the 25 mg/l threshold value set in Annex 2 of the Waters Protection Ordinance at 15 per cent of the NAQUA measuring sites and thus at a similar level to 2020.

	Threshold value	# Measuring sites surveyed	# Measuring sites > threshold value	
Nitrate	25 mg/l	520	76	15%
PPP residues	0.1 µg/l	520	179	34%
PFAS	0.5 µg/l (PFOA) or 0.3 µg/l (PFHxS, PFOS)	519	1	0.2%
VHC	1 µg/l	518	15	3%

PPP residues were found in groundwater at just under 60 per cent of NAQUA measuring sites in 2022. The threshold value of 0.1 µg/l was exceeded at one in three measuring sites. In particular, the metabolites of the fungicide chlorothalonil, which were detected for the first time in 2017 as part of a NAQUA pilot study, pollute groundwater resources on a large scale in the Central Plateau and are now officially classified as relevant to drinking water.⁸² They exceed the threshold value of 0.1 µg/l at more than 30% of NAQUA measuring sites. Since the range of substances analysed in groundwater has greatly expanded in recent years, the data from this period cannot be compared directly. The long-term development can only be assessed specifically for particular active substances.

PFAS, with a chain length of at least 4 carbon atoms (>C₄), were detected at just under half of NAQUA measuring sites as part of a pilot study in 2021. The current threshold values for drinking water that are applicable for PFOA (C₈), PFHxS (C₆) and PFOS (C₈), have only been exceeded in rare cases. An important source for the contamination of groundwater with PFAS (>C₄) is the use of fire-extinguishing foams containing PFAS. These PFAS can also enter groundwater from landfill sites and via (industrial) wastewater, as well as through sewage sludge and construction materials. However, the ultrashort-chain PFAS, trifluoroacetic acid TFA (C₂) occurs in groundwater throughout Switzerland, as shown by a NAQUA pilot study in 2022 and 2023. Depending on the location, the concentrations vary widely, with significantly higher concentrations recorded in agricultural land, where TFA enters groundwater on a large scale through the use of plant protection products. Smaller concentrations of TFA enter groundwater through precipitation. TFA in precipitation primarily comes from gaseous refrigerants and propellants. In isolated cases, the discharge of industrial wastewater into rivers can lead to significant contamination of groundwater with TFA.

VHCs of 1 µg/l laid down in Annex 2 of the Waters Protection Ordinance was exceeded at three per cent of the NAQUA measuring sites in 2022. VHCs were detected in groundwater at 25 per cent of the measuring sites in total. The number of measuring sites where VHCs were present in elevated concentrations has not decreased further over the last few years.

Conclusion: The threshold values laid down in the Waters Protection Ordinance are being met at the vast majority of groundwater measuring sites run by the National Groundwater Monitoring Network NAQUA. Residues of fertilisers, pesticides, PFAS and other synthetic organic substances occur in groundwater particularly where the land is intensively farmed and in densely populated areas.

3.6.2 Water use

Questions concerning water consumption in Switzerland usually involve recourse to the SGWA's annual statistics on drinking water, which first appeared in the operating year 1900. In addition to public water suppliers, which served 939 million m³ in 2020,⁸³ business, industry and agriculture also obtain substantial volumes of water, as an SGWA study demonstrated for the first time in 1975.

⁸² www.bafu.admin.ch/chlorothalonil

⁸³ Freiburghaus M. (2024). W15001 Statistische Erhebungen der Wasserversorgungen in der Schweiz – Betriebsjahr 2023. SVGW.

The FOEN-backed survey by the SGWA in 2007/2008 demonstrates that around half of the volume of water required by the Swiss economy is covered by private supply and that private supply from industry remains at the same level as it was three decades ago, albeit with a major shift between sectors.⁸⁴

The following table⁸⁵ provides an overview of the estimated annual volume of water required for the various modes of use in Switzerland. Hydropower is not listed as a use and neither is the use of water flows in cooling at nuclear power plants. It makes no sense to quantify these uses due to their complexity (transitions between drainage basins, multiple uses in pumped-storage and run-of-river power stations, questions about whether the water is being used or consumed).

Use	Description	Total (km ³ /year)
Households	Households and small businesses	0.5
Business and industry	Business and industry	1.1
Agriculture	Total ⁸⁶	0.4
Public purposes	Incl. fountains	0.08
Waste		0.12
Total		2.2

The following table shows the percentage comparison of demand in relation to mean precipitation and total runoff, averaged over the year and throughout Switzerland, as an indicator of water availability.

Water balance ⁸⁷	km ³ /year	% of total demand
Precipitation	60	4
Runoff	40.5	6

Conclusion: The huge difference between the two clearly illustrates that, at national level, Switzerland deserves to be called the *water tower*. This will continue to be the case in future, regardless of any changes there may be in supply or demand. Despite this conclusion on the overall level of Switzerland, there are vulnerable areas at local and regional level which are temporarily affected by problems of scarcity,⁸⁸ see also Section 1.10.1.

⁸⁴ Freiburghaus M. (2009). Der Wasserbedarf der Schweizer Wirtschaft, Bezugsjahr 2006. SGWA

⁸⁵ Freiburghaus M. (2009): Wasserbedarf der Schweizer Wirtschaft. Aqua & Gas 12: 1001-1009.

⁸⁶ without use of rainwater

⁸⁷ Hubacher R., Schädler B. 2010: Wasserhaushalt grosser Einzugsgebiete im 20. Jahrhundert. Tafel 6.6. In: Weingartner R., Spreafico M. (Hrsg.): Hydrologischer Atlas der Schweiz (HADES). Bundesamt für Umwelt, Bern. Average for the period 1901-2000.

⁸⁸ Pfandl M. (2010) Geht der Schweiz das Wasser aus? Zwischen Wasserschloss und Wasserknappheitsszenarien. Geomatik Schweiz 108: 440-444. <http://doi.org/10.5169/seals-236708>

4. Water-related disease surveillance and response systems

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 ☐

The procedures and documents required for outbreak investigations are made available to the public authorities concerned. They apply to both the food and drinking water sectors, as well as to shower and bath water (legionella) since December 2024: <https://www.blv.admin.ch/alek>

5. Overall evaluation

5.1. Switzerland as *water tower*

Switzerland, Europe's *water tower*, is in the fortunate position of having adequate natural water resources. The demand for drinking water for the whole of Switzerland can be covered by approximately two per cent of its annual precipitation. With its 1,500 lakes, countless streams and rivers and its glaciers, Switzerland not only benefits from abundant valuable freshwater resources, but their quality can also be considered as good from a microbiological and chemical point of view. This is largely due to extensive water protection efforts.

Some 4,000 water suppliers ensure the availability of drinking water. Sophisticated water treatment processes are rarely required thanks to the high quality of untreated water resources. Disease outbreaks resulting from impurities in the drinking water have only occurred to date in isolated cases as a result of failure to comply with the legally prescribed protective measures. Around 750 large-scale and 3,500 small-scale sewage treatment plants and 90,000 km of sewage pipes ensure almost complete coverage for the removal and comprehensive treatment of wastewater.

5.2. Implementation of the Protocol on Water and Health in Switzerland

For decades, Switzerland has made great efforts to improve and preserve the water quality of its groundwater and surface waters. In 1953, the Swiss people approved the inclusion of a water protection article in the Federal Constitution. The first Waters Protection Act came into effect in 1957 on the basis of this article. This was followed in 1992 by a new, more comprehensive Waters Protection Act, which was designed to protect waters from all kinds of adverse influences. As a foodstuff, drinking water is subject to comprehensive food legislation.

Irrespective of the Protocol on Water and Health, the two federal authorities responsible for water protection and for drinking water, the FOEN and the FSVO, have always developed strategies and formulated objectives designed to implement the legal requirements and thus preserve and improve water quality. This is one reason why little attention has been paid in Switzerland to the Protocol on Water and Health until now. The targets in this report have thus far been specified largely independently of the Protocol.

Setting targets in relation to water is not new for Switzerland; targets and requirements are embedded in the legislation (for example in the Waters Protection Act). What is new for Switzerland about the strategy of the Protocol, however, is the nature of the programme, i.e. that the achievement of targets is linked to a specific time frame. The Protocol also promotes cooperation between the relevant departments and other stakeholders concerned with water. Finally, the Protocol provides the option of forcing targets to be set or of lending greater weight to certain targets.

Switzerland meets the key requirements of the Protocol on Water and Health thanks to the high quality of water resources and drinking water it has achieved as well as the existing infrastructure.

5.3. Data on water quality

There is as yet no central overview of the quality of drinking water in Switzerland; this data can only be found in the individual cantons and water suppliers (see also Section 2.1). The implementation of national evaluations (see Section 3.1) should rectify this situation. The available data show that the chemical and microbiological quality of drinking water in Switzerland is generally good.

In the area of groundwater and surface waters, the national monitoring carried out by the FOEN in cooperation with the cantonal agencies – the National Groundwater Monitoring Network NAQUA and the National Surface Water Quality Monitoring Network NAWA – provides nationally representative data on the quality of water resources. The data from these two monitoring programmes have been managed by the FOEN in a central database since 2013. Other environmental data are held in various cantonal offices. Micropollutants represent a major challenge and a potentially important problem, especially in the densely populated Central Plateau with its intensive agricultural use.

5.4. Raising public awareness

The public has hitherto been informed about the Protocol mainly via the FSVO and corresponding media releases. Further information on drinking and bathing water can be found on the internet.⁸⁹ Furthermore, all drinking water suppliers are obliged to provide information about the quality of the supplied drinking water at least once a year. Many suppliers use an internet platform set up and provided free of charge by the SGWA.⁹⁰ Important information on drinking and bathing water is also made available to the public by the cantonal laboratories, e.g. in the form of their annual reports or via the internet. In addition, a national overview of the quality of bathing waters which are relevant from a European perspective is published.⁹¹

The public can obtain comprehensive information on water protection (surface water and groundwater) from the FOEN website,⁹² the Swiss waters report⁹³ and the environmental⁹⁴ report. More detailed information and analyses on groundwater quality are published in the NAQUA report,⁹⁵ which is a key element of reporting on groundwater resources. At cantonal level, information is provided by the environmental protection departments via corresponding media sources. Overall, therefore, the public has numerous information channels at its disposal for obtaining an overview of the wide variety of issues connected with water.

5.5. Research and education

The state of research in Switzerland in respect of water is highly varied and there are a wide range of educational opportunities at basic and advanced levels.

Eawag⁹⁶ is a world-leading water research institute. The combination of natural and social scientists and engineers permits a wide range of water research, across the continuum from relatively undisturbed aquatic ecosystems to fully engineered wastewater management systems. To ensure that new findings and concepts from research are put into practice as quickly as possible, Eawag also fosters close contacts with experts from industry, the administration and professional associations.

Various universities in Switzerland offer courses that teach the basics of water management and urban water management.

The key to the high level attained by water supply and disposal facilities in Switzerland is the thorough training given to operatives (Switzerland's dual vocational training system). The industry associations SGWA and VSA also offer a wide range of vocational training, encompassing plant management, pipe construction, installation supervision, quality assurance and occupational safety. Vocational training is supplemented with technical meetings to discuss current topics in the water sector.

The technical journal Aqua&Gas, which is also the publication medium of the SGWA and the VSA, is widely considered to be the leading journal in the field of drinking water supply, municipal water management and watercourse quality.

⁸⁹ <https://www.blv.admin.ch/trinkwasser>

⁹⁰ www.trinkwasser.ch

⁹¹ <https://www.bafu.admin.ch/bafu/de/home/themen/wasser/fachinformationen/zustand-der-gewaesser/zustand-der-fliessgewaesser/wasserqualitaet-der-fliessgewaesser/badegewaesserqualitaet.html>

⁹² <https://www.bafu.admin.ch/bafu/en/home/topics/water/info-specialists/state-of-waterbodies.html>

⁹³ BAFU (2022) Gewässer in der Schweiz. Zustand und Massnahmen. <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/gewaesserbericht.html>

⁹⁴ <https://www.bafu.admin.ch/bafu/en/home/documentation/reports.html>

⁹⁵ BAFU (2019) Zustand und Entwicklung Grundwasser Schweiz. Ergebnisse der Nationalen Grundwasserbeobachtung NAQUA. <https://www.bafu.admin.ch/bafu/en/home/topics/water/water--publications/publications-water/ergebnisse-grundwasserbeobachtung-schweiz-naqua.html>

⁹⁶ <https://www.eawag.ch/en/>

5.6. National cooperation

The table below provides an overview of the various working groups which involve the national and cantonal authorities in Switzerland and the water suppliers:

Organisation, working group	Members (coordination)	Purpose
Strategic Advisory Group on the evaluation of waters SBGB; Steering Committee on the evaluation of waters LGB	FOEN, EAWAG, cantonal authorities	Strategic and technical support for analysing waters as a basis for enforcement, planning measures and environmental monitoring (with a focus on chemistry, biology and morphology)
Working group on NAQUA parameters	FOEN, cantons (KJU, SACCh), FSVO, FOAG, FOPH, SGWA, research, industry	Advising the National Groundwater Quality Monitoring Network (NAQUA) on the priorities and focus of issues relating to groundwater quality
Working group on nitrates/PPPs	FOAG, FOEN, FSVO, KJU, KOLAS	Supporting and advising projects in accordance with Article 62a WPA on agricultural measures to remediate contaminated waters; further developing the basic principles
Drinking water and bathing water commission of the Swiss Association of Cantonal Chemists SACCh	SACCh, FSVO	Uniform implementation of legislation on drinking water and bathing water
Principal water commission of the SGWA (Swiss Gas and Water Industry Association)	SGWA, FOEN, FSVO, SACCh	Management of drinking water, decisions concerning water distribution
ISDC – water, Interdepartmental Sustainable Development Committee on Water	SDC, ⁹⁷ FOAG, FOEN, FSVO, SECO (coordination rotates yearly)	Coordination of international activities, joint statements
Drinking water division, guaranteeing water supply in situations of shortage	FONES, ⁹⁸ FOEN, FSVO, SGWA	Coordination of measures in situations where there are problems with the national supply

5.7. International cooperation

5.7.1 Protocol on Water and Health and sustainability indicators

Switzerland was re-elected as a Member of the Bureau of the UNECE/WHO Europe Protocol on Water and Health at the 6th Session of the Meeting of the Parties to the Protocol (Geneva, Switzerland, 16-18 November 2022). Thus, Switzerland has participated actively in the work of the Bureau for the past three years.

Furthermore, Switzerland is also one of the Lead Parties of Programme Area No. 1: Improving Governance for Water and Health through Setting Targets, Implementing Measures and Reporting. The objectives of Programme Area No. 1 are to reinforce the implementation of the core provisions of the Protocol as regards target

⁹⁷ Directorate for Development and Cooperation

⁹⁸ Federal Office for National Economic Supply

setting and reporting under Articles 6 and 7 and support related action at national level. In addition, Switzerland has fully exercised the responsibility of chairing the Task Force on Target Setting and Reporting under the Protocol in the Programme of Work for 2023-2025.

The SDC actively engages with specific elements of the Protocol within the framework of the Sustainable Development Goals (SDGs). In alignment with Goal 6, it is dedicated to ensuring availability and sustainable management of water and sanitation for all by 2030.⁹⁹

5.7.2 International commissions

In the area of water protection, Switzerland has entered into various obligations at international level, specifically in connection with the following six international water protection commissions: the International Commission for the Protection of the Rhine (ICPR),¹⁰⁰ the International Commission for the Protection of Lake Constance (IGKB),¹⁰¹ the Association of Waterworks in the Lake Constance/River Rhine Region (AWBR),¹⁰² the International Commission for the Protection of the Waters of Lake Geneva (CIPEL),¹⁰³ the International Commission for the Protection of Italian-Swiss Waters (CIPAIS)¹⁰⁴ and the Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPAR).¹⁰⁵

Led by the FOEN, Switzerland is actively involved in protecting these transboundary water bodies. As a result, e.g. thanks to the great efforts in Swiss water protection over the past few decades, pollution of the Rhine with nutrients and other pollutants has been substantially reduced. For example, the discharge of toxic heavy metals such as mercury, cadmium and lead has declined by over 95 per cent in the last 20 years. All of the targets set by the ICPR for the quality of water in Basel are currently met. Nevertheless, the water quality will continue to be monitored in order to ensure, for example, that in the event of an incident in which chemicals could potentially enter the Rhine, the downstream areas are informed quickly and comprehensively.

⁹⁹ <https://www.eda.admin.ch/dam/deza/en/documents/themen/wasser/gpw-strategy-final-EN.pdf>

¹⁰⁰ www.iksr.org/en/

¹⁰¹ www.igkb.org

¹⁰² <https://www.awbr.org>

¹⁰³ www.cipel.org/en/

¹⁰⁴ www.cipais.org

¹⁰⁵ www.ospar.org

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

6.1. 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.

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

The situation of schools and health care facilities have not been monitored so far in Switzerland.

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).

6.2. 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.

The legislation on Foodstuffs and Utility articles (see Section 2.7).

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

Percentage of population	Current value (specify year)
Total	100% (2021), see Section 3.4

6.3. 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).

The Swiss situation has been assessed in Sections 3.4 Access to drinking water and 3.5 Connection to sanitation system. Specific targets are also described under Sections 2.3 and 2.4.

7. Information on the persons involved in the report

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