

Water, sanitation and hygiene in schools

Key insights from the third
subregional workshop

11–13 December 2023, Astana, Kazakhstan

1. Background and introduction

On 11–13 December 2023, WHO/Europe hosted the third subregional workshop on water, sanitation and hygiene (WASH) in schools. The event took place in Astana, Kazakhstan, bringing together representatives of health and educational authorities from Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, as well as participants from United Nations Children's Fund (UNICEF) country offices in central Asia and the Schools for Health in Europe (SHE) Network, and experts from Croatia, Lithuania and Serbia.

The workshop was organized and funded under the auspices of the Protocol on Water and Health, a multilateral legal instrument jointly supported by the United Nations Economic Commission for Europe (UNECE) and WHO/Europe (Box 1).

The purpose of the workshop was to offer an overview of the most recent health and education considerations for ensuring adequate WASH in schools. It served as a platform for discussing and exchanging information on regional priorities for action, and for strategizing effective implementation of improvements at both the national and local levels, including consideration of aspects of WASH related to preparedness and response to health emergencies, based on the lessons learned from the coronavirus disease (COVID-19) pandemic. Recognizing the interdisciplinary nature of WASH interventions, the workshop aimed to promote leadership and cooperation between the education and health

sectors, and to encourage collaborative action to advance WASH in schools.

Thanks to the enthusiastic participation of pupils during the opening of the workshop, participants gained valuable insights into first-hand experiences and challenges associated with using WASH facilities in schools. They also had the opportunity to discover pupils' perspectives and ideas about how WASH conditions in schools could be improved to meet their needs.

Through interactive sessions and group work, participants shared country-specific examples of initiatives and efforts to ensure provision of consumables for adequate WASH in schools, including for menstrual hygiene management (MHM) – an emerging priority in central Asian countries. They also provided updates and valuable insights into the status of national policies and standards for WASH in schools, and discussed country practices

Box 1.

The Protocol on Water and Health

The Protocol on Water and Health is a multilateral legal instrument that supports advancing the WASH agenda in the WHO European Region, including meeting the commitments of the 2030 Agenda for Sustainable Development and the Declaration of the Seventh Ministerial Conference on Environment and Health.

An ambitious programme of work for 2023–2025 under the Protocol aims to address key regional challenges and priorities in the WASH domain, including advancing WASH in schools.

For more information about the Protocol on Water and Health, see the list of useful tools and resources in [section 8](#).



for effective surveillance of WASH conditions and pupils' WASH-related behaviours – such as use of toilets, handwashing with soap and regular hydration.

Presentations were given on global indicators and tools for monitoring and reporting on national progress towards achieving Sustainable Development Goal (SDG) targets on WASH in schools, and on successful approaches to conducting pupil perception surveys and engaging pupils in monitoring and evaluation of WASH conditions. Participants discussed a set of concrete steps outlined during the workshop to strengthen national target-setting and progressive action planning to achieve universal access to WASH in schools, including by using the mechanisms offered by the Protocol on Water and Health. They also exchanged views about success factors and barriers to regular operation and maintenance, and to sustainable financing. During the workshop, a number of common challenges across countries were identified, such as difficulties in justifying investment in WASH in schools, and the need to establish norms for calculating the required WASH expenditure per student.

Participants were invited to share information and best practices from their work on WASH in schools in their national contexts, as well as challenges faced and ideas on how to address them. Several case studies were presented during the course of the workshop; a selection of these are outlined in greater detail in the following sections of this report to give an overview of the key topics discussed.

A representative from a media outlet showcased a successful case study in which the media supported government agencies to enhance understanding of the magnitude of the issue, demonstrating how awareness-raising campaigns can help enhance the

user-friendliness, comfort and cleanliness of school toilets ([section 2](#)). Owing to the high vulnerability of central Asian countries to climate change, a case study from Uzbekistan emphasized the need to prioritize inclusive, climate-resilient and environmentally sustainable WASH infrastructure in schools as crucial for adaptation and achieving advanced levels of service provision ([section 3](#)). Participants were particularly interested in stepwise improvements and successful approaches that could enable them to work progressively towards compliance with national WASH standards, such as the Three Star Approach ([section 4](#)). Other case studies identified priorities for action including ensuring access to adequate WASH services in schools as a fundamental pillar in promoting healthy nutrition and eating habits ([section 5](#)), and sustaining momentum on hand hygiene

([section 6](#)). The workshop also included a session on engaging multiple stakeholders and strengthening access to WASH, using the health-promoting schools framework and a systems approach ([section 7](#)).

Participants gave positive feedback on the workshop, noting that they particularly valued the exchange of experiences among countries, as it provided a unique opportunity for mutual learning and collaboration. Continued knowledge-sharing and capacity-strengthening will be instrumental in further advancing WASH in schools and fostering healthier learning environments for children across central Asian countries.



2. From awareness-raising to national standards for WASH in schools: a case study from Kazakhstan

Awareness-raising initiatives and campaigns are driving forces to improve WASH in schools by fostering behaviour change, promoting good hygiene practices and highlighting the importance of adequate WASH infrastructure, while also calling for necessary improvements.

“We want toilets in Kazakhstani schools to be accessible, comfortable, safe and meet all sanitary and hygienic standards.”

One of the messages of the TOILE awareness-raising campaign

TOILE is an informational and awareness-raising campaign about the quality of school toilets that was implemented between June and December 2022 by Peremena.media, an online media project focusing on education and upbringing in Kazakhstan. The campaign was designed to motivate pupils and school communities across Kazakhstan to talk openly about toilets in their schools, whether they liked them and what kind of problems they had faced in

accessing school toilets when needed. Pupils were also encouraged to take photos of toilets and share them anonymously on a social media platform, while being offered an opportunity to vote for the worst toilet.

Evidence generated through the campaign and continued advocacy gained significant popularity, drawing public attention to the issues related to WASH in schools. As a result of this bottom-up awareness-raising and demand stimulated by the social media campaign, several national follow-up actions were taken. For instance, a technical group on WASH in schools was established in partnership with the WHO Country Office in Kazakhstan, and the Kazakh Government and Parliament, including representatives of the social media campaign and other important stakeholders.

The technical group worked to develop national standards on WASH in schools that were officially adopted in 2023, aligning Kazakhstan with international standards as of 1 January 2024. Implementing national standards for WASH in schools will lead to forthcoming reforms in school construction and maintenance, with a specific focus on gender equality and water management.



3. Climate-resilient WASH in schools and advanced services: a case study from Uzbekistan

The effects of climate change are making countries across central Asia more susceptible to extreme weather events, such as droughts, heatwaves, heavy rainfall and floods. Climate change also affects the provision of adequate WASH in schools. For instance, prolonged periods of drought can lead to water scarcity in schools, disrupting essential hygiene practices such as handwashing, and compromising the functionality of sanitation facilities.

In Uzbekistan, the Ministry of Preschool and School Education, the Ministry of Health and the Scientific Research Institute of the Ministry of Construction, supported by the UNICEF Country Office, have set up a multisectoral technical working group for the revision of standards, sanitary norms and procedures for WASH in schools and preschool facilities, including for construction and rehabilitation of school buildings. Among other key elements, the revised standards will address climate-resilient and disability-inclusive WASH infrastructure, and menstrual hygiene and health. To accelerate implementation, the standards will be accompanied by national guidelines for WASH in schools. To date, improvements to climate-resilient WASH facilities have been facilitated in 25 schools across six districts in the Republic of Karakalpakstan, Uzbekistan, in areas that are predominantly affected by environmental consequences resulting from the drying up of the Aral Sea. Other initiatives include use of solar panels, installation of

reverse osmosis systems for purifying underground water, three-step septic tanks for sewage water, and creation of water reservoirs in schools in areas with limited water supply.

The Uzbek case study provides a useful example of establishing a clear set of requirements for climate-resilient and inclusive WASH facilities and services for all. Once the basic level of service has been achieved across all WASH domains for all schoolchildren in a country, focus should transition to progressive action planning to achieve advanced levels of service provision. Such actions include promoting quality and enhancing aspects such as usability and user-friendliness of facilities, while also ensuring climate resilience and environmental sustainability. The overarching objective is to maximize the benefits of WASH in schools for pupils.



Muhammad Usman

Table 1, created for and discussed during the workshop, offers examples of targets that governments can set to achieve advanced service levels gradually, including considerations related to climate change. Adequate financing of WASH in schools will be essential to guarantee the sustainability of services in the long term.



Table 1. Examples of additional criteria for advanced WASH service provision in schools

Criterion	Water	Sanitation	Hygiene
Quality	The quality of drinking-water supplied meets national standard and/or WHO guidelines for drinking-water quality.	A cleaning and maintenance routine is in operation, ensuring that clean, hygienic and usable toilets are available at all times.	Schools provide private places to dispose of used menstrual hygiene materials safely, and to wash hands, private parts and clothes. A curriculum for hygiene education includes handwashing practices, MHM, correct use of toilet facilities and regular voiding.
Use of facilities and user-friendliness	Schools have a rule about free access to water, allowing children to drink when needed and at their desks.	School rules for toilet visits are adapted to children's physical and developmental needs. School toilets are equipped with toilet paper inside toilet facilities at all times.	Schools actively teach hand hygiene. Schools establish rules and daily routines for hand hygiene (e.g. prior to school lunch, after use of toilet).
Climate resilience and environmental sustainability	Schools have plans for heat protection and promotion of hydration in case of heatwaves.	Schools use technologies with reduced water use for toilets.	Schools implement educational programmes designed to encourage responsible water usage for handwashing, alongside installation of water reservoirs to ensure the continuity of essential hygiene practices in times of water scarcity.






4. The Three Star Approach to foster school-level action and improvements: a case study from Tajikistan

The Three Star Approach (TSA) for WASH in schools was developed to improve the effectiveness of hygiene behaviour-change programmes for children.¹ The TSA promotes a system of cost-effective hygiene measures in schools to which additional services can be added over time. The approach recommends starting with simple and affordable hygiene practices (one star) and implementing subsequent improvements in a stepwise fashion, working progressively towards compliance with the national WASH standards (three stars). The guiding principle for interventions at all stages is “keep it simple, scalable and sustainable”, enabling the approach to be expanded sustainably countrywide at low cost.

UNICEF Tajikistan, in partnership with the Tajik Ministry of Education and Science, introduced a WASH in schools TSA programme in July 2021 to promote safe learning environments. The programme focused on 45 schools across Tajikistan where WASH infrastructure had been rehabilitated with support from the UNICEF Global WASH Thematic Fund. It included behaviour-change activities in schools to raise awareness about good hygiene practices (Fig. 1), to improve awareness of the importance of timely and regular maintenance of WASH infrastructure, and to identify and manage finances to keep facilities functional. Emphasis was placed on ensuring inclusive and equitable access to WASH in schools, with particular attention given to participation and empowerment of children and young people, alongside sensitization efforts targeting the school administration and parents. Recognition and reward mechanisms were used to incentivize

and acknowledge contributions of schools towards achieving programme objectives.

Schools were categorized as follows:

-  one star – pupils perform daily group hand-washing and daily group cleaning of classrooms and the school compound;
-  two stars – pupils wash their hands with soap after going to the toilet, and the school supports MHM, and has improved the toilets and wastewater treatment;
-  three stars – the school has upgraded facilities and systems in line with national standards on WASH in schools.

By 2022, the programme had achieved significant success. Only 5 schools remained at one star, compared to 28 schools before the intervention; 37 schools had achieved two stars, compared to 17 before the intervention, and 3 schools had managed to update WASH facilities to meet national standards and thus attained three stars, compared to 0 before the intervention. In addition, an increase in pupils' educational attainment and awareness of menstrual health and puberty was observed, as well as an effective and low-cost transfer of skills among schools participating in the programme as a result of school-to-school exchanges.

¹ Field guide: the three star approach for WASH in schools. New York: United Nations Children's Fund; 2013 (<https://www.unicef.org/documents/three-star-approach-wash-schools-field-guide>, accessed 7 May 2024).

Some of the challenges included a lack of capacity of school staff to engage children in the hygiene agenda to support habit formation and development, limited financial resources to support a safe learning environment, lack of access to and functionality of WASH facilities, and a lack of reliable data and information on WASH in schools.

The Ministry of Education and Science's role in overseeing the implementation and ensuring the continuation and scale-up of the TSA was instrumental. Next steps include upscaling of WASH behaviour-change communication plans in schools as part of efforts to implement the TSA across Tajikistan.

Fig. 1. Examples of hygiene communications materials developed under the programme



Source: posters created by the UNICEF Country Office in Tajikistan, with financial support from the European Union, and in partnership with the Ministry of Education and Science of Tajikistan, 2021.

5. Testing materials for a communication campaign on reducing consumption of sugar-sweetened beverages in school settings: a case study from Kyrgyzstan and Tajikistan

Sugar-sweetened beverage (SSB) consumption among children is one of the most common unhealthy nutrition habits worldwide. It is associated with increased risk of overweight and obesity, and risk of dental caries and other noncommunicable diseases (NCDs).² According to the WHO European Childhood Obesity Surveillance Initiative, in 2018–2020, 29% of children aged 7–9 years were living with overweight or obesity. In addition, around 20% of children consumed SSBs on more than three days a week, which can compromise their health and well-being.³



Overall, schools are environments where children spend a significant portion of their time. They can thus play an important role in enabling healthy behaviours – specifically healthy eating habits – along with effectively addressing the issue of SSB consumption. At the same time, access to adequate WASH services – specifically to safe drinking-water – in schools is a fundamental pillar of promoting healthy eating habits and healthy behaviours, serving as a critical mechanism for preventing NCDs. For example, provision of appropriate drinking-water infrastructure – such as water fountains in school canteens – alongside promotion of regular hydration facilitates the adoption of healthy behaviours, such as opting for water over SSBs.

Use of communication campaigns is a common approach to improve health. However, there is

limited evidence about which messages are likely to be effective and acceptable, including to caregivers to reduce SSB consumption among their children. To support the development of an effective communication campaign tailored to the central Asian context targeting primary caregivers, a research project was initiated in Kyrgyzstan and Tajikistan to test communication messages to reduce consumption of SSBs among school-aged children (7–11 years old). The project aimed to answer the following two main questions.

- Do messages increase caregivers' intention to reduce their children's consumption of SSBs?
- Which version of the messages is the most appropriate in terms of clarity, acceptability and usefulness, while avoiding unintended reactions?

A set of messages was developed, based on an evidence review of communication-based interventions to reduce children's SSB consumption. Each message included introductory text about the negative effects on health from SSB consumption, and offered safe drinking-water as the best alternative. Focus-group discussions with caregivers in Kyrgyzstan and Tajikistan were held to tailor and adapt the messages to different cultural contexts, including natural additions to safe drinking-water (such as herbs and fruit) to make water more attractive to children. Finally, the three most promising messages were chosen, and a randomized controlled trial was conducted to evaluate their reception. This enrolled a minimum of 1000 primary caregivers per country, recruited through schools. The analysed results will be available in 2024, and are intended for use in targeted activities.

² Guideline: sugars intake for adults and children. Geneva: World Health Organization; 2015 (<https://iris.who.int/handle/10665/149782>, accessed 7 May 2024).

³ WHO European Childhood Obesity Surveillance Initiative (COSI) : report on the fifth round of data collection, 2018–2020. Copenhagen: WHO Regional Office for Europe; 2022 (<https://iris.who.int/handle/10665/363950>, accessed 7 May 2024).

6. Promoting and sustaining universal hand hygiene: the Hand Hygiene for All initiative and acceleration framework tool

The workshop participants highlighted that hand hygiene emerged as a critical focus area for preventing and controlling the spread of the disease within school environments during the COVID-19 pandemic. However, there was shared concern that while hand hygiene received significant attention during the crisis, there is a risk that it may be perceived as a temporary measure. Participants also emphasized that promotion of good hand hygiene practices among schoolchildren and adequate investment in ensuring a consistent supply of hygiene consumables like soap in schools may no longer receive the attention and prioritization they deserve. Following the pandemic, funding for hygiene has decreased significantly in almost all countries. WHO and UNICEF developed an initiative to continue to promote hand hygiene as an essential element of WASH in schools (Box 2).

To promote and sustain universal hand hygiene, Tajikistan developed and adopted the first National Roadmap on Hand Hygiene for All in 2023, recognizing the importance of provision of WASH facilities in schools and other types of educational settings – such as day care centres, universities and colleges – as a fundamental prerequisite for learning.⁴ The Roadmap outlines a strategic approach to hand hygiene in educational settings. This includes, among others, enhancing the Ministry of Education's leadership role in ensuring hand hygiene for all students, implementing evidence-based behaviour-change strategies to promote hand hygiene, integrating hand hygiene into all levels of education curricula to consistently reinforce its importance to children, ensuring accessible and user-friendly handwashing stations, and allocating sufficient resources for proper functioning and maintenance of hand hygiene facilities. Special emphasis is given to strengthening monitoring systems to support informed decision-making.

Box 2. The Hand Hygiene for All initiative

The WHO and UNICEF-led Hand Hygiene for All (HH4A) initiative aims to implement WHO's global recommendations on hand hygiene to prevent and control the COVID-19 pandemic and work to ensure lasting infrastructure and behaviour. This initiative calls for countries to set out comprehensive roadmaps to ensure that hand hygiene is a mainstay beyond the pandemic, as part of infection prevention and control and WASH efforts. It also proposes a framework for coordination and collaboration among global and regional partners, with the primary aim of supporting and growing country-led efforts and investments.

The hand hygiene acceleration framework tool (Fig. 2) developed by WHO, UNICEF and WaterAid as part of the HH4A initiative provides support for governments to track the process of developing and implementing a plan of action for hand hygiene improvement, and to assess the quality of that plan. It helps stakeholders to identify barriers, opportunities and priority actions for accelerating progress towards universal hand hygiene, and drives investment to these.

Fig. 2. Hand hygiene acceleration framework tool



Source: WHO, UNICEF. Hand hygiene acceleration framework tool. Geneva: World Health Organization; 2023 (<https://iris.who.int/handle/10665/366967>, accessed 7 May 2024).

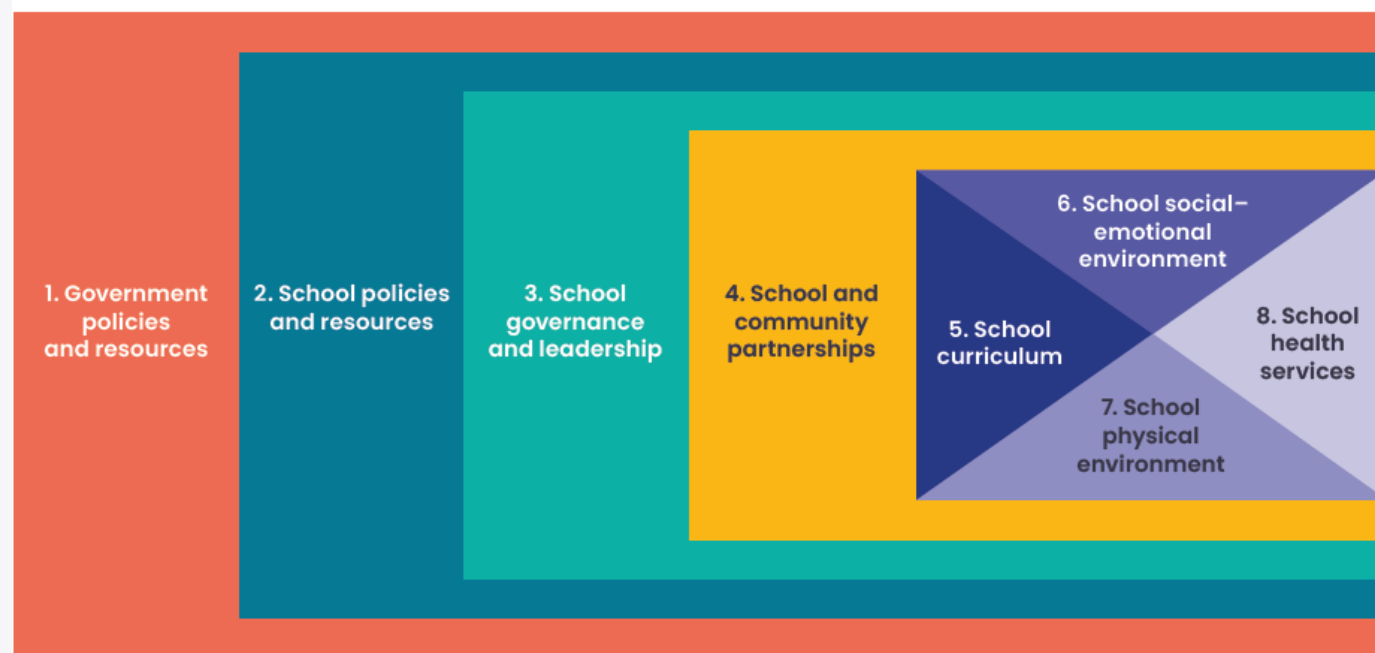
7. Strengthening access to WASH using the health-promoting schools framework and a systems approach

The health-promoting schools (HPS) framework is a holistic approach to promoting health, well-being and educational attainment in schools created by WHO and supported by UNICEF and the United Nations Educational, Scientific and Cultural Organization. It reflects a whole-school approach, comprising healthy school policies, curricula, physical and psychosocial environments, communities, and health services. The many barriers to appropriate WASH in schools require action in several systems and sectors, including infrastructure, environment, health and education. Bringing these systems together is the essence of the HPS framework. A multisystem approach ensures that policies, mechanisms and resources for health and well-being are sustainably promoted in all aspects of school life.

The HPS framework includes a set of global standards to be used by stakeholders involved in identifying, planning, funding, implementing, monitoring and evaluating any whole-school approach (even if the term “health-promoting schools” is not used) at local, subnational, national and global levels, in primary and secondary schooling and across public and private educational institutions (Fig. 3). The HPS framework facilitates improvements based on human capacity-building, ensuring that schools with inadequate infrastructure and material conditions are not overlooked and left behind, and preventing the exacerbation of disparities between educational institutions.



Fig. 3. The eight global standards of the HPS framework

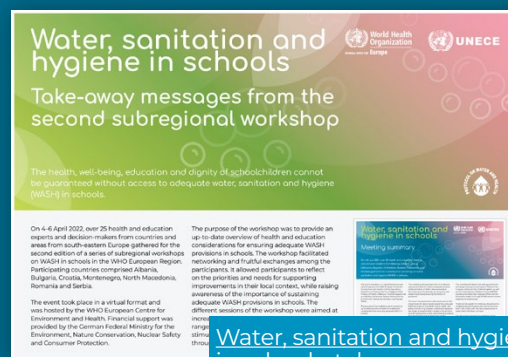


Source: WHO, UNICEF. How school systems can improve health and well-being: topic brief: water, sanitation and hygiene (WASH). Copenhagen: WHO Regional Office for Europe; 2023 (<https://iris.who.int/handle/10665/367423>, accessed 7 May 2024).

Numerous actions, activities and initiatives informed by these global standards can be conducted to strengthen access to and use of WASH facilities. Examples include:

- developing national policies for implementing the HPS framework and improving WASH in schools, ensuring alignment between the ministry of education and other relevant sectors;
- developing national WASH guidelines that set minimum standards for WASH in schools;
- developing school policies on personal hygiene, food preparation, MHM, infection prevention and control, and environmental hygiene;
- recognizing and promoting WASH as integral to health and education;
- ensuring that WASH and MHM are integrated into national school health literacy frameworks and educational materials for pupils;
- creating WASH awards for WASH-friendly schools and community groups;
- ensuring that teachers are comfortable and confident in delivering educational messages from the comprehensive national health and nutrition curriculum, including messaging on personal hygiene and MHM;
- committing to “zero tolerance” of bullying and discrimination, and emphasizing dignity and safety of school toilets.

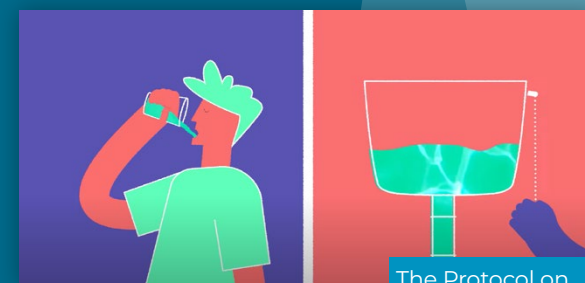
8. Useful tools and resources



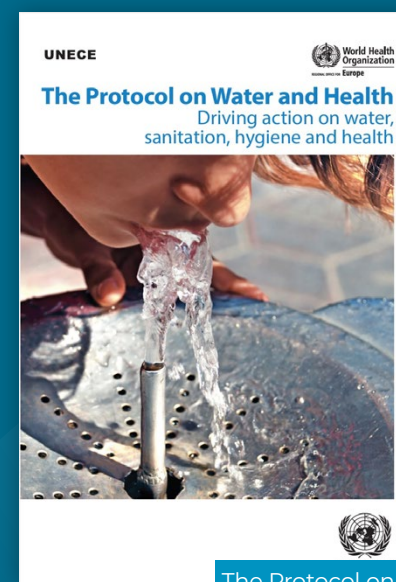
[Water, sanitation and hygiene in schools: take-away messages from the second subregional workshop.](#)



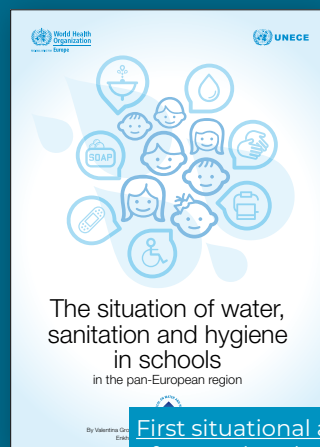
[Summary report of the first subregional workshop](#)



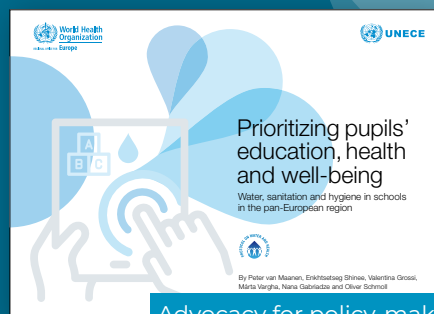
[The Protocol on Water and Health \[video\].](#)



[The Protocol on Water and Health: driving action on water, sanitation, hygiene and health.](#)



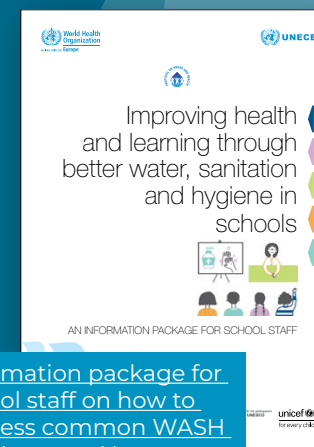
First situational analysis of WASH in schools in the pan-European region



Advocacy for policy-makers of all involved sectors to prioritize WASH in schools



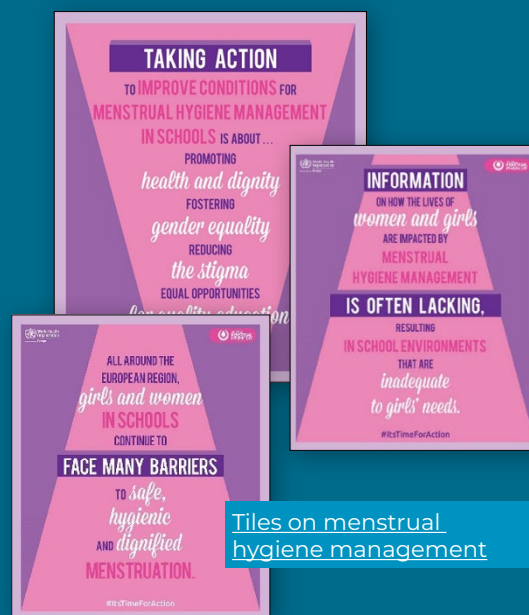
Evidence-based and ready-to-use instruments to support public health surveillance



Information package for school staff on how to address common WASH problems and improve provisions



Poster series on WASH in schools for pupils



Tiles on menstrual hygiene management



How school systems can improve health and well-being: topic brief: water, sanitation and hygiene (WASH).



Testimonies from the Region on the benefits of addressing menstrual health at school