



NHSMUN

National High School Model United Nations

UNESCO BACKGROUND GUIDE | 53

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A Note on the NHSMUN Difference

Esteemed Faculty and Delegates,

Welcome to NHSMUN 2027! We are Armen Bagdassarian and Sabeeh Mirza, and we are elated to serve as this year's Secretaries-General. Thank you for choosing to attend NHSMUN, the world's largest and most diverse high school Model United Nations conference. As a space for collaboration, consensus, and compromise, NHSMUN strives to transform today's brightest thinkers, speakers, and collaborators into tomorrow's leaders. We believe that an emphasis on education through simulation is paramount to the Model UN experience.

Realism and Accuracy: Although a perfect simulation of the UN is never possible, we believe that one of the core educational responsibilities of MUN conferences is to educate students about how the UN System works. We strive to invite real UN, NGO, and field experts into each committee through our committee speakers program. Moreover, we arrange meetings between students and the actual UN Permanent Mission of the country they are representing. These exclusive resources are only available due to IMUNA's formal association with the United Nations Department of Global Communications and consultative status with the Economic and Social Council. No other conference goes so far to deeply immerse students into the UN System.

Educational Emphasis: At the heart of NHSMUN lies education and compromise. Part of what makes NHSMUN special is its diverse delegate base. As such, when NHSMUN distributes awards, we strongly de-emphasize their importance in comparison to the educational value of Model UN. In particular, our daises look for and promote constructive leadership and diplomacy that strive toward consensus, as real ambassadors do in the United Nations.

Research and a Dedicated Staff: Our staffers care deeply about delegates' experiences and what they take away from their time at NHSMUN. Our Directors spend over six months preparing Background Guides, in addition to Update Briefs written to reflect the rapidly changing nature of the topics to be discussed. Our staffers are trained rigorously to provide the best conference experience possible. Our daises provide thoughtful comments on submitted position papers. Our staff aims to tailor the committee experience to delegates' reflections and research, but also to facilitate an environment where all delegates' thoughts can be heard.

Empowering Participation: The UN relies on the voices of all of its member states to create resolutions. This is our philosophy at NHSMUN too. Our Rules of Procedure and our staff focus on making every voice in the committee heard, regardless of country assignment or skill level. Additionally, unlike many other conferences, we also emphasize delegate participation after the conference. Delegates spend countless hours researching topics critical to the UN and broader international sphere.

Delegates, it is our sincerest hope that your time at NHSMUN will be thought-provoking and stimulating. NHSMUN is an incredible time to learn, grow, and embrace new opportunities. We look forward to seeing you work both as students and global citizens at the conference.

Best,

Armen Bagdassarian
Secretary-General

Sabeeh Mirza
Secretary-General

Position Paper Requirements

Delegate research and preparation is a critical element of attending NHSMUN and enjoying the debate experience. We have provided this Background Guide to introduce the topics that will be discussed in your committee. We encourage and expect each of you to critically explore the selected topics and be able to identify and analyze their intricacies upon arrival to the conference.

The task of preparing for the conference can be challenging. To assist delegates, we have updated our [Beginner Delegate Guide](#) and [Advanced Delegate Guide](#). These guides contain more detailed instructions on how to prepare a position paper and excellent sources that delegates can use for research. Use these resources to your advantage. They can help transform a sometimes overwhelming task into what it should be: an engaging, interesting, and rewarding experience.

To accurately represent a country, delegates must be able to articulate its policies. Accordingly, NHSMUN requires each delegation (the one or two delegates representing a country in a committee) to write a position paper for each topic on the committee's agenda. More information about how to write and format position papers can be found in the [Research Guide](#). To summarize, position papers should be structured into three sections.

I: Topic Background – This section should describe the history of the topic as it would be described by the delegate's country. Delegates do not need to give an exhaustive account of the topic, but rather focus on the details that are most important to the delegation's policy and proposed solutions.

II: Country Policy – This section should discuss the delegation's policy regarding the topic. Each paper should state the policy in plain terms and include the relevant statements, statistics, and research that support the effectiveness of the policy. Comparisons with other global issues are also appropriate here.

III. Proposed Solutions – This section should detail the delegation's proposed solutions to address the topic. Descriptions of each solution should be thorough. Each idea should clearly connect to the specific problem it aims to solve and identify potential obstacles to implementation and how they can be avoided. The solution should be a natural extension of the country's policy.

Each topic's position paper should be **no more than 10 pages long** double-spaced with standard margins and 12 point font size. This is a maximum; **3–5 pages per topic is often a suitable length**. The paper must be written from the perspective of your assigned country and should articulate the policies you will espouse at the conference.

Each delegation is responsible for submitting position papers on or before **February 26, 2027**. If a delegate wishes to receive detailed feedback from the committee's dais, their position paper must be submitted on or before **February 5, 2027**. The papers received by this earlier deadline will be reviewed by the committee dais and returned before February 26. Instructions on how to submit position papers will be shared directly with faculty advisors.

Submission instructions for position papers will be sent to faculty advisers via email. If delegations are unable to submit their position papers on time, please contact us at nhsmun@imuna.org.

Delegations that do not submit position papers will be ineligible for awards.

Committee History

The Constitution of the United Nations Educational, Scientific and Cultural Organization (UNESCO) was signed on November 16, 1945, and entered into force in 1946.¹ UNESCO's early work included rebuilding schools, libraries, and cultural institutions destroyed during World War II.² Since then, its work has expanded while retaining its central mission of promoting peace and intercultural dialogue through education, science, and culture.³ Today, UNESCO strives to achieve the Sustainable Development Goals through the promotion of inclusivity, quality education, protection of the environment, and promoting the ethical use of technology.⁴

UNESCO is headquartered in Paris, France. As of 2026, it counts 194 member states and 12 associate members.⁵ However, membership may fluctuate as countries decide to join or withdraw from the organization.⁶ Every two years, UNESCO's Member States and Associate Members gather to set the organization's budget and elect its leadership, joined by observers from non-member states and by intergovernmental and non-governmental organizations.⁷ Over its 80-year history, UNESCO has built its influence through guidelines, campaigns, conventions, and declarations, tools that have shaped how the world understands diverse cultures, environmental protection, and the universal need for education.⁸ Some of its most significant achievements include the 1971 Man and the Biosphere (MAB) Programme, the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, and the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage.

UNESCO uses three main normative instruments: conventions, recommendations, and declarations. Conventions create commitments under international law for states that ratify them. Recommendations establish principles and standards that member states are expected to submit to their competent national authorities, but they are not legally binding.⁹ Declarations are also non-binding and are used to establish principles on matters of lasting importance.

Its mandate allows it to recommend standards, coordinate cooperation, and administer international agreements, but it cannot compel member states to comply. This is a real limitation when it comes to holding countries accountable.¹⁰ This limitation has not prevented the organization from shaping international standards and national policies over the past eight decades. UNESCO's mission remains rooted in its founding principle: peace and mutual understanding can be strengthened through international cooperation in education, science, and culture, even when the organization cannot compel states to act.

¹ Mingst, Karen. "UNESCO | Definition, History, Members, & Facts." Britannica. last modified September 27, 2024. <https://www.britannica.com/topic/UNESCO>.

² Mingst, Karen. 2024. "UNESCO | Definition, History, Members, & Facts."

³ UNESCO. "75 years of history in the service of peace." Accessed September 29, 2024. <https://www.unesco.org/en/75th-anniversary>.

⁴ UNESCO. n.d. "Our Mission." UNESCO. Accessed September 29, 2024. <https://www.unesco.org/en>.

⁵ UNESCO. "Member States." Accessed September 29, 2024. <https://www.unesco.org/en/countries>.

⁶ U.S. Department of State. "The United States Withdraws from the United Nations Educational, Scientific and Cultural Organization (UNESCO)." July 22, 2025. <https://www.state.gov/releases/2025/07/the-united-states-withdraws-from-the-united-nations-educational-scientific-and-cultural-organization-unesco>; UNESCO. "Associate Members: Rights and Obligations." <https://www.unesco.org/en/legal-affairs/legal-texts/associate-members-rights-obligs>; UNESCO. "UNESCO Statement following Nicaragua's decision to withdraw from the Organization." May 2025. <https://www.unesco.org/en/articles/unesco-statement-following-nicaraguas-decision-withdraw-organization>.

⁷ UNESCO. "UNESCO in key figures." Accessed September 29, 2024. <https://www.unesco.org/en/key-figures>.

⁸ UNESCO. n.d. "Key achievements." Accessed September 29, 2024. <https://www.unesco.org/en/achievements>.

⁹ UNESCO. "UNESCO's standard-setting. An Overview." UNESCO. last modified June 19, 2024. <https://www.unesco.org/en/legal-affairs/standard-setting/overview>.

¹⁰ UNESCO. "UNESCO's standard-setting. An Overview."

TOPIC A

UNESCO | NHSMUN 2027

Water Management through Education and Scientific Cooperation



Introduction

Access to safe drinking water is fundamental to human life.¹ Global efforts to improve access to drinking water, sanitation, and hygiene (WASH) services have contributed to more than 961 million people gaining access to safely managed drinking water between 2015 and 2024, increasing global coverage from 68 to 74 percent.² Over the same period, safely managed sanitation coverage increased from 48 to 58 percent, and basic hygiene services coverage grew from 66 to 80 percent.³ Despite this progress, as of 2024, 2.2 billion people still lack safely managed drinking water, 3.4 billion are without safely managed sanitation, and 1.7 billion do not have basic hygiene services at home.⁴ Moreover, at least half of the world's population experiences high water stress for at least one month per year.⁵ Sustainable Development Goal (SDG) 6 seeks to “ensure the availability and sustainable management of water and sanitation for all,” but none of the SDG 6 targets are on track to be met by 2030.⁶

Environmental factors, such as drought, flooding, and ecosystem degradation, have long threatened water access and are increasing due to climate change.⁷ However, water insecurity – which can occur when water is insufficient, unsafe, unaffordable, unreliable, or physically inaccessible – is also a socioeconomic, management, and governance issue that disproportionately affects marginalized groups.⁸ According to Khaled El-Enany, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO):

“Access to water is not merely a question of availability or infrastructure. It is, at its core, a question of rights – and of power. Who has access to water, who pays the price for its scarcity, and who sits at the decision-making table reveals enduring inequalities that run deep through our societies.”⁹

Global water demand has doubled since 1960, driven largely by growing agricultural, industrial, and domestic use.¹⁰ Large regional disparities, population growth, and emerging technologies such as artificial intelligence (AI) are expected to place additional pressure on water resources.¹¹

With a mandate to promote education, science, and culture, UNESCO and its Intergovernmental

Hydrological Programme (IHP) have been at the forefront of promoting international education and scientific cooperation on water management. The United Nations (UN) has emphasized the need for greater international cooperation to improve water management.¹² Thus, UNESCO can use education, scientific cooperation, capacity building, and international partnerships to address these challenges while advancing progress towards SDG 6.

History and Description of the Issue

HISTORICAL AND INSTITUTIONAL DEVELOPMENT

Hydrology is the study of water: where it is found, how it moves, and how its quantity and quality can change. Although water can be found practically everywhere on Earth, less than one percent is liquid fresh water. Most water is found in oceans or frozen in glaciers and ice caps, making only a small share available for human use. Approximately 98 percent of liquid fresh water exists as groundwater, requiring expensive well and pumping infrastructure to extract.¹³

Consequently, many early civilizations developed along major rivers, such as the Egyptians and Nubians on the Nile, and the Mesopotamians in the Tigris and the Euphrates valley.¹⁴ The importance of water for life and agriculture led humans to develop knowledge systems based on flooding patterns, construct public works like wells, irrigation canals, and aqueducts, and develop early methods of water purification.¹⁵ Modern technology and infrastructure have considerably improved since ancient times. However, even today, basic access to water remains a major challenge. In 2023, an estimated 1.8 billion people lived in households without water supplies on the premises.¹⁶

The quality of water sources is also a significant issue, even for those with reliable access. As water moves through the water cycle, it can dissolve or carry substances that can harm its quality for human consumption.¹⁷ Scientific breakthroughs in epidemiology and germ theory in the mid-to-late 19th century, as well as technological advancements in filtration and purification in the late 19th and early 20th centuries, resulted in lower rates of waterborne disease and death in developed countries.¹⁸ Chlorination saw widespread adoption in the early 20th century due to its low cost and consistent ability to ensure higher water quality.¹⁹ While waterborne diseases like cholera and typhoid have been virtually eliminated in developed countries, they remain a major water quality concern in developing countries, due to the lack of adequate sanitation and hygiene.²⁰

UNESCO has long worked at the intersection of water governance, scientific research, cultural

preservation, and sustainable development, notably through the Intergovernmental Hydrological Programme and World Water Assessment Programme (WWAP). UNESCO's water-related work began in oceanography. In 1946, at the first session of the General Conference, India proposed an institute to study the Indian Ocean. In 1952 and 1954, Japan also led draft resolutions for UNESCO to promote international cooperation on oceanography.²¹ As global interest grew, UNESCO created the Intergovernmental Oceanographic Commission (IOC) as a platform for all ocean science topics. One of its earliest achievements was the establishment of the first tsunami warning and mitigation system in the Pacific in 1965, followed by systems in the Indian Ocean, Caribbean, and Northeast Atlantic and Mediterranean in 2005.²² The IOC now encompasses 153 member states and is responsible for coordinating global efforts in ocean science, ensuring that science informs policy, society, and sustainable ocean governance.²³

In November 1964, at the 13th session of the General Conference, member states unanimously adopted a motion that declared 1965 to 1974 as the International Hydrological Decade (IHD), building on the momentum that led to the IOC.²⁴ IHD initiatives spearheaded intensive research that greatly improved global understanding of water cycles, distribution, and management.²⁵ This progress led to the creation of the Intergovernmental Hydrological Programme (IHP) in 1975, which was the first intergovernmental program dedicated to water research and management in the UN system. Its first phase,

Perhaps the most significant advancement was the introduction of chlorination.

known as IHP-I (1975 to 1980), focused on advancing basic hydrological research.²⁶ Subsequent phases, which typically cover eight-year periods, have gradually expanded the IHP's focus on the multidisciplinary study of water resource management, education, and policy development.²⁷

The most recent phases of IHP-VIII (2014 to 2021) and IHP-IX (2022 to 2029) have prioritized water security and resilience in a changing environment, with the current IHP-IX being titled “Science for a Water Secure World in a Changing Environment.”²⁸ IHP-VIII and IHP-IX have also advanced the use of Integrated Water Resources Management (IWRM), a cross-sectoral policy approach designed to maximize economic and social welfare in the management of water, land, and related resources without compromising the sustainability of vital ecosystems.²⁹ Today, the IHP works in partnership with its UNESCO Water Family of 170 IHP National Committees and Focal Points, 17 IHP Flagship Initiatives, 29 water-related partner institutions known as Category 2 Institutes and Centres (C2Cs), and 93 water-related UNESCO Chairs and University Twinning and Networking Programme (UNITWIN) Networks across higher education institutions.³⁰

In response to a call from the UN Commission on Sustainable Development for a “UN system-wide periodic global overview of the status, use and management of freshwater resources,” UNESCO created the WWAP in 2000.³¹ WWAP complements IHP's work by providing a wider range of policy-relevant, timely, and reliable information on water resource development and management, notably through the annual release of its UN World Water Development Report (UN WWDR). It also contributes to fostering and monitoring progress towards SDG 6.³² Since 2007, the Government of Italy has provided WWAP's core funding, while the Region of Umbria has supported and hosted its secretariat in Perugia. WWAP has also received additional voluntary contributions for specific projects.³³

It is important to recall that UNESCO is one

of many UN organizations working on water-related issues. Since water intersects across several committee mandates, including the Food and Agriculture Organization (FAO), UN Children's Fund (UNICEF), UN Development Programme (UNDP), World Meteorological Organization (WMO), and World Health Organization (WHO), UN-Water was established in 2003 as a coordination mechanism among 36 UN organizations working on WASH issues.³⁴ Moreover, UN-Water is currently implementing the Collaborative Implementation Plan (2025-2028), which supports implementation of the first UN System-wide Strategy for Water and Sanitation.³⁵

HUMAN RIGHTS AND SOCIOECONOMIC INEQUALITY

Water is often referred to as a “superconnector” that weaves together a wide range of issues, such as public health, economic development, food security, peace and conflict, and migration.³⁶ At its core, adequate governance, financing, infrastructure, and education are needed to build water resource systems that connect people with clean water. However, the physical presence of water or sanitation infrastructure is not the same as access. A water or sanitation service can be too expensive, unreliable, or inaccessible for vulnerable groups.³⁷ Competing economic priorities, such as growing water demand for agricultural and industrial purposes, may also lead to unsustainable water use and scarcity for vulnerable populations.³⁸ Approaches to water resource management should therefore account for intersectional needs, including those of women, children, ethnic and gender minorities, Indigenous Peoples, persons with disabilities, and other marginalized groups.

International recognition of access to water as a human right took several decades. In March 1977, the first UN Water Conference was held in Mar del Plata, Argentina. The resulting Mar del Plata Action Plan acknowledged issues that are still relevant today, such as water use, environment,

health and pollution control, education, training, and research.³⁹ Member states also recognized, for the first time, the right to safe drinking water, and called for the decade of 1981 to 1990 to be deemed the International Drinking Water Supply and Sanitation Decade.⁴⁰ In January 1992, ahead of the UN Conference on Environment and Development that produced the three Rio Conventions, the WMO held an International Conference on Water and the Environment in Dublin, Ireland.⁴¹ The Conference notably drafted four guiding principles, referred to as the Dublin Principles, which state that fresh water is a finite and vulnerable resource, that water governance should be participatory, and that women play a central role in water management.⁴² The UN General Assembly finally recognized the human right to safe drinking water in 2010, followed by the distinct right to sanitation in 2015.⁴³

Building on this recognition, clean water and sanitation was included in the 2030 Agenda for Sustainable Development as SDG 6, highlighting its position as an international priority.⁴⁴ Its targets include equitable access to safe and affordable drinking water, adequate sanitation and hygiene, implementing IWRM, and expanding international cooperation, all by 2030.⁴⁵ Progress

across all SDG 6 targets has been slow.⁴⁶ As of 2024, more than a quarter of the world's population still lacked access to safely managed drinking water services, and 41 percent did not use a safely managed sanitation service.⁴⁷

Women and girls are among the most affected groups in situations of water stress. Of the estimated 700 million people who must fetch water due to a lack of water supply in their homes, women and girls are primarily responsible for water collection in approximately seven out of 10 households without water on the premises.⁴⁸ Many of these households are found in rural areas, which receive disproportionately less support for water supply and sanitation services than urban areas.⁴⁹ The need to collect water increases physical and mental health risks. In 2020, 13 percent of households surveyed across 21 low- and middle-income countries (LMICs) reported a water-fetching injury, with women more likely to be affected. Women and girls may also face gender-based violence and harassment while traveling to and from water sources.⁵⁰

The effects of water stress for women and girls extend far beyond their role as water collectors. For example, as of 2024, only 78 percent of healthcare facilities in LMICs had basic water



Nigerian women fetching water

Credit: Shamus08

services.⁵¹ This disproportionately affects women, who represent 70 percent of the total health workforce, and who, in a 2020 survey of 1.2 million women, identified WASH provision as one of their five leading demands concerning maternal and reproductive health services. This is because the lack of water and hygiene services can significantly increase the risk of birth complications and newborn mortality.⁵² In agriculture, the productivity gap between female- and male-managed farms of the same size was estimated in 2023 to be 24 percent, partially due to unequal access to water.⁵³ The participation of women and other marginalized groups in water management can address these gaps and support gender mainstreaming, but as of 2023, only 27 percent of countries reported high levels of women's representation or regular consultation in water governance processes.⁵⁴ Even when such groups can participate, their inclusion may only be symbolic, with no significant influence over decisions or policies.⁵⁵ Similarly, women are underrepresented in science, technology, and engineering roles associated with the water sector. Data from 64 utilities in 28 LMIC found that “fewer than one in five water workers were women, and they were paid less than their male counterparts.”⁵⁶

For children and youth, WASH access in schools remains insufficient to enable safe and inclusive learning environments. As of 2023, only 77 percent of schools provided basic drinking water services, 78 percent offered basic sanitation, and 67 percent had basic hygiene services.⁵⁷ Without water, children cannot wash their hands before eating and after using the toilet, and girls cannot manage their menstrual cycles with dignity and privacy, which may cause them to miss school during menstruation.⁵⁸ Achieving universal coverage across schools by 2030 will require doubling the rate of progress for basic drinking water and sanitation, and quadrupling the rate of progress for hygiene services.⁵⁹ The absence of water supply at home can also affect the physical and mental health of children. For example, studies of low-income communities in

the United States have found that residents who were cut off from water services or unable to afford them reported shame and embarrassment when their children could not shower and clean themselves properly, discouraging them from going to school.⁶⁰

Many other vulnerable groups lack access to clean water, and those with intersecting marginalized identities may experience amplified consequences. In Canada, many First Nations – one of the three recognized groups of Indigenous Peoples in Canada – face long-term boil-water advisories due to inadequate or failing WASH infrastructure on reserves, contributing to poor public health outcomes in communities already grappling with the legacies of colonialism and cultural genocide.⁶¹ In 2016, the Government of Canada committed to ending all long-term boil-water advisories within five years, but as of June 4, 2026, there are still 38 long-term advisories in effect.⁶² The challenge of installing adequate water systems in First Nations communities is compounded by their rural locations and an absence of long-term funding arrangements, including a lack of support to hire and train residents to operate water systems themselves.⁶³ In cases like these, with multiple intersectional considerations, significant funding, consultation, and political will are required to set up durable and equitable water management systems.

SUSTAINABLE WATER MANAGEMENT AND ENVIRONMENTAL IMPACTS

The sustainable use of water is intertwined with the natural environment. Responsible water management systems must balance human demand with possible impacts on the local water cycle and ecosystems. However, some current water management practices are directly contributing to the interconnected crises of climate change, biodiversity loss, and pollution. Sustainable water management systems also need to adapt to natural disasters like droughts, floods, and storms, as well as increased variability caused by climate change. The promotion of

Integrated Water Resources Management (IWRM) can help governments account for the effect of human activities across the entire water cycle, but this can only be achieved through continuing international cooperation.⁶⁴

Global water demand is projected to increase by 20 to 25 percent by 2050, with major growth across sectors like agriculture, livestock, energy production, and manufacturing.⁶⁵ While industrial development is important, poor water management without proper attention to its impact on the water cycle can lead to devastating socioeconomic and environmental consequences. In the 1960s, the Soviet Union proceeded with a major water diversion project in Central Asia, in what is now Kazakhstan, Uzbekistan, and Turkmenistan, to transform the desert into farmland.⁶⁶ The irrigation project was successful, but it also caused the Aral Sea – once the fourth-largest lake in the world – to shrink by around 90 percent over the course of the following four decades. Aral Sea ecosystems, fisheries, and communities collapsed, and residues from fertilizers and pesticides became public health hazards and degraded nearby soil. The disaster led to the disappearance of wetlands and the extinction or

severe endangerment of native birds, mammals, and marine life, and even made winters colder and summers hotter and drier.⁶⁷ According to the World Wildlife Fund, freshwater species have declined by 85 percent worldwide since 1970, the sharpest drop of any ecosystem, largely due to heavy water withdrawals.⁶⁸

Hydropower projects are another significant example of industrial impacts on water governance. While hydroelectricity is an important source of low-carbon power, the construction and management of dams can lead to international conflict between upstream and downstream countries, highlighting the need for cooperation.⁶⁹ Early in its mandate, UNESCO was invited by Egypt and Sudan in 1959 to assist in the protection and rescue of endangered historical sites along the Upper Nile Valley that would be flooded by the construction of the Aswan High Dam.⁷⁰ The Dam offered great benefits to Egypt, generating half of the country's electricity upon its completion in 1970, and allowing it to regulate water flow and irrigate crops year-round.⁷¹ Unfortunately, the Dam also displaced over 50,000 people and altered the region's ecology by wiping out fish populations, preventing nutrient-rich sediment from reaching



Aswan High Dam

Credit: Silar

downstream farmers, and changing the groundwater pressure, which may have increased seismic activity in the area.⁷²

Moreover, the 1929 and 1959 Nile Water Agreements, which enabled the Dam's construction, are a major source of regional tension. The colonial-era bilateral treaties effectively established Egyptian and Sudanese monopolies over the Nile prior to the independence of most other Nile Basin countries, such as Kenya, Tanzania, and South Sudan.⁷³ Since decolonization, the eleven Nile Basin countries have been engaged in multilateral dialogue on transboundary cooperation, notably through the Nile Basin Initiative.⁷⁴ However, while most Nile Basin countries have endorsed the Cooperative Framework Agreement (CFA), a treaty that aims to promote more inclusive governance of the Nile, Egypt and Sudan view the CFA as a threat to their historical water allocations under the Nile Water Agreements and have declined to ratify it.⁷⁵ Due to these persistent gaps in cooperation, the Nile Basin remains vulnerable to unsustainable water management and frequent international disputes, including threats of military action.⁷⁶

Poor household and industrial waste management systems can also lead to water pollution. This can threaten public health and natural ecosystems. Industrial dumping and run-off, such as pesticides, fertilizers, and factory byproducts, can introduce harmful chemicals into groundwater.⁷⁷ For example, around a quarter of the United States' petrochemical products are processed on the stretch of the Mississippi River between New Orleans and Baton Rouge, in the

state of Louisiana.⁷⁸ Since the 1980s, the area has been referred to as Cancer Alley because residents face elevated cancer and other health risks associated with industrial pollution into the air, water, and soil. African American residents in Cancer Alley face even higher rates of pollutant exposure, cancer risk, and mortality than white residents, demonstrating how a lack of access to clean water can exacerbate existing inequalities.⁷⁹ As of 2023, the UN estimates that only 56 percent of domestic wastewater worldwide was safely treated.⁸⁰

Climate change is also increasing water insecurity worldwide by altering changes in precipitation, evaporation, soil moisture, groundwater and streamflow patterns.⁸¹ Extreme weather events like droughts and floods will become more common, and the disappearance of glaciers and snowpacks will affect the water supply for downstream communities.⁸² Under the Paris Agreement, countries are committed to limiting the increase in global average temperature to well below 2°C above pre-industrial levels, and ideally to 1.5°C.⁸³ However, climate action to date has fallen short, and the WMO expects a 70 percent chance that the 1.5°C threshold will be surpassed in the five-year average from 2025 to 2029.⁸⁴ The World Resources Institute forecasts that even in an optimistic scenario where countries succeed in limiting global temperatures to between 1.3°C and 2.4°C by 2100, an additional one billion people are expected to live with extremely high water stress.⁸⁵ These risks are especially severe in parts of the Middle East and Africa, where large populations are projected to face extremely high

Toxic substances may take years to build up in the environment and food chain before their effects become clear.

water stress by 2050.⁸⁶

IWRM and climate-resilient infrastructure can help mitigate the unpredictability in water supplies and extreme weather events caused by climate change. Hydrometeorological cooperation and early warning systems (EWS), such as the IOC's tsunami warning and mitigation systems, play a key role in predicting water-related hazards and assessing risk.⁸⁷ Nature-based solutions, such as the protection and restoration of wetlands, mangroves, and forests, can also help protect against droughts and floods.⁸⁸ Education can also complement these measures by helping farmers, industries, public officials, and communities understand water-related risks and adopt more sustainable practices.

Member states should also review water utilization across their economies. For example, countries can prioritize water-efficient energy sources such as solar and wind, develop urban water-resilience action plans, treat and reuse wastewater, and improve water-use efficiency in agriculture.⁸⁹ Efforts to enhance climate resilience and disaster response should align with international frameworks, notably the Paris Agreement, the Rio Conventions, and the Sendai Framework for Disaster Risk Reduction 2015-2030, which outlines targets and priorities such as strengthening disaster risk governance and enhancing preparedness for an effective response.⁹⁰

SCIENTIFIC COOPERATION AND TECHNOLOGICAL CONSIDERATIONS

Population growth, economic development, and climate change are affecting water availability and quality, increasing the need for stronger hydrological knowledge, practitioner training, public education, cost-effective technologies, and infrastructure to advance SDG 6. Partnerships between governments, academia, civil society, and the private sector can advance hydrological research and promote knowledge and data sharing. Providing basic technologies – like hand

pumps and rainwater harvesting – and WASH infrastructure, including pumping, storage, transmission, distribution, and treatment systems, can improve access to water. However, these interventions require upfront capital, training for users and operators, and long-term financing for maintenance. Together, science, technology, education, and capacity-building can enable efficient and sustainable water management across different socioeconomic conditions and environments.

Education and capacity-building can help translate scientific knowledge into stronger community participation in water management. Community education can train residents to monitor water quality, collect reliable data, and use their findings in local decision-making. Research on citizen water monitoring shows that continuous training, standardized methods, and cooperation with universities, scientists, public institutions, and international organizations can strengthen community water organizations. However, these efforts require continuing technical, financial, and institutional support to remain sustainable.⁹¹ UNESCO can contribute by supporting citizen-science initiatives and using platforms like Citizens4Water to share practical tools and experiences, connect initiatives worldwide, and expand opportunities for education and knowledge exchange.⁹²

Hydrological research remains crucial because of the complexity of water systems. The water cycle is often taught as a simple, circular cycle of evaporation, condensation, and precipitation.⁹³ In reality, many things can affect the movement of water, like changes in climate, ecosystems, and human behavior. As a result, hydrology draws from other research areas like meteorology, chemistry, geology, engineering, ecology, and health and social sciences. For example, in the Sahel, which covers the semiarid region south of the Sahara Desert, water tables – the upper boundaries of underground zones saturated with groundwater – have risen significantly since the 1990s, and especially in the past five years.⁹⁴ This hydrological development comes

after years of drought in the 1970s and 1980s, which contributed to the deaths of up to a million people.

In some areas, the changes have supported agriculture and biodiversity, but the Sahel's rainfall is becoming concentrated in extreme downpours that are now some of the most powerful storm clusters in the world. Consequently, in countries like Niger, more people now die from floods than drought. Scientists do not fully understand why water is returning to the region. Some scientists believe that this might be due to factors like regional tree-planting efforts to combat desertification, the revival of traditional water harvesting methods, political instability that led to the abandonment of irrigation projects, the drought-driven crusting of soils, and a northward migration of the West African monsoon due to warming in the North Atlantic.⁹⁵ The changes in the Sahel highlight the complex nature of water systems, and the need for further research and international collaboration.

UNESCO is leading global partnerships to address gaps in hydrological research and monitoring. Since 1975, the IHP has built an extensive network of UNESCO Water Family

institutions.⁹⁶ The National Committees form the backbone of the IHP and include participation from scientists, water managers, government bodies, professional associations, civil society, and industry.⁹⁷ Meanwhile, the Flagship Initiatives aim to broaden the IHP's scientific scope and produce knowledge from across its member states.⁹⁸ This includes the Flow Regimes from International Experimental and Network Data (FRIEND-Water), an international research initiative that helps set up regional networks for analyzing hydrological data. The initiatives also include the International Flood Initiative (IFI), an interagency initiative that promotes an integrated approach to flood management, as well as From Potential Conflict to Cooperation Potential (PCCP), a project that facilitates dialogue around the management of shared water resources.⁹⁹

The creation of the IHP Regional Steering Committee for Asia and the Pacific (RSC) shows the important role of the IHP in sharing scientific knowledge and capacity. Created in 1995, the RSC was meant to be a regional hydrological science platform designed for and by the water science community in Asia and the Pacific.¹⁰⁰ Since 1995, the RSC has held annual conferences involving its 19 member countries,

Floods in Niger

Credit: Dr. Ondřej Havelka



produced approximately 800 scientific papers, organized more than 30 training courses, and published five volumes of the catalogue of rivers for Asia and the Pacific. The RSC is currently co-developing hydrological tools to address key regional challenges such as flood hazard mapping and dam reservoir operations, bringing together expertise and resources from across partners in the UNESCO Water Family.¹⁰¹ Thus, international scientific cooperation such as the RSC can enhance research through knowledge and data sharing, pool funding to enable larger scale projects, and improve international cooperation by fostering closer relationships between countries.¹⁰²

The deployment of cost-effective WASH technologies and infrastructure also depends on accessible technical knowledge and training. At the most basic level, communities need a way to pump drinking water, which can come from available surface water and groundwater or, in freshwater-scarce countries, desalination.¹⁰³ The construction of cheap hand pumps has improved access to safe and reliable water supplies in developing countries, especially in rural areas, as groundwater is generally safer than contaminated surface water, open wells, and unprotected springs.¹⁰⁴ Hydrological data is required to assess groundwater availability and identify where to install pumps. Motorized pumps can further reduce the manual labor required and significantly increase the number of people that can be served by a single pump, at a higher cost.¹⁰⁵

In 2019, UNICEF paid an additional USD 5,000 per unit to solarize existing hand pumps in Sudan, which enabled each system to meet the water needs of between 500 and 1,000 people.¹⁰⁶ While pumps can be technically simple to repair, the absence of long-term funding arrangements for regular maintenance, training, mechanics, and spare parts has led to the rapid deterioration of basic water infrastructure in poorer regions.¹⁰⁷ It is estimated that in sub-Saharan Africa, around one in four hand pumps no longer work, in large part due to corrosion caused by prolonged

exposure to groundwater.¹⁰⁸ A broken pump threatens its community's water security. Pump durability can be improved by support and funding for local governments and communities, educational campaigns, and higher standards for hand-pump materials.¹⁰⁹

As countries develop and urbanize, more complex water distribution systems are required to filter, pump, transport, and store water supplies. Distribution systems like pipes can generate significant long-term benefits by reducing the distance that people need to travel to access water, but can be expensive to build.¹¹⁰ As previously mentioned, the deployment of more water-efficient practices and technologies – like drip irrigation, smart sensors, and wastewater recycling in agriculture – has tangibly increased global water-use efficiency, reducing demand-related strain on water systems.¹¹¹ However, these improvements have been highly concentrated in Oceania, Europe, and North America, and regions like Central and Southern Asia remain highly inefficient in comparison.¹¹² Such regional disparities highlight the challenges that developing countries face in accessing capacity, training, and resources to improve their water systems.

Current Status

ADDRESSING FUNDING GAPS

In 2020, UN-Water identified five global accelerators that can deliver faster results towards achieving SDG 6: financing, data and information, capacity development, innovation, and governance.¹¹³ Financing underpins progress across all SDG 6 targets, as investments are required to construct and maintain water systems, support scientific research, knowledge sharing, and training, and support cooperation between countries. Insufficient funding contributes to water scarcity. Even when funding is available, a lack of coordination between

donors can make it less effective.¹¹⁴ The UN System-wide Strategy for Water and Sanitation calls for closer collaboration with governments, domestic and international financial institutions, and other public and private financing partners like companies and philanthropic organizations, to close financing gaps.¹¹⁵

The World Bank estimates that developing countries spend USD 164 billion annually on the water sector, across four subsectors: water supply and sanitation, irrigation, water transport, and hydropower.¹¹⁶ More than half of this current spending is in the water supply and sanitation subsector, but the World Bank suggests that these spending levels must triple in order to achieve SDG targets 6.1 (Progress on Drinking Water) and 6.2 (Progress on Sanitation) by 2030.¹¹⁷ At the macroeconomic level, water-related infrastructure development is highly dependent on public spending: 91.4 percent of annual spending comes from public sources, including governments, official development assistance (ODA), and state-owned enterprises.¹¹⁸ Only 1.7 percent of total water spending comes from the private sector, suggesting that there is room to attract private investment and explore other sources of funding.¹¹⁹ Public spending on water also competes with other government priorities: between 2009 and 2020, public expenditures in the water sector made up 1.2 percent of total government spending, compared to 4.1 percent for transportation, 4.5 percent for energy, and 60.2 percent for services like education, health, and social protection.¹²⁰ Growth in public water-sector spending has also slowed over the last

decade as well, showing the need for a renewed focus on water in fiscal planning across all countries.¹²¹

Within this funding gap, UNESCO is concerned about insufficient investment in training, education, and capacity-building measures for public officials, water managers, professionals, water operators, and water users. These individuals are crucial for IWRM and the long-term sustainability of water systems.¹²² Human capital is an important component of maintenance.¹²³ However, annual spending on maintenance, including salaries and wage bills, is significantly lower than capital expenditures on building infrastructure, accounting for less than 7 percent of total spending across the water sector.¹²⁴

There has also been a decline in water-related vocational programs to train water technicians, despite new technologies in the water sector requiring additional training of operators.¹²⁵ This does not mean that governments should reduce capital spending. There must also be more funding for maintenance, especially since costs will increase under the intensifying physical effects of climate change. Possible solutions include expanding the IHP's role in providing training and capacity-building programs for operators, engineers, scientists, and technicians, with consideration for the promotion of women in these fields. Other solutions include improving coordination across donors to pool resources in longer-term funds and increasing collaboration with climate finance proposals to unlock resources from climate funds.¹²⁶

Water infrastructure has high upfront costs and much more is still needed to achieve SDG 6 targets.

Funding delivery, including for maintenance, is also a governance issue that can be addressed by building state capacity.¹²⁷ From 2009 to 2020, governments spent only 72 percent of the money budgeted for the water sector. This was much lower than spending rates for human development (99 percent), transportation (91 percent), and agriculture (89 percent).¹²⁸ The World Bank finds no clear correlation between budget execution rates and a country's income level, suggesting that this is an issue related to governance, financial management, and the quality of political institutions.¹²⁹ Training for policymakers and other people involved in water governance, such as through C2Cs like the IHE Delft Institute for Water Education and the International Centre for Water Security and Sustainable Management, can help professionalize service delivery, improve public financial management systems and enhance governments' ability to attract more finance.¹³⁰

At the institutional level, UNESCO is facing budgetary constraints that may limit its ability to advance its water agenda. In 2026-2027, UNESCO plans to spend almost USD 51 million on initiatives related to inclusive water resources management, including the IHP, WWAP, and UNESCO Water Family.¹³¹ Of this amount, USD 16 million will come from the regular budget, and USD 34 million will come from voluntary contributions, such as Italy's support for the WWAP.¹³² UNESCO's regular budget is funded through contributions that member states must pay on an annual basis.¹³³ However, the withdrawal of the United States from UNESCO, effective December 31, 2026, will likely result in significant budget cuts.¹³⁴ Additional voluntary contributions could fill this expected gap, but many governments are facing ongoing fiscal constraints and decreasing their foreign aid.¹³⁵

ADVANCING EDUCATION, PUBLIC AWARENESS, AND CAPACITY BUILDING

The IHP-IX Strategic Plan identifies water education as a priority, with the goal of training

many "decision makers, educators, and citizens worldwide" by 2029.¹³⁶ By raising public awareness of water-related issues across all education levels, UNESCO aims to help more people understand the importance of water to their communities and economies, encourage conservation, and increase public support for its sustainable governance.¹³⁷ In other words, education and public awareness can help make water management a political priority, leading to more government funding and support. However, as noted in the previous section, public funding for the water sector has slowed in recent years. UNESCO must therefore develop more effective means of informing diverse audiences while utilizing an increasingly limited pool of resources for its programming.¹³⁸

Integrating water-related topics across formal, non-formal, and informal education at all levels is a good way to promote water awareness.¹³⁹ Recognizing the importance of integrating WASH in classrooms, UNESCO already supports a wide range of educational initiatives, including workshops, webinars, distance-learning methods, and international dialogues around best practices. Recently, UNESCO has also been interested in the role of youth in advancing innovation and new perspectives in water management. In June 2026, member states at the 27th session of the IHP Council approved Youth4Water, the first IHP Flagship Initiative entirely dedicated to young people.¹⁴⁰

Drawing on a network of over 400 youth organizations, Youth4Water aims to promote the active participation of young people by providing more opportunities to learn, innovate, and contribute to water governance. Youth4Water and other youth-related initiatives remain in their early stages, and in August 2026, UNESCO launched a youth survey to develop the first global open dataset on youth engagement in the water sector and get a better sense of youth challenges and priorities.¹⁴¹ When considering solutions, member states can further acknowledge youth as agents of change by advancing and utilizing these emerging youth

initiatives. With regard to education and capacity-building initiatives more broadly, member states may wish to connect these efforts with UNESCO's ongoing work under its Education for Sustainable Development framework, which provides policy guidance and technical support to countries, and implements projects like the Greening Education Partnership.¹⁴²

Training materials and hydrological research and data should be openly and easily accessible, where possible, within the frameworks of the UNESCO Recommendation on Open Science and Open Hydrology.¹⁴³ Open science seeks to make scientific knowledge, data, methods, and tools accessible so that researchers, policymakers, and the public can use and contribute to them. Published in 2024, the UNESCO Open Hydrology framework aims to improve access to hydrological information across six pillars: open data, open source, open publishing, open infrastructure, open education, and open participation.¹⁴⁴ The recommendations are based on the results of the Open Hydrology survey, which polled UNESCO Water Family members about the ease of access to hydrological data, methodologies, software, hardware, and learning.

The survey provides strong evidence for the benefits of open science but highlights gaps in current knowledge-sharing practices. For example, while 93 percent of respondents use open data, only 80 percent of respondents actually share data.¹⁴⁵ This difference is due to several factors, such as the lack of policy and guidance in research institutes like universities. Only 50 percent of respondents reported that their institution or workplace had an open science policy.¹⁴⁶ There is ongoing work under the IHP to form a cross-organizational coalition to develop and implement strategies for advancing the Open Hydrology framework, which could include an "Open Hydrology Catalog" of open science sources and publications, an "Open Hydrology Medal/Prize" to recognize significant contributors, and annual events showcasing national capability and best practices.¹⁴⁷ Such initiatives can promote global scientific cooperation by improving access to information and lowering the cost of education, training, and research.

UNESCO can also draw on its extensive experience with global public awareness campaigns to use international days, years, and decades to draw attention to specific issues.

Water campaign

Credit: Dejazzeez



The IHD was successful in facilitating early international hydrological cooperation and led to the establishment of the IHP.¹⁴⁸ Similarly, the WWAP publishes its flagship UN WWDR every year on World Water Day (March 22) to maximize the impact of the occasion.¹⁴⁹ Member states can explore measures to increase the impact of events like this, including by supporting local events and campaigns through IHP National Committees and other members of the UNESCO Water Family.

Public participation in water science is another way to improve public awareness while helping scientific research. The IHP-IX Operational Implementation Plan proposes expanding public awareness, education, and training related to water-resource monitoring.¹⁵⁰ Accordingly, in February 2026, UNESCO launched the Citizens4Water platform, which is designed as a collaborative space that showcases citizen science projects, programs, and tools related to freshwater management.¹⁵¹ One of the highlighted case studies is the *Dji Mansa* (“Water Masters”) initiative in Mali and Niger, led by AFR’EAU. The organization aims to train citizen scientists to document environmental changes.¹⁵² These kinds of citizen science initiatives can be helpful

to scientific research by filling in data gaps, especially in regions where traditional monitoring networks are under-resourced.¹⁵³

PROMOTING INTEGRATED WATER RESOURCES MANAGEMENT

Integrated Water Resources Management (IWRM) is an approach that treats water management as a connected system rather than as separate problems. It recognizes water’s environmental, social, and economic importance. It also encourages governments to coordinate across sectors.¹⁵⁴ IWRM can promote inclusive governance of water resources, elevating the role of women in water management, creating more inclusive decision-making processes, and reducing the effects of water scarcity on vulnerable groups. Today, scientists and policymakers are increasingly recognizing the importance of local and Indigenous knowledge systems to water management and science. They are finding new ways of integrating local communities and Indigenous Peoples in governance processes.

IWRM also aims to include scientists as water resource managers, ensuring that water use



Indigenous Girl Gathering Water

Credit: Adam Jones

is guided by the latest research and data across natural and social sciences. However, based on recent data, the rate of global IWRM implementation is slow.¹⁵⁵ At the current rate, the world will not achieve sustainable water management until at least 2049.¹⁵⁶ The IHP-IX Strategic Plan calls for member states to find more ways to promote IWRM and strengthen water governance. However, countries may have different views when it comes to poverty reduction and economic priorities.¹⁵⁷

Water governance can take place across various platforms, at “national, municipal, and local levels, in government, public and private water utilities, and in water management and user groups.”¹⁵⁸ Inequalities in water access show the ongoing failure of water governance to account for marginalized communities. The absence of vulnerable groups – notably women – from governance organizations can undermine the management, sustainability, equality of use, and benefits of water systems. Some countries and regions are taking action to address these gaps. For example, in Latin America and the Caribbean, many countries’ national water policies addressed the gender gap by incorporating a gender perspective in policymaking and increasing the active participation of women and their organizations in decision-making.¹⁵⁹ UNESCO is working to support more inclusive governance, including by highlighting women, youth, and Indigenous Peoples in capacity building for educators, policymakers, and skilled professionals. It is also assisting countries in piloting innovative water governance structures, embracing transparent governance practices, and hosting workshops to share best practices and innovative solutions.

Marginalized groups can also contribute to open and inclusive water science. In recent years, there has been greater recognition of the need to learn from local and Indigenous knowledge systems to improve local data collection and water management. UNESCO has long been a pioneer in this field, supporting exchanges between Indigenous knowledge-

holders and scientists in fields like ecology, water management, and natural risk prevention through the Local and Indigenous Knowledge Systems (LINKS) programme.¹⁶⁰ Local communities and Indigenous Peoples possess extensive knowledge of their ecosystems.¹⁶¹ In the Bolivian Altiplano, researchers found that local farming communities excelled in the observation of environmental dynamics, thanks to centuries of observation and knowledge transfer.¹⁶² Since their crops have historically relied on rain-fed agriculture, the farmers were able to forecast rainy seasons based on indicators like plants and animals behavior as well as the presence of frost, moisture, and winds at specific times of year.¹⁶³ The IHP-IX Strategic Plan acknowledges the importance of “integrating modern science with ancestral, indigenous, and local knowledge,” providing a mandate for member states to consider more ways to promote the participation of local communities and Indigenous Peoples in water science and governance.¹⁶⁴

However, IWRM is only effective when it accounts for the latest scientific expertise across all affected sectors. The IHP is interested in advancing work around socio-hydrology, or the study of human impact on hydrological processes.¹⁶⁵ By enhancing the understanding of the dynamics of water-societal interactions, governments and water governance bodies can make more informed decisions that better account for human influence and economic activities. Scientific knowledge and technology are also required to address water-related disasters and improve climate resilience through solutions such as EWS and smart water management systems. Member states can consider how to promote cooperation across water management practices as well as including scientists in water-governance frameworks through training programs for scientists and policymakers and through international dialogues.

Bloc Analysis

POINTS OF DIVISION

Water management priorities vary across member states due to differences in economic development, hydrogeography, governance systems, and public funding for water infrastructure, science, and education. Finance remains a major issue as member states differ on how to fund water-related initiatives and how UNESCO can provide financial resources. The poorest countries depend on foreign assistance to develop their water sectors, but developed countries are facing tighter fiscal situations and are reducing foreign aid. Since many UNESCO initiatives rely on voluntary contributions from donors, declining foreign assistance will hurt programs under the IHP and WWAP. Cuts to public finance may push some countries to seek funding from other sources, like multilateral development banks, the private sector, and other non-governmental organizations.

Member states also differ in their levels and forms of support for IWRM and UNESCO initiatives centered on sustainability and equality. Some member states may prioritize immediate water infrastructure development through existing and traditional governance structures. They may view certain gender and environmental considerations as secondary to expanding water infrastructure. The relationship of member states to local communities and Indigenous Peoples may also influence their position on how local and Indigenous knowledge can be used in water science and governance.

Another important consideration is how hydrogeography shapes national priorities and expertise. It is natural for member states to advocate for more collaboration, research, and programming around their own water challenges. For example, the Netherlands specializes in water management in deltas, the Asia-Pacific RSC is evaluating regional water-related disaster risks, and Nigeria prioritizes climate risks, drought, and

groundwater management.¹⁶⁶ UNESCO can draw on this diversity of experiences to strengthen its initiatives and reflect the wide range of water-related concerns, but it must also strive to appropriately balance regional perspectives.

BLOC 1 - EFFECTIVE AND INCLUSIVE INSTITUTIONS

Member states in this bloc are generally higher-income countries that support international cooperation and strong standards for water governance. Examples include Canada, Sweden, and Germany. As major contributors to international development programs and institutions such as UNESCO, they are interested in developing more sustainable financing models for water-related initiatives. Development assistance is coming under increasing fiscal pressure in many donor countries, so this bloc may seek to explore other sources of finance, including the private sector. This could translate into more education and training for policymakers around public-private partnerships. This could also include policy and regulatory reforms that attract more private investment in the water sector.¹⁶⁷

Many countries in this bloc view IWRM as a way to promote sustainable, inclusive, and intersectional water governance that prioritizes environmental protection and climate action. They also view IWRM as a way to promote the participation of women, youth, Indigenous Peoples, and other marginalized groups. For example, this bloc generally embraces initiatives that promote gender equality, youth capacity building, nature-based solutions, citizen science, and local and Indigenous knowledge systems in water science and management.

This bloc strongly supports UNESCO's role in advancing scientific and technological cooperation through the UNESCO Water Family but recognizes that much of this research relies on public funding from developed countries. Open Science initiatives that facilitate access to information, education, and training for scientists

from developing countries can help address gaps in research capacity. UNESCO-led initiatives also benefit developed countries, such as its current work around water management in urban centers through the Megacities Alliance for Water and Climate, and emerging work around the uses and impact of AI on water use.¹⁶⁸ These states may view science diplomacy as a means of fostering cooperation, especially in areas with conflict over water management.

BLOC 2 - CLIMATE RESILIENCE AND FLEXIBLE GOVERNANCE

Member states in this bloc prioritize climate-resilient water resource systems and flexible, nationally determined approaches to water governance. Economic development varies across the group. Some countries are still focused on reducing water stress and improving basic WASH access, while others are seeking to expand water infrastructure to keep up with the pace of economic growth. However, all countries in this bloc are seeking to address climate-related risks.

Member states in this bloc, such as Japan, Pakistan, Cuba, Brazil, and Saudi Arabia, are especially interested in leveraging the UNESCO Water Family to advance work on relevant topics like desalination, wastewater recycling, water-use efficiency, climate-resilient infrastructure, EWS, and disaster risk reduction. Some countries may be interested in developing stronger linkages between UNESCO's hydrological work under the IHP and its oceanographic work under the IOC.¹⁶⁹ Many members of this bloc also promote more alignment between the IHP and the Paris Agreement, to advance work on climate change mitigation, adaptation, and finance. Given the scale of required investment, lower-income member states are interested in additional contributions from higher-income countries for UNESCO initiatives and may be cautious about finance from the private sector due to higher costs. Certain higher-income member states do have capacity to provide public finance to

UNESCO initiatives but would prefer that this funding is directly targeted toward their national priorities.

Member states hold diverse views on how considerations such as gender equality, public participation, and biodiversity conservation should be integrated into water governance, due to differences in government systems, economic priorities, social and cultural values. While some members of this bloc are interested in promoting gender equality, ecological protections, and engaging with local and Indigenous communities, others view these considerations as secondary to economic development. As a result, this bloc generally agrees on flexible, nationally determined approaches to water governance that account for differences in social, cultural, economic, and institutional contexts across member states.

BLOC 3 - WATER SECURITY AND DEVELOPMENT

Member states in this bloc face serious constraints involving water access, infrastructure, financing, technical capacity, or climate vulnerability. Examples include Mauritania, Côte d'Ivoire, and Senegal, where rapid population growth and fewer resources are affecting water security and socioeconomic development. As a result, this bloc prioritizes expanding access to basic WASH infrastructure and education. This includes leveraging the UNESCO Water Family as a source of scientific expertise, technical assistance, education, and training that can strengthen national institutions. For example, this bloc supports IHP initiatives that expand hydrological monitoring, groundwater assessment, drought forecasting, and water information systems, while increasing support for Open Science and access to training for water professionals, researchers, and public officials.

This bloc generally advocates for more finance and technology transfer from developed countries and international financial institutions, as external support is required to achieve SDG 6.

Member states value scientific and technological cooperation when it facilitates access to affordable solutions suited to local conditions, including low-cost monitoring technologies and water-use efficiency measures.

Countries in this bloc emphasize implementation of water governance frameworks that reflect national development priorities. While there is growing recognition of the importance of gender equality, local community participation, and ecosystem protection, this bloc is more immediately focused on expanding infrastructure and basic access. However, the populations of many members of this bloc have some of the lowest median ages in the world. As such, youth initiatives can be important vehicles to deliver water-related programs. These blocs all represent broad policy tendencies rather than fixed coalitions, and some member states may share priorities with more than one bloc.

climate science.¹⁷⁰ The IHP-IX Strategic Plan, together with the UN System-wide Strategy for Water and Sanitation and the SDG 6 Global Acceleration Framework, can serve as roadmaps for where UNESCO should focus its current efforts. This includes strengthening networks between governments, experts, and other stakeholders, enhancing education, awareness, and training programs, further advancing scientific research and knowledge sharing, and facilitating more multi-level dialogue, including at local and transboundary levels. However, key tensions remain concerning which kinds of initiatives should be prioritized, their funding and scope, and cooperation between countries and international organizations. UNESCO must bridge these divides and build consensus around how UNESCO can most effectively use its mandate to strengthen water governance, expand international cooperation, and accelerate progress toward SDG 6 so that access to water is universal, equitable, and sustainable.

Committee Mission

UNESCO has a unique role in addressing global water challenges through education, scientific cooperation, and knowledge sharing. Through its work on water, notably through the IHP and the UNESCO Water Family, UNESCO can help member states work together and build water-resource systems. However, financing gaps, unequal technical capacity, inadequate infrastructure, and the worsening effects of climate change are harming progress toward SDG 6.

Member states must decide how UNESCO can best use its mandate and resources to address these challenges while recognizing differences among member states' priorities. With this in mind, the IHP-IX Strategic Plan and its Operational Implementation Plan have set clear priority areas during the 2022 to 2029 period, including scientific research, innovation, education, bridging the data-knowledge gap, IWRM, and water governance informed by

TOPIC B

Supporting the Role of Teachers

UNESCO | NHSMUN 2027



Introduction

The quality of teachers in classrooms is one of the most influential factors for student learning in school systems.¹⁷¹ The quality of teaching and education is one of the main commitments of the United Nations Educational, Scientific and Cultural Organization (UNESCO), which treats education as a public good and a shared human right. As schools around the world experience teacher shortages, school budgets become strained, teacher burnout increases, and student learning is harmed.¹⁷²

Under Sustainable Development Goal (SDG) 4, it is expected that every child will complete primary and secondary education by 2030. UNESCO and the International Task Force on Teachers for Education 2030 estimate that meeting this commitment will require 44 million additional teachers.

The two main components of addressing the teacher gap are recruiting and retaining teachers.¹⁷³ These two problems have different impacts depending on the region. For example, in Sub-Saharan Africa, teacher recruitment is the focus, as higher birth rates and increasing school-age populations require a larger number of teachers in classrooms. However, in other areas, like Europe or North America, the focus is more on retaining teachers over time. This is because many teachers leave due to low pay and burnout.¹⁷⁴ Both teacher retention and recruitment must be addressed in order to improve teacher shortages and support schools. However, because these problems differ by region, interventions effective for one area may not be effective for another.

Teachers may leave the profession, and prospective educators may decide not to enter it, for a variety of reasons. In most school systems, teachers earn less than workers with similar backgrounds and education levels in other fields. Many teachers are also undersupported or underprepared to do well in the classroom. Furthermore, teachers face heavy workloads that grew during the COVID-19 pandemic that have yet to return to pre-pandemic levels. In conflict-

affected states, these pressures have become much worse, as teachers often work without a formal contract or reliable salary.¹⁷⁵

Most of the problems confronting teachers have been on the international agenda for decades. For example, the 1966 International Labor Organization (ILO) and UNESCO Recommendation concerning the Status of Teachers set international standards for the profession. It addressed the rights, responsibilities, and professional working conditions for school-level educators worldwide. Since 1966, additional standards and frameworks have expanded international guidance on teachers, including the 1997 Recommendation concerning the Status of Higher-Education Teaching Personnel.¹⁷⁶ More recently, the Global Framework of Professional Teaching Standards was created in 2019 by UNESCO and Education International, a global federation of education unions worldwide. The framework outlined three areas for improvement: improving teaching quality, supporting equitable education, and helping countries build or update their own education standards.¹⁷⁷

UNESCO can create standards and expectations, facilitate research, share resources or funding, and track how countries are doing. However, it is up to countries and regional governments to manage national curricula, hire and pay teachers, and ensure students receive a fair and complete education.¹⁷⁸ Ultimately, it is up to the countries and schools to close the teacher gap and support their teachers. Yet, the discussions and

decisions at the international level can influence and change the course of this issue.

History and Description of the Issue

ORIGINS AND GROWTH OF THE GLOBAL TEACHER SHORTAGE

The global teacher shortage has been a continuous issue in today's education system. If left unaddressed, the shortage could further weaken education systems and prevent countries from achieving SDG 4. According to UNESCO's International Task Force on Teachers for Education, it will cost USD 120 billion annually to fill all the teacher gaps in classrooms by 2030. Additionally, the teacher gap is most severe in secondary education. 70 percent of all the teaching positions that need to be filled are in secondary education. Regionally, Sub-Saharan Africa is the most impacted by the teacher shortage. UNESCO estimates that by 2030, 15 million new teachers will be needed in this region.¹⁷⁹

About 58 percent of the teacher gap comes from teachers leaving the profession. The other 42 percent reflects new teaching posts created by rising enrollment that need to be filled.¹⁸⁰ In other words, more than half of the world's teacher shortage is caused by people leaving the profession.

That split between recruiting and retaining teachers varies in different regions. In Sub-Saharan Africa, nearly twice as many teachers are needed to fill new positions created by growing enrollment as are needed to replace teachers who leave the profession. About 62 percent of the region's 15 million-teacher gap comes from a school-age population that is growing faster than the teacher workforce, while

only 37 percent comes from teachers leaving. Southern Asia is another region missing teachers due to recruitment, rather than retention. In all other parts of the world, such as Europe, North America, South America, the Caribbean, and Central and East Asia, additional teachers are mostly needed because teachers are leaving the profession.¹⁸¹ Therefore, certain regions will need to address the teacher shortage with different strategies and considerations.

The international approach to the profession was originally built to encourage teacher recruitment. In 2015, the UN adopted SDG 4. Within this SDG, Target 4.c committed countries to substantially increase their number of qualified teachers. Although recruitment is central to this target, increasing attrition has made retention equally important.¹⁸² However, the rate at which teachers have started leaving has increased. This is referred to as the attrition rate. Globally, the attrition rate for primary school teachers has climbed from 4.62 percent in 2015 to 9.06 percent in 2022.¹⁸³ Thus, as schools, regional governments, and the international community have been trying to increase the number of teachers in the classroom, the number of teachers leaving the field also continues to grow.

Filling this teacher gap will require over USD 100 billion per year to cover new teacher salaries, benefits, classroom resources, and materials. However, even though funds are needed, international education aid is expected to drop 25 percent by 2027. The gap between rising costs and shrinking aid will shape nearly every resolution considered.¹⁸⁴ However, this financial challenge is not the same everywhere. UNESCO estimates Sub-Saharan Africa alone needs close to USD 39 billion per year, an increase of roughly 79 percent over current education budgets. Almost all of it would go toward funding new positions for a growing student population.¹⁸⁵ Closing the gap in South Asia is projected to cost roughly USD 25 billion, compared with an

estimated USD 5.4 billion for Europe and North America combined.¹⁸⁶ Regions that are losing the most teachers or need a large number of new teachers are also the same regions who are in the most financial need to solve this issue.

UNESCO reported that at least 93 countries were facing acute teacher shortages in 2014.¹⁸⁷ Since then, an additional 18 countries have reported active teacher shortages for the 2022 to 2023 school year.¹⁸⁸ In an effort to address the issue, many countries have taken steps toward potential strategies. In 2025, the UNESCO General Conference and the ILO Governing Body agreed to revise their 1966 Recommendation. This was the first substantive update in 59 years. The goal is to find solutions for retention, consider how technology fits within teaching, and to recruit new workers into the field. The revision is moving in phases, with a special conference expected to adopt the new text by the end of 2027. This issue is currently unfolding, with both individual policy and international efforts being made in hopes of improving outcomes.¹⁸⁹

WORKING CONDITIONS, RETENTION, AND SOCIAL RECOGNITION

According to teacher unions, a major reason why teachers are leaving is because of pay. Education International's 2024 Global Status of Teachers report surveyed 204 union representatives across 121 countries. Inadequate pay was named more often than poor career progression, heavy workloads, or low professional status.¹⁹⁰

The Organisation for Economic Co-operation and Development (OECD)'s 2024 Teaching and

Learning International Survey (TALIS) asked teachers across 55 education systems how they felt about their pay. Only 39 percent said they were satisfied. That number has barely moved since 2018.¹⁹¹ The dissatisfaction matches a real, measurable gap. Teachers' salaries for primary level education across OECD countries average around 83 percent of what other similarly educated workers earn in other jobs. That number rises to 87 percent at lower secondary level teaching and 91 percent at upper secondary level teaching.¹⁹² Thus, teachers' pay is lower compared to other professions at every stage of a teaching career, making the profession undesirable compared to other types of jobs. For high-income countries, teachers do not make as much as professionals in law, medicine, or finance. However, they usually report making enough money to cover their living costs. This is different for teachers in many low-income countries. Teachers earn wages that fall below a living income altogether. The ILO and UNESCO have linked this directly to recruitment shortfalls, as well as high attrition rates.¹⁹³

However, pay is not the whole explanation. It is just one piece of the problem. The same 2024 TALIS survey asked teachers how they feel they are treated and valued by society. On average, only 22 percent of teachers said they feel valued. Those who did feel valued were more than 10 percent less likely to say they intend to leave teaching within five years.¹⁹⁴ This shows that valuing and uplifting teachers could also help address the teacher shortage. While teacher salaries and job recognition are independent of each other, both low salaries and low recognition

When asked to name the biggest cause of teacher shortages, inadequate pay was a common answer.

are causing teachers to leave the profession.

There is evidence that addressing both compensation and recognition together, rather than correcting for pay alone, helps retain teachers. The RAND Corporation, a nonprofit policy research organization, tracked how many US teachers planned to leave their jobs by the end of the school year in its State of the American Teacher Survey. RAND found that the share of surveyed teachers planning to leave declined from 22 percent in 2024 to 16 percent in 2025. Its findings also indicate that compensation, workload, and school leadership all influence teachers' intentions to remain.¹⁹⁵ This study is especially significant because it demonstrates that shortages need more than one solution. Multiple factors, like policy and social changes, must be considered when creating solutions.

The amount of preparation and grading that teaching requires also puts pressure on teachers. The OECD TALIS reported that after classroom instruction, teachers spend much of their time preparing lessons for their classrooms. When questioned, more than 50 percent of teachers identified lesson preparation as a major source of their stress. Another 40 percent of teachers

said that student grading is their source of stress. The study also found that first-time and less experienced teachers were more likely to feel stress from lesson planning and student grading than more experienced teachers.¹⁹⁶ At the start of their career, most teachers do not have access to their past lesson plans like veteran teachers do. They must often create their lessons from scratch, so new teachers will often need the most support. Given lesson planning and student grading will always be a part of a teacher's tasks, supporting newer teachers will also support more experienced teachers.

The impact of the teacher shortage unevenly affects younger teachers who often burn out before they can get comfortable in their role. One in five teachers under the age of 30 intend to leave the profession entirely within the next five years. That number has grown since 2018, and in several education systems, roughly half of young teachers report intending to leave.¹⁹⁷ Early-career teachers are disproportionately likely to leave before they build up the classroom experience that makes them effective. This further shows that support for younger or first-time teachers is crucial.

The working conditions of teachers also shape

Teachers marching during the #RedforED

Credit: Nduati.githae



retention and recruitment. Along with stressful and time-consuming tasks, many teachers have expressed concerns about oversized classrooms. In 2023, the global average ratio of students to teachers was 26 to one. However, in some regions like Southeast Asia and Sub-Saharan Africa, this ratio is much higher.¹⁹⁸ In these situations, teacher stress can increase significantly. They are forced to serve a larger number of students, creating more work and using more of their time, while receiving the same salary.

Therefore, pay, recognition, workload, and working conditions all affect teacher recruitment and retention. However, these factors highlight regional differences in the teacher shortage worldwide, as well as differences in country policies and plans for action. Recognition campaigns may help in developed countries. But this may not make a difference for teachers in developing countries who are not being paid enough to cover their living expenses. Nonetheless, all factors point to the same fact: teachers need better support, more resources, and proper pay.

PROFESSIONAL DEVELOPMENT AND DIGITAL TRANSFORMATION

Teacher professional development has traditionally focused on helping educators improve their knowledge, manage a classroom, and use effective teaching methods. However, as education systems have changed, teachers have needed to adopt new skills to lead their classrooms.¹⁹⁹ The creation and evolution of digital technologies has been a main reason for this change. Starting in the 1990s, governments and national curriculums began introducing information and communication technologies (ICTs) into schools. This included computers, calculators, digital textbooks, and other internet-based resources. This created new opportunities for instruction, but it also required teachers to learn how to use and implement these technologies in the classroom. UNESCO has emphasized that simply providing schools with

technology does not mean they will have better learning outcomes. Teachers must be able to adapt and use this technology for the needs and benefit of their students.²⁰⁰

The addition of ICTs into schools created a new challenge for professional development. Teachers were expected to use technology while many training programs were not yet adapted to help them learn and use this technology. UNESCO's ICT Competency Framework for Teachers, first developed in 2008 and updated in 2018, tried to address this gap by providing resources and guidelines to help teachers use ICTs effectively. The framework covers not only basic technological skills, but also the use of technology for instruction, assessment, administration, and collaboration.²⁰¹

However, the integration of technology into forms of teaching and classrooms also exposed a new inequality. UNESCO's data shows that in 2022, almost 60 percent of primary schools worldwide did not have access to the internet. This technology gap affected low-income countries the most, as only 20 percent of primary schools in these countries have internet access for teacher instruction.²⁰² Meanwhile, in high-income countries, more than 90 percent of classrooms have internet access.²⁰³ Teachers around the world are entering the era of digital transformation from different starting points. A teacher working in a school with reliable internet and technology is able to understand and use technology much more effectively than a teacher without those resources.

Artificial intelligence (AI) is the most recent digital transformation in the classroom. By 2022, only seven countries had a national plan to train teachers in artificial intelligence, including China, Finland, Georgia, Qatar, Spain, Thailand, and Türkiye. UNESCO addressed this in 2024 by releasing the AI Competency Framework for Teachers, alongside a matching framework for students, during its annual Digital Learning Week.²⁰⁴ The teacher framework is the first global standard of its kind. It sets out

15 competencies across five areas, including a human-centered mindset and the ethics of AI.²⁰⁵ The goal of this program is to help teachers use AI in learning environments in a safe way. The framework is not a binding rule. It simply helps countries build their own national standards.

However, that human-centered approach did not begin in 2024. UNESCO set out the underlying principle five years earlier, in the 2019 Beijing Consensus on Artificial Intelligence and Education. The Consensus held that machines should not replace teachers, but that teachers must be ready to work in classrooms where AI is present.²⁰⁶ The 2024 framework is best understood as the technical follow-through on this 2019 commitment. The 2019 Beijing Consensus set the foundation. The 2024 Competency Framework supplies the specific skills meant to put that foundation into practice.²⁰⁷

AI has the potential to personalize learning, remove barriers for students with disabilities and multilingual learners, and reduce the time teachers spend on routine tasks. For example, AI tools can help adjust the difficulty of assignments, improve the accessibility of instructional materials, and assist with initial

lesson planning. If used carefully, these tools may give teachers more time to work directly with students.²⁰⁸

However, there are risks that come with AI use in the classroom. In 2025, the International Task Force on Teachers for Education 2030 published a paper on protecting teacher agency. Teacher agency is a teacher's ability to use independent judgment rather than simply follow an AI tool's suggestion. The paper sorts the relationship between teachers and AI into three categories: teaching with AI, teaching about AI, adapting teaching to a world where AI is already everywhere. The paper also names the central danger of AI to teaching: de-professionalization. This is the reduction of a teacher's independent judgment due to AI tools taking over more of the tasks that teachers once did.²⁰⁹

As teachers work with or use AI, they should be careful about cognitive offloading which happens when teachers rely on AI to plan lessons, assess students, or generate feedback. This can interfere with their professional development, as teachers risk losing the judgment that those tasks require. AI may weaken the ability of teachers and can lead to them relying on technology to do the work for them. Another

A teacher-training session on digital-classroom

Credit: Mamdoudidop



concern that teachers should be mindful of is data misuse. This is when student data is put into AI systems and can be commercially exploited or shared for other uses. Additionally, AI can give teachers biased information or recommendations, which can unfairly affect students and further disadvantage already marginalized learners. For example, an AI system may incorrectly label Black or Hispanic students as “high risk,” leading teachers to lower their expectations or recommend less challenging courses.²¹⁰ Poorly governed AI adoption could widen the very gaps it is meant to close.²¹¹

Overall, the gap between UNESCO’s guidance and classroom reality remains significant. International bodies can define what responsible professional development and digital technology training should look like. But many governments still lack the ability, resources, and teacher-training systems needed to put that guidance into practice.²¹² As a result, the teachers most affected by shortages or lack of digital resources may also be the least likely to receive professional development.²¹³ However, if the international community works together to make this knowledge and these resources evenly accessible, then these resources and skills can be utilized by all teachers. Moving forward, the use of technology for professional development should be implemented carefully, to make sure that teachers are not being replaced or limited by these new resources.

TEACHERS IN CRISIS, CONFLICT, AND DISPLACEMENT CONTEXTS

Another pressing issue in supporting teachers is addressing attacks on education. Students, teachers, professors, and education personnel are often attacked in school buildings. The Global Coalition to Protect Education from Attack (GCPEA) documented at least 8,566 reported attacks on education in 2024 and 2025. This was a 40 percent increase from the previous two-year period. These attacks included violence against education personnel and the military use of schools and universities. They harmed at least 10,600 students and education personnel across 83 countries.²¹⁴

Education Cannot Wait is a UN global fund for education in emergencies. It found that 234 million school-aged children were affected by crises and in urgent need of education support in 2024. That is an increase of 35 million children from the previous three years.²¹⁵ In these settings, teachers are tasked with finding ways to keep classrooms running through these conflicts, displacements, and disasters.

There have been many discussions about how to support teachers in times of crisis. The Inter-agency Network for Education in Emergencies (INEE) is a global network in which UNESCO participates. INEE maintains the Minimum Standards for Education, a set of 19 benchmarks most recently updated in 2024. These benchmarks guide how crisis-response actors should manage, train, and support teachers. Among their requirements, teachers should be recruited through transparent and fair processes,

A teacher in a system short on classrooms, teachers, electricity, and internet access is unlikely to be the first to benefit from a new global AI framework.

given clearly defined conditions of work, and paid appropriate compensation. However, these expectations are largely not being met.²¹⁶ This requires policymakers and the international community to meet these standards and try to find ways to ensure access to education in times of crisis.

Due to ongoing instability and conflict, teachers in Lebanon have been struggling in the classroom. Teachers have been hired on short-term contracts to run second-shift classes. These are separate afternoon sessions created for displaced Syrian children, rather than regular daytime schooling. Those teachers have gone unpaid for months at a time. The value of what pay they do receive has also decreased by 90 percent, because of the country's inflation crisis. Because of this, many teachers have either supported or gone on repeated strikes.²¹⁷ A 2026 UNESCO article further argued that many displaced and refugee teachers are prevented from entering classrooms. Their qualifications may not be recognized in host countries, their certifications may not transfer, and thus they cannot access formal employment.²¹⁸

The INEE Minimum Standards also call for learning environments that protect the mental

wellbeing of teachers and students.²¹⁹ With the ongoing conflict in Ukraine for instance, a 2025 study found that teacher-focused mental health support was not present. Existing school programs were largely not designed around teachers' own needs, leaving many educators without adequate support for the stress and uncertainty caused by the conflict. However, one program specifically supported educators themselves. The Psychosocial Support for Educators program provided six online training modules covering educator self-care, children's responses to trauma, coping strategies, and ways to identify and support students experiencing psychological distress. The study enrolled 881 Ukrainian educators, some of whom participated in the program while others formed a comparison group. Participating educators reported decreases in stress, anxiety, depression, and burnout, as well as greater knowledge and readiness to support students.²²⁰ Although the study did not measure student performance, its findings suggest that virtual mental-health training can help educators working in crisis settings. For now, however, this type of teacher-focused support remains uncommon.

UNESCO's response to these crises has

A Lebanese teacher helping a Syrian student at a refugee camp

Credit: DFID



continued to evolve. The Strategic Framework for Migration, Displacement, Emergencies and Education was adopted in 2024. It explains how the organization connects emergency education response with longer-term recovery.²²¹ In April 2026, UNESCO's Executive Board took a further step by adopting the International Plan to Protect Education from Attack. While earlier tools focused primarily on response, this plan addresses disruptions before, during, and after conflict. It aims to reduce systemic risk and build long-term resilience for education personnel and institutions.²²² Yet implementation remains difficult. Education still receives less than three percent of global humanitarian aid. As a result, even strong prevention plans must compete for a small and consistently underfunded share of emergency financing.²²³

Teachers working in crisis settings without stable contracts, adequate pay, or formal recognition must be supported so that education can continue, even in emergency situations.²²⁴ Governments and international organizations should therefore protect teachers' safety, recognize displaced educators' qualifications, and provide reliable compensation so that education can continue during emergencies.

Current Status

COVID-19'S LASTING IMPACT ON TEACHERS AND CLASSROOMS

In early 2020, the COVID-19 pandemic forced the most sudden and widespread school closures in modern history. Within a matter of weeks, governments across the world moved classes online or suspended them altogether. Teaching, a profession built around having a physical presence in a classroom, had to be reinvented almost overnight. At its peak, the disruption affected more than 1.6 billion students across over 190 countries and impacted more than 100 million teachers.²²⁵ It was the largest simultaneous interruption to education ever

recorded. This crisis revealed how important it is to prepare and develop teachers' skills for digital technology use or instruction.

The transition to remote learning due to the pandemic impacted countries differently. UNESCO reported that many teachers during the pandemic lacked the digital teaching skills to properly execute remote learning. Because some countries lack electricity or internet, some schools were completely shut down. For example, only about 30 percent of schools in Zimbabwe have internet access, meaning the majority of schools in this area could not support remote learning, and stopped teaching entirely during the pandemic.²²⁶ This deeply affected the learning progress for many students. In low- and middle-income countries, the number of 10-year-olds who could not read and understand a simple sentence rose from 57 percent before the pandemic to 70 percent by 2022.²²⁷ However, school closures were not the only cause of this decline. Many teachers also lacked the training, technology, and support needed to continue teaching effectively during the pandemic.

The damage was not spread evenly. This was largely due to differences in the level of support teachers received. When Brazil's Instituto Peninsula surveyed teachers in 2020, 83 percent said they did not feel prepared to teach remotely. About two-thirds of these teachers reported feeling anxiety during this time, and fewer than one in 10 described themselves as happy in their work.²²⁸ This experience reflects a broader international problem. Many teachers were expected to adopt new technologies while dealing with a changing curriculum, increased communication with families, and uncertainty about school closures all at the same time.²²⁹

Most governments and education offices were not able to quickly adapt to this crisis. However, a few governments did handle this crisis more smoothly. Estonia let teachers rewrite their own curricula and reallocate class time as they saw fit during the pandemic. Uruguay routed new administrative demands through GURI,

a reporting platform teachers already knew, rather than inventing a new system to handle remote learning. Peru rewrote its own emergency guidelines in the middle of the pandemic once it realized they were causing burnout in teachers rather than preventing it.²³⁰ This demonstrates that even in a crisis, national governments have the ability to use their resources and think carefully about the issue in order to support teachers.

The strain on teachers did not end when classrooms reopened. By 2024, RAND Corporation researchers surveyed nearly 1,500 American public school teachers and found that 60 percent were burnt out. Nearly one quarter wanted to leave their job, and teachers were resigning and retiring at rates higher than before the pandemic. The same survey found that almost 40 percent of high-poverty school districts experienced budget cuts once emergency COVID-19 federal funding ended. High-poverty school districts are often underfunded, leaving them with fewer resources to support teachers. Thus, the COVID-19 pandemic intensified pressures and concerns for teachers and schools that contributed to dissatisfaction and attrition several years later.²³¹

The pandemic also changed what professional development looks like for teachers. Before COVID-19, digital training could often be treated as one component for teachers to learn and master. After the widespread adoption of remote and hybrid learning, teachers increasingly needed ongoing training for digital resources, online assessments, and adapting lessons for in-person and digital environments. For

example, UNESCO's work in Latin America and the Caribbean following the pandemic placed a high emphasis on revising teacher professional development for these reasons.²³² UNESCO has stressed that instead of preparing for emergency situations, teacher professional development should be continuous and constantly evolving. Teachers were expected to not only recover from the pandemic, but to shift into a mindset of being able to constantly adapt and learn for multiple scenarios and crisis situations.²³³

The COVID-19 pandemic rapidly disrupted teaching systems around the world, but it mostly exposed gaps that were already present in teaching models. The pandemic made these gaps more apparent, increasing calls for professional development and digital learning. Teachers who entered the pandemic without proper digital training were forced to quickly acquire those skills. Teachers who were already working under heavy workloads faced additional challenges and demands. Despite schools now being open, the effects of this crisis remain clear. Schools continue to struggle with teacher burnout, student learning outcomes have declined, and the expectations for teachers and performance continue to increase.²³⁴

THE 2025 WORLD SUMMIT ON TEACHERS & THE SANTIAGO CONSENSUS

The 1966 ILO/UNESCO Recommendation concerning the Status of Teachers remains a foundational international standard concerning the Status of Teachers. It is the original standard for how teachers are trained, hired, and

Digital competency for teachers is now increasingly treated as part of teachers' professional development.

employed.²³⁵ Building off that, in August 2025, UNESCO and Chile hosted the first-ever World Summit on Teachers in Santiago. Ministries of education, teacher unions, and non-governmental organizations (NGOs) gathered to try to solve the teacher gap. Over 27 countries were represented throughout the conference.²³⁶

Over two days of negotiation, the participants produced the Santiago Consensus. This framework created six priorities for the teaching profession. It calls for fair policy across an entire career, genuine professional development, a real voice for teachers in decision making, steady financing, digital and AI competency, and a workforce that reflects the students it teaches.²³⁷ Donor agencies and finance ministries pushed for short-term contract positions or performance-based pay. Both options cost less than hiring permanent staff, which matters when education budgets are tight. However, teacher unions pushed back, arguing these types of teacher positions can weaken job security and the collective bargaining protections the profession has spent decades building.²³⁸ Their agreement on a single shared agenda was itself a notable outcome of the summit. It is the most complete statement UNESCO has issued about teachers specifically, rather than about education in general.

That agreement comes with a price. Closing the 44 million teacher gap will cost roughly USD 120 billion a year. The majority of this cost comes from paying the additional teacher salaries.²³⁹ The Santiago Consensus asks each government to raise money on its own through its current budget, funds, or other efforts. One option is debt-for-education swaps. These swaps are deals in which a lender forgives part of a country's debt, and in return, the country agrees to spend that same amount of money on education instead of repaying it.²⁴⁰ The rest depends on international aid, which is currently shrinking rather than growing. Global aid to education fell 12 percent in 2024 alone, and is projected to be down by roughly a quarter by 2027, the sharpest decline since the 1990s.²⁴¹

Moreover, Santiago carries the same basic limitation as the 1966 Recommendation: it is a political declaration, but not a binding treaty.²⁴² No government pays a fine for ignoring it, and participating countries cannot be compelled to honor the commitments they endorsed. However, the declaration still carries serious weight. The 1966 Recommendation also lacked an enforcement clause, yet it still became the reference point that shaped how countries defined teacher qualifications, hiring, and working conditions. This demonstrates the weight and influence of a shared international standard.²⁴³ The real test for Santiago is not whether six priorities were agreed to in a conference room, but whether these guidelines can reach and impact a classroom.

Eight months after Santiago, an Asia-Pacific forum in Bangkok provided an early opportunity to discuss regional implementation of the Santiago Consensus. From March 31 to April 2, 2026, representatives from across the Asia-Pacific region gathered for a policy forum on strengthening the teaching profession. This was a regional follow-up to the conversations in Santiago, where they discussed its applications in the area and nearby classrooms.²⁴⁴ With guest speakers and professionals in the field, participants recommitted to these guidelines.²⁴⁵ However, whether or not these guidelines will impact classrooms has yet to be determined.

The Bangkok Forum did not establish a new funding mechanism, reflecting the Santiago Consensus's reliance on voluntary national implementation. UNESCO can only monitor implementation and encourage countries to follow the guidelines; it cannot require governments to do so. For example, the Sustainable Development Goal 4 (SDG 4) Knowledge Hub and Voluntary National Reviews are self-reported by countries, so a government grades its own progress with no outside check and no penalty for an inaccurate assessment.²⁴⁶ The two funds Santiago leans on most for financing, the Global Partnership for Education and Education Cannot Wait, have similar

weaknesses. They both run entirely on voluntary pledges, and neither can force a government to pay or contribute.²⁴⁷

Four years remain before the 2030 deadline for achieving SDG 4. Agreements like the Santiago Consensus provide useful suggestions and guidelines on how countries can address this critical issue. However, it is up to local and national governments to channel effort and resources into this problem, and to come through on their promises. Without a significant change to recruiting or retaining teachers, the teacher gap is likely to widen even further.

REGIONAL CASE STUDY: SOUTH SUDAN'S EDUCATION AND TEACHER CRISIS

South Sudan gained independence from Sudan in 2011, after decades of civil war. It inherited a state that could barely fund the institutions a new country depends on, including schools. Education in South Sudan remains extremely underfunded. From 2023 to 2024, education accounted for less than eight percent of total government spending. While this was an increase from 2020, where the government only spent around 4 percent on education, funds are very limited for schools and teachers.²⁴⁸ South Sudan

has a very young population with nearly 40 percent of the population under 15, and a median age of only 19.²⁴⁹ However, more than 2.8 million school-aged children are not in school. This means the country is not providing education for all of its children.²⁵⁰ The failure to keep teachers and students in classrooms today will impact the country's future, but South Sudan faces incredibly strained resources.

That shortfall is visible at Gumbo Basic School in Juba, the country's capital. Headmaster Paul Santino and his entire teaching staff had gone unpaid for more than a year as of mid-2026.²⁵¹ Santino walks four miles to the school before dawn each day and locks the gate himself each evening. The school survives on informal stipends from parents. The staff have simply kept teaching without a salary. The school also does not have access to a clean, filtered water supply.²⁵² These conditions are not unique to Gumbo. A joint UNICEF-UNESCO assessment put South Sudan's net primary enrollment rate, which is the proportion of primary-school-age children who are officially enrolled, at only 37.6 percent nationally.²⁵³ The 2023 National Education Census recorded an average student to teacher ratio of 39 to 1 across all levels. This

Overcrowded classroom in South Sudan

Credit: SuSanA Secretariat



ratio of students to teachers increased from last year, forcing teachers to take on more students than before.²⁵⁴ Fewer than half of the country's primary school teachers have also received any formal training.²⁵⁵

UNICEF reported that teachers in South Sudan earn an average of USD 50 per month. Approximately 80 percent of educators in South Sudan's schools are either unpaid volunteers or teachers with minimal training.²⁵⁶ If schools were to increase enrollment, this would put additional strain on the limited resources and teachers at these schools. The government is stuck in a difficult position. Low public financing makes it harder to pay and train teachers. With minimal pay, teachers are less likely to stay in the classroom and come back. With fewer teachers, the number of students per classroom will increase. This will likely strain teachers more, making them want to leave or ask for more money. It is a tough cycle that will continue to reinforce itself and make the situation worse.

Moreover, this fragile education system in South Sudan comes with additional risk. According to the Global Coalition to Protect Education from Attack (GCPEA), security forces beat teachers protesting over withheld salaries in Bor, Jonglei state, in February 2022. They also arrested the local teachers' union chairperson twice that year for leading the same protest.²⁵⁷ In another town called Rumbek, the police arrested 33 more teachers across two separate wage protests in June 2022.²⁵⁸ The pattern recurred in 2023, when police in Lakes state detained over 15 teachers who refused to comply with the Ministry of Education's teacher-quality screening exercise.²⁵⁹

These incidents display that improving teacher retention is not simply a question of raising salaries. It also requires governments to establish reliable systems for paying educators and allow them to raise concerns about working conditions.

Declining donor support has made it even more difficult for the government to close this education gap. Sharp cuts in assistance from the United States, for instance, have put South Sudan in a tough position.²⁶⁰ The United States government has argued that the deeper problem is domestic, saying that years of external funding allowed South Sudan's government to treat foreign aid as a "substitute for governance" instead of spending its own funds on services such as education.²⁶¹ Critics counter that withdrawing assistance is unlikely to force immediate government reform. Instead, abrupt cuts may close schools and other essential services, placing the greatest burden on civilians who have little control over government spending. This disagreement over responsibility remains unresolved. International assistance can help fill immediate gaps in South Sudan's national budget, providing teachers with support, resources, and pay. However, continued dependence on international aid can also make education systems in low-income countries vulnerable to changing donor priorities and external political decisions.

In the meantime, South Sudan's teachers continue to go unpaid. For example, 23-year-old university student Simon Oba volunteers as a teacher at Gumbo, despite not yet having formal teaching qualifications. He walks to the school each day while paying his university tuition

Many teachers who have protested unpaid wages and working conditions have been arrested rather than heard.

through family support and personal savings. After graduating, he plans to become a qualified teacher and join South Sudan's next generation of educators.²⁶² The education system in South Sudan faces further threats as conflict continues in the country and a new outbreak of Ebola spreads in neighboring countries.²⁶³ As South Sudan struggles to find the funds and maintain its teaching workforce, this case provides a clear example of the needed interventions in many countries to better support students and teachers.

Bloc Analysis

POINTS OF DIVISION

The teacher gap represents two shortages inside one number. Most countries are facing teacher retention issues, but there are still a substantial number of countries that need additional teachers because of growing school-age populations. Which issue a country faces depends on its demographics, existing education system, and available resources. For example, in Sub-Saharan Africa, over 60 percent of the teacher gap comes from a growing population, meaning they need new teachers. However, in Europe and Northern America, about 94 percent of the teacher gap comes from replacing teachers who leave in systems where enrollment is stable and the workforce is aging.²⁶⁴ A government that cannot train new teachers fast enough and a government that cannot keep the teachers it has will require different solutions.

One major point of division is whether governments need to build the teacher workforce or maintain the one they already have. Depending on their situation, countries will prioritize different policies and projects. A country's classroom sizes, teacher performance, and student literacy rates will ultimately influence how that country wishes to move forward. While countries can reach a shared agreement that talks about

multiple strategies, some countries might only want to commit to agreements that are relevant to their situation.²⁶⁵

Another point of debate is where money for education should come from. While some countries receive assistance from donors and NGOs to fund schools and teachers, other countries rely primarily on public funds.²⁶⁶ There is also debate over how these funds should be used. Some argue that funding should be used mostly for hiring new teachers and raising pay for those already working. However, there are also many other expenses in education, such as school infrastructure and classroom materials. These are often underfunded and require more attention as well.²⁶⁷

Countries also have different perspectives on international agreements made through the UN regarding education. While the Santiago Consensus of August 2025 is a political declaration rather than a treaty, progress on it is self-reported and left to the autonomy of countries.²⁶⁸ However, education systems and teachers might benefit from stronger monitoring and accountability for implementing these guidelines. Since binding international requirements could conflict with national sovereignty, countries and local administrators will continue to decide how to apply these guidelines on a case-by-case basis.

Under SDG indicator 4.c.1, countries report data to the UNESCO Institute for Statistics (UIS) on the proportion of teachers who meet the minimum qualification requirements for their level of education.²⁶⁹ These requirements are established nationally, so they vary from one country to another. However, understanding a country's individual situation as well as factors influencing teacher support can provide the necessary background to analyze its potential blocs. These blocs also represent broad policy tendencies rather than fixed coalitions. Some countries face recruitment, retention, and training challenges simultaneously and may therefore share priorities with more than one bloc.

STATES WITH BELOW-TARGET TEACHER QUALIFICATION AND SUPPLY

Members of this bloc face the most immediate challenge of expanding the size of their teaching workforce while large numbers of children are still not enrolled in the current education system. This bloc is most applicable to Sub-Saharan Africa. The region needs roughly 15 million more teachers by 2030, which accounts for one-third of the global shortage. This bloc prioritizes recruiting new teachers and expanding training capacity, although retention remains important.²⁷⁰

Countries in this bloc may also have large numbers of teachers who do not meet national qualification requirements. Only 64 percent of primary teachers and 58 percent of secondary teachers in Sub-Saharan Africa meet the minimum qualification requirements established in their national systems. These rates are approximately 20 percentage points below the corresponding global averages.²⁷¹ They are also struggling with overcrowding. In 2023, primary schools in Sub-Saharan Africa averaged 60 students for every trained teacher, more than double the global average of about 26. In Chad, the ratio reaches 90 to 1.²⁷² Other states that may align with this bloc include South Sudan, Liberia, Niger, Sierra Leone, and Nigeria.

This bloc will prioritize creating new teaching positions, expanding teacher-training programs, increasing external funding, and strengthening teacher recruitment. Member states are likely to support international partnerships, scholarships, and certificate programs for future teachers, as well as programs that prepare teachers to work in underserved areas or emergency settings.

STATES WITH MATURE BUT UNEVEN RETENTION

In this bloc, states have the ability to train teachers, but the problem they face is keeping them. Of the 4.8 million additional teachers needed in Europe and Northern America by 2030, 94 percent are needed to replace teachers

who have left.²⁷³ Pay is one major reason for these retention difficulties. Across the OECD, primary teachers earn 17 percent less on average than full-time workers with university degrees, though individual systems range from near-equal pay to nearly 40 percent below average.²⁷⁴ That spread is why the bloc cannot agree on a single solution. With higher-income countries facing these issues, the bloc has the smallest shortage but the greatest influence over financing. States such as the United Kingdom, Finland, Estonia, and Spain may align with this bloc.

Financially, this bloc is the main source of donor funding. But its own retention crisis draws on the same national budgets, so paying teachers more at home and funding teacher programs abroad can create competing budget priorities. Retention is also the bloc's biggest internal disagreement. States with wide pay gaps treat higher salaries as the necessary first step, while those with narrower gaps argue that recognition and working conditions matter more. On enforcement, members broadly resist binding international targets on teacher pay or employment, holding that each government should decide its own budget.

STATES SCALING TEACHER SUPPLY AND TRAINING SYSTEMS

Members of this bloc are creating additional teaching positions to serve a growing student population while also improving training for current teachers. These states must raise the quality of their teaching workforce and add to its size at the same time. Their challenge is not solely recruiting new teachers or preventing attrition. They must also provide large-scale training to educators who are already working but may not yet meet national qualification standards. Indicator 4.c.7 of SDG 4, which measures the percentage of teachers who received in-service training during the previous 12 months, is the more telling measure here.²⁷⁵ Members may deliver that training through national programs, including government digital

platforms and in-person institutions. States such as Brazil, India, China, South Africa, and Peru may align with this bloc.

When it comes to funding, this bloc wants support for training systems already under construction, rather than emergency financing or salary subsidies. This bloc's members are still building pay scales and career structures, so expansion and training may receive greater attention than retention. The real issue is capacity. On enforcement, the bloc sits between the other two blocs. It needs outside support, but many members also want to preserve control over their developing national training systems. That makes it the likeliest source of compromise. This bloc will likely support proposals to expand national training programs, share methods with states at a similar stage, and deliver training online. However, the digital divide is worth noting here. About 60 percent of primary schools worldwide have no internet connection, so an online-first approach will have a harder time reaching many of the teachers who need training most.²⁷⁶

Committee Mission

The UN Educational, Scientific and Cultural Organization (UNESCO) was established in 1945 to contribute to peace and security through cooperation in education, science, and culture.²⁷⁷ In education, it works through four tools. It sets international standards, produces the data governments use to measure their own progress, provides technical support to education ministries, and coordinates collaboration among international and national actors. UNESCO cannot set national education budgets, decide teacher salaries, or require a government to act on what it has agreed to. Its Constitution prohibits it from intervening in matters that fall within a member state's domestic sovereignty.²⁷⁸

Teachers are reflected in UNESCO's mandate through two especially important frameworks.

The first is Sustainable Development Goal (SDG) 4, which UNESCO monitors and encourages. This target commits member states to substantially increase the supply of qualified teachers by 2030.²⁷⁹ The second is the 1966 joint ILO and UNESCO Recommendation concerning the Status of Teachers. It sets the international standard for how teachers are trained, hired, and employed. It is under revision now, with adoption expected in 2027.²⁸⁰

In this committee, countries consider what should be addressed and decided at the international level in order to try to influence or improve policies in their own countries. The committee should consider teacher pay, working conditions, professional development, recruitment and retention, and technology and curriculum changes as factors in this issue. A country with a growing population and need for more teachers will likely have different priorities than a country with a shrinking population and need to retain teachers.

The challenge for this committee is developing recommendations that are broad enough to work for any type of situation while remaining specific enough to provide practical solutions that governments and schools can use. Whatever the committee produces will be a recommendation. However, its transparency and detail can influence and change national policies that can support and strengthen the field of teaching for years to come.²⁸¹

Research and Preparation Questions

Your dais has prepared the following research and preparation questions as a means of providing guidance for your research process. These questions should be carefully considered, as they embody some of the main critical thought and learning objectives surrounding your topic.

TOPIC A

- 1 What are the main causes of water insecurity in your country, and which populations are most affected?
- 2 How is climate change affecting your country's water supply, water quality, or risk of floods and droughts?
- 3 What water education, scientific research, or capacity-building programs already exist in your country? How could UNESCO strengthen them?
- 4 Does your country share rivers, lakes, or groundwater with neighboring states? If so, how are these resources managed, and what disagreements remain?
- 5 What position does your country take on sharing water-related data, research, and technology with other states?
- 6 How should UNESCO finance its water programs? What role should developed countries, development banks, private companies, and nonprofit organizations play?
- 7 How can UNESCO include women, Indigenous Peoples, youth, and local communities in water management while respecting national circumstances and priorities?

TOPIC B

- 1 Countries measure teacher shortages in different ways. Some track qualification rates, others track attrition, and others track classroom ratios. What gets lost when a single global indicator tries to capture such different national realities?
- 2 How can a single international standard serve both states that cannot train teachers quickly enough and states that cannot keep the teachers they already have?
- 3 How should member states weigh investment in teacher salaries against investment in working conditions and professional status, and does that balance shift with a country's income level?
- 4 What strategies can states use to sustain teacher salaries as international education aid declines?
- 5 How can UNESCO's AI Competency Framework for Teachers be made useful to teachers in schools without reliable electricity or internet access?
- 6 In what ways can states protect teachers working in conflict and displacement settings, where salaries are often unpaid and qualifications go unrecognized?
- 7 What should the revised 1966 Recommendation require of member states, and how can progress be tracked when UNESCO cannot enforce compliance?

Important Documents

TOPIC A

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The content in this background guide does not reflect the position of Patrick's employer.

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