CNYMUN 2026

FORGING UNITY IN A FRAGMENTED WORLD

XLIII

Commission on Science and Technology (CSTD)
Chair Letter

DEAR DELEGATES,

Welcome to the Commission on Science and Technology for Development at CNYMUN 2026! As we move forward towards the future, skills such as diplomacy and cooperation become more important, and we are looking forward to a successful conference filled with discussion about some of the most prominent issues facing the world today. Your chairs for the CSTD will be Haris Iqbal and Lindsey Chong.

ABOUT THE CHAIRS:

Lindsey is a junior at Fayetteville-Manlius High School. This is her third year in MUN and first year as a chair. When not at MUN, she is always out google training for tennis and playing golf. She also plays the violin and loves hanging out with friends.

Haris Iqbal is a junior at Fayetteville-Manlius High School. This is his second time being a chair, as he chaired at CNYMUN 2025 last year. He has participated in multiple MUN conferences since his freshman year. Haris likes to play basketball and watch the NBA. His favorite team is the OKC Thunder. He also enjoys hanging out with friends and family.

ABOUT THE COMMITTEE:

The Commission on Science and Technology (CTSD) works in the UN to provide GA and ECOSOC advice on relevant science and technology related issues.[1] Annual intergovernmental forums for discussion are held, addressing concerns regarding science, technology and development. Discussions of new importance, change and the impact of science and technology are conducted, leading into questions about development and a sustainable future. Countries are provided forums to raise critical questions and explore opportunities presented by the modern rapid technological advancements, but also making sure that developing countries are not lagging behind. Solutions are found collaboratively, benefitting all while being ethical, practical, and efficient.[2]

Your topics for the United Nations Commission on Crime Prevention and Criminal Justice (CCPCJ) at CNYMUN 2026 will be:

1. Economic Diversification through Digitalisation in Developing Countries
2. Addressing Water Scarcity Through Sustainable Technologies

ABOUT THE CONFERENCE:

Keeping in line with CNYMUN tradition, all committees will follow Harvard style debate, meaning delegates are prohibited from using pre-written clauses and/or resolutions during committee. Doing so will make a delegate ineligible for awards. To be eligible for awards, delegates must submit a Georgetown style position paper per each topic, meaning that each topic should be one page, single spaced, with a font size of 12 in Times New Roman. Position papers should outline the stance of your delegation and demonstrate a comprehensive understanding of your topics. The use of AI is prohibited and will result in disqualification from awards. When deciding on awards, chairs will look favorably upon delegates who have put significant effort into preparation prior to the conference, collaborate with other delegates without being overbearing, remain within the bounds of their nation's policies, and encourage other's voices to be heard. CNYMUN committees are structured using a tiered structure, designating each committee as open, intermediate, or advanced. CSTD is designated as an **open** committee. In turn, the Best New Delegate award will be offered to a first-time delegate in this committee.

Please share position papers prior to the start of the conference. The chairs' emails are listed below for you to contact about any research, position paper, or committee inquiries. It is recommended that all delegates share their position papers to both chair's emails, although chairs will ask for any hard copies of position papers at the start of committee session one if necessary.

We encourage you to scan our delegate preparation resources and award structure on www.cnymun.org. We wish you the best of luck and can't wait to see what you bring to CNYMUN 2026!

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[1]"Commission on Science and Technology for Development." *UNCTAD*, unctad.org/topic/
    commission-on-science-and-technology-for-development. Accessed 16
July 2025.

[2] "About the CSTD." *UNCTAD*, unctad.org/topic/

    commission-on-science-and-technology-for-development/about.
Accessed 21
    July 2025.

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TOPIC 1: ECONOMIC DIVERSIFICATION THROUGH DIGITALISATION IN DEVELOPING COUNTRIES

Economic diversification is vital for developing countries. Developing countries are often overly dependent on certain exports. This includes oil, minerals, and agricultural products, and the reliance on these products makes the economy of these countries very volatile and prone to crashes, as fluctuating prices, supply shocks, and global conflicts can swing their economies. Economic digitalisation, which is the use of digital technologies in the economy, provides a road to building more stable and stronger economies. Technologies included in digitalisation are e-commerce, digital governance, and artificial intelligence.[3] If countries digitalise their economies, they can increase jobs, improve financial stability, and further become a part of global markets.

Since the 20th century, institutions like the World Bank and International Monetary Fund (IMF) have been emphasizing the importance of economic diversification over past decades, especially to nations dependent on resources.[4] Despite this, progress has been slow due to many reasons. This includes weak infrastructure and a lack of access to money.[5] The rise of digital technology in recent years has brought new opportunities. These technologies, including mobile phones, online services, and digital payment have helped developing nations in their process of diversification. For example, Kenya's M-PESA system helped change access to financial services in the 2000s. The M-PESA system allows users to access financial services from the convenience of their mobile phones. This system was effective and it greatly boosted entrepreneurship.[6] Another example is Rwanda's investment into broadband and ICT infrastructure. This greatly

[3]"International Monetary Fund." *Imf.org*, 2025, www.imf.org/external/error.htm?URL=www.imf.org/en/Publications/Books/Issues/2016/12/31/Diversification-and-Development-Policy-Challenges-for-Resource-Rich-Economies-42941. Accessed 16 Oct. 2025.
[4]World Bank. "Overview." *World Bank*, 2023, www.worldbank.org/en/topic/digital/overview.
[5]Adhikari, Ratnakar, and Taffere Tesfachew. "How Poorer Countries Can Achieve Digital Transformation." *World Economic Forum*, 27 Mar. 2024, www.weforum.org/stories/2024/03/unleashing-digital-transformation-in-the-least-developed-countries.
[6]Piper, Kelsey. "What Kenya Can Teach Its Neighbors — and the US — about Improving the Lives of the "Unbanked."" *Vox*, Vox, 11 Sept. 2020, www.vox.com/future-perfect/21420357/kenya-mobile-banking-unbanked-cellphone-money.

helped improve Rwanda's access to technology, helping change the economy.[7] Rwanda built an e-government platform called *Irembo*, which allows citizens to access many things online such as ID, registrations, and taxes.[8] Another thing Rwanda did was establish *kLab and FabLab*, helping attract entrepreneurs, and lowering obstacles for digital startups and things such as e-commerce and app development.[9] These are just a few examples out of many and they show how digitalisation can help redefine an economy, sparking change in areas where a traditional economy has failed.

While there has been a lot of progress, there is still a lot left to be done. The digital divide across the globe is still prominent. Approximately ⅓ of the world's population is offline, and the majority of these people are in developing regions.[10] In some areas that have internet access, there are still issues, which include poor infrastructure, high expenses, and low digital literacy.[11] Additionally, there are still gender gaps. Women are less likely to have access to digital technologies and as a result feel their benefits less.[12]

Many countries and regions are making changes to their policies to adopt digital strategies. For example, India has a *Digital India* program which has increased internet access, electronic governances, and digital ID systems.[13] This has helped growth in the technology sector. The African Union also launched its *Digital Transformation Strategy for Africa (2020-2030)* which is meant to help make a path for

digitalisation that is also inclusive.[14] Global organizations such as the World Bank and UNDP are currently stressing that investments in human capital, infrastructure, and governance must be paired with investments.[15] Another effort Rwanda made was supporting the initiative for the *One Laptop per Child* program, helping promote digital literacy among children. While this program had high ambitions, it fell short of its goals, showing how not all attempts at digitalisation are equally successful.[16] However, it is important to note that it helped start the process of digitalisation in Rwanda. While there are many efforts for advancements, there are still concerns. There are worries about dependence on foreign technology firms, bad cybersecurity frameworks, and the issue of potential "digital colonialism."[17] For example, Kenya's digital economy is controlled by foreign companies including Google, Amazon, and Meta. While this has helped the economy, they are overreliant and prone to outages that aren't in their control.[18] An issue surrounding digital colonialism occurred in Nigeria, one of Africa's fastest growing digital economies, in 2021. Nigeria uses many U.S based companies and social media. After a tweet by Nigerian president Buhari was deleted, Nigeria banned twitter. Many complained that Nigeria's ban was harmful to the economy and a violation of free speech, and Twitter was eventually unbanned.[19] This example shows how when a foreign company becomes heavily involved in other countries, it can become too influential in politics and the economy, creating tensions with the government.

[7]*Technology Needs Assessment - Rwanda Republic of Rwanda*
[8]"Irembo Builds Digital Government Services with Percona - Case Study - Irembo." *Percona.com*, 2015, experience.percona.com/case-study/casestudy-irembo/. Accessed 16 Oct. 2025.
[9]"Irembo Builds Digital Government Services with Percona - Case Study - Irembo." *Percona.com*, 2015, experience.percona.com/case-study/casestudy-irembo/. Accessed 16 Oct. 2025.
[10]"Facts and Figures 2023." *Www.itu.int*, 2023, www.itu.int/itu-d/reports/statistics/facts-figures-2023/.
[11]Opp, Robert. "Committing to Bridging the Digital Divide in Least Developed Countries | United Nations Development Programme." *UNDP*, 8 Mar. 2023, www.undp.org/blog/committing-bridging-digital-divide-least-developed-countries.
[12]OECD. "Digital." *OECD*, 2023, www.oecd.org/en/topics/digital.html.
[13] "About Us - Digital India | Leading the Transformation in India for Ease of Living and Digital Economy | MeitY, Government of India." *Digital India | Leading the Transformation in India for Ease of Living and Digital Economy | MeitY, Government of India*, 7 May 2025, www.digitalindia.gov.in/about-us/.

[14]African Union. "The Digital Transformation Strategy for Africa (2020-2030) | African Union." *Au.int*, 18 May 2020, au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030
[15]World Bank. "Digital Economy for Africa Initiative." *World Bank*, 2022, www.worldbank.org/en/programs/all-africa-digital-transformation.
[16]Shah, Namank. "A Blurry Vision: Reconsidering the Failure of the One Laptop per Child Initiative» Writing Program» Boston University." *Www.bu.edu*, www.bu.edu/writingprogram/journal/past-issues/issue-3/shah/.
[17]World Economic Forum. "Global Cybersecurity Outlook 2025." *World Economic Forum*, 13 Jan. 2025, www.weforum.org/publications/global-cybersecurity-outlook-2025
[18]"Kenya and Africa Rethink Digital Dependency after Global IT Outage." *The Kenyan Diaspora Media*, 2025, thekenyandiaspora.com/stories/2095/Kenya-and-Africa-rethink-digital-dependency-after-global-IT-outage?utm_source=chatgpt.com. Accessed 16 Oct. 2025
[19]Kelley, Jason. "Nigerian Twitter Ban Declared Unlawful by Court." *Electronic Frontier Foundation*, 20 July 2022www.eff.org/deeplinks/2022/07/nigerian-twitter-ban-declared-unlawful-court-victory-eff-and-partners.

Many African and Latin American nations are willing to participate in economic digitalisation. However, they have a need for financial aid, help with technologies, and infrastructure investments. Larger countries such as India, China, Brazil, South Africa, and Russia could share their models of digitalisation and help with the process, as they have experience with economic digitalisation. Western nations including the European Union, U.S, and Canada all have economies that are digitally developed. They emphasize the importance of data privacy, and regulation. They also support fair competition in digital markets. Lastly, Least Developed Countries (LDCs) and small countries are focused on making sure the process is inclusive, and that marginalized groups are not excluded from a more digitalised economy.

QUESTIONS TO CONSIDER:
1. How can developing countries overcome challenges with infrastructure including a lack of electricity and expensive broadband?
2. How much aid should developed nations provide and what limitations should there be?
3. What regulations are necessary in order to ensure cybersecurity, data protection, and sovereignty, especially in developing states?

HELPFUL SOURCES:
"Overview on Digitalization"
https://www.worldbank.org/en/topic/digital/overview

"IDCA"
https://www.idc-a.org/

"Digital technologies are key to economic diversification"
https://sdgpulse.unctad.org/ict-development/

"Digital Progress and Trends Report 2023"
https://www.worldbank.org/en/publication/digital-progress-and-trends-report

TOPIC 2: ADDRESSING WATER SCARCITY THROUGH SUSTAINABLE TECHNOLOGIES

Water scarcity has been a global concern, affecting billions of people around the world. As water is a basic necessity, its limited quantity becomes increasingly crucial as modern pressures escalate. Rapid population growth, agricultural demand, climate change, pollution, and urban development, wasteful use and mismanagement increase the demand on freshwater systems. To combat and manage the strain on water, sustainable technology can be employed. Using sustainable technologies aid in reducing water scarcity, helping billions of people globally, and will continue to help the rapidly growing population. By means of using new technologies, planning out water usage, and utilizing water efficient methods, countries can experience economic development along with improved public health, allowing societies to thrive, hence taking steps in solving the water crisis.[20]

Only three percent of the world's water is freshwater, with two thirds of that remaining frozen in glaciers, ice caps and being kept in underground aquifers. One billion people are unable to access water, almost three billion people find water scarce for at least a month and two billion people experience poor sanitation, exposing them to cholera, typhoid and other water borne illnesses. As populations grow each year, more people find themselves in need of freshwater, not only for consumption but also for industrialization, agriculture and clothing.[21] Countries experiencing the worst water stress also have higher levels of population growth, putting more strain on the water supply. More people equates to a need for more food production, where water is necessary.[22] Food security is risked, with reports projecting ten billion people globally by 2050, meaning 56%more calories are in need of being produced.[23] Agriculture, another major

contributor to water usage, takes up seventy percent of the world's accessible freshwater, while also wasting around sixty percent for bad irrigation and inefficient methods. This wasteful use dries out rivers, lakes and underground aquifers, paired with pesticides and fertilizers contaminating waters.[24]

Throughout history, water scarcity has proved to be a challenge. Exacerbated by climate change and rapidly growing populations, rising temperatures, sea levels and drought interrupt the water cycle. A current example is the capital of Afghanistan, Kabul. Experts have warned that Kabul may become the first city to run out of water, as aquifer levels have dropped down by up to 30 meters over the past decades, due to rapid urbanization combined with climate breakdown. This paired with the 80% of unsafe groundwater with high levels of sewage, arsenic and salinity have caused some households in Kabul to spend up to 30% of their income on water, and also more than two thirds of homes have experienced water related debt.[25] Water scarcity is also experienced in the United States, with around 2.2 million Americans residing in homes without running water or basic plumbing. Aging water infrastructure combined with failing septic systems, millions of people lack safe sanitation facilities for waste disposal and wastewater treatment. Clean, safe water and sanitation are crucial in preventing disease, as water scarcity and contamination can result in short term health effects like headaches and diarrhea, but can also lead to long term health issues, including kidney failure, hepatitis, diabetes and even cancer.[26] Water, a finite resource, has seen increased demand as populations grow over time and many civilizations water resources fail to meet demand.[27] The egalitarian Indus Civilization

[20] Mollah, Mashum. "Sea Going Green." *Sea Going Green*, 23 May 2023, www.seagoinggreen.org/blog/2023/05/23/ 2023-5-23-7-sustainable-solutions-to-water-scarcity. Accessed 25 July 2025.

[21] "Water Scarcity." *World Wildlife Fund*, www.worldwildlife.org/threats/ water-scarcity. Accessed 21 July 2025.

[22] Benson, Deborah. "How Does Population Growth Affect Water Scarcity?" *Healing Waters International*, 25 July 2022, healingwaters.org/ how-does-population-growth-affect-water-scarcity/. Accessed 12 Aug. 2025.

[23] Kuzma, Samantha, et al. "25 Countries, Housing One-Quarter of the Population,

Face Extremely High Water Stress." *World Resources Institute*, 16 Aug. 2023, www.wri.org/insights/highest-water-stressed-countries. Accessed 25 July 2025.

[24] "Water Scarcity." *World Wildlife Fund*, www.worldwildlife.org/threats/ water-scarcity. Accessed 21 July 2025.

[25] Amini, Mariam. "Kabul at Risk of Becoming First Modern City to Run out of Water, Report Warns." *The Guardian*, The Guardian, 7 June 2025, www.theguardian.com/world/2025/jun/07/kabul-could-become-first-modern -city-to-run-out-of-water-report-warns. Accessed 14 Sept. 2025.

[26] O'Neill, Ruth. "Addressing a Growing Water Crisis in the U.S. | CDC Foundation." *Www.cdcfoundation.org*, CDC Foundation, 22 Mar. 2023, www.cdcfoundation.org/blog/addressing-growing-water-crisis-us. Accessed 14 Sept. 2025.

[27] "Water - at the center of the climate crisis." *United Nations*, www.un.org/en/ climatechange/science/climate-issues/water. Accessed 18 Aug. 2025.

present in modern day Pakistan thrived for nearly seven centuries, but eventually met their demise through the drying of the Saraswati River. Their large population wasn't able to be supported with low crop yields, causing people to migrate to areas with water. The Khmer Empire with a population of one million people in Greater Angkor, had systems of management regarding their food supply for a growing population. Water availability proved to be a major issue, prompting solutions by Angkor's rulers. Reservoirs to store water during monsoons and canals were built, initially proving successful for a limited time. These water systems failed in 1347 CE and rulers were unable to adapt quickly or make decisions, resulting in blocked dams and channels. Disappointed with their rulers and facing starvation, the people revolted, leaving the city inhabitable by 1430 CE. All three of the empires, however differing in cultures and size, succumbed to the pressures of water shortages.[28]

In current years following technological innovations, sustainable technologies have played major roles in combating water scarcity, but come with unintended consequences. Research has shown that indoor water conservation can potentially reduce the quality and quantity of wastewater, while also making it more difficult for locals to use treated wastewater. Reliance on treated municipal waste water from neighboring urban areas has grown, this effective strategy for dealing with water scarcity unveils that sometimes conservation, at times may work at odds with reused wastewater. Urban areas become affected as recycled, wastewater and indoor conservation reduces water supply in communities and downstream reaches of rivers.[29] Major tech companies have become a leading source of water consumption as AI data centers are built in areas prone to drought. These tech giant companies utilize AI tools and cloud services that heavily rely upon evaporative cooking processes

that consume millions of liters of water each day to prevent overheating. Although using AI to obtain data to track water scarcity is a valuable strategy, it also comes with the usage of large amounts of water by companies that power them.[30] Techniques, artificial intelligence, and technologies with the shared goal of preserving freshwater have all proved crucial to solving the crisis. Advanced desalination technology utilizes reverse osmosis and solar power, effectively removing salt and other impurities from sea water or brackish water, resulting in freshwater. This process is cost effective, but can potentially use high energy consumption and brine disposal. The rainwater harvesting technique has been designed to collect and store rainwater. Modern technologies have improved water collection, storage and efficiency through helping stormwater runoff problems by reducing flood and soil erosion. Collecting and reusing rainwater reduces reliance on traditional water sources and can instead contribute to sustainable water management and address local water challenges for populations across different countries. As water mismanagement is a leading cause of water scarcity, AI can offer solutions to optimize water management strategies by forecasting weather patterns, predicting water demand and detecting leaks in infrastructure.[31] Using these technologies and other sustainable options, cities can develop water resilience plans, creating new water sources through treating and reusing water waste. Solar and wind power can also be promoted in countries experiencing higher levels of water scarcity, as these water conscious energy sources work to save water.[32]

Although water scarcity is a global challenge, certain regions and countries experience water scarcity at higher rates than others. The most stressed regions include the Middle East and North Africa, where

[28] Higgins, Karen. "Water Scarcity: What History Teaches Us About Water Resource
    Management." *Transdisciplinary Journal of Management*, 1 Feb. 2023, tjm.scholasticahq.com/article/

67888-water-scarcity-what-history-teaches-us-about-water-resource-management.
    Accessed 18 Aug. 2025.
[29] Pottinger, Lori. "The Unintended Consequences of Indoor Water Conservation." *Public Policy Institute of California*, 29 Nov. 2019, www.ppic.org/blog/unintended-consequences-indoor-water-conservation/. Accessed 13 Sept. 2025.

[30] Abdullahi, Aminu. "AI Data Centers Boom Is Draining Water from Drought-Prone Areas." *TechRepublic*, 9 May 2025, www.techrepublic.com/article/news-ai-data-centers-drought/. Accessed 13 Sept. 2025.
[31] Mollah, Mashum. "Sea Going Green." *Sea Going Green*, 23 May 2023, www.seagoinggreen.org/blog/2023/05/23/
    2023-5-23-7-sustainable-solutions-to-water-scarcity. Accessed 25 July 2025.
[32] Kuzma, Samantha, et al. "25 Countries, Housing One-Quarter of the Population,
    Face Extremely High Water Stress." *World Resources Institute*, 16 Aug. 2023,
    www.wri.org/insights/highest-water-stressed-countries. Accessed 25 July 2025.

83% of the population experiences water stress and in South Asia where 74% does. Over 25 countries currently are exposed to annual high water stress, showing that they use over 80% of their water supply for domestic needs, agriculture, and industry. Short-term droughts can prove detrimental to these countries, and water sources like tap can be cut off. Countries including Bahrain, Cyprus, Kuwait, Lebanon, Oman and Qatar show high demand for domestic, agricultural and industrial use paired with limited quantities of water.[33]

QUESTIONS TO CONSIDER:
1. Which technologies are most suitable for certain countries given their resources and location?
2. What is the status of water stress experienced by specific nations and what are the primary causes for water scarcity in that region?
3. How can technologies be accessible to developing nations?

HELPFUL SOURCES:
"Water Scarcity"
https://www.unwater.org/water-facts/water-scarcity

"Water - at the center of the climate crisis"
https://www.un.org/en/climatechange/science/climate-issues/water

"7 Sustainable Solutions to Water Scarcity"
https://www.seagoinggreen.org/blog/2023/05/23/2023-5-23-7-sustainable-solutions-to-water-scarcity

"UNCTAD Report: How technology can help solve the water and sanitation crisis"
https://www.unwater.org/news/unctad-report-how-technology-can-help-solve-water-and-sanitation-crisis

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[33] Kuzma, Samantha, et al. "25 Countries, Housing One-Quarter of the Population,
Face Extremely High Water Stress." *World Resources Institute*, 16 Aug. 2023,
www.wri.org/insights/highest-water-stressed-countries. Accessed 25 July 2025.