

**INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION
ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

**Geneva, Switzerland
25-26 October 2022**

Contribution by Belize

to the CSTD 2022-2023 priority theme on “Ensuring safe water and sanitation for
all: a solution by science, technology and innovation”

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PRIORITY THEME 2: Ensuring safe water and sanitation for all: a solution by science, technology and innovation

United Nations Commission on Science and Technology for Development (CSTD)

Dear CSTD Member,

The [25th CSTD annual session](#) selected “Ensuring safe water and sanitation for all: a solution by science, technology and innovation” as one of the priority themes for its 26th session (2022-23 period). This theme addresses SDG 6 on Clean Water and Sanitation.

Water is a most critical natural resource for human beings while clean water and sanitation is essential for human’s daily life. The latest available data shows that in 2020, 26 per cent of the world population did not have access to a safely managed drinking water service while 46 per cent did not use a safely managed sanitation service. Lack of access to safe water has clear gender impact as the burden of securing water falls disproportionately on women and girls with consequences for their income and educational opportunities. Lack of sanitation also creates specific risks for women and girls’ safety.

A range of technologies provide effective and affordable opportunities to improve the management of water and sanitation. Some are purely technological (e.g., water purification technologies, wastewater treatment technologies and increasing water availability technologies) while others relate to information and data management and sharing (e.g., hydrological observation, data exchange and forecasting).

Under this theme, the Commission will examine the key challenges facing developing countries in providing safe water and sanitation to their population. It will also highlight successful practices in applying science, technology and innovation (STI) to the management of water and sanitation services. Finally, it will explore how to enhance experience and technology sharing among countries to effectively address water and sanitation challenges.

The CSTD secretariat is in the process of drafting an issues paper on the theme to be presented at the CSTD inter-sessional panel meeting on 25 -27 October 2022. We are seeking inputs from CSTD Member States. We would be grateful if your country could kindly answer the following questions:

1. What are the concrete challenges that your country has encountered in managing water and sanitation and providing access for all to these services?

[The concrete challenges faced by Belize in managing water resources is a combination of limited implementation of the comprehensive water resources management framework, limited human resources \(expertise\), limited ability to access financial resources to employ research and development and to purchase advanced technologies to conduct hydrological \(surface and groundwater\) investigations required to inform sound decision making, and limited public education and awareness programs/campaigns to effect behavioural change from a research and development viewpoint.](#)

2. What projects/policies has your country implemented to use the above-mentioned range of technologies and innovations or other STI, including frontier technologies (e.g., AI and drones) to address these challenges? What are the main outcomes? What are the main difficulties confronted while trying to implement these projects/policies? Pls. include the gender dimension.

[The usage of drones has been incorporated into the hydrological sphere to have an aerial view of the spatial extent of flooding events. It has also been used a reconnaissance tool when trying to locate the most feasible location for monitoring stations placement. The challenges with employing AI and/or other such technologies is the affordability and expertise required to operate, often technicians are self-taught to operate the equipment. Main outcomes resulting is more efficient and effective use of resources. In the case of exploratory drilling for well water supply has been significantly reduced due to the level of knowledge acquired using requisite technology. The main difficulties encountered while trying to implement are related to cultural norms and tradition. Water resources management in Belize is historically and to a slightly lesser extent possess a gender inequity of male’s vs female’s; however, in the last 5 years it](#)

has been transitioning to female leaders but still maintains males being most of the practitioners. Additionally, in some of the areas where hydrological investigations are to be executed, there exists a mainstay challenge where culturally males only speak to males as well as the existence of the legislation which governs Indigenous Peoples and the protocols that must be adhered to.

3. Can your country provide examples of policies/projects/initiatives aimed at strengthening national STI capabilities in managing water and sanitation for ensuring their access by all population in your country? One example is what institutional and regulatory arrangements are in place to stimulate R & D and innovation in managing water and sanitation for access by all.

One innovation activity is the securing of an electrical resistivity meter which employs geophysics to improve location of groundwater resources to assist the Department of Rural Transformation in providing water services to the rural population.

4. Could you share case studies of regional and international cooperation that have helped your country in strengthening STI capacities? Can you provide success stories in this regard?
None currently.

Please indicate contact person(s) responsible for projects/policies and international collaboration in this context in case we need clarification on the inputs.

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Please send your responses and any further inputs on the theme to the CSTD secretariat (stdev@unctad.org) by 31 July 2022. We look forward to receiving your valuable inputs.

Sincere regards,
CSTD secretariat