

2ND CARIBBEAN SCIENCE SYMPOSIUM ON WATER

PURPOSE, GOALS & ANTICIPATED OUTCOMES

MARCH 20TH - 24TH, 2023

THE CARIBBEAN SCIENCE SYMPOSIUM ON WATER

The first regional water science symposium featured a number of cutting-edge research papers and presentations that addressed a number of relevant issues confronting the Caribbean water sector, including challenges related to water storage, treatment and distribution, and the threats posed by climate change. This second symposium builds on the first, by focusing on conservation and innovation priorities for the regional water sector. We are interested in featuring papers and projects that address at least one of our major thematic areas outlined in the Call For Papers and seek to bring together scientists, practitioners, policy experts and other water sector stakeholders working at the intersections of conservation, technological innovation and management.

2023 Theme - Conservation and Innovation: Changing the Regional Water Paradigm

Currently more than 900 million people worldwide lack access to clean drinking water and over 2 billion lack basic sanitation. Water demand is increasing at a rate faster than population growth, and the United Nations estimates that in 2025 an estimated 5 billion of the world's projected 8 billion people will live in areas where water is scarce. Increasing populations, expanding food production and industrialization, and high living standards will continue to drive up demand for water over the course of this century; all while freshwater overuse and increasing rates of pollution are threatening existing water quality and availability. This situation is likely to worsen under a changing global climate system that will see increasing incidences of droughts, extreme daily temperatures and shifting rainfall patterns across the globe. Developing regions like the Caribbean are likely to be disproportionately impacted given their degree of exposure and sensitivity to climatic shocks and underlying challenges in the management, storage, and delivery of existing freshwater resources. Recurring droughts and hurricanes are already exacerbating water scarcity across the region, posing significant threats to human health and well-being and the productivity of key sectors such as tourism and agriculture. Many regional water utilities suffer from aging equipment and water supply infrastructure, high rates of non-revenue water, limited financial resources, and high energy and operating costs.

Addressing existing issues confronting the regional water sector, such as challenges regarding the storage, treatment, and distribution of available water resources, is therefore key to adapting the Caribbean to future climate changes, and in achieving Sustainable Development Goal (SDG) 6 on Water and several other related SDGs. Water is also critical for successful climate change mitigation given its importance to energy security. Conservation is thus an extremely important priority action area given the ongoing and impending threats posed to freshwater resources from human activities and environmental change. Growing demands for water are compounded by changes in natural systems' functions increasingly caused by changes in land use transitions, climate-induced stresses and ecological degradation. There is an urgent need to identify opportunities for advancing conservation efforts in the regional water sector that can offer sustainable solutions that are culturally relevant, affordable, and accessible. Integrally tied to this is the need for innovation and new thinking around water conservation, storage, use and management.

This **Caribbean Science Symposium on Water** aligns well and supports several recent and ongoing regional initiatives and programmes, including but not limited to: *The Regional Framework for Achieving Development Resilient to a Changing Climate and Implementation Plan*, the *Comprehensive Disaster Management Framework*, and the *Sendai Framework*. Additionally, there are regional projects such as the Global Environment Facility funded *Integrated Approach to Water and Wastewater Management (CReW+)*, *Integrating Land Water and Ecosystems Management (IWEco)*, and the *Regional Strategic Action Plan for Governance and Building Climate Resilience in the Water Sector (RSAP)*.

The World Bank's Pilot Project for Climate Resilience (PPCR) and Disaster Vulnerability and Resilience Project (DVRP), providing funding to the water sector through the Inter-American Development Bank, the Caribbean Development Bank and the Green Climate Fund, all attest to the importance of the water sector to the future development of the Region. Additionally, Caribbean academics are actively engaged in a wide range of research initiatives contributing to the better understanding of, and providing solutions to, the myriad of water challenges facing the region.

Whilst discussions around water conservation and wastewater management and reuse are not new to the Caribbean, there is a noticeable gap between research and implementation in these areas, and their translation to the policy domain, and use and relevance in informing evidence-based decision-making. This second **Caribbean Science Symposium on Water** provides an opportunity to bridge that gap by bringing the two sides together. The Symposium will bring together representatives from the research, development, economic, legislative and policy communities to share and discuss ideas on ongoing scientific studies, initiatives, innovations, and best practices related to enhancing water conservation and management in the Caribbean.

We are interested in presentations that cover a variety of best practices and innovations spanning the public, private and NGO sectors. These could include new innovations in nature-based solutions, citizen science, and digital transformations such as the use of AI technology, Big Data and Information and Communication Technologies to improve water management and delivery. The Symposium seeks to attract high-quality scientific, research, technical and exploratory papers that can offer useful insights on key challenges impacting the access, management, utilisation, and sustainability of water resources across the region and potential solutions. A key feature will be bringing Science and Policy together, to interrogate science outputs from a policy perspective to enhance policy dialogue across the region particularly around IWRM. Without sound science, evidence-based policy formulation cannot occur and places the economies of the region at greater risk of maladaptation and mismanagement of already scarce resources.

The Symposium is designed not only to be an opportunity to share research outputs but importantly provide interactive opportunities to bridge the gap between science outputs and policy formulation, and be an arena for exploring the practical and policy implications of these outputs. The intention is that, in collaboration with several regional partners including the Organisation of Eastern Caribbean States, the CARICOM Community and the Caribbean Water and Wastewater Association, substantive outputs from the Symposium in the form of policy perspective papers, will be presented to relevant Ministerial fora including the High-Level Forum of Ministers with responsibility for Water.

It will also provide greater scientific and technical insight into the continuing development of the Caribbean's Regional Strategic Action Plan for Water and other related regional and sub-regional programmes, policies, strategies, and action plans relating to water resources management.

The Symposium is scheduled to take place virtually during the week of **March 20th - 24th, 2023**. The main theme of the Symposium will be **"Conservation and Innovation: Changing the Regional Water Paradigm"**. The three-day event will feature two keynote presentations, round table policy forums and discussions, expert panel sessions and more.

We intend to offer a technical workshop to assist graduate students in research design and to host a forum where experts, technicians, policy makers, scientists and young persons can identify areas of research that are lacking and of paramount importance to the region. This will help guide aspiring researchers in their field of work in the area of Integrated Water Resources Management. Anticipated outputs encompass 'Best-in-Show' research and policy relevant work, policy perspective papers, and online published proceedings, database of research topics, case studies and bridging the gap of the science policy interface.

The bi-annual event is one of the first of its kind for the Caribbean and aims to feed into several regional and global activities in 2023 of importance to the Caribbean Community, including the 28th session of the UNFCCC Conference of the Parties (COP 28). The initiative will be a signature event for the Global Water Partnership-Caribbean (GWP-C) and is expected to provide a dynamic platform to actively engage scientists, policy makers, youth, and other stakeholder groups on water-related issues.

If you would like to partner with the Global Water Partnership-Caribbean (GWP-C) for the convening of the second Caribbean Science Symposium on Water, e-mail us at: info@gwp-caribbean.org