

COMMUNIQUÉ:

Caribbean Science Symposium on Water 2021

CARIBBEAN SCIENCE SYMPOSIUM ON WATER MARCH 23, 24 & 25 2021

BUILDING RESILIENCE IN THE REGIONAL WATER SECTOR TO ADDRESS CLIMATOLOGICAL & HYDROLOGICAL RISKS & THREATS

GLOBAL WARMING OF 1.5° REPORT

THE URGENCY OF THE PROBLEM

- TAKE NOTE**
WE ARE ALREADY AT 1°C & IT'S PROVING CHALLENGING!
HOTTER, MORE UNSTABLE WEATHER, HIGHER SEA LEVELS, MORE EXTREME WEATHER.
- TAKE ACCOUNT**
WE ARE ON TRACK TO OVERSHOOT 2°C & IT SPELLS TROUBLE!
UNFAMILIAR CLIMATE, UNRELIABLE DEVELOPMENT PILLARS, 32°C REVERSALMENT GOALS UNATTAINABLE.
- TAKE ACTION**
A LIVABLE TOMORROW DEPENDS ON WHAT WE DO TODAY!
UNPRECEDENTED IMPACT, MORE EXTREME WEATHER, HIGHER SEA LEVELS, UNDESIRABLE DEVELOPMENT PILLARS.

ACCESS TO WATER FOR EVERYBODY

WATER ACCESS DISPARITY

FROM THE TRADITIONAL TECHNIQUES - PAST

TO NEW TECHNOLOGIES - FUTURE

WATER SECURITY IS NEVER FAR FROM OUR MINDS...

A CARIBBEAN STRUGGLE

WE CAN CREATE CHANGE IF WE ...

WE MUST BUILD RESILIENCE IN THE WATER SECTOR

AGRICULTURE, TOURISM, HEALTH

NEW RISKS & CHALLENGES: WATER POLLUTION, CLIMATE CHANGE

MOBILIZE

ENGAGE YOUTH & WOMEN

POLICY MAKERS UNDERSTIMATE THE TIME & RESOURCES NEEDED TO PRODUCE SCIENTIFIC RESEARCH

SCIENTISTS OFTEN FAIL TO TRANSLATE THEIR RESEARCH INTO SOLUTION ORIENTED RESULTS

YOUTH CAN BRIDGE THE GAP

INNOVATION, CLARITY, FRESH PERSPECTIVES, SUPPORT & EMPOWER

DATA INFORMED WATER MANAGEMENT POLICIES

INVEST IN BIG DATA

BUILD POLICY STRATEGIES AROUND SCIENTIFIC KNOWLEDGE

DIFFERENT NEEDS vs **DIFFERENT LANGUAGES**

POLITICIANS vs **SCIENTISTS**

A COMMUNICATION GAP

CIVIL SOCIETY BUY IN IS ALSO FUNDAMENTAL

ADVOCACY

CREATE REGIONAL COLLABORATION NETWORKS

ACT

LEARN

BRIDGE THE SCIENCE-POLICY GAP

LET'S MOVE BEYOND THE SILOS

ENGAGE REGIONAL INSTITUTIONS

OPPORTUNITIES IN REGIONAL APPROACHES

COMMON HISTORICAL & CULTURAL CONTEXTS, DATA COLLECTION, FUNDING SCHEMES, BIG DATA, MULTICOUNTRY PROJECTS & GUIDELINES, SHARING BEST PRACTICES, LAND USE FRAMEWORKS, QUALITY STANDARDS

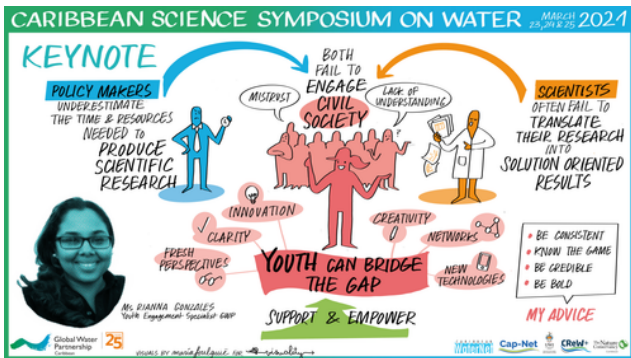
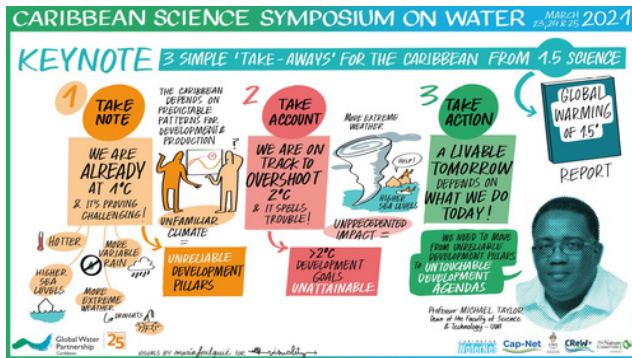
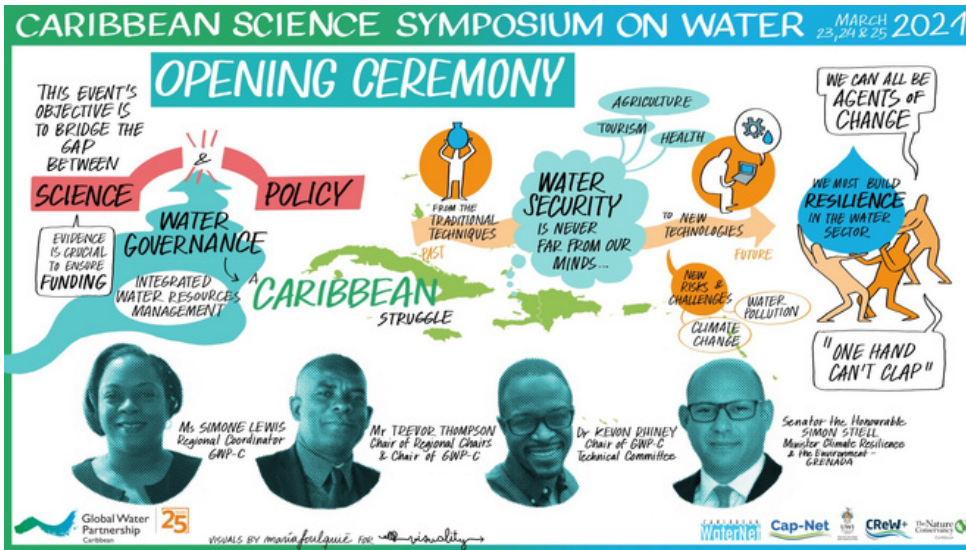
The Symposium was hosted by the Global Water Partnership-Caribbean (GWP-C) and was held from March 23rd – 25th, 2021, attracting more than 400 attendees. The event was held online and featured two (2) keynote presentations, a Young Caribbean Water Entrepreneurs Shark Tank session featuring former and current GWP-C prize recipients, and several scientific panel sessions and moderated roundtable discussions with key water sector experts, policymakers, and practitioners.

This was the first event of its kind in the Caribbean and it complements other regional initiatives such as the Caribbean Water and Wastewater Association (CWWA) Conference that is held annually. The Caribbean Science Symposium on Water (CSSW) will be held bi-annually, with the next symposium scheduled for Spring 2023.

The theme for this year’s symposium was **“Building resilience in the regional water sector to address climatological and hydrological risks and threats.”**

The purpose of this communiqué is to highlight the main themes and messages that emerged from the CSSW. For a more detailed account of the Symposium, including summary notes for the various presentations and feature address from Senator the Honourable Simon Stiel (Minister responsible for Climate Resilience and the Environment, Government of Grenada):

ACCESS OUR OFFICIAL
**CSSW 2021 REPORT FROM THE
 FOLLOWING LINK:**
[HTTPS://BIT.LY/3RK1TV.](https://bit.ly/3rk1tv)



BRIDGING THE GAP BETWEEN SCIENCE AND POLICY

Bridging the gap between science and policy is considered crucial if we are to address the fundamental issues impacting the regional water sector. Bridging this gap while improving mutual understanding is becoming increasingly urgent.

There is an increasing recognition that water is an overarching thematic area which impacts development across multiple sectors, including tourism, agriculture, housing, and renewable energy. The water sector has a major role to play in supporting and promoting an integrated and multi-sectoral approach to economic and social development, including enabling regional states to meet key Sustainable Development Goals such as **SDG 6 (Clean Water and Sanitation)**.

Another key theme taken away is the critical importance and cross-cutting nature of the water sector in climate change adaptation and mitigation. The water sector must be at the table when other sectors are developing their adaptation plans.

The Symposium identified several major barriers/obstacles in bridging the science-policy gap. Among these included ineffective communication from the scientific community to policy makers and the general public. There is a need to transform and communicate scientific information to make it more accessible and in ways that can more readily be translated into policy. Utilising the range of communication methodologies and technologies at our disposal is key to achieving this.

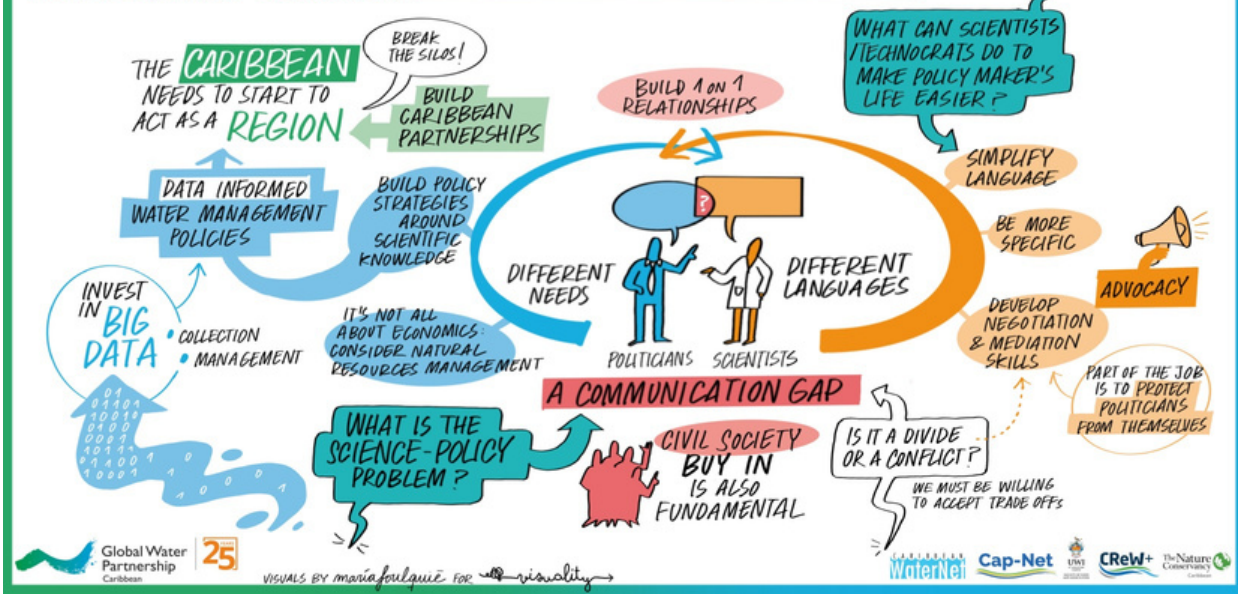
Scientific research needs to be demand driven and should align with broader sustainability goals such as those outlined in the UN Sustainable Development Agenda. Where possible, scientists should be part of the policy making process. There was general agreement that there is a need for more evidence-based policies across the regional water sector supported by relevant local and regional level research.

The economic dimensions and implications of science must be part of our communications if it is to be understood and taken seriously. And these must be aligned with regional and national development imperatives. There are opportunities to exploit technologies and decision support systems that can support better informed decision-making and promote resilience and climate-smart initiatives within the water sector.

There is also a need to move towards more results-based management systems that allow for greater accountability and transparency. Monitoring, evaluation, and reporting should become central elements of this approach which allow for better tracking of results and progress.

Knowing what has worked and what has not is fundamental to improving existing management systems and providing the evidence base to update ineffective and outdated policies. Policy makers also need to be better informed by and engaged with the scientific community. This includes prioritising and providing greater funding support for scientific research.

MODERATED SESSION BRIDGING THE SCIENCE/POLICY DIVIDE



Fostering an enabling environment offers greater opportunities for partnerships and collaboration with public and private sector entities. Creating legal frameworks is needed to address data sharing politics and hurdles between institutions and encouraging the active participation of technical personnel and civil society in decision-making processes.

There is also a need to strengthen the role and application of citizen science and indigenous knowledge and practices in water management and resource governance. Developing systems that allow for greater integration of indigenous knowledge and practices with mainstream scientific and engineering approaches could offer valuable cost-effective and no-regret solutions for the regional water sector.

It was suggested that a framework for collaboration is needed to bridge the science-policy divide. This would involve developing a better governance framework that would elevate the status of science on par with economic and other national and regional development indicators and imperatives.

Another key consideration relates to identifying mechanisms that can better showcase, promote and facilitate research and innovation from young regional scientists that can inform policy and decision-making.

ENGAGING AND EMPOWERING YOUTH

The Symposium highlighted the importance of increasing youth participation in decision-making processes and the need for their involvement in confronting the growing challenge of water safety and security. While frameworks for involving youth exist, there is a noticeable limitation in terms of their implementation, influence and credibility, as well as, the resources available for these programmes to work effectively.

It was pointed out that part of the challenge was a general lack of recognition of youth's ability to contribute to policy development and innovative solutions. There is therefore a need to raise awareness about the crucial role youth can play in championing change and being changemakers themselves. Youth are recognised as having a unique ability to transform the complexity of the science and transform the implications into creative, fun, and palatable information that can reach traditionally underserved and neglected stakeholders. This means they play a critical role in contextualising knowledge to inform actions to solve water issues in their communities.

The Symposium also pointed to the important role youth can play in fostering creative innovations, entrepreneurship and technology that provide solutions to national and regional water challenges (as evidenced in the Shark Tank session). These innovations can assist in increasing accessibility of water in rural communities and improving sanitation and use of nature-based solutions to improve water quality and mitigate flooding, for instance.

It was also pointed out that there is a need to create a safe place where youth can learn from each other and build and share tools together to create solutions. This could include creating networks to facilitate data access and sharing.

Providing opportunities for youth to work closely with government agencies, private sector, academic and research institutions, and NGOs/CBOs to share experiences and get more information on the problems we are facing in our communities. This includes providing mentorship opportunities where possible.

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YOUNG CARIBBEAN WATER ENTREPRENEURS

SHARK TANK SESSION

WATER FREE FROM REELABS
 PITCH by YERINI WALEN-BRYAN
 REMOTE MONITORING AUTOMATION & CONTROL SYSTEM:
 FLOW SENSOR, TANK SENSOR, ELECTRONIC WATER VALVE, APP, REAL TIME TO MONITOR & PREVENT, WATER LEVEL, LEAKS, RUNNING FAUCETS, OTHER WATER MANAGEMENT ISSUES.
 THANKS TO THE GRANT WE WERE ABLE TO KEEP WORKING THROUGH THE PANDEMIC.

CONSTRUCTED FARM WETLAND
 PITCH by AJANI JACOBS
 FLOOD RUNOFF, A NATURE-BASED SOLUTION FOR FLOOD MITIGATION & MAINTAINING WATER QUALITY, SOAKS & HELDS WATER LIKE NATURAL WETLANDS, SEED MONEY WILL BE USED TO FINANCE STUDIES & PERMITS, PRODUCTIVE RICE FARMLAND.

ROUND TABLE DISCUSSION

YOUTH & GENDER

LAVREN ARENDESE, KENDEL VICENT, LUCIANA RAQUEL VERASTEGUI MONGADA, ADELIN PIERRE, JAMILLA SEALY

- BETTER YOUTH POLICY
- ADVISORS & MENTORS
- FUNDING

WOMEN HAVE SPECIAL ACCESS & SECURITY ISSUES RELATED TO WATER SECURITY

LEARN FROM OTHERS

DIVERSE PERSPECTIVES NEEDED TO COME UP WITH INCLUSIVE SOLUTIONS

GO INTO THE COMMUNITIES YOU ARE TRYING TO HELP

WE MUST LEARN & ENGAGE

YOUTH HOLDS FRESH & INNOVATIVE IDEAS

WE MIGHT NOT HAVE THE EXPERIENCE BUT WE HAVE THE ENERGY

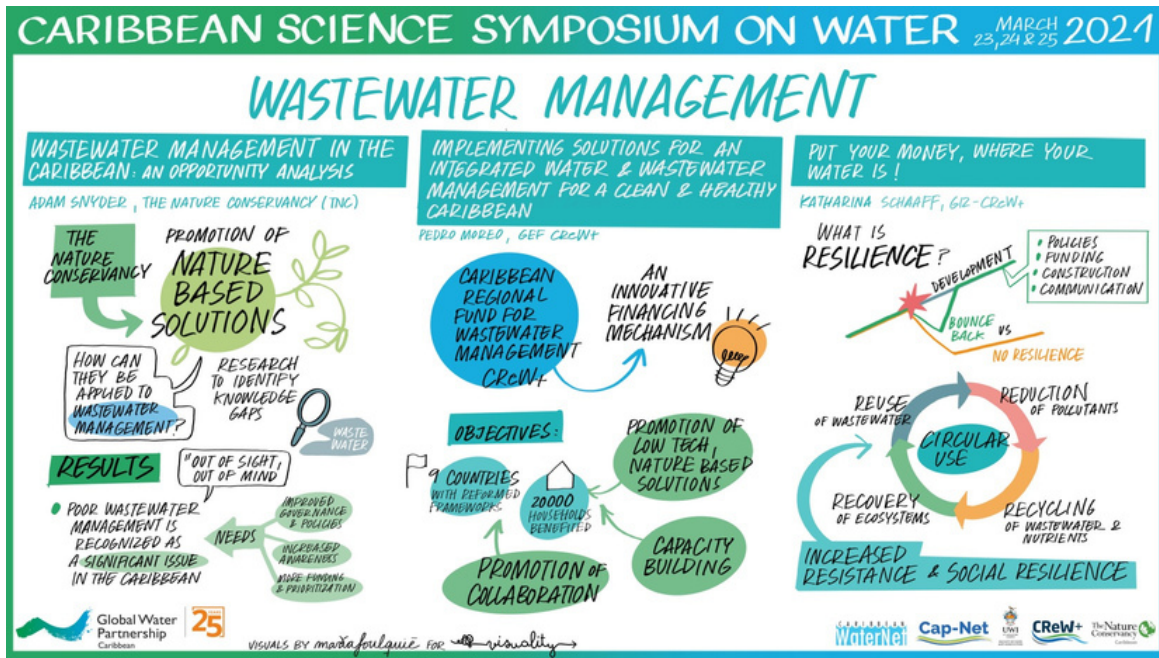
WE EXIST IN THE NOW

SOLUTIONS INVOLVEMENT IN THE DECISION MAKING SPACES CONTINUES TO BE A CHALLENGE

Global Water Partnership Caribbean 25 VISUALS BY mariafoulaque FOR VISUALITY

WaterNet Cap-Net CreW+ The Nature Conservancy

IMPROVING WASTEWATER MANAGEMENT AND ADVANCING CIRCULAR ECONOMY PRINCIPLES



The Symposium highlighted the need to improve the management of wastewater as an integral component of building resilience in the regional water sector. Enhanced wastewater management is seen as crucial to advancing an integrated water resources management (IWRM) framework. This includes reducing incidence of contamination and promoting best practices in the effective treatment, recycling and reuse of wastewater resources.

Several barriers were identified, including a general lack of political support and prioritisation by regional governments. There is poor coordination among state agencies whose mandates intersect with the management, utilisation, and treatment of wastewater resources. This aligns with a generally low prioritisation or even understanding of nature-based solutions in environmental resources management in the Caribbean, which suggests that there is significant room for growth in this area.

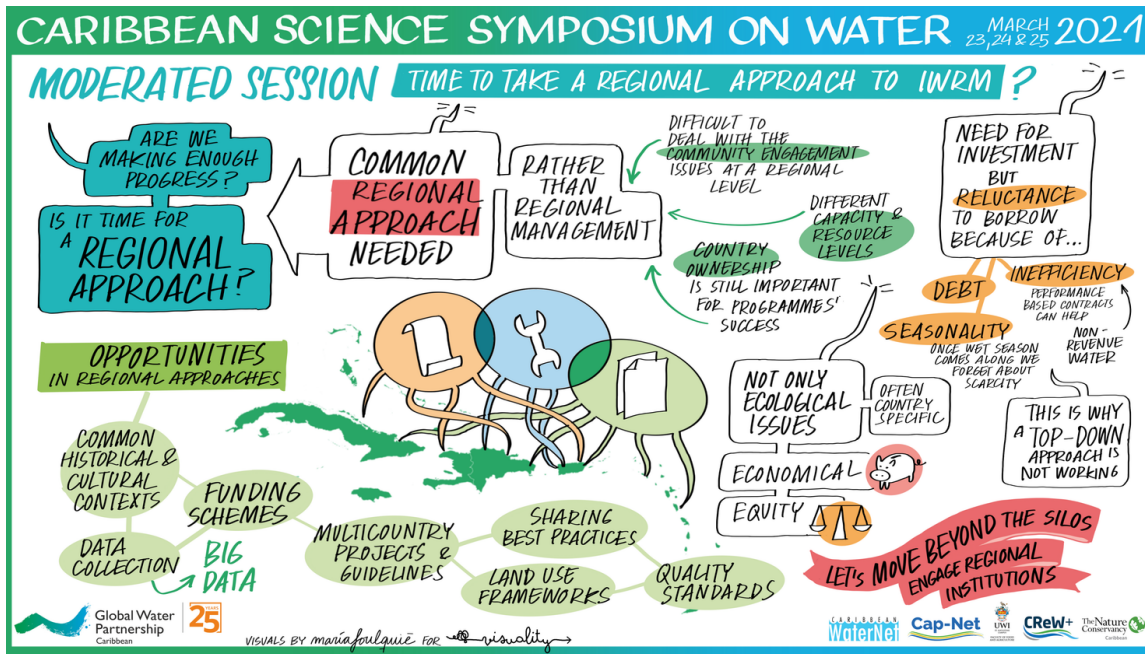
Adopting circular economy principles for instance, offers a number of benefits for the Caribbean. Key among which includes reducing our demand on scarce freshwater resources, renewable energy from the use of biosolids, and nutrient recovery, while building resilience to climate-related shocks such as drought and flooding.

The circular use of water, including wastewater resources also increases efficiency and reduces the overexploitation of available water resources. This has implications for water provisioning and access across key sectors including agriculture, energy and tourism. The promotion of a circular economy approach in the water sector also supports efforts of building ecological resilience.

The circular use of water resources allows for the preservation and maintenance of vital ecosystem services which in turn build resilience to natural hazards, sustain livelihoods and development of new livelihood opportunities.

It was also highlighted that though there is need for improvement in this area, there are a number of ongoing initiatives in the region that are making significant strides in enhancing wastewater management. This includes the construction of wastewater treatment plants to serve local communities, developing financing mechanisms that are incentivising the water conservation practices and setting standards for the use of treated wastewater in the agriculture sector. There was also expressed interest in developing new knowledge products that document blue and circular economy best practices in water and wastewater management for replication and upscaling across the Caribbean region.

PROMOTING A REGIONAL APPROACH TO IWRM



A key overarching message from the CSSW was a need to advance a regional approach to IWRM. This includes strengthening regional advocacy networks and strengthening governance frameworks that can hold regional leaders accountable in protecting water resources.

Several recommendations were offered. These included updating existing regional water policies and seeking assistance from regional institutions to strengthen coordination activities. Elevate water issues regionally through advocacy, similar to efforts around crime and the economy. This includes greater engagement with the private sector and civil society where appropriate and feasible, to push innovation and efficiency.

Improve data generation, access, analysis, transformation and sharing to enhance decision-making and policy intervention were also seen as crucial elements in building resilience and promoting best practices in the regional water and wastewater sector.

In closing, it was pointed out that water issues have been a long-standing challenge for the Caribbean, and there are several issues relating to governance, policy, technology, public awareness, enforcement and country and sub-national level nuances and specificities which hinder attention to water issues. Attention also needs to be directed to traditional knowledge and practices with regards to water conservation and management. At the community level, this will include an attention to gender equity and traditional practices such as rainwater harvesting.