



HR Wallingford
Working with water



Resilience in the Caribbean water sector
Strengthening regional and national
capacity to respond to climate change

The devastating impacts of the 2017 hurricane season, coupled with prolonged periods of drought, have highlighted the urgent needs of the water supply sector in the Caribbean. With the severity of extreme weather events likely to increase, it is vital to establish robust, implementable climate resilience policies and investment plans in the water sector, and to identify financing for their effective implementation.

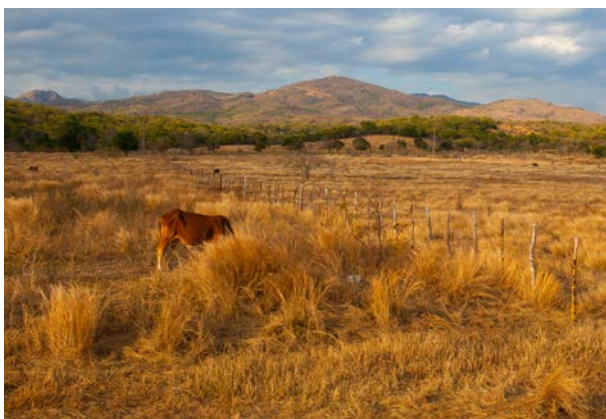


2017 Atlantic Hurricane season

HR Wallingford has established a proven capability in supporting governmental departments and water utilities across the region to strengthen climate resilience in the face of extreme natural hazards and climate change. We have led a range of projects across the region funded through the Caribbean Development Bank (CDB), Global Water Partnership Caribbean and the Climate and Development Knowledge Network (CDKN).

Climate-sensitive sectors such as water are central to sustainable development in the Caribbean. Strengthening regional and national capacity to respond to climate change, to mainstream climate resilience, and to design transformative sector-wide interventions was therefore a key priority under the ACP-EU-CDB National Disaster Risk Management (NDRM) programme. As part of this wider initiative, HR Wallingford led the Planning for the Integration of Climate Resilience in the Water Sector in the Caribbean project and developed Caribbean-specific tools and approaches that sector practitioners can use to assess, design and implement effective climate resilient development actions in the water sector.

Caribbean-specific tools and approaches



The regional tools and approaches are designed so that they can be adapted to meet individual country contexts and needs. In doing so, the aim was to institutionalise good practice and to strengthen the capacity of national practitioners responsible for the establishment of robust and implementable climate resilient policies, investment plans and financing strategies. The approach includes a framework for assessing and strengthening water sector resilience across multiple facets (enabling environment, water resources management and water supply systems) and a Water Sector Resilience (WSR) Index to measure levels of vulnerability of the water services sector in country-specific contexts.

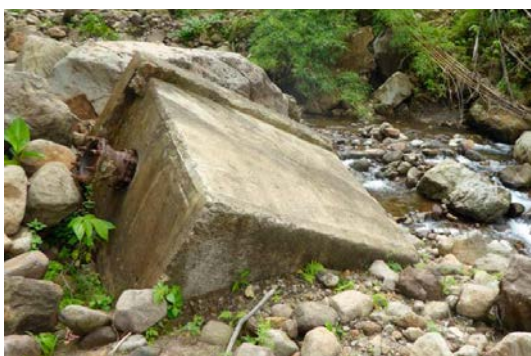


Water infrastructure highly exposed to landslides and flooding in Dominica. Images courtesy of DOWASCO

Country case studies

The tools and approaches were developed and refined through country case study applications in Grenada and St. Kitts & Nevis. A second phase of the project, subsequently applied the tools and approaches in two further case study countries, Dominica and Antigua & Barbuda. These additional pilot applications demonstrated the applicability of the approaches in countries where the water supply and services were severely affected by Hurricanes Maria (Dominica) and Irma (Antigua & Barbuda) in September 2017. Activities completed in each case study country included:

- > Climate Risk and Vulnerability Assessments of the water supply sector in each island, addressing not only services, but the management of water resources. These used a participatory approach, engaging a broad range of stakeholders using semi-quantitative scoring approaches, combined with and filling gaps in technical analyses of supply, demand and hazard exposure information.
- > Review of policies and plans related to the water sector, providing an in-depth assessment of the structural vulnerabilities in the governance and regulatory systems related to water management.



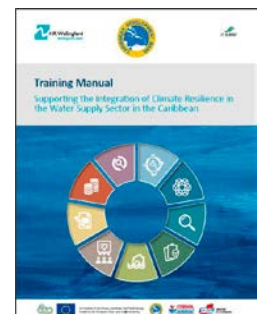
Water system intake structure washed out during Hurricane Maria in Dominica. Images courtesy of DOWASCO

- > Development of a sector wide investment plan setting out the short, medium and long term investments required to support the resilience of the sector to climate related risks. These included investing in the governance of water resources and services, data and information management and infrastructure. Rounds of consultation with key stakeholders shaped the Plan and ensured they reflected the needs of the beneficiaries.

Knowledge products

A Training Manual detailing the tools and approaches has been uploaded to the Caribbean Development Bank's website:

www.caribank.org/sites/default/files/publication-resources/Task%205_Training%20Manual.pdf



The Training Manual is designed to support national-level processes for the integration of climate resilience and, in doing so, guides users through the main stages of the processes including:

- > Engaging stakeholders and setting objectives;
- > Assessing risks and identifying options;
- > Prioritising options and planning for implementation; and
- > Monitoring and evaluation (M&E).

Detailed guidance is provided on Climate Risk and Vulnerability Analysis; Screening of legislation, policies, strategies; Preparation of investment plans; and, Identifying sources of finance to implement priority measures. In addition, the Training Manual showcases good practice case studies, lessons learned from country applications and additional reference and resource materials.



Regional and national capacity development

At the regional level, HR Wallingford engaged with representatives from the borrowing member countries (BMCs) of the Caribbean Development Bank including Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, The Bahamas and Trinidad and Tobago. A regional Training of Trainers event (June 2018) brought together over 70 representatives from these countries. The objective was to train trainers and practitioners in how to establish robust and

implementable climate resilience water sector policies and investment plans. The training workshop centred on the application and use of the Training Manual to assess and design effective climate resilient action and strengthened the capacity of national professionals and practitioners to identify, plan and implement climate resilient development pathways. Subsequently, participants prepared action plans to initiate their own country processes for the preparation of national climate resilient policies, strategies and investment plans.

Round-up

The project has led to improved understanding of climate resilience solutions and strengthened capacity to identify, plan and implement responses. HR Wallingford was uniquely placed to lead the project and to bring added-value and expertise to Caribbean stakeholders. We focus on integrating our UK and international experience in water resources, water services and climate change adaptation with regional expertise and knowledge. This provided the right foundation to address the complex climate challenges in the Caribbean water sector.

