

G-CREWS 25/04/2022

Water Conservation Plans for Health Facilities

Mainstreaming Climate Resilience in the Health Sector

Key Messages

- **MOST HEALTH CENTRES THAT HAVE UNDERGONE A SMART ASSESSMENT IN GRENADA DO NOT HAVE A WATER CONSERVATION PLAN.**
- **IMPLEMENTING WATER CONSERVATION PLANS WILL MAKE HEALTH FACILITIES RESILIENT TO CLIMATE IMPACTS.**
- **COLLABORATION BETWEEN RESPONSIBLE ENTITIES AT THE NATIONAL LEVEL IS ESSENTIAL FOR THE CONTINUED SUSTAINABILITY OF WATER USE EFFICIENCY EFFORTS.**

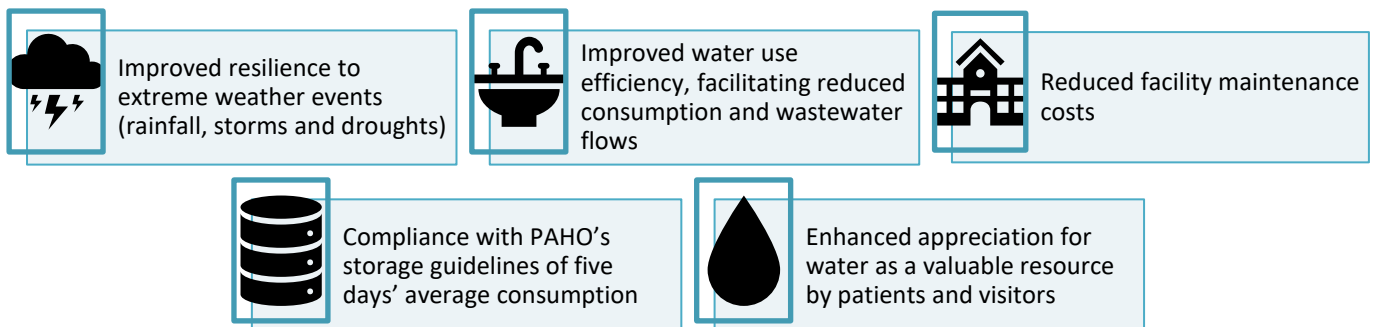
Background

Grenada's Second National Communication identified **human health as a climate-sensitive sector** in the country. **Water security and safety** was identified as one of the high priority climate sensitive health risks for Grenada (Pan American Health Organization Health & Climate Country Survey, 2017). Most of the health centres in Grenada that were assessed under the PAHO SMART Hospitals Project, do not have a water conservation plan.

Objective and Envisioned Impact

This initiative is part of G-CREWS Activity 1.2: "Mainstreaming of Climate Resilience in Policies, Plans and Regulations of Water-Related Sectors". It addresses a major gap in comprehensive water conservation planning for health facilities by deploying best-practice in water audit and water conservation plan methodologies.

The **goals of the water conservation plan**, upon implementation by medical facilities, are:



If done across multiple facilities, implementing water conservation plans can lead to a 10% increase in the Green Checklist ¹ under the PAHO Smart Hospitals Toolkit. In combination with increased water storage, this will result in more health facilities being more resilient to climate impacts. Therefore, the population will continue to receive health care despite these impacts.

¹ See SMART Hospitals Toolkit on www.paho.org - The Green Checklist indicates improvements that hospitals and health facilities in the Caribbean can make to minimize their contributions to climate change.

A pilot water audit done collected the following types of information:

This audit at Princess Alice Hospital (St. Andrew) revealed the following results:



Background Information



Water Consumption Data



Inventory of Water Use Points



Fixture Flow and Leakage Data



Computations, Observations & Recommendations for Conservation

Number of beds	49
Average number of 'walk-in' patients per day	41 (2019) 38 (2020)
Average number of occupants per day	16
Actual average daily consumption (gallons)	3,258
End Uses for Water at the facility: bathrooms (50%), cleaning (25%), kitchen (10%), laundry (10%), Other (5%)	

Some of the **recommendations** that were made for more efficient use:

- Installing commercial low-flow faucets
- Replacement of showerheads with low-flow fixtures
- Replacement of toilet fixtures to modern and more efficient low-flush fixtures
- Install Rainwater Harvesting Systems (RWH), comprising roof catchments, PVC roof guttering, downpipes, storage tanks (minimum 6,000 gallons), solar powered booster pump, and plumbing retrofit to enable rainwater use in toilet flushing and outdoor uses.
- Regular monitoring of plumbing fixtures for leaks



Implementation of these recommendations is projected to reduce the average daily potable metered water at Princess Alice Hospital by **50-55%** (1,650-1,800 gallons per day). This can produce potential monthly NAWASA water bill savings in the range of **\$1,530-\$1,670**.

Recommendations for Replication

Collaboration between the responsible entities at the national level is essential for the continued sustainability of this work. Through a formal agreement between NAWASA and the Ministry of Health, it is envisioned that these entities will collaborate closely to implement the water conservation planning at other identified facilities as well as increasing water storage as indicated under Activity 3.2 of G-CREWS 2 (which will fulfil the PAHO storage requirements of five days' average consumption).

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