Global Water Partnership Caribbean

PROJECT SUMMARY

Global Water Partnership-Caribbean (GWP-C) Provides Funding to Support Partners' Implementation of Small-Scale Integrated Water Resources Management (IWRM) Projects in the Caribbean

GROUNDWATER MANAGEMENT IN MONTSERRAT

PROJECT OVERVIEW

Constant access to electricity plays a major role in economic development of a nation in most developing and underdeveloped parts of the world. The supply of electricity for industrial, commercial, and domestic use in Small Island Developing States (SIDS) is usually highly unstable.

This gives rise to the frequent use of alternative sources of power supply to meet energy demands. Due to inconsistent supply of power, there is a growing need for an alternative source of power supply. Therefore, this project aims to enhance energy performance at 3 pumping stations that provide supply of potable water to the island of Montserrat, through the purchase of an alternative source of energy supply for the pumping stations.

MAIN OBJECTIVES

1. To purchase a simple low-cost device aimed at easing constant power outage, creating downtime at the pump stations.
2. To minimise power interruptions at the pump stations.

IMPLEMENTING PARTNER

Montserrat Utilities Limited (MUL)

LOCATION

MONTSERRAT

KEY OUTPUTS

A cost benefit analysis will be conducted to evaluate the cost savings that will be achieved from installing an automatic transfer switch (ATS), thus reducing labour costs.

Installing an ATS will maintain a steady rotational speed of the motor dive of the pump unit (PU) and this will significantly maintain the energy performance at pump station [1 2 3], thus obtaining significant electrical energy savings, and reduce water losses.

PROJECT DURATION

3 MONTHS

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HYDROGEOLOGICAL MAPPING IN BARBADOS

PROJECT OVERVIEW

Barbados is one of the most water scarce countries in the world, with an average renewable water volume per person of 280 cubic metres/year. The lack of sound scientific information such as hydrogeological maps, has in part led to unsustainable management practices.

This has resulted in high salinity levels in wells close to the coast and the need for the island to explore water importation as a short-term measure. This project aims to address the knowledge gap through a combination of data gathering and analysis to generate a preliminary hydrogeological map of the island.

KEY OUTPUTS

1. A new hydrogeological database for Barbados.
2. Digitised geographical information system layers.
3. A new hydrogeological map that shows areal and vertical extent of the island's aquifers and preliminary conceptual hydrologic model that shows groundwater flow patterns.

PROJECT DURATION

5 MONTHS

IMPLEMENTING PARTNER

The Centre for Resource Management and Environmental Studies (CERMES)

LOCATION

BARBADOS

MAIN OBJECTIVES

1. Collect topographical, geological, and hydrogeological information for the entire island.

2. Digitise the data collected, create layers in ArcGIS, and assign properties to the layers based on the relevant hydrogeological properties.

3. Generate a preliminary hydrogeological map, conceptual, and preliminary numerical model that is representative of the extent of the Pleistocene limestone aquifers, underlying aquitards, and provides a sound representation of Barbados' hydrogeology.

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HYDROGEOLOGICAL MAPPING IN BELIZE

PROJECT OVERVIEW

There is a lack of data and knowledge on groundwater resources both for quality and available groundwater resources in northern Belize. The lack of systematic data gathering and monitoring of groundwater contribute to the non-existence of a national program for groundwater data collection aimed at water quality or quantity, despite the increasing demand as a result of the extension of both formal and informal village water supply systems and agricultural activity.

The proposed project will address these knowledge gaps by providing data that will be used to form a component of a more comprehensive programme of monitoring and investigation for the regional aquifer.

MAIN OBJECTIVE

The overall objective of the proposed project is to provide baseline information on the regional groundwater aquifer to determine regional groundwater flow characteristics and water quality within aquifers of northern Belize to support a sustainable water resources development plan for the aquifer.

PROJECT DURATION

5 MONTHS

IMPLEMENTING PARTNER

National Hydrological Service of Belize

LOCATION

BELIZE

KEY OUTPUTS

1. Georeferenced and characterised groundwater well inventory data set.

2. Evaluate existing data on groundwater levels in the Districts of Orange Walk and Corozal to produce a regional map of groundwater levels.

3. To determine the groundwater flow direction.

4. Conduct water quality analysis of basic parameters from YSI probe to characterise the water quality.

5. Use outputs from 1 and 2 above to inform the design of a small-scale regional groundwater hydrological monitoring network.

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IWRM CAPACITY BUILDING IN GUYANA

PROJECT OVERVIEW

Over the years, the Government of Guyana has made several attempts to respond (with varying degrees of success) to the myriad challenges that have plagued the water sector.

Through this project, the University of Guyana aims to build capacity on Integrated Water Resources Management (IWRM) and improve coordination among stakeholder entities that directly or indirectly, affect the quantity and/or quality of water resources, in an attempt to address the traditional silo and sectoral approach to water resource management; and lack of an engaging process; and institutional fragmentation.

KEY OUTPUTS

1. 300 pamphlets on IWRM focusing on definition, goals, principles, benefits and implementation steps.
2. Increased awareness and understanding of IWRM.
3. Establishment of a GWP-C Chapter in Guyana and an Executive/Oversight Committee.

PROJECT DURATION

5 MONTHS

IMPLEMENTING PARTNER

UNIVERSITY of GUYANA

The University of Guyana (UG)

LOCATION

Guyana

MAIN OBJECTIVES

1. To create/build awareness, understanding and sensitivity with regard to existing threats to water resources and the importance of IWRM.

2. To establish, formalise and create a multi-stakeholder structure/body (a GWP-C Chapter that is representative of government,private sector, civil, and community organisations directly or indirectly affect water resources management) to meet statutorily to discuss, share data and information, and collaborate on national water related events.

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IWRM CAPACITY BUILDING IN DOMINICA

PROJECT OVERVIEW

Gauging is defined as measuring the level or flow of water in a stream or channel. Stream gauges gather important metrics, such as flow and temperature. That information is used to allocate water during drought, predict floods, ensure the protection of natural resources and to track water flows.

Currently in Dominica, gauging is done sporadically and the hope is to get a schedule and increase data of pilot sites by at least 50%. Given that there is no set water resource unit for water monitoring, the capacity building among staff will aid in gauging these sites at least once or twice a month based on location.

KEY OUTPUTS

1. Staff trained to collect streamflow data.
2. Systematic, structured, and efficient streamflow database.
3. More informed decision-making.

PROJECT DURATION

5 MONTHS

IMPLEMENTING PARTNER

Dominica Water and Sewerage Company Limited (DOWASCO)

LOCATION

Dominica

MAIN OBJECTIVE

The objective of this project is to develop a robust and efficient streamflow data collection system. Such a system will facilitate better planning, monitoring and decision-making, as it relates to water resources management.

It will allow increased capacity among staff to collect streamflow data, aid in better monitoring during the wet and dry season, help with the designing of suitable intakes and storage tanks and will encourage and promote a better ecological balance, as it relates to abstraction.

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IWRM CAPACITY BUILDING IN BARBADOS

PROJECT OVERVIEW

Barbados has been described as a highly water scarce country. This has become even more so over the years with the climate change challenges, increase in population, new hotels and buildings, as well as the rise in the use of chemicals and irresponsible waste disposal, creating organic persistent pollutants.

This capacity building project - "Improving the awareness, knowledge and skills of non-profit institutions and individuals to sustain wise use of water resources"- aims to raise awareness and build capacity about the link that IWRM shares with the SDGs in Barbados.

KEY OUTPUTS

1. Target audience enrolled and engaged in capacity building activities.
2. A listing of career opportunities available in the water sector.
3. Target audience strengthened to better understand the SDGs and the interdependence of water to their achievement.

PROJECT DURATION

5 MONTHS

IMPLEMENTING PARTNER

Caribbean Centre of Excellence for Sustainable Livelihoods (COESL)

LOCATION

BARBADOS

MAIN OBJECTIVE

This project aims to:

1. Help at least 30 young and mature male and female non-profit leaders and MSME entrepreneurs and their teams to better manage their water usage and resource, with the encouragement to extend their newly acquired knowledge to their beneficiaries, customers and communities.
2. Create informed citizens in order to "move" the politicians to action.