

**CASE STUDY: ICCAS PROJECT**

**BLAIZE RAINWATER HARVESTING PROJECT**



**Submitted**

By

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| **Integrated Climate Change Adaptation Strategies (ICCAS): Case Study** |
| **Title: Baize Rainwater Harvesting Project** | **Period:** January 2016 – August 2017 |
| **IMPLEMENTING AGENCIES** |
| United National Development Programme (UNDP) | **Ministry of Education Human Resources Development & Environment, NAWASA** | German Development Cooperation (GIZ), BMUB |

**Background**:

The Integrated Climate Change Adaptation Strategies (ICCAS) project was designed to provide a holistic approach to climate change adaptation and mainstreaming in Grenada. The overall aim of the ICCAS project was to increase resilience of vulnerable communities and ecosystems to climate change risks on the three islands: Grenada, Carriacou and Petite Martinique. The project, which has four Components, uses a comprehensive, integrated approach for analysing and implementing adaptation strategies. It also used a unique approach of establishing the institutional and operational framework for building adaptation and resiliency with direct support for the implementation of small-scale adaptation initiatives through a community based climate change adaptation fund which contributed immensely in informing ordinary citizens about the impacts of climate change and demonstrating through actual interventions, how they can initiate various activities, in their homes, schools and communities to build resiliency.

The complete ICCAS Programme was comprised of four (4) components out of which a number of projects were conceived and executed. These projects can be grouped along the following themes:

* Agriculture and water
* Marine and coastal areas
* Education and awareness
* Flood mitigation
* Recycling
* Land degradation

The Blaize Rainwater Harvesting Project is one of the 27 projects funded under the umbrella ICCAS programme funded and falls within the thematic area of Agriculture and Water, more specifically within the area of Water Management. The project was the first pilot carried out under the ICCAS programme and was identified as model replicable project to address the issue of water supply in vulnerable, inaccessible communities.

**Blaize Project Summary**

The community of Blaize is a village located between 1200 & 1500 metres above sea level in the parish of St Andrew with a population of 120 persons. The village’s road access is poor and prior to the project the villagers did not have pipe borne water, received truck borne water every two to three weeks or had to collect water in buckets from small springs in the area. The water available from the springs tended to become very low during the dry season. Due to the relative unavailability of water villagers spent considerable amount of their daily life collecting water and quite frequently during the dry season the village experienced severe water scarcity and villagers were unable to carry out normal activities due to lack of water. With climate change these issues were becoming exacerbated.

Before determining the details of the project some baseline investigation on water demand and potential supply from rainfall was done. The water demand was estimated to be approximately 20 gallons per person per day with overall daily demand being 2400 gallons.

**Project Objectives/Goals**

One of the specific goals/outputs expected in the ICCAS programme was in the area of the Water and Coastal Zone Resources Management, more particularly “planning, management and efficient use of the water and coastal zone resources is improved, through the establishment of integrated water resource management approaches and the formulation of CZM policies and management plans.” The Blaize project was developed and implemented to help achieve this goal.

The project’s aim was to capture and store sufficient water during the rainy season so that the villagers would not be completely dependent on truck borne water and would be able to carry out their daily home and business activities with sufficient supply available in the dry season.

To achieve the objective the project was designed with a rainwater catchment area of 15,000 sq ft and a cistern with a 50,000-gallon capacity (that is a month’s worth of capacity at the total daily consumption figure of 2400 gallons). A distribution network from the tank servicing the entire village was included the project, so that upon completion villagers had pipe-borne water in their homes. The total project cost was USD$120,000

The project commenced in September of 2015 and was launched in July of 2016 with tank and connections completed by that date.

**Climate Change Adaptation impact**

Blaize was set up as a pilot to show how simple technology located within the affected community could mitigate against the effects of climate change.

Given that one of the major consequences of climate change is the increase in extremes climatic events and variability of weather, especially extreme drought, the availability of adequate water storage facilities, is in fact a very useful strategy in climate change adaptation and allows for more effective water resource management.

The provision of the water supply at the point of demand makes it more useful and more easily managed by the community which has a very positive impact on sustainability. The project is also highly replicable which allows for future expansion of capacity to meet growing needs.

**Positive Lessons that can be Extracted from this Project**

This project along with others based on rainwater harvesting focused on use of renewable resources (rainwater), and appropriate technology (rainwater harvesting) and placing the source of the resource within the community which increases the sense of community empowerment. This is an excellent model for sustainable renewable resource use in a climate vulnerable environment.

Provision of water on a reliable basis has improved the quality of life including household productivity and school attendance.

The conduct of a baseline study by NAWASA before the implementation of the project helped in identifying the major issues with the existing water supply. The community was extensively surveyed (38 interviewees out of a population of 120 persons though not all responded to all the questionnaire items) in this baseline study which also increased the community’s sense of involvement and hence commitment to the project.

The involvement of the community through community meetings before and during project implementation has contributed to project support and to better community understanding of the impact of climate change and the necessity to adapt to that change and manage resources. More particularly the results of the questionnaire and details of the project plan and implementation were shared with the community before the project began.

Additionally, post project training has been carried out in the community in maintaining water quality which contributes to the sustainability of the project.

**Areas for improvement when replicating this Project Approach**

It should be noted that though NAWASA carried out an extensive questionnaire with high response rates in the community the questionnaire did not deal with the issue of long term water requirements in the community on the demand side based on the likelihood of population growth, and possible increased commercial and farming requirements. Additionally, on the supply side there may be significant changes in the quantum of rainfall received in the future due to climate change, so the size of the storage facility may not be adequate for future demand. It is possible that a more thorough feasibility study, using time series date and projections into the future of both rainfall and of population changes (including business/commercial requirements) would have allowed for design features to accommodate any changes in terms of quantity of water supply including tank placement and number of tanks.

**Key Comments on Project Success from Stakeholders**

The head of the environmental division states, “one of the key areas we looked at was piloting action on the ground” to develop a project that was “tailor made” and “not a cookie cutter solution”. As one of the village residents says the “project was a good initiative” and as another says, “it saves time, the time you take to go outside, full up a bucket to go to the bathroom or the washroom. Now, you have it right there!”

**Resources:**

[https://www.international-climate-initiative.com/en/media-centre/videos/film/show\_video/show/community\_rainwater\_harvesting\_project\_in\_blaize,\_grenada/](https://www.international-climate-initiative.com/en/media-centre/videos/film/show_video/show/community_rainwater_harvesting_project_in_blaize%2C_grenada/)

<http://www.iccas.gd/?q=about-iccas>

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Location of Project: Caribbean/OU/Grenada/St Andrew

Major Habitat Type for this partnership: Farming community

Types of Partners: Government, Place-based NGO, International NGO, Community Based Organization etc.

Priority: Freshwater

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