

**CASE STUDY: ICCAS PROJECT**

**CLIMATE SMART AGRICULTURE**

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**Submitted**

By

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| **Integrated Climate Change Adaptation Strategies (ICCAS): Thematic Report** |
| **Title: CLIMATE SMART AGRICULTURE** | **Period:** Mid 2016 – March 2018 |
| **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 as part of the Community Climate Change Adaptation Programme. These projects can be grouped along the following themes:

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

**Project Summary**

The agriculture sector of Grenada, Carriacou and Petite Martinique is being seriously affected by the effects of climate change on water resources as changing rainfall patterns, higher temperatures, higher evapotranspiration as well as longer and more severe dry spells bring with them drought conditions. Droughts can lead to temporary food scarcity and reduced productivity of grazing pastures. In the sister islands of Carriacou and Petite Martinique, limited surface water resources leave the agricultural sector even more vulnerable to soil erosion, and saltwater intrusion, further threatening the livelihoods of farmers. It is also predicted that changing climatic conditions could also result increased vulnerability to hurricanes. Heavy rains will also erode agricultural soils and damage crops. They can also increase fertilizer runoff, threatening the integrity of the island’s protected marine areas. To combat these identified threats of rainfall variability and drought conditions ICCAS project introduced a Climate Smart Agriculture (CSA) pilot project which was aimed at increasing the use of CSA techniques to improve the management of water and build resilience of the agricultural sector.

To achieve this objective the project adopted a two-pronged approach – namely, Capacity development and building resilience in the agricultural sector.

* The Capacity Development and Dissemination Programme (CSA-CapDiP) initiative sought to trains agricultural technical and extension officers in the Government of Grenada and the local statutory Agri-associations on using GIZ’s Modules on Sustainable Agriculture and the Response-Inducing Sustainable Evaluation (RISE) Tool. Once trained, these technical and extension officers were responsible for transferring the knowledge gained to farmers and other stakeholders.
* The second initiative was the establishment of a CSA model farm known as the Grenada Ecological Resilience Research Institute (GERRI) which provide hands-on opportunities to implement the practices in the field and building the resilience of the agricultural sector of Grenada.

The project has trained a total of 45 officers at the Ministry of Agriculture and CSA practices were integrated into the ministry's work plan. The model farm has been established implementing the different recommended practices to secure the future of the agriculture sector and a number of resilient farming practices and incentives were given to farmers to increase climate resilience. These include composting and vermiculture bins and proper turning technique demonstration. Additionally, climate smart technologies in solar power water pump and drip irrigation systems were introduced to school farming systems.

**Climate Change Impact**

The project has begun to change the approach to agriculture to a more sustainable and environmentally friendly one, that reduces the use of artificial pesticide and fertilizer which produce dangerous runoff that can affect water sources and the marine environment, soil erosion and slash and burn agriculture, and increases the use of CSA techniques like mulching, composting, soil and water conservation which have a beneficial effect on the environment.

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

There were a number of positive lessons which one can take away from the use of CSA techniques. These were as follows:

1. This project has taken a training approach that focused on improving the technical capacity of the agricultural extension officers who then trained both other officers and the farmers in the field. This is a model that is sustainable in the longer term.
2. The approach focused on first building awareness then mentoring and coaching both less experienced extension officers and the farmers in the field.
3. The monitoring of farmers’ activities was promoted by introducing a section in the forms that are filled out by the Agricultural Extension officers, that recorded farmers’ use of CSA techniques.
4. The pilot project approach focused on 5 farms who already had a positive attitude to CSA thereby provided a model for those farmers to demonstrate show how the approach could be economically viable.
5. The use of the model farm, based solely on CSA practices provides farmers with a living model of what can be done successfully using CSA.

**Areas for improvement for future projects**

There was one main challenge in the Agricultural Extension division:

* Aging workforce – depletion of technical know how
	+ Within the ministry most of the trained experienced officers leaving within the next 2-3 years
	+ Extension assistants exist but they lack training and experience

The focus has to be therefore, on intensive training of the inexperienced officers and widening the knowledge pool.

In terms of the farmers the main challenge continues to be their acceptance of the approach as being financially viable. Farmers can be resistant if they see the approach as more costly initially or more labour intensive. It is necessary to work very closely with then to show them that initial higher cost results in better yield and longer-term sustainability of the land. Older farmers who own the land plant mainly tree crops which require less labour and maintenance while younger farmers who may not own the land grow cash crops for quick income generation and are not interested in the longer-term investment in things like proper drainage required by CSA. These attitudes can only change with continuing education and with incentives put in place at the policy level.

**Key Comments on project from Stakeholders**

Dr Duncan Campbell said, “this is the strategy – spread the demonstration around the island, work with the ministry of agriculture or volunteers who have the time, and use these people as teachers” to facilitate the shift to CSA practices.

**Resources:**

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

MHT: What is the Major Habitat Type for this partnership? Farming community?

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

Priority: Agriculture

Date: May 2018

Links : <http://iccas.gd/?q=community-projects/climate-smart-agriculture-csa>

 <https://www.giz.de/en/worldwide/27030.html>

<http://iccas.gd/?q=video>