Project No: BAR/SGP/OP5/YEAR3/CORE/LD/13/08
Grantee: Caribbean Permaculture Research Institute of Barbados
Location: Barbados
SGP Contribution: US$ 50,000.00
In-Kind Co-Financing: US$ 90,151.00
Cash Co-Financing: $30,000.00
Project Duration: Dec 2013 - July 2015

Project Description
The Caribbean Permaculture Research Institute of Barbados with funding provided by the Global Environmental Facility Small Grants Programme, implemented by United Nations Development Programme is applying the new approach of permaculture to promote sustainable regenerative soil practices and a climate smart approach to agriculture in communities across Barbados. With support from the Ministry of Agriculture, Food, Fisheries and Water Resources (MAFFW), the project seeks to create a financially solvent organisation to serve as a permaculture educational facility and tropical training site.

Background
Land degradation affects many agricultural lands across the globe, resulting in soil infertility, low crop yields and increased vulnerability to erosion. This issue is exacerbated by climate change especially in Small Island Developing States (SIDS) thereby threatening food security and the livelihoods of many farmers. Land degradation remains a pressing issue for Barbados due to many contributing factors such as land clearance for construction, use of non-specific herbicides, use of cross contour ploughing and furrowing and the removal of organic matter from the soil without replacing it. Furthermore land degradation due changing climate has been accelerating as a result of higher temperatures which increase the rate of organic matter decomposition within the soil and has increased the frequency of adverse weather events that lead to soil erosion. This has create a recognition that a new food production system on the island that is sensitive to these factors is required.

The government recognises a real urgency to improve soil conditions that enable food security and adapt to the reality and future threat of climate change. However to do this, conventional agricultural systems must now be transformed to increase their resilience and to ensure a sustainable agricultural production system is maintained. Permaculture facilitates the adoption of the principles of agro-ecology in this innovative approach to addressing these issues whereby ecological concepts and principles are applied to the design and management of sustainable food systems. These consequently improve soil fertility and productivity thereby increasing food security and resilience of the production system. In addition, permaculture practices reduces significantly the carbon foot print of farming by negating the need for fossil fuels to facilitate production thus this system contributes to climate change migration within the agricultural sector. Permaculture is a new approach that can potentially support the agro-ecological movement, mainstreaming similar principles into agricultural
production systems. It also has the potential to contribute to resilience of climate change by cushioning impacts of climate episodes such as drought and/or extreme weather events.

Under this project, CPRI has sought to develop an institute that will demonstrate how designing holistic systems on varying landscapes can meet local demands and build resilient communities across Barbados. It is hoped that this project will be a catalyst for the adoption of agro-ecological approaches in the region.

**Implementation**

The main project activities included:

- An established Permaculture training facility
- Creation and implementation of a Permaculture Whole Systems Design Demonstration Site Plan to develop the land into productive sustainable systems
- The development of a multi-tiered permaculture educational program and produce competent permaculture designers and experts.
- The development of community outreach activities to build resilient communities,
- Trained locals to operate the training facility which is financial stable (human capacity)

**Results**

- **Environmental impact**
  CPRI secured approximately fifteen acres (6.07 hectares) of land from Ministry of Agriculture as a Permaculture Whole Systems Demonstration site. Of which the first five acres are under sustainably agricultural practices, that is, without the use of synthetic chemicals, fertiliser, pesticides and herbicides which undermine the natural environment. A number of practices and designs included
  - The construction of swales to manage water runoff and increase rainwater infiltration.
  - The establishment of a vermicomposting bed to help stabilise organic materials and convert them to a valuable soil amendment and source of plant nutrients.
  - The construction of urban, kitchen and mandala garden to promote strategies for food security demands, easy accessibility and visual interest.
  - The installation of a rainwater harvesting system as a strategy for sustainable water management.

- **Capacity development**
  There were equal opportunities for both men and women to participate in the training programme. To date four Permaculture Design Course groups have been trained, with 83 persons between ages of 18-63 being certified as Permaculture Designers. Many of these persons have left the course being inspired to enhance food security through establishing kitchen gardens, food forest. Some have also redesigned their properties using permaculture principles. Over 100 persons from the wider community have also been engaged through 7 on-site
permaculture farm tours hosted by CPRI. As of June 2015 CPRI achieved the status of an approved technical Vocational Education Training (TVET) Centre in Barbados. One local Permaculture teacher has been trained and is in the process of being internationally certified.

- **Socio-economic impact**
  The training facility utilised two income generating mechanisms to support its operation/functioning and the livelihood of organic farmers. Revenue generated has been generated from participants of the Permaculture Design Course and the hosting of the weekly Graeme Hall Farmers’ Market, in collaboration with the Ministry of Agriculture, as a means for organic farmers to sell directly to consumers. A total of BBD$22,920 (USD$11,460) was generated during the period March – July 2015.

**Beyond project impact: Replication, Upscaling and Policy Influence**

The project had some important influence on government policy and agricultural training programmes for youth and young farmers given that MAFFW registered four of its agricultural employees into the Permaculture Design Certification and 23 Agri-preneurship students. Also, MAFFW fully supports the Bio-Vital Sustainable Soil Management course on Organic Farming which commences on August 10, 2015. MAFFW has also contributed financially so that the Agri-preneurship students are registered to work during the 2-week programme which includes extensive hands-on application of knowledge shared in the class sessions.

The project can be easily replicated in other communities and led by certified permaculture designers. It has inspired many individuals to replicate these designs on adjacent surrounding. For example one community garden, Community Permablitz, has been established adjacent to Graeme Hall Sanctuary with support from community members and CPRI volunteers. In addition, the project has also influenced other SGP grantees who will be applying permaculture design to their project site.

**Partnerships**

The project success can be attributed to the extensive resource mobilisation strategies through developing strategic partnerships/support linkages with the private, public sector and civil society at all levels.

- **Local level:** Organic Growers and Consumers Association (OGCA), Be the Change Barbados, Slow Food Barbados, Barbados Charities support Network (BCSN)
- **National Level:** Barbados Agricultural Society (BAS), TVET Barbados
- **International level:** Permaculture World Wide Movement (Permaculture Research Institute [PRI] Australia and WWOOF), Trust Nature Australia, Worldwide Permaculture Network

These partnerships have facilitated the following:

- The business community has enabled the facility to offer full PDC scholarship to people within the communities. A total of 55 persons received sponsorship to date.
- Under the Youth Agri-preneurship Incubator Programme, implemented by MAFFW, 23 students between 18-35 completed certification.
- Volunteer support provided from the World Wild Opportunities on Organic farms (WWOOFERS)
- The utilisation of the Global Crowdfunding site, Indiegogo, yielded US$1,900 to support the programme.
Photos & Additional Information

https://www.facebook.com/CPRIBarbados/photos_stream

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