

Implementation of Resilient Farming Systems and Practices

Guadalcanal Province, Solomon Islands

Introduction

Subsistence agriculture is the main livelihood for most of the rural households in Solomon Islands, which make up 85% percent of the population (Jansen et al., 2006). Small-scale semi-subsistence farming and fishing is the norm, with approximately 40 percent of GDP comes from agriculture, forestry and fisheries (FAO, date unknown). Recent disasters have highlighted the severe impacts of natural hazards on food security in the Solomon Islands, including flash floods in 2014 which wiped out entire villages and food gardens. Regular landslides, soil erosion, drought and a high incidence of pests and diseases also impact income, employment and nutrition. Climate change is projected to exacerbate these threats.



In many cases, farming communities in Guadalcanal Province are also challenged by limited access to agriculture extension services, difficulties accessing funding for community facilities, flooded roads reducing or removing market access and poorly planned agriculture facilities, such as copra and cocoa dryers. Further, many communities are faced with increasing populations thus increasing the pressure on limited food supplies.

In an effort to enhance food and nutrition security in communities in Guadalcanal Province, the Ministry of Agriculture and Livestock (MAL) launched a resilient community farming scheme to:

- Identify risks associated with climate change, disaster (e.g. flood, landslide), environmental changes (e.g. erosion, pollution) and society (e.g. gender, youth, the elderly) to and from agriculture initiatives;
- Develop measures to address these risks; and
- Implement resilient farming systems in communities across the Province.

Initially, this intervention was delivered in **Niu Birao** community, and after monitoring and evaluation demonstrated success, it was then replicated in **Katehana, Suagi, Tumurora and Ngalimera** communities.

Approach

In order to implement more resilient farming systems in communities across the Province, the team strengthened the enabling environment that would ensure climate and disaster **risks were considered at all levels** of decision making. In collaboration with the UNDP's Pacific Risk Resilience Programme (PRRP), the following foundations were laid:

- **Dedicated capacity.** MAL created a full-time senior government post dedicated to disaster and climate risk management (CCDRM) to drive resilience strengthening activities
- A **Resilience Agriculture Extension Officer (AEO) Network** was established by the MAL CCDRM post, to provide capacity building on resilient farming for extension officers
- **Risk mapping** was undertaken for each community, which allows farmers to identify risks **to** and **from** their activities
- **Partnerships.** Farming and agricultural activities in Guadalcanal are delivered by a broad cross section of partners, a number of whom have collaborated to deliver this project. These include MAL, Oxfam and Live and Learn Solomon Islands
- **Leadership.** MAL Director Extension has championed a risk informed approach in the agriculture sector, supporting incorporation of CCDRM into the sector plan, and availing AEOs to become members of the resilience network
- **Gender and social inclusion** was integral to all activities, with involvement from the Guadalcanal Province Women's Division and Live and Learn Gender Officer ensuring that women, youth and other social inclusion aspects were integral considerations in all phases of delivery.

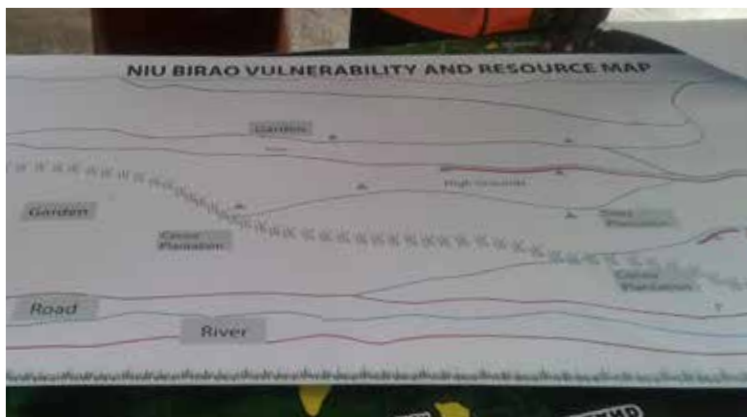
Activities

Climate, disaster, environment and social risk factors are taken into consideration throughout design, implementation and monitoring and evaluation of the resilient farming systems scheme. Interventions vary depending on the community needs.

Design

During the design phase of the scheme **Project Steering Committees** are established in each community with support from the local AEO and the MAL CCDRM Officer. The Steering Committee is established from the existing Village Disaster Committee. The Steering Committee is responsible for site selection, leading the community consultation, for project implementation and overseeing implementation of the project.

Community risk maps are developed to determine hazards that may impact on agriculture activities, and where the strengths and needs are in the communities to manage these hazards.



Implementation

In each community, **demonstration plots** are developed to provide on-site farm display on: **resilient and sustainable farming systems**, such as alley cropping and contour farming; and **resilient farming practices** and techniques, such as mulching, crop rotations, cover cropping, composting, crop diversification and fruit tree planting as a buffer. In each community, the crops that are utilised for the demonstration include yam, taro, sweet potato, pana and cassava.

The techniques demonstrated and the content of the plots is determined during the community consultation and risk mapping exercises, and activities are led by the Agriculture Extension Officer. The specificities of the demonstration plots vary depending on particular community needs.

Monitoring and Evaluation

A risk informed monitoring and evaluation template has been developed, and M&E undertaken by the Project Steering Committee, in collaboration with the MAL, the AEOs and Oxfam.

Results

// **Communities are now doing things differently. Where farmers had not tried things before, they are now planting different crops using new methods, and more nutritious food is available**

Helen Mateabu, Live and Learn Solomon Islands.



Farmers can more easily identify risks and have been **using community risk maps to support their decision making** beyond the intervention. As a result, they are locating copra dryers, cocoa dryers, and plots in more appropriate locations, and are using more resilient crops. Additionally, as a result of their expanded responsibility, AEOs are reportedly more engaged with these communities than before.

The project team ensured that **gender and social inclusion issues** were central to decision making, planning and implementation in these activities through the Guadalcanal Women's Division. As a result, there has been an increase in the vegetable crop harvest, the excess of which are sold to market through the community Women's Savings Clubs.

At the national level, strengthening of the enabling environment that ensures climate and disaster risks are considered at all levels of decision making has provided a more permanent space for risk informed development. **Using in-house sector capacity** (the MAL post and the AEO network) for risk informing development is a key ingredient to the **sustainability of the activities**, given that both will be involved after the project life. Strong **leadership and partnerships** between Government, non-Government organisations and communities have enabled this, and ongoing, resilient development.

Replication and Scale

Based on the success of the Niu Birao resilient farming systems scheme, the model has already been replicated in **4 additional villages** in Guadalcanal, and Oxfam have committed to do the same with an additional 5 villages. Further, World Vision and Kustom Gardens are rolling out similar programmes in communities across the country.

The Resilience AEO Network has been established in all 9 Provinces in Solomon Islands, and through the MAL CCDRM post are undergoing training and capacity building to scale the resilient community farming across the country.

References

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