



Pacific Catastrophe Risk Insurance Company Internship the Research and Writing
Assignment

A Proposal for Better Disaster Risk Management in Fiji.

**Topic: Conservations Agriculture and Sustainable Intensifications as a Way
Forward for Disaster Risk Management in Fiji**

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Introduction

Humans are adversely affected by disasters ever since the dawn of our existence (Klein and Weigelt, 1991). A disaster is defined by the United Nations Office for Disaster Risk Reduction (UNISDR) 2 as “A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources”.

Pacific island countries are vulnerable when it comes to natural disasters (Johnston, 2014) and most governments tend to be on the losing end when it comes to disaster consequences and adverse effects. Governments put in place measures and legislations to help the nations in mitigating the adverse effects of disaster. The loss of life resulting from major disasters tends to occur more frequently in those areas prone to disasters and within less developed countries. Pacific island communities are among the most risk-prone in the world when it comes to disaster since we are marginalized that is we lack resources and means of protections against disasters which are available to more developed countries like America.

Disaster was viewed as a problem that could be managed more effectively by informed action appropriate investment of attention and resources in risk-prone communities. Over the years the government of Fiji has been faced with disasters and this leads to loss of lives, properties and degradations of agriculture lands. The government of Fiji are basically reliant on aid from overseas in order to cope with the loss incurred from disasters however, the sad fact is that the government do not really have a proper means for a better disaster risk management in Fiji. There is nothing more certain in disaster management than the fact that once the disaster starts to unfold, it is too late to start looking for means to manage it and it costs a lot of money to incur for the loss caused by the disasters.

Agriculture plays an important role in the lives of the people of Fiji because it has the potential to enhance livelihoods for farmers. Therefore, this paper will discuss how conservation agriculture and sustainable intensifications as a way forward for disaster risk management in Fiji. The aim of this paper is to discuss and introduce the concept of Conservation Agriculture and Sustainable Intensifications (CASI) to the people of Fiji and for them to adopt it to be able to mitigate the risks that come with disaster. The reasons why I chose this because I know for the fact that a lot of people around Fiji depends on Agriculture as their source of livelihood. By adopting CASI interventions people will be able to raise their standard of living thus build better houses that will be able to withstand disaster. Also have access to food security and there will be still staple food available after disaster and do not have to wait for aid from government and from other non-governmental organizations. This proposal is a way forward for disaster risk management in Fiji and it would involve different stakeholders from various government ministries, international donors, the beneficiary and other non-governmental organizations that will be interested to be part of the project.

Literature Reviews

Disaster and Disaster Risk Management

A disaster is defined by the United Nations Office for Disaster Risk Reduction (UNISDR)² as “A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources”(Kelman, 2015). Pacific island communities are among the most risk-prone in the world(Johnston, 2015). The South Pacific area are prone to disasters of many kinds, tropical cyclones are predicted to increase in strength, track length and lifespan due to climate change. There is a need for Small island developing states to be able to adapt their disaster response accordingly. Vulnerability is high for communities on the outer island of the Small Island developing countries(Barnett and Waters, 2016). These communities are out of reach of many aid organizations, and are required to be more self-reliant and resilient than most and this island relied mostly on Agriculture as their main source of livelihood.

One of the major aspects that needs to be addressed when it comes to disaster management is climate change(Kelman and West, 2009). Climate change will manifest in altered regimes of natural hazard occurrence, and therefore can be conceptualized as a disaster management issue (Bajracharya et al., 2011). The increase in the severity of natural disaster is been brought about by climate change and this is particularly affecting developing island countries such as Fiji(Pelling and Uitto, 2001). Disaster risk management is important and there is an increase in the need to ensure and enhance the effectiveness of responses to these disasters, from all involved – governments, aid organizations and the affected communities. There is a growing realization of the connections between development and sustainability(Johnston, 2015). Dealing with disasters entails post-disaster activities such as response, recovery, and reconstruction along with pre-disaster activities termed “disaster risk reduction”. Disaster risk reduction is defined as “The concept and practice of reducing disaster risks through systematic efforts to analyses and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events”. Disaster risk management includes preparation, planning and mitigation (Kelman, 2015). The level of both physical injury and economic loss associated with natural disasters cannot be ignored by any country and thus it is important that it important that government put in place policy and means of managing disaster risks. CASI will be an essential element which will be to better align disaster risk reduction and climate change adaptation efforts, so as to lessen the likelihood that there will be extreme losses and threats to the food security and the livelihood of the people of Fiji.

Climate Change

There is existing evidence that there increased numbers of observed extreme weather events, such as heat waves, extremes in precipitation, and the potential for increased number of severe storms and this is caused by global warming(Coumou and Rahmstorf, 2012). Global warming leads to climate change. The term “Climate Change” refers to any change in climate over time, whether due to natural variability or as a result of human activity (Stocker et al., 2014) . A report being

published by UNICEF shows that climate change impacts in the the Pacific region will result in mortality and injury from extreme weather events; increase in risk of water scarcity; changes in the transmission, incidence, and distribution of water-, food-, and vector-borne diseases; migration and declining livelihoods; and heightened risk of food insecurity and child malnutrition (Urbano et al., 2010). Climate change and increased in risks of disasters makes the Pacific Island countries especially Fiji vulnerable (Becken, 2005). For the Pacific, projected frequency of tropical cyclones may follow global trends of less frequent tropical cyclones and a likely increase in the relative proportion of severe storms by the end of the 21st century(Knutson et al., 2010). Coping with climate and extremes weather conditions has become a natural part of Pacific Islander’s way of life. There are several “non-climate” related factors and processes which affect the ability of communities to cope with climate stresses. These include (but are not limited to) rapid population growth, land ownership and kinship issues, intrusion of western culture into traditional governance, the erosion of traditional knowledge impacting agricultural practices, natural resource degradation, and increasing reliance on imports (Urbano et al., 2010). The isolated locations and the low lying geographical locations of Fiji and other Pacific Island countries makes them vulnerable and also the economic status of the country which renders them to heavily relied on the donors support. Some of the thematic areas of development assistance is disaster preparedness, climate change adaptations and disaster risk management in the Pacific Island Countries especially Fiji(Commission, 2009, Campbell, 1998).

Agriculture and Conservations Agriculture and sustainable Intensifications

Agriculture in Fiji has always been associated with the production of essential food crops as well as export other agriculture products. Agriculture plays a significant roles in the lives of the people of Fiji as it is a major source of livelihood to many people across Fiji especially those in the outer islands(Lako et al., 2019) . Pacific communities have traditionally faced food security issues arising from extended dry periods associated with El Niño/La Niña-Southern Oscillation (ENSO) events or from the destruction of agricultural produce by cyclones and floods and over time have developed ways to preserve food to cope with such situations (Kuruppu and Liverman, 2011). Fiji’s agricultural sector has been integral to the Fijian economy in terms of the provision of food and raw materials for the domestic market, the absorption of domestic labour and capital, and generation of export income. It has also supported manufacturing and services sectors(Gani and Scrimgeour, 2019). Conservations Agriculture and sustainable intensifications is not a new concept it has been utilized by our forefathers as means of preparing back up food supply after a natural disaster. For instance in Samoa communities they would salvage ready to harvest root-crop tubers, filled with valuable starch, which were then preserved in underground fermentation rooms(Berrel and Philips, 2013). Also they would have a backup plantation for cyclone period by growing taro patches, since bananas and breadfruit trees fall down and this is where the concept of integrations intercropping and mixed farming, came in. Agricultural intensification has been a major theme for cultural-ecological studies within a number of disciplines (Kuhlken, 2004). An ideal approach could be an “integrated farming system approach” that incorporates the planting of fruit trees with root crops(Berrel and Philips, 2013) and thus CASI is a way forward for disaster

risk management as it is a means of preparing the people of Fiji, improve livelihoods at grassroots level and building a resilient Fiji.

Vision

To enhance rural livelihood systems of the people of Fiji and also to build resilient at grassroots for a better disaster risk management in Fiji

Mission

To proposed the concepts of Conservations Agriculture and Sustainable Intensifications as a way forward for disaster risk management. This will be done by

- Identifying the beneficiaries of the project that is to select the site and the communities in which the project has to be done and this could be the demonstrations farms pilot of the project and this could be few locations. The reasons why I choose to have demonstrations farms site because knowing very well how the people of Fiji works is that they will only adopt a concept once they see it with themselves the fruitions of the project

- Facilitates training and workshop for farmers to learn more about the concept of Conservations Agriculture and Sustainable Intensifications. What crops and other fruit trees that can be integrated together and farming technique that they need to follow the climatic conditions and the management aspects of it. Also to teach the farmers on the importance of record keeping like time of planting, harvesting and amount that is harvested.

- Furthermore, provides farmers with training to assist farmers in applications of loans to help them in their farm and also to keep monetary records about the expenses and revenues. Also to find means to acquire funding of the project

Objectives

The objective of this report is to:

- Allow the people of Fiji to adopt the concept of Conservations Agriculture and Sustainable Intensifications to build resilience and be able to mitigate the risks that comes after a natural disaster
- Increase income for the people of Fiji to improve people livelihood so that they could build better houses that could be able to be secure during cyclone.
- Generate employment and income in rural areas and provide security for people in time for disaster so that they are not always reliant on the government and foreign aid so after a disaster they still have means of getting by after a natural disaster.
- Further enhance the capacity of farmers to have food security especially in times after a natural disaster
- Provide skills to unemployed youths and farmers in managing new farm business and ventures and also by training and workshops.

The Project Lifecycle of the CASI Project

Project Lifecycle Sequences	Activities Carried Out
1. Project Identifications	<ul style="list-style-type: none"> ❖ Stakeholder analysis (the stakeholders includes the project staff, the beneficiaries of the project and the consultant and training facilitators) ❖ Problem analysis (the problem that were identified is to find a better proposal for better disaster risk management in Fiji)
2. Preparations and formulations	<ul style="list-style-type: none"> ❖ Objective analysis ❖ Strategy analysis <ol style="list-style-type: none"> 1. Scheduling project activities 2. Resourcing (determining inputs required for the project) 3. Financing of the project (making the budget for the project)
3. Review and appraisals	<ul style="list-style-type: none"> ❖ Analyzing social, economic and environmental feasibility of adopting the concepts of Conservations Agriculture and Sustainable Intensifications
4. Implementations and Monitoring	<ul style="list-style-type: none"> ❖ Hiring and managing project staff ❖ Managing project materials ❖ Assigning responsibility to staff for different activities of the project ❖ Analyzing and managing project risk ❖ Monitoring progress of project result *monitoring is undertaken with the purpose of improving management decision making. It provides an opportunity to the management to take actions that need to be taken
5. Evaluations and Lessons	<ul style="list-style-type: none"> ❖ Deciding key tasks in evaluation ❖ specifying performance indicators for projects for project activities outputs objectives and overall goal ❖ Involving stakeholders in the evaluations process ❖ Deciding data sources and collecting data for verifications of the project performance ❖ Verifying project achievements with respect to its planned activities outputs and objectives ❖ Making recommendation to take actions that need to be taken.

Typology of Stakeholders Participations in CASI Project

Types of Stakeholders	Requirement specifications
Internal stakeholder	<ul style="list-style-type: none"> -staff working on the project - beneficiaries of the project
External Stakeholder	<ul style="list-style-type: none"> -external donors and NGO and other investors -Consultant -Exporters - Government ministries (Ministry of agriculture)

Table of Activities

Activities	Descriptions	Time Frame
- Situations analysis	Area survey (geographic locations and climatic conditions) Site of the project Identifying beneficiaries of the project	2 Week
Awareness Training	Awareness training will be done with the situation analysis. This is where the farmers will know more about the concept of CASI and they will know how it work and they will also have to know about the pros and cons of how CASI works or the strength and weakness, opportunities and threats . The communities are to be chosen on their willingness to participate on the project and this are existing communities of farmers.	2 week
Stakeholders analysis	The identifications of all the major stakeholders that are going to be part of the projects. This includes the -staff working on the project -Beneficiaries -People who are funding the projects -the training facilitators - consultant - shipping companies and export companies - all the key stakeholders of the project are identified and what are the roles they are going to play - stakeholder analysis will be done by the staff of the project will also be done with the situations analysis or before situations analysis	1 week
Training and workshop	Training and workshop will be done to let the people knows more about CASI and the way it works the combinations of crops and the farming techniques and this would be series of training and there will be demonstrations training to let the concept sink in to the people and also there will be management training.	1 week per training
- Monitoring and evaluations	Monitoring will be done all throughout the timespan of the project it is done to keep track of all project-related metrics including team performance and task duration, identifying potential problems and taking corrective actions necessary to ensure that the project is within scope, on budget and meets the specified deadlines. Evaluations – is to determine the relevance and level of achievement of project objectives, development effectiveness, efficiency, impact and sustainability. The evaluations will be done 3 times within the lifespan of the project 1st Evaluations –done once the projects has started beginning of the project 2nd Evaluations – done midway through the project 3rd Evaluations – done towards the ending of the project	Once a month 5 days 5days 5days

Conclusion

This paper has provided an example of a means or a coping strategies for disaster response and disaster risk management in Fiji. Conservation Agriculture and Sustainable Intensifications is a way forward for disaster risk management in Fiji. It is prevalent that agriculture does plays a significant roles in the livelihood of the people of Fiji. However, the sad reality is that the livelihoods of the people of Fiji are at a threat due to the effect of natural disaster which incurred losses and most people are mostly reliant to the government and international aids. The reasons I believe that the concept of CASI will work because most people are reliant on agriculture and this will build resilience at grassroots level and improve livelihoods. CASI is not a new concept because this practices has been utilized by our forefathers as means of having backup food supply after a natural disaster. It is true that Fiji is prone to be adversely affected during natural disaster due to it isolated locations and the low lying geographical locations and the economic status of the country making it vulnerable. Disaster risk management is important and there is an increase in the need to ensure and enhance the effectiveness of responses to these disasters, from all involved – governments, aid organizations and the affected communities. People cannot really tell the severity of the disaster however we can reduce or mitigate the risks and thus it is important to adopt to a sustainable means like adopting the concept of CASI as a way forward in the risks management. By adopting CASI interventions people will be able to raise their standard of living thus build better house that will be able to withstand Disaster. Also have access to food security and there will be still staple food available after disaster and do not have to wait for aid from government and from other non-governmental organizations. This proposal is a way forward for disaster risks management in Fiji and it would involve different stakeholders from various government ministry, international donor, the beneficiary and other non-governmental organizations that will be interested to be part of the project. CASI will be an essential element which will be to better align disaster risk reduction and climate change adaptation efforts, so as to lessen the likelihood that there will be extreme losses and threats to the food security and the livelihood of the people of Fiji. Therefore, CASI is a way forward for disaster risk management as it is a means of preparing the people of Fiji, improve livelihoods at grassroots level and building a resilient Fiji.

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