

NAME: LUCY FLORANCE SIDAL

NASINU, FIJI

PROGRAMME: BACHELOR IN COMMERCE

INTERN-PACIFIC CATASTROPHE RISK INSURANCE COMPANY

DATE: 17/10/21

EMAIL:lucysidal@gmail.com

PHONE: 8652921/8331510

A PROPOSAL FOR BETTER DISASTER RISK MANAGEMENT IN FIJI

Sub-Topic: Strengthening Fiji's Disaster Response and Preparedness, in order to better prepare for and manage the effects of natural disasters.

PURPOSE & OBJECTIVES

The main purpose of this proposal is to document pacific island nations like Fiji pursuing disaster risk through preparedness, mitigation, emergency response, and recovery activities. The proposal is focused on three main sections which are:

- Individual, Regional & National level Disaster Risk Perception
- Disaster planning & Proper Management
- Disaster Mitigation & Preparedness followed by its Recommendations

The proposal therefore, focuses on how the Fijian economy may satisfy their basic needs, manage their environmental resources, make their initiatives sustainable and integrate their development activities, which may be done through regular workshops, training and follow up activities, in order to combat climate change and its associated sea level rise.

INTRODUCTION

Fiji is situated from one of the high-risk disaster - prone areas. Over the past, disasters have incurred substantial costs in terms of human, financial, and physical assets as well as harm to the country. The issue is exacerbated further by the damage, dislocation, or lack of necessary economic productivity and infrastructure such: as water supply, electricity, telecommunications, and transport (Seyedin et.al, 2011). Fiji is prone to a variety of natural disasters including: cyclones, floods, earthquakes, fires, landslides, and drought.

BACKGROUND

Pacific Islands Countries like Fiji are vulnerable to the effects of climate change, sea level rise, and extreme natural events and are currently facing many of the challenges that some other people in the world still plan about. Natural disasters and limited adaptive environmental capacity, small islands are critical indicators of what changes will impact on life in coastal communities into the future. In addition, survival in these islands in the short term will depend largely on local, social, cultural, economic and political conditions. Small islands nations therefore provide ideal study sites and early indicators to the rest of the world, because the consequences of climate and environmental changes are already felt and addressed in them. The resilience and adaptability in these islands must be carefully studied and assessed (Veitayaki, 2002).

However Cyclones accompanied by high winds, flooding, and storm surge, are the most common and have the most catastrophic consequences. Earthquakes, with its secondary risks including, tsunami, fire (in urban regions), and other natural disasters every year, one or two cyclones impact the nation and river flooding and flash floods have become more regular as a due to climate change. Destruction caused by tropical cyclones itself has been calculated more than \$500 million within the last decade, with more than 100 fatalities lost (Go Fiji, 2021).

Tropical Cyclone Ami, which hit the Northern and Eastern Divisions in 2003, caused more than \$100 million in social and economic losses, while the April 2009 floods cost more than \$30 million in damages. The 1997-1998 droughts in Fiji resulted in a \$104 million revenue loss in the sugar industry solely. The worst-affected areas were the western portions of Viti Levu and Vanua Levu, as well as the Yasawas, where 95% of the population obtained water and food ration packs. The Fiji Cabinet declared it as natural disaster in September 1998 due to the prolonged drought (Go Fiji, 2021).

EFFECTS OF NATURAL DISASTERS

Moreover, Factors Influencing Vulnerability is: Communities in low-lying coastal regions (direct impact), Inhabitants in neighboring areas (torrential rains, flooding), Poor telecommunications or warning systems lightweight structures, outdated infrastructure, inferior quality concrete Infrastructure, fishing vessels, and marine businesses (Moe et.al, 2006). Damaging side effects of these are: Physical damage; Structures destroyed or damaged by winds, flood, torrential rains, and landslides. Fatalities may occur as a result of flying debris or flooding. Water supply - Flood water may contaminate ground water. Contamination of water resources may result in viral epidemics and disease. Agriculture and food resources can be ruined by high winds and rains, which can destroy standing crops, tree plantations, and food stores. Connectivity and logistics may be severely disrupted as wind blows down phone lines, towers, and cable modems. Transportation may also be impacted (Moe et.al, 2006).

Hazard measures include: risk analysis and hazard monitoring, land usage regulation and flood zone management, architectural disaster resilience, including vegetation cover development Particular Preparation Strategies Community warning systems, Evacuation plans, Training and community participation, Easy and straightforward demands Relocation and emergency shelter, Search - and - rescue, Healthcare help, Water filtration, Reestablish logistic and communications systems, Disaster evaluation Relief food production and Distribution of seedlings for replanting (Moe et.al, 2006)

SOLUTIONS

The Fijian government developed the National Disaster Management Plan in 1995, adopted the Natural Disaster Management Act in 1998 and developed hazard-specific response plans/procedures such as the Cyclone Response Plan/Procedures. The Acts Strategy and programs are in place to prevent or lessen the consequences of hazards and events, to prepare for and respond to them, and to return the country and its people to normal and productive life. It is crucial to note however, that some of the policies, plans, and programs may not yet be covered in the National Disaster Management Plan, as it is still being revised (Natural-Disaster-Risk-Reduction-Policy, 2018). These plans have been implemented with the main aim for the country to be ready and well prepared for any disaster which may come its way.

Appropriate processes for focusing on specific emergency / crisis circumstances, as well as relief initiatives have yet to be established. Proper training throughout all facets of crisis and catastrophe management is required. Thorough planning is required to organize better allocation of resources, including physical and material for the safeguarding of lives and livelihoods, limiting environmental damage, and returning to a regular life style as quick as possible. Procedures must be in effect to coordinate efforts with multilateral organizations, as well as to seek and accept outside support (Natural-Disaster-Risk-Reduction-Policy, 2018).

Over time a disaster culture developed with every person of the country engaged in emergency / crisis mitigation and response in order to decrease the impact of disasters to an acceptable level. The National Disaster Management Office (NDMO) is in charge of coordinating actions before, during, and after an unexpected crisis. The Natural Disaster Management Act of 1990 appoints the Chair of the National Disaster Management Council (NDMC) and the National Disaster Controller. Representatives of the Authority's three distinct are recruited from line departments based on their functions. "These organizations are: Prevention and Mitigation Committee,

Preparedness Committee, and Emergency Committee." (Natural-Disaster-Risk-Reduction-Policy, 2018)

On the contrary natural disasters not only affect the environment stability it also leaves a negative impact on the economy of a country. For instance, when a natural disaster occurs it damages food crops, homes, kills live stocks, causes loss to businesses and many more, this leaves both the people and the government in a state of economical loss. The only best way to mitigate such an issue is to be better prepared before it happens. Not only that but the responsible officials should look into the upgrading of their systems so that they are able to detect a natural disaster well earlier so that the people are given ample time to better prepare themselves thus, reducing the damages it may cause for them. Even till date the economy is still facing challenges because such natural hazards not only damages people's livelihoods they affect school students. For example, when a natural disaster occurs several school facilities are damaged for instance buildings, indoor equipment and many more. This actually takes the government a long period of time to repair and stabilize. In some cases it may take weeks, for some it may take months but in worst situations it may take years to repair and recover from the loss caused by drastic natural hazards.

Furthermore, natural hazards such as cyclones often hit Fiji which later causes flooding in many low lying areas. Not only that but past records show that many have also died due to such flooding that have been caused by cyclones that have passed through the country of Fiji over the past few years. The best way to mitigate this problem is for individuals to shift to higher grounds safely as soon as a cyclone warning is released by the weather department. At many times in the past we have heard that people only start to move when the situation gets worse and the event of natural disaster is occurring, this is both unsafe and risky at the same time. People tend to lose their life in the process of evacuating their homes at this certain time. For example some choose to stay back and not evacuate and move to higher grounds well before the natural disaster occurs. This actually puts the little ones lives in greater danger in comparison to the adults as they are not able to fully protect themselves and in cases where they are not

fully prepared, these little ones have lost their lives looking for shelter during such unprecedented times.

Adding on, when a hazard such as a cyclone warning is given off by the weather department, the government and responsible personnel are given the task to locate and announce safe evacuation center's for those living in low lying areas. In the simplest term: can be defined as the urgent or immediate movement away from a hazard or risk. Evacuations are more common than people realize and may be optional or mandatory. Disasters that occur often force individuals to leave their homes, their neighborhoods, their cities and sometimes even states on short notice moments. Most of these centers are churches, community halls, schools and etc. It is usually spacious so that it could cater for many people at once.

However, this is not very safe this is mainly because there are several people that turn up to these evacuation sites and because there is no proper security around, individuals can be prone to theft, fights, spreading of sickness and many more. In many cases there are also elderly's living in evacuation centre's during a natural hazard. This may tend to worsen their health but in worse scenarios it may even cost them their lives. Thus, one way in which the government of the country can help mitigate this problem is by providing evacuation center's with power security example police and also proper health care service, for instance having health officials at evacuation venues. This will ensure that even when a problem arises people are not helpless and that care is able to be given to them wherever they are and they do not have to endanger their lives and move out in search of life.

LITERATURE

Natural disasters may give rise to loss, damage and may affect subjective expectations about the prevalence and severity of future disasters. As a result such expectations may shape individuals investments behaviors, with potentially affecting their incomes in the subsequent years. As part of an emerging literature on indigenous preferences economics have begun studying the consequences that exposure to natural disasters

have on risk perceptions, attitudes & behaviors. Many field of study in this lane may consider the impact of being struck by the December 2012 cyclone Evan on Fijian households. Risk attitudes and subjective expectations about the livelihoods are severity of natural disasters in the pacific island countries over the next 20years. However, a cyclone path allows us to estimate the casual effects of exposure on both risk attitudes and risk perceptions. As a result such extreme natural events may change individuals risk perceptions as well as their beliefs about the frequency and magnitude, which brings about future shocks (Brown, Daigneault, Tjernström and Zou, 2021).

All in all, post disasters there is always loss of utilities such as electricity and water, the officials should better prepare citizens and tell them well before on the duration of fixation only so they are given a rough idea of how to manage the remaining resources in order to ensure that there is no shortage. The government therefore has many areas to look into when it comes to mitigating during and after natural disasters occur however, ensuring that the water is restored is one of the most important tasks to complete. Not only making sure that water supplies are restored in homes but to also ensure that the water supplies are not contaminated due to the disaster and to ensure that water is safe for everyone. Individuals should be well advised as it will allow them to make proper use of their water sources that were stored before hand.

RECOMMENDATIONS

Furthermore, there are many more ways in which natural hazards can be mitigated, firstly reducing the greenhouse gases in the atmosphere in order to reduce climate change. Secondly, individuals must now look into alternative Energy production for example developing renewable energy solutions such as solar, wind and tidal energy which may reduce our reliance on fossil fuel burning power stations. This will surely help reduce carbon dioxide emissions from being released into the atmosphere. Carbon capture, this simply involves reducing carbon dioxide emissions from the fossil fuel burning power stations whereby carbon dioxide is removed from the waste gases.

Hence, once captured the Carbon dioxide is then properly converted into a dense liquid. This liquid can then be stored in a safer location for example it could be kept underground in old coal mines. This will help in reducing the amount of carbon dioxide that is released from fossil fuel burning power stations by up to 90% in total. Planting trees is another way to mitigate this problem this is simply because planting trees will help in reducing the amount of carbon dioxide concentration in the atmosphere as the trees will absorb it as part of the process of photosynthesis. Hence, through afforestation or in simple planting more trees a much greater proportion of carbon dioxide could be absorbed all in all reducing the greenhouse gasses in the atmosphere. By adapting and implementing such methods we will be able to stand better prepared and become much more resilient as a country towards natural hazards which is an ongoing problem faced by us as Pacific Islanders.

References

Brown, P., Daigneault, A., Tjernström, E. and Zou, W., 2021. *Natural disasters, social protection, and risk perceptions.*

Moe, T.L. and Pathranarakul, P., 2006. An integrated approach to natural disaster management: public project management and its critical success factors. *Disaster Prevention and Management: An International Journal.*

<https://www.internetgeography.net/topics/how-can-climate-change-be-managed/>

Seyedin, H., Ryan, J. and Keshtgar, M., 2011. Disaster management planning for health organizations in a developing country. *Journal of Urban Planning and Development*, 137(1), pp.77-81.

Veitayaki, J. (1995) Fisheries Development in Fiji: The Quest for Sustainability, Institute of Pacific Studies, Ocean Resources Management Programme, Suva, Fiji Islands, University of the South Pacific.

Veitayaki, J. (2002) 'Taking Advantage of Indigenous Knowledge: The Fiji Case', *International Social Science Journal*, Issue No. 173, pp. 395-402.

Veitayaki, J. (2003) 'Empowerment and the Challenges of Involving Local Communities' in W. Aalbersberg, B. Thaman, L. Sauni & M. Power (eds.) *Proceedings of the Pacific Regional Workshop on Mangrove Wetlands Protection and Sustainable Use*, University of the South Pacific, June 2002. Apia, SPREP, pp. 85-94.

Veitayaki, J., Aalbersberg, B. & Tawake, A. (2003) 'Empowering Local Communities: case study of Votua, Ba, Fiji' in E. Mann Borgese, A. Chircop & M. McConnell (eds.) *Ocean Yearbook 17*, Chicago IL, University of Chicago Press, pp. 449-463.

Veitayaki, J., A. Tawake & B. Aalbersberg (in press) *Combining Traditional Cultural Values and Science for Effective Marine Resource Management in Fiji*. Submitted to the New York American Museum of Natural History.

Veitayaki, J., A. Tawake, A. Bogiva, S. Meo, R. Vave, P. Radikedike, N. Ravula & S.P. Fong (2005a) 'Addressing Human Factors in Fisheries Development and Regulatory Processes in Fiji: The Mositi Vanuaso Experience' in A. Chircop & M. McConnell (eds.) Ocean Yearbook 21, Chicago IL, University of Chicago Press, forthcoming.

Veitayaki, J., A. Tawake, A. Bogiva, S. Meo, R. Vave, P. Radikedike, N. Ravula & S.P. Fong (2005b) 'Partnerships and the Quest for Effective Community-based Resource Management: The Mositi Vanuaso Project, Gau, Fiji', Journal of Pacific Studies, Vol. 28, No. 2, pp. 328-349.