

CLIMATE CHANGE ADAPTATION IN POST-DISASTER RECOVERY - POLICY BRIEF 8

Climate Adaptation Strategies in Fiji: The Role of Social Norms and Cultural Values

This policy brief discusses the resilience of flood-adapted iTaukei communities in the Lower Ba River Catchment, in northwestern Viti Levu, Fiji. It explores the various strategies used by villages to adapt to floods and examines how these strategies are chosen based on sociocultural factors and access to resources, power, and information. The findings presented in this policy brief derive from research carried out in three villages recovering from the impacts of flooding from 2012. This policy brief outlines the important role that communities play in implementing climate adaptation strategies as part of long-term risk reduction approaches. In acknowledging local knowledge and each village's unique context, climate adaptation strategies can effectively address the needs and reflect the interests of these at-risk communities.

Key Messages

- ❑ **Sociocultural structures** provide the basis from which communities and households make informed decisions on climate change adaptation strategies.
- ❑ Each community has adopted a number of strategies in line with **Agrawal & Perrin's (2008) framework** according to their specific social, economic, and geographic situation.
- ❑ **Access to resources, power, and information** are key factors that inform communities and households in selecting appropriate adaptation strategies.
- ❑ The **importance of local context** must be acknowledged in implementing risk-reduction approaches.
- ❑ Adaptation frameworks must accommodate diverse values, traditions, and social structures, where **one-size-fits-all adaptation approaches should be avoided**.

CONTEXT

The largest island in Fiji, Viti Levu, has experienced more frequent and more intense flooding in recent years due to increasing climate-induced hazards. The Fijian government has identified a number of coastal communities as being at high risk of flooding and sea-level rise and in urgent need of relocation. Relocation efforts led by the government overlook the adaptive capacity of local communities based on their own needs and circumstances. These relocation efforts also fail to acknowledge the adverse impacts that relocation can have on traditional livelihoods. Future policies on climate change adaptation need to acknowledge the capacity of Fijian households and communities to adapt based on their unique context. This policy brief outlines the adaptation strategies employed by each village, which reflect the sociocultural structures in each community and the access households have to resources, power, and information.

The study area comprised three iTaukei (indigenous) communities in the Ba River Catchment in northwestern Viti Levu, Fiji. The villages are Votua, Etatoko and Nawaqarua. All three have an intertwined history, culture, and land relations (cf. Figure 5).



Figure 1. Catching mud crabs In the Ba River delta

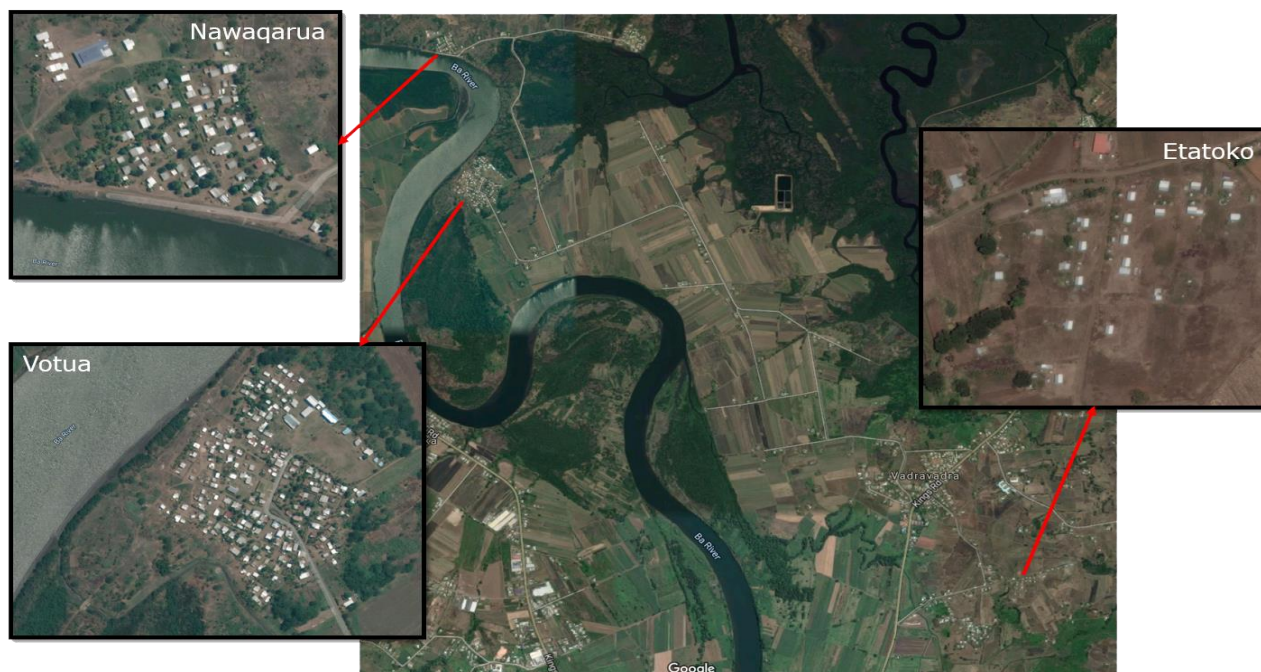


Figure 2. Aerial maps of the study area and villages

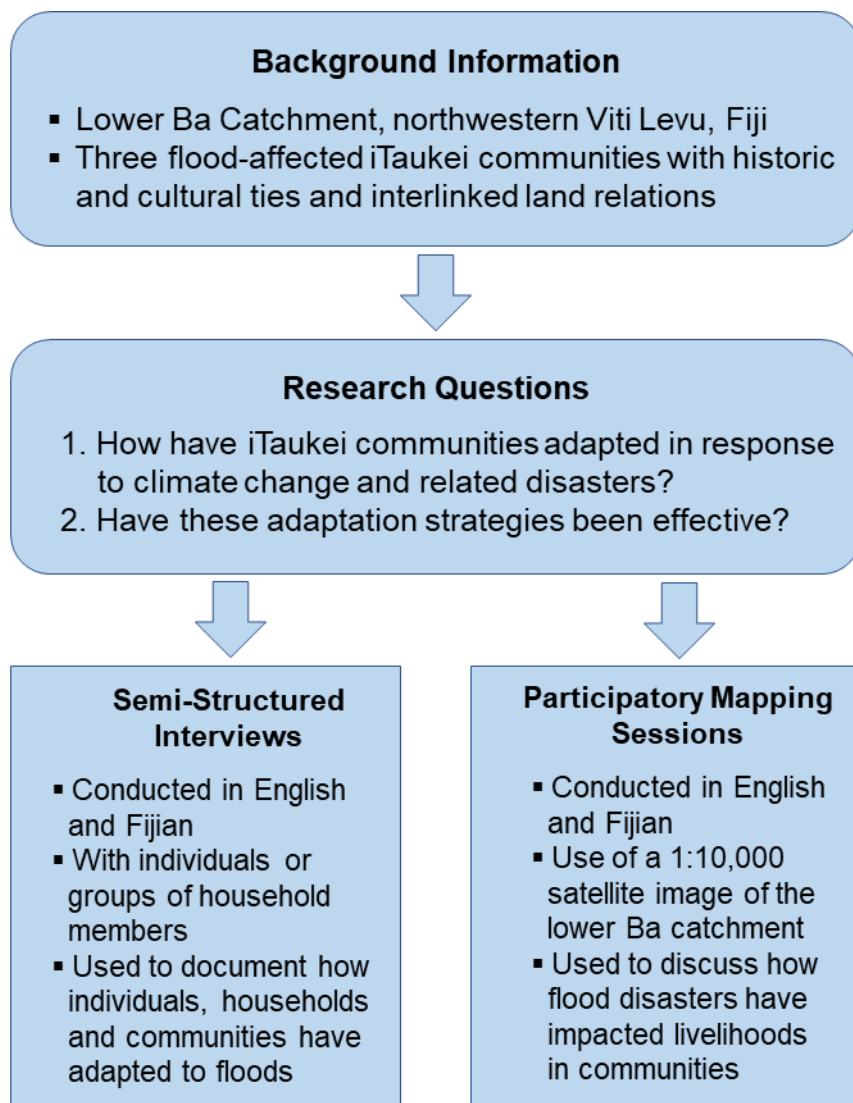


Figure 3. Background and research approach of the study

AGRAWAL & PERRIN'S (2008) FRAMEWORK AND HOW IT IS EMPLOYED IN THIS STUDY

A number of frameworks have been developed to inform policymakers' views on the community's role in climate change adaptation strategies. **Climate change adaptation** is commonly regarded as long-term changes that are a result of innovation. By contrast, community-based approaches are often seen as short-term coping strategies that are purely driven by survival and not based on proper planning and foresight.

Community-based approaches can carry a number of misconceptions amongst policymakers, where:

- Adaptation strategies are always desired, intended and beneficial for everyone in the community
- Adaptation strategies are used to address physical wellbeing only
- Change to traditional lifestyle and culture is justified in order to adapt to climate change

These assumptions fail to address the sociocultural factors that are fundamental in choosing appropriate adaptation strategies in a community. By considering the limitations of these perspectives, this study is based on Agrawal & Perrin's (2008) framework of five classes of climate adaptation practices which, unlike most other frameworks, allows to consider a community's physical, cultural, and social needs in a holistic manner.

According to this framework, climate change can result in socio-cultural, economic and physical risks that can be managed through applying five key adaptation strategies: mobility, storage, diversification, communal pooling, and market exchange.

The study found that all three iTaukei communities employed a range of these strategies based on their specific contexts and unique vulnerabilities and strengths.

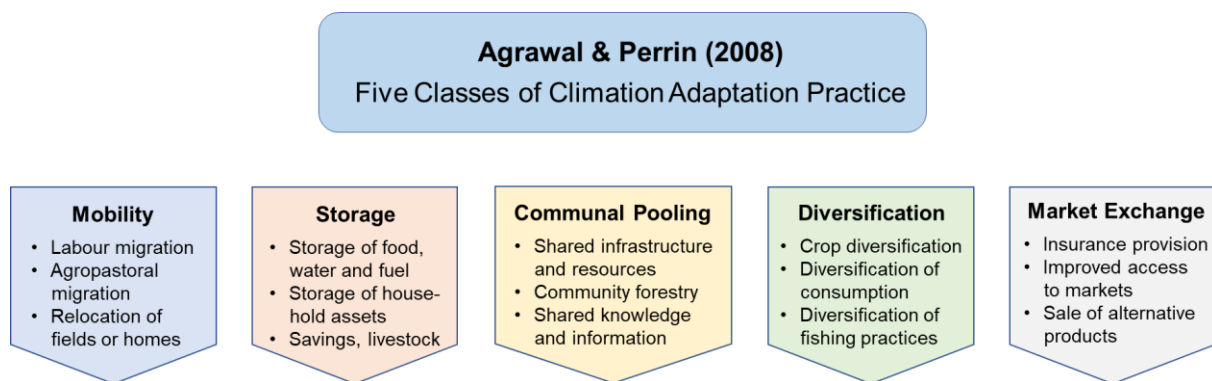


Figure 4. Agrawal & Perrin's (2008) Climate Adaptation Framework

CLIMATE ADAPTATION PRACTICES IN THE THREE VILLAGES

Each village in this study has adapted to floods over the years based on their particular circumstances. All three villages are located in the lower Ba River catchment area, which is at high risk of flooding and riverbank erosion. The area is also exposed to storms and sea surges.

The oldest village, Votua, has remained in its current location for about 200 years. Despite limited information about exposure to hazards throughout history, it is likely that their adaptation processes had been successful prior to the flooding events in 2012.

The second community is Nawaqarua, which has relocated several times due to riverbank erosion. This village has also received assistance from the Japan International Cooperation Agency (JICA) for a community-based disaster risk management (CBDRM) project between 2010-2013.

The last community is Etatoko, which was relocated with financial support from the government and international NGOs. The people of Etatoko once lived in the village of Wavuwavu, which was destroyed by the floods of 2012.

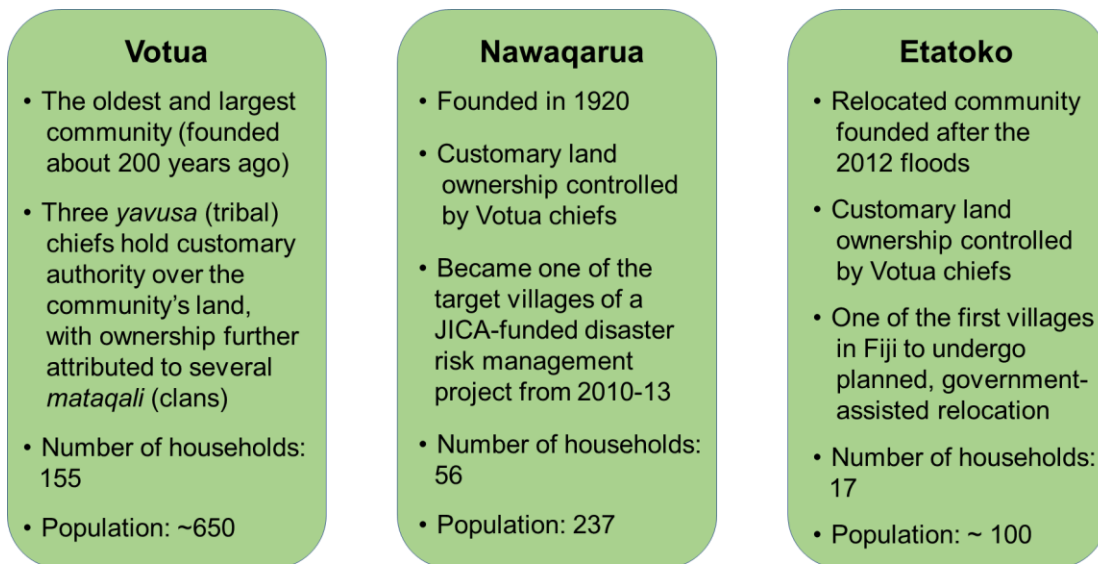


Figure 5. Profile of study communities

HOW FAILURE TO ACKNOWLEDGE LOCAL CONTEXT CAN LEAD TO VULNERABLE COMMUNITIES

Etatoko (formerly Wavuwavu) was one of the first Fijian villages to undergo a planned resettlement coordinated by the Fijian government. As a result, Etatoko should now be better adapted to the multiple risks of climate change. However, this relocation has made the people of Etatoko vulnerable in different ways.

Whilst relatively safe from flooding, relocation has brought a new set of challenges that did not affect the village previously. This includes dislocation from where livelihoods are still derived, the increased burden of travel, and exposure to new hazards, such as drought and cyclones.

When climate adaptation strategies are implemented by external stakeholders without considering the local context, the lack of community involvement in making such decisions may make the communities more vulnerable to the impacts of climate change.

Another example is how community social structures often must change in response to relocation. This triggers an internal conflict which disrupts the community's stability because the cultural and traditional values have not been properly considered in the decision-making process.



ADAPTATION STRATEGIES EMPLOYED AS A RESPONSE TO FLOODING

Despite external efforts to implement climate adaptation measures, the three villages in this study have employed their own range of flood adaptation strategies in line with Agrawal & Perrin’s (2008) framework of five climate change adaptation practices. These strategies were selected and applied at both the community and household levels in a variety of ways which

reflect the sociocultural norms and values present in the communities. Each village expressed challenges in adaptation given availability of resources and access to power and information. However, these villages also identified opportunities as a means of adapting to relocation and changes to the local environment.

	VOTUA	NAWAQARUA	ETATOKO
Mobility	<ul style="list-style-type: none"> Inclined to relocate if the government provides land, housing, and jobs Lack of autonomy in the decision to relocate due to decision-making hierarchy held by elders Other limitations to mobility include housing needs, finances, and available job opportunities 	<ul style="list-style-type: none"> Relocating livestock fields to safer areas to secure food sources during floods Restrictions to relocate due to decision of elders, a strong connection to the land, and financial constraints 	<ul style="list-style-type: none"> Residents have relocated the village to a safer place with the help of external donors Relocation has resulted in feelings of dislocation from livelihoods, exposure to new hazards and a restriction to return permanently to the old location
Storage	<ul style="list-style-type: none"> Desire to build more community storage as only one participant could store household items in a permanent capacity Lack of financial capital and low inter household coordination as a key obstacle to building more storage space 	<ul style="list-style-type: none"> Higher capacity for public storage compared to Votua, particularly for water, food, and animals Communal hall and water storage tanks built by external organisations 	<ul style="list-style-type: none"> Consistent access to water from groundwater borehole and solar-powered pump financed by Australian Aid
Diversification	<ul style="list-style-type: none"> Diversify crop, land use, and fishing practices to maintain the necessary level of income and food Housing diversification where a two-storey house was built as a site for evacuation and storage 	<ul style="list-style-type: none"> Planting crops at higher ground and dredging river bed for fishing opportunities Planting flood-resilient crops and switching to fishing for smaller crabs Given seeds for flood-resilient crops from the government 	<ul style="list-style-type: none"> Practicing diverse agriculture in any available areas despite limited land and water resources
Communal Pooling	<ul style="list-style-type: none"> Sharing labour in reforestation and mangrove replanting for soil drainage Sharing infrastructure, knowledge, food and water amongst residents to enhance the ability to cope with climate hazards 	<ul style="list-style-type: none"> Two-story house built as a place for evacuation and storage Received help from the government to rebuild houses after Cyclone Evan in 2012 Sharing labour, assets, and knowledge amongst community members 	<ul style="list-style-type: none"> All houses that built from external funds are cyclone-resistant Limitations for newcomers who must build their own house, which are often less resilient than funded homes
Market Exchange	<ul style="list-style-type: none"> Fishing to earn money during the non-harvest period 	<ul style="list-style-type: none"> Households emphasise financial savings as a form of disaster insurance 	<ul style="list-style-type: none"> Little capacity for market exchange due to few resources and limited access to boats Reliant on rations supplied by external agencies

Figure 6. Adaptation strategies: Challenges and opportunities for each village






Mobility	Storage	Communal pooling
 <p data-bbox="204 510 587 607">Resettled community of Etatoko, elevated above the flood plain of the Ba River</p>	 <p data-bbox="611 510 986 607">Storage of fermented root crops that can serve as post-disaster food</p>	 <p data-bbox="1013 510 1385 607">Cyclone-resilient traditional <i>bure</i> in Navala are built with communal labour</p>
Diversification	Market exchange	
 <p data-bbox="204 913 587 1001">Many families have built two-story houses as a strategy of flood adaptation</p>	 <p data-bbox="611 913 1342 1001">Catching mud crabs in mangroves is a lucrative activity for women; after the 2012 floods, the exchange and sale of <i>kuka</i> (small crabs) acted as a short-term coping mechanism</p>	

Figure 7. Examples of the five classes of adaptation practice

THE ROLE OF THE COMMUNITY TO KNOW THEIR OWN SITUATION

Given the experience of the three villages in this study, policymakers can be effective and inclusive in their approach in a number of ways. Community-based adaptation strategies are based on a system of interlinking sociocultural values and norms. These norms shape the community's response to climate change, where they both contribute to effective adaptation strategies and constrain individuals' abilities to create their own strategies. Therefore, decisions need to be negotiated within the social structure and be approved by traditional leadership.

Communities must also be trusted to determine what sociocultural changes must occur in order to adapt. Livelihood changes will be inevitable and the loss of traditions is not always justified in climate

change adaptation. Given the Fijian government's plan to relocate at-risk communities, policymakers must reflect on the potential risk that communities face in losing identity and connection to place.

Local context determines why particular strategies are used and whether they are appropriate. A standardised, one-size-fits-all approach is not likely to work as each community has its own cultural and geographic features requiring strategies specifically catered to that context.

Going forward, policymakers need to appreciate how communities use adaptation strategies for context-specific reasons, and that such strategies can be effective as long-term measures of community risk reduction and resilience.

POLICY IMPLICATIONS

- ❑ Acknowledge the **sociocultural factors** that play a role in climate change adaptation.
- ❑ Trust the community to determine which strategies work best given **local context and sociocultural structures**.
- ❑ Acknowledge that adaptation strategies are chosen **contingent upon resources, power, and information** available. This is also subject to approval from community leadership.
- ❑ Trust the community to determine **which traditions and lifestyle factors can be changed** in response to climate change adaptation and risk reduction.
- ❑ Encourage **context-specific adaptation strategies** for each community rather than implementing one-size-fits-all approaches.



This policy brief has been prepared by Asfirmanto Ali, Erin Stieler and C Natalia Titisari, The University of Auckland, New Zealand. It is based on the following material:

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