



The Impact of Faith-Based Narratives on Climate Change Adaptation in Narikoso, Fiji

Amanda Bertana

Department of Sociology, Southern Connecticut State University, New Haven, CT, USA

ABSTRACT

Most research on climate change in South Pacific island communities has privileged people's observations of physical environmental change with less attention paid to how people interpret the causes of these changes. Increasingly, more studies are focusing on how communities are receiving messages about environmental degradation, and from whom they are receiving them. This case study draws upon ethnographic research conducted in November 2015 in Narikoso on Ono Island in Fiji's Kadavu Group. This village was in the process of relocating inland as a response to shoreline erosion and severe coastal flooding. By employing data drawn from interviews with government actors, religious leaders, and residents of Narikoso village along with fieldnotes from participant observation, this paper examines how village residents interpreted coastal flooding and shoreline erosion according to the biblical story of Noah's Ark alongside a secular narrative of climate change. I conclude by showing the unique challenges these worldviews had on the community's decision to relocate.

KEYWORDS

Relocation; religion; climate change adaptation; sea level rise; Fiji

Introduction

The adverse effects of climate change – in particular sea level rise and more frequent and severe storm surges – have significant impacts on South Pacific small island developing states (SIDS) (Mortreux and Barnett 2009). For example, because of their low-lying geographic typology, coupled with low levels of economic development, South Pacific SIDS are particularly vulnerable to any fluctuation in sea level change. Furthermore, sea level threats are already taking form in many small island coastal communities with sea water contaminating freshwater resources, coastal flooding damaging infrastructure, and shoreline erosion literally consuming land (Barnett and Neil Adger 2003; Briguglio 1995; Ciplet, Roberts, and Khan 2015; Kempf 2020; Roberts and Parks 2007).

While climate change's physical impacts on South Pacific coastal communities is well documented (Weir, Dovey, and Orcherton 2017), considerably less attention has been paid to how communities directly experiencing the consequences of climate change interpret ecological changes. Despite this gap in the literature, scholars have long pointed out that beliefs and perceptions of climate change and associated risks are critical indicators of

CONTACT Amanda Bertana  bertanaa1@southernct.edu  Department of Sociology, Southern Connecticut State University, 501 Crescent Street, New Haven, CT 066515, USA

adaptation efforts. Simply stated, how individuals view climate change will either enhance or inhibit their response to adaptation. Therefore, it is important to study how communities who are considered to be on the 'frontlines of climate change', perceive climate change (Farbotko and Lazrus 2012). The overall objective of this article is to add to a growing body of literature that documents and analyses scientific and theological interpretations of ecological degradation. Through the presentation of ethnographic material related to coastal erosion in Fiji, I advance inquiries into how science and religion inform perceptions of ecological changes and adequate responses to its impacts.

Narikoso village on Ono Island in Fiji's Kadavu Group is an ideal case study to examine the impacts religion and science have on villager's perceptions of and responses to ecological changes for three primary reasons. First, Narikoso is undergoing visible changes in tidal conditions. As a predominantly subsistence community, villagers are aware of the detrimental impacts coastal erosion has on their village, and draw attention to the soil salinisation and shoreline flooding. Second, religious leaders and government actors actively communicate climate change information to villagers through sermons and government sponsored awareness campaigns. Some Catholic and Methodist village pastors, for instance, circulate messages about climatic changes within a Christian worldview, while government actors and the ecumenical organisation, the Pacific Conference of Churches, preach a secular narrative of climate change. Third, at the time of my fieldwork, Narikoso was in the process of a government sponsored relocation scheme, in which the village was shifting inland as an adaptation to coastal degradation. The amalgamation of the variables stated above created a complex situation whereby Narikoso villagers interpreted rising tides¹ according to a secular narrative of climate change and the Christian doctrine of Noah's Ark. This ultimately shaped the way in which village residents received relocation as an appropriate adaptive response to coastal erosion.

In what follows, I provide a brief background of climate change as a conceptualisation of ecological degradation. Drawing from individual household interviews with Narikoso villagers, coupled with interviews conducted in Suva with national government workers, representatives from faith-based organisations, local NGOs, and a Pentecostal minister, I show that although climate change is privileged as the causal explanation of coastal erosion, it is not a universal reflection of islanders' worldviews. I illustrate this point by providing a detailed description of the widely circulating belief that Fiji's climatic changes are God's punishment for what is deemed immoral behaviour. I then discuss the implications this specific religious messaging has on Narikoso's relocation efforts. Finally, I conclude with an analysis of the increasing popularity of theological interpretations of coastal erosion among Fijians as not only a sign of the influential power of religion, but also as a coping mechanism for villagers in the midst of an uncertain future.

Conceptual Background: Climate Change, Religion, and Discourse

Studies regarding climate change are expanding beyond describing its physical dimensions to discuss climate change as a conceptual framework. Hulme (2007) identifies climate change specifically as a measurable scientific and technocratic narrative. Within this perspective is the notion that climate change encompasses an objective reality. Independent of subjective ways of knowing, climate change is thus perceived as the pragmatic way of explaining ecological change. Despite cases of climate scepticism, consistent publications

of the IPCC's Assessment Reports on the impacts, challenges, and practical solutions to addressing climate change have only enhanced the scientific doctrine's authority and credibility (Anshelm and Hultman 2014; Bolin 2008; Rubow and Bird 2016).

Scholars point out that the IPCC constructs knowledge on climate change according to a 'linear model of expertise' (Beck 2012, 155). Beck (2012) defines this as an asymmetrical approach that privileges scientific knowledge as the authority on climate change. It consequently stifles the multiple ways in which people experience environmental change. In this context, tension arises between how climate change is being communicated globally and how it is interpreted in the local context. Jasanoff (2010, 235) reinforces claims about the problematic nature of the universality of climate change when it encounters the 'subjective, situated and normative imaginations of human actors engaging directly with nature'. Jasanoff (2010, 235) points out that conflict arises because 'scientific facts emerge out of detached observation whereas meaning emerges from embedded experience'. Drawing from Jasanoff's work, Hulme and Mahoney (2010, 714) emphasise the importance of political and cultural context in which knowledge claims about climate change are disseminated: 'Revealing the local and situated characteristics of climate change knowledge thus becomes central for understanding both the acceptance and resistance shown towards the knowledge claims of the IPCC.'

As climate change is more widely disseminated through the IPCC's secular lens, it is becoming more evident that socio-cultural variables shape people's perceptions of climate change (Weber and Stern 2011). This is especially true throughout the South Pacific Islands. Scholars working within this region have found that changing climatic conditions are often contextualised within a religious context. Janif et al. (2016) find that some Fijian islanders adopt secular explanations of climate change while others draw upon their religious beliefs. Within this work is the assumption that religion is a counter-narrative to climate change. Rubow (2013) identifies a similar phenomenon in the Cook Islands with cyclone discussions seeping into religious understandings. However, in this context science and religion merge to create new eco-theologies. Along this same vein, Fair (2018) finds that islanders in Vanuatu simultaneously accepted religious and scientific claims associated with climate change. Fair explains this occurrence through the terminology *tufala save* which translates to 'double knowledge' signifying the multiple ways in which individuals make sense of the world. For Fair (2018), the making of religious meaning out of environmental changes is a way for islanders to execute agency over their future.

These above studies take a nuanced approach to the religion-science schism by making clear that religion and science are not mutually exclusive ways of knowing. They address the epistemological basis for religious claims associated with climate change, but Pascht (2019) calls for a more ontological approach. Doing so, he argues, requires a fundamentally more complex analysis that takes into consideration the message, the material world, and the social environments in which people live. When discussing knowledge formation from these lenses combined, we can better understand how people come to conceive of their reality.

Methodology

Religion and Colonialism in Fiji

Although Fiji gained independence in 1970, the religious remnants of colonialism are deeply embedded in Fiji's social structures creating a shadow over all realms of life

(Newland 2004; Tomlinson 2009). Tomlinson (2009, 10) frames the arrival of Christian missionaries as a 'rupture' in Pacific history, signifying for converts a transition from 'darkness' (practices of cannibalism and worshipping ancient gods) to 'light'. It simultaneously represented a decline in Fijian power and a newly introduced political order that socially reorganised the islands (Tomlinson 2009). The rise of the Methodist Church and Christian missionaries coincided with a transitional status shift for Fijian Chiefs who were also prominent village priests. The British administration refused to acknowledge the Chief's priestly role, and instead, reified their power through other means. By granting them control over land and resources, they integrated Chiefly power into a European model of rule. This eventually created a hybridised model of 'tradition in the present' (Jolly 1992, 340), which remains present through Fiji's land tenure system (Newland 2004). In this unique sense, Christianity became a discontinuous form of continuity that linked the past to the present by reorganising traditional practices – both political and religious.

The European invasion reorganised the island's religious fabric in three distinct ways. It opened up Fiji to a wave of Christian missionaries seeking new converts. It made the acceptance of Christianity a political statement (Newland 2004; Tomlinson 2009). When the missionaries converted prominent leaders such as Ratu Seru Apensia Cakobau, who was referred to as King of Bau by the British administration; self-titled *Tui Viti* (King of Fiji) (Parke 2014), they further legitimated Christianity as the supreme religion. By converting the King of Fiji, they were able to spread Methodism throughout the islands. At the same time, they systematically eradicated the worship of Fiji's ancestral gods by condemning indigenous spirits as sinful and satanic (Ryle 2012). The Methodist Church eventually became emblematic of tradition while also establishing itself as the protector of the Fijian people against tradition's non-Christian spirits who would punish the people for present wrongdoings (Tomlinson 2009).

To date, Fiji is one of the most religious countries in the world, with less than 1% of the population not identifying with a religion. As a multi-ethnic society, ethnicity is predictive of religion, meaning most Fijians of Indian descent are Hindu with an Islamic minority while most indigenous Fijians are Christian with the majority being Methodist (Newland 2004). Fiji remains ethnically and religiously segregated between the Indian and the indigenous Fijian population, with Christianity acting as the cornerstone of indigenous Fijian life (Nunn 2017).

Nunn points out: 'Unless you are cocooned in a tourist bubble, it is hardly possible to miss God when you visit the Pacific Islands' (2017, 1). Nunn identifies churches on nearly every city block as physical markers of Christianity's deep-seated influence over islanders. Although integral to urban life, it can easily be argued that religion has an even larger role in the rural areas. Similar to urban spaces, rural areas have tangible markers to indicate the importance of faith. The church, as the most important structure in the village, is traditionally located in the centre of the houses (Tomlinson 2009), to visibly show how life is organised around God.

Not only is Methodism ingrained in Fijian life, it has also continued to be politicised (Fache and Fair 2020). Fiji has experienced a series of coups since 1987, all of which have a degree of underlying religious tension. The most notable of which occurred in 1987, with coup leader Lieutenant Colonel Sitiveni Rabuka justifying his seizure of power through religious overtones, with the specific goal of converting Muslims and Hindus to Christianity (Tomlinson 2013). Fiji's fourth coup, led by now Prime Minister

Bainimarama, reversed the harmonious relationship between the government and the church. As Tomlinson (2013, 82) pointed out, after 2006, ‘For the first time, the Methodist Church became an overt and consistent opponent of coups.’ The Methodist Church publicly criticised Bainimarama’s military intervention and interim government through Fiji’s newspapers. While also encouraging people to pray, so the nation would not be met with a curse. As Tomlinson (2013, 83) emphasises, warnings of curses in Fijian Methodism are not uncommon. This is especially true when it pertains to the nation being cursed, however, they are a reflection of the strained relationship between the church and the state.

This brief overview of the politicised nature of Methodism throughout Fiji becomes important in assessing religious discourses associated with climate change for two primary reasons. First, religious-political narratives are prevalent throughout the Oceania (Kempf 2017). Kempf (2017), for instance, finds a similar religious narrative in Kiribati in which he analyses as a resistance against science and political representation. The epistemological divides represented at the national manifest on the local level as resistance against the political status quo. Second, it establishes a precedent in Fiji with curses being a response to times of transitions. Drawing on curses as a means to caution people about the uncertainties of the future is not an uncommon response.

Study Area

Narikoso is a coastal village of 28 households and a fluctuating population, between 95 and 105 people at any given time between 2013 and 2015. The village sits on the shoreline of Ono Island, an outlier of Kadavu, Fiji’s fourth largest island (see Figure 1). Kadavu, normally thought of as a high-end tourist destination, also has a reputation of Kadavians being more *traditional*. Government workers and islanders from Viti Levu and Vanua Levu often referred to the outer islanders as having a more religious mindset with a subsistence lifestyle. What makes most Fijian villages in the Kadavu Group, Narikoso included, paradoxical is that they are spatially remote and operate largely outside of the market economy, relying on subsistence fishing, farming, and gathering (Sofer 2015) but are surrounded by high-end resorts owned by wealthy foreigners. For most Kadavian villagers, a modest income is earned through the selling of surplus crops and fish to neighbouring resorts, while a larger cash flow is earned through *yaqona* (kava) farming, which is harvested and then sold through markets in the mainland.

Religiously, Narikoso villagers identify as devout Christians. Two churches – Methodist and Catholic – sit in the middle of the village, serving as the epicenter of the community (see Figure 2) and a reminder that Fijian life revolves around God. Although there are only two churches in the village, Seventh-Day Adventists and the Pentecostal Assemblies of God are also represented in the community. While Narikoso villagers, like most Kadavians, identify as Christian, the *kalou-vu* (Fiji’s ancestral spirits) have a strong presence in the region, more so than in the main island of Viti Levu. Kadavians, for instance, speak about neighbouring resort owners making kava offerings to the *kalou-vu* in return for wealth. Islanders substantiate these assertions by claiming to have seen Fiji’s snake god living under the docks of the resorts and hearing rumours from the snake god himself, who has the ability to transform into a man. The informal gossip network about the *kalou-vu* suggests that to Kadavians, the cosmological world is not just background noise, but an active presence that shapes how people see the world.



Figure 1. Map of Kadavu. Source: CIA World Factbook.

In respect to environmental degradation, Narikoso's coastline has severely eroded increasing the frequency of coastal flooding (see [Figure 3](#)). Because of these changing ecological conditions, in 2012, customary village leaders purportedly solicited the Fiji government for resources to shift the village to higher ground.² Within months, Prime Minister Voreqe Bainimarama sent in the military to begin excavation for a new village site located approximately 500 feet adjacent to the coastal site (see [Figure 4](#)). Since then, government funding for the construction of the new site has been prematurely depleted and the project has stalled. Therefore, at the time of my fieldwork, Narikoso had not yet relocated and was still experiencing severe shoreline erosion.

Methods and Materials

The data for this article was gathered during ethnographic fieldwork that took place in the Fiji Islands from April 2015 to August 2016. As part of a larger research project, I interviewed over 20 individuals – affiliates of the Pacific Conference of Churches, community organisers, scholars, individuals who worked with the Secretariat of the Pacific, and Fiji



Figure 2. Church in Narikoso. Source: Author.

government workers, all of whom worked with rural South Pacific communities on climate related issues including climate change awareness workshops and the implementation of adaptation projects. Data for this specific analysis also comes from semi-structured interviews with a Pentecostal pastor in Suva, adult residents of Narikoso, and Kadavuans from neighbouring islands.

In addition to interviews, I collected fieldnotes from a Catholic Church service, community events in the village, and *talanoa* (storytelling) sessions around the kava bowl. Ethnographic methods, interviews in particular, are well suited for investigating the cognitive and cultural landscape in which people deal with and



Figure 3. Coastal flooding during high tide. Source: Author.

comprehend changes in their surrounding environment (Crate 2011; Esterberg 2002). As the most comprehensive means to understand how local communities frame and understand ecological disruptions, an ethnographic methodological approach is ideal for focusing in on how islanders perceive ecological changes and appropriate responses therein (Crate 2011).

In total, I spent two weeks in November 2015 in Narikoso village. During the first week, without my prior knowledge, government workers and representatives from Secretariat of the Pacific (SPC), a regional development organisation, were in Narikoso conducting cost-benefit assessments for the continuation of the relocation. Consequently, I was able to gather additional government insights concerning climate change broadly. However, my interviews with Narikoso villagers began during my second week, when government and NGO workers returned to Suva.

Interviews with villagers were semi-structured and lasted anywhere from 30 to 60 min. I initially conducted group interviews separated by gender. However, Fijian villages are hierarchical so rarely do people deviate from comments suggested by the Chief or village elders. I thus switched to individual interviews, since collective interviews were leading to inconsistent responses. Because of language barriers, interviews were conducted back and forth between English and Fijian. I relied on assistance from a research assistant, a native Fijian speaker, who translated part of the interviews during the interview itself. Topic areas included: (1) observations about environmental changes, (2) knowledge about climate change, (3) the relocation process, and (4) general concerns about the potential shift inland. Although my larger study did not



Figure 4. New village site. Source: Author.

focus on the interpretation of religion in relation to ecological changes, rising tides as God's moral retribution emerged as a salient theme across the majority of interviews in Narikoso.

Environmental Changes in Narikoso

As a predominantly subsistence community, Narikoso villagers are acutely aware of changes in their environment. Village residents unanimously acknowledged severe shore-line degradation and coastal inundation, yet there is no consistent timeline identifying when these changes actually began. Older villagers cite changes in the coast anywhere from 30 to 50 years ago, with Cyclone Meli in 1979, being the catalysing event as to when the shoreline started to undergo visible erosion. Younger village residents identify coastal inundation as occurring more recently, as one woman contended, the sea started to reach the village in the last 5 or 6 years. Another woman in her 20s stated, 'Last year [2014] the water level changed.' The inconsistent answers about environmental transformations are not unique to Narikoso. Unclear timelines are prevalent in many oral traditions. Even though there may be variation in people's perception, oral traditions still provide a more comprehensive picture of environmental deterioration when there is a lack of written records available (Jacka 2009).

Additionally, villagers' observations coincide with the dynamic nature of nature itself. This is particularly relevant to Narikoso, which is built on a *tombolo* connecting Ono Island to Lanitua Island.³ Tombolos are build-ups of sediment that link islands.

As sand bodies, they are more prone to sedimentary redistribution making the coastline more dynamic relative to a true island. Interestingly, the village elders' observations about Narikoso's coastline are a reflection of Narikoso being on a tombolo.

Independent of people's recollections, village residents identified ecological markers as indicators of environmental changes. A man in his 50s described the shoreline as once being lined with trees. The tree stumps now submerged in the ocean serve as a reminder of what the village used to look like. An elderly woman referred to the transformation of the coconut trees as evidence of soil salinisation. She explained that they did not fruit like they had in the past, pointing out that they were noticeably sparse and their coconuts smaller and drier. These observations, although relevant to understanding the physical consequences of sea level rise on coastal communities, do not answer the question: How do villagers account for the *causes* of the encroaching sea?

Case Study: Climate Change, Christianity, and Relocation

Climate Change Discourse in Narikoso

Narikoso residents live in a remote area of the Fijian islands with minimal and inconsistent access to national newspapers, radio, and television. Thus villagers primarily receive information about climate change from three key actors – the Fiji government, the Pacific Conference of Churches (PCC), and SPC. Seeing it as their responsibility to protect coastal communities from rising tides and more intense and frequent storm surges, the national government, prior to COP23 (held in 2017), started arranging for climate change awareness campaigns throughout Fiji's rural areas. In Narikoso, climate change awareness workshops accompany the relocation process with local government officials and the PCC occasionally holding awareness workshops in the village. In doing so, they present information about sea level rise according to the secular narrative of climate change.

It was unclear exactly how climate change was being conveyed in Narikoso. While I never received a clear answer concerning the messages that were disseminated in these workshops, I was able to extrapolate some salient themes that align with the secularisation of climate change. It is not my intention to rehash the nuances of climate change and its linkages to sea level rise. My goal instead is to show how the climate change discourse is being presented in a way that reflects what Hulme (2007) regards as technocratic and scientific discourse.

There was clear tension between the villagers' perception of sea level rise as a natural phenomenon and the government's messaging of rising sea levels as a by-product of climate change. Within this context is a dispute between two positions: one in which nature is a dynamic system that is continuously in flux and, the other where humans have the capacity to modify nature through carbon emissions. According to a local government worker, sea level rise is directly associated with climate change: 'They [villagers] know that the sea level is rising but they don't care. The NGOs and the government intervene to tell them this is climate change and it's really happening in your village.' Another local government worker echoed a similar stance: 'They [government] inform[ed] the people that it was *not* a natural process.' In this messaging, the rising tides are directly linked to climate change. The aforementioned disconnect between people's observation

and *inaction* is attributed to villagers' perceptions of changes in tidal conditions as a natural process, a phenomenon occurring independently of human interference. From this view, fluctuations in sea level were not a by-product of carbon emissions, but rather a natural process whereby the tides ebb and flow. This notion was exemplified in interviews wherein villagers suggested that nature is continuously changing.

Paralleling the above, climate science stresses that human influence is 'extremely likely' to have caused climate warming (IPCC 2018). With respect to the unequal nature of climate change this point draws attention to an interesting paradox: although Fiji contributes minimally to carbon emissions, they are disproportionately vulnerable to sea level rise (Ciplet, Roberts, and Khan 2015; Roberts and Parks 2007). Couched in this message is a lack of control over the sea. Government and NGO workers noted the importance of explaining to communities that they were not responsible for the rising tides; therefore, islanders had no way to make them stop rising. In many of my conversations with villagers, this theme would emerge, whereby locals would say it was people like me (Americans) with our airplanes, cars, and buying that were threatening the fate of their islands. These comments illustrate an awareness of the scientifically identified causes of climate change, however, they were often coupled with contradictory religious claims of God punishing people for immoral behaviour. The inconsistencies in villager's responses regarding blame for sea level rise in Narikoso is a conundrum, one that anthropologist Rudiak-Gould (2014) describes as universal-cum-self-blame challenging the notion that victim of and culprit in contributing to climate change are mutually exclusive terms.

The climate change discourse brought to Narikoso by the government is presented in a way that focuses predominately on the need to always be prepared. As other scholars have pointed out, terms such as 'management', 'risk', and 'preparedness' are often integral to climate change messaging (Cox et al. 2018, 383). Yet, this language is also often delivered according to a fear-based warning system. A local government worker addressed villagers about climate change awareness in this way: 'If you're not careful, it [rising sea levels] will bring this If you're not prepared enough this will happen.' Though motivated by the best of intentions, these comments were met with resentment. As one villager articulated to me: 'You bring your science and you bring your fear.' He went on to emphasise that we [Fijians] have been living like this [along the coast] for centuries. This interviewee's response indicates that the external climate change discourse is actually interrupting Narikoso villagers' lives more than the changing tides themselves. To him, the environment continuously changes and people adapt accordingly. The fear embedded in climate change messaging is disrupting how people perceive and interact with their surrounding environment.

Although Narikoso villagers continuously referenced climate change as the culprit of the rising tides, there were inconsistencies in how people interpreted climate change. In most cases it was used as a 'catch-all-phrase' to describe daily weather patterns. Rain, wind, sunshine, and rusty tin roofs were all considered products of climate change. In some circumstances, conversations would end abruptly when I asked people to elaborate on what they meant by climate change. In other interviews, however, people would simultaneously reference climate change and religion as causal explanations for rising tides. This was most prevalent in the notion of responsibility, wherein people identified carbon emissions from affluent lifestyles while still maintaining the idea that God controlled the weather.

Uncertainty about South Pacific Islanders' actual belief in climate change as a causal explanation of ecological changes is well cited (Lata and Nunn 2012; Janif et al. 2016). Curiously, government and NGO workers in Fiji are also universally aware that most villagers throughout the islands are sceptical about the nuances of the scientific reasoning for rising sea levels. For instance, I spoke to an NGO worker who frequently held climate change awareness workshops in Narikoso and other rural villages. I asked if she thought villagers believed the secular discourse. She said, 'They [villagers] don't know.' From this NGO worker's perspective, climate change was minimally understood throughout rural Fijian villages. She went on to compare Narikoso to Vunidogoloa (another village that had relocated because of coastal erosion): 'In Vunidogoloa there was climate change awareness. They knew of the impacts. Even though the awareness of climate change was inaccurate, they knew of it.'

Because of the perceived knowledge gap that existed in the village, government workers discussed the need for more climate change education workshops. As one interviewee stated, 'More consultation by the government and those people [NGOs]. In the village, they don't have that mindset . . . I think more consultation and awareness by the government and other NGOs can help the people.' Evident in these responses are stereotypes of rural peoples. Phrases such as 'they think differently', or merely describing rural people as 'they', signifies an 'us and them' dichotomy in which the other occupies the inferior role (Kempf 2017). Embedded in this statement is also the insinuation that more climate change awareness will undo the theological interpretations of the rising tides (Kempf 2017), which are interpreted by the NGOs and government workers as a misunderstanding of climate change causes and impacts.

Noah's Ark in Narikoso

In contrast to the secular narrative of climate change in Fiji, theological interpretations of ecological degradation are actively disseminated to Christian congregations throughout the islands. It is important to emphasise that not all religious leaders preach a theological understanding of rising tides, identifying rising sea levels not as a by-product of carbon emissions, but rather God's disapproval of immoral beliefs and practices (Leduc 2010).

While in Suva, I spoke to pastors from different denominations, one was a representative of the Assemblies of God, the largest Pentecostal church in Fiji. Although Methodism remains the dominant religion, it is important to note that Pentecostalism is growing at a rapid speed because its more unorthodox approach to Christianity attracts the youth (Cox et al. 2018). In my discussion with the minister he spoke about how his church uses the pulpit to preach about climate change. When I inquired about his sermons, he asked me, 'Tell me, do you think we can stop the sea from rising?' Without answering the question, I simply asked, 'Do you think we can stop the sea from rising?' He responded 'Yes'. And went on to quote Genesis 1:26:

Then God said, 'Let us make human beings in our image, to be like us. They will reign over the fish in the sea, the birds in the sky, the livestock, all the wild animals on the earth, and the small animals that scurry along the ground'.

The preacher's rationalisation aligns with White's (1967) thesis of Judeo-Christian scripture teaching that humans have authority over the environment. The minister

interpreted this biblical quote literally and used it as evidence to suggest that God gave humankind control over nature. He interpreted this to mean that people have the power to request nature to behave in certain ways, including asking the sea to stop rising.

The Pentecostal preacher went on to provide a common conception found throughout the Pacific: the belief that the sea is rising because God is punishing people for their sins (Rubow and Bird 2016). He went on to explain in more detail the story of the rising tides, using the biblical story of Noah's Ark in which God flooded the Earth because,

The Lord saw how great the wickedness of the human race had become on the earth, and that every inclination of the thoughts of the human heart was only evil all the time. The Lord had regretted that he made human beings on the earth, and his heart was deeply troubled. So the Lord said, 'I will wipe from the face of the earth the human race I have created-and with them the animals, the birds and the creatures that move along the ground- for I regret that I have made them.' (Genesis 6:5-7)⁴

In the story of Noah's Ark, God spared Noah because he was a faithful and righteous person, but punished the rest of the world with a flood. The preacher's literal biblical interpretations were being used to rationalise two key ideas: (1) humans can indirectly control nature through their moral behaviour and (2) Fiji and other Pacific Islands will be spared.

Curiously, God's covenant with Noah in which he promises to never flood the Earth again, provides a rationale for why the islands will eventually be safe from sea level rise, but it does not explain why the tides are currently rising. The pastor went on to describe the rising tides, explaining that God holds containers of water one in the sky and one in the ocean,

When we sin too much He releases the water as a way to punish us. If we pray and ask the sea to stop where it is, it [the sea] will listen. If we don't pray and repent for our sins then the sea will continue to rise.

The preacher believed that people will eventually repent, and this will cause the sea to retreat. He went on to emphasise the implications this has for relocation efforts throughout Fiji:

We ask them: Do you want to move to the hill? If you don't want to move you need to ask the sea to stop. You need to go to church. You need to pray. You need to do confession. If you don't, the sea will continue to rise and you will have to move away.

The preacher's response indicates that he obviously encounters resistance from communities that are at risk of being relocated.

This preacher's religious understanding is pervasive throughout Narikoso, independent of villagers' denomination. Interestingly, unlike other studies that identify age, education, and interaction with environmental NGOs as deterministic variables of resistance to the scientific climate change discourse (Rhoades, Rios, and Ochoa 2008), in Narikoso men and women, youth and the elderly, all reported immoral behaviours as the cause for the rising tides. In fact, despite continuous interactions with groups that bring the scientific climate change information into the village, villagers still adhere to a religious worldview of rising tides. As an elderly woman in her 60s stated in reference to the rising tides: 'If we're not faithful, the tides will continue to rise up to the new site... Be faithful, or don't ask what's wrong.' A husband and wife in their late 20s also related the rising

tides to God's retribution for immoral behaviour. The wife explained what she and her husband believed was happening in the village, 'If you disobey God's laws you will be punished.' To the villagers it was not just faithfulness in going to church that caused the sea to rise; this also included what they perceived to be the immoral behaviour of their neighbours. Thus, they blamed each other for the rising tides.

Many people validated their claims of God punishing Narikoso through their observations. In one case, an elderly woman pointed out that Narikoso was the only village on Ono Island experiencing the rising tides. She went on to argue that neighbouring villages were being spared because they were 'faithful'. In other instances, people referenced the power of God in the wake of natural disasters. A young man in his late 20s, for example, observed that the preacher's house and the church were the only two structures unharmed after Cyclone Tomas in 2010. He used the lack of damage to these structures, as evidence of God's ability to protect people against nature

Consequences for Adaptation and Relocation Efforts in Narikoso

Government workers routinely expressed frustration about faith-based organisations entering villages to preach theological explanations of climate change. While concerned about what was often referred to as misinformation, the government has no authority over these groups or the messages they choose to disseminate. Surprisingly, government and NGO workers alike never identified the religious discourse itself as problematic, rather, they were primarily concerned with how the message undermined adaptive capacity within the villages. In general, government workers cited God's promise to Noah after the flood: 'Never again will all life be destroyed by the waters of the flood' (Genesis 9:11), as a deterrent for islanders to seek adequate adaptation efforts as precautionary measures. This trend was pervasive throughout Narikoso.

Some village residents described themselves as 'holy' and therefore invincible to dangerous environmental conditions. Household interviews revealed that residents had a sense of security believing God would protect them because they lived their lives according to Christian values, a perspective found throughout the Pacific Islands (Rubow and Bird 2016). When explaining Cyclone Tomas in 2010, a couple living within a few feet of the shoreline, described how they stayed in their house and prayed as the storm passed: 'They [government workers] told us to move up the hill, but we stayed here. We prayed. We said no, God will protect us.' Clearly disregarding the government's guidance, the woman and her husband refused to take any precautionary measures during the storm surge.

There is a disconnect between the belief that God controls the weather and relocation as an adaptive strategy. In the context of Narikoso, the goal of relocation is to remove people from imminent danger posed by the rising tides. However, village residents' worldview that the Christian God is punishing them for immoral behaviour does not accurately identify relocation as a solution, as an elderly woman contended, 'The relocation is good but if we continue our ways, the waves will chase us up the hill.' The phrase, 'the waves will chase us up the hill' was echoed by village residents, implicit in the comment is the suggestion that relocation will not provide protection for the community. Only through penance and a shift in lifestyle can people stop the rising tides, as a Narikoso villager stated, 'Be faithful to God or don't ask what's wrong.' The comments above

provoke an important question: If the community does not perceive relocation as a viable adaptation, why are households shifting inland?

In the context of Narikoso, the impetus for villagers to relocate is to alleviate the financial burden associated with housing. As a relatively cash-poor community 'it is unlikely the community would be able to fund large-scale adaptation efforts, even if it is in their own interests' (Jolliffe 2016, 6). From an economics viewpoint the village simply does not have an abundance of financial means or disposable income. In the Narikoso relocation, the Fiji government assumes the cost of the project and will provide full funding for individual houses. In this context, though, relocation equates to new housing.

I do not want to give the illusion that there was 100% consensus to relocate, on the contrary, there was contention regarding the shift inland. Some people were opposed to moving altogether and stated that they had no intention of leaving their house. Contrary to other studies that cite access to revenue from tourism and ecosystem services as reasons for why 'some Fijian communities may consider relocation in the name of climate change a far worse option than "dealing with disasters"' (Nolet 2018, 62), Narikoso villagers that did not want to relocate merely because they wanted to stay in the home that they built. Among those who did not oppose moving, people uniformly stated that the relocation was 'good' because it meant that each nuclear family would receive a new house. One woman remarked, 'I like it. We get a new house with two rooms, a kitchen, a toilet.' An adult man living with his extended family cited, 'I will get my own house.' This sentiment was reiterated by numerous families who had their adult children living with them. A woman who was more financially well off than others in the village stated, 'It's good. There's some people in the village that wouldn't be able to build their own house.' A young couple living by the shoreline discussed the financial burden of continuously repairing their house because of water damage: 'It cost us 300 dollars for concrete to rebuild the bottom of our house. If the government assists it will make it easier.' The community's emphasis on housing over adaptive strategy suggest a clear decoupling between the Fiji government's intent of relocation as an adaptation to the challenges of coastal erosion and the villagers' reception of it.

This disconnect can be potentially problematic. Paralleling people's resistance to evacuate to higher ground during storm surges, the belief in God's covenant with Noah provides villagers with the belief in safety. This clearly prevented households from accepting relocation as an adaptation. Thus, people were choosing not to move under the presumption that the waves will chase them up the hill so long as the community continues to sin. Others were implementing their own solutions to the rising tides, as explained by a Narikoso resident, 'We have been fasting and doing prayer as a community to get people to change their ways.' Already, the project outcome raised concerns because people had no intention of moving. There are foreseeable consequences for the relocation scheme with the most obvious being the community abandoning the new village site and moving back to the coast.

Complimentary Religion and Scientific Knowledge

Recognising that Christianity is integral to Fijian life, some organisers invoke spiritual language into climate change messaging (Nunn 2017). In contrast to the purely secular narrative of climate change, NGO workers were Christianising their climate

communication to rural villages. A Tuvaluan scholar from the University of the South Pacific who frequently held climate change workshops in Tuvalu discussed the pervasiveness of Noah's covenant with God illustrating the salience of the messaging across island nations (Fair 2018; Rubow and Bird 2016). Echoing concerns similar to government workers, the interviewee did not find the theological message controversial, rather, she expressed apprehension about the notion that it gave people a false sense of security. In order to mitigate this outcome, she localised the larger discourse of climate change into a Christian worldview that more clearly resonates with villagers' religious identities. In her messaging, she articulates adaptation strategies as a 'gift from God':

They always say God promised to never flood the Earth again. I tell them the story about an Australian man whose house was flooded from a storm. He's on the first floor of his house and a boat comes to save him from drowning. The man refuses to get on the boat and says, 'No, my God will save me.' The first floor gets flooded, so he goes to the second floor, and the boat comes trying to save him again. Again, he replies, 'My God will save me.' The second floor gets flooded, so he goes to the third, and again the boat comes to save him. He gives the same response, and has nowhere left to go but the roof. When he's on the roof, the clouds part, God comes out, and says to the man, 'Stupid man I sent a boat three times to save you.'

Similar to Fair's (2018, 7) findings in Vanuatu, the messaging described above is indicative of an emergent hybridised discourse that identifies 'the provision of scientific knowledge as a beneficent act of God'. The logic is relatively straightforward, God gave people knowledge and skills to build things that will keep them safe. Reflected in this messaging is the idea that religion and science do not have to be mutually exclusive, instead, the two discourses can be used in tandem. By doing so, neither discourse is being undermined by the other, giving both science and religion equal weight in climate change messaging. However the interviewee, in her parable, reveals a distinction between her messaging and that of the pastor in Suva and the Fiji government; she is less concerned with how people understand climate change but wants to ensure that people adequately understand climate *risk* and respond in a way that ensures their safety.

Discussion and Conclusion

In this paper, I have discussed the theological and scientific perceptions of climate change among Narikoso villagers. The core implication of this research is that religious messages shape people's perception of climate change risks and consequently influence adaptation responses (Fache and Fair 2020; Jacka 2009; Lata and Nunn 2012; Orlove 2009; Rubow and Bird 2016; Rudiak-Gould 2011, 2013). Thus, it should be no surprise that adaptation projects will fail, without consideration of socio-cultural perceptions of environmental transformation (Crate and Nuttall 2009; Walshe et al. 2018). Despite this well-known fact, research on climate change and adaptation has largely dismissed the effect religious worldviews have on risk perception and sustainable adaptation strategies.

The literature on climate change risk perception itself is far from scarce, however, it often makes a simplistic assumption: people's inability to comprehend climate science is the single largest predictor for climate change risk perception (Farbotko 2010; Weir, Dovey, and Orcherton 2017). Known as the knowledge deficit model, this framework suggests that the public lacks scientific knowledge and therefore cannot evaluate climate

risk properly, which eventually leads to people rejecting adaptation measures. The knowledge deficit model thus identifies *more* climate education as the solution to heightening risk perceptions (Tabara, St. Clair, and Hermansen 2017). However, the Narikoso case study reveals some of the limitations to the knowledge deficit model by revealing that climate change messaging can have major effects on how people view climate change and appropriate responses. While the knowledge deficit model continues to dominate mainstream climate-policy interactions (Tabara, St. Clair, and Hermansen 2017), some promising research is emerging to address the critical interface between climate change, adaptation, and worldviews (Fair 2018; Rubow and Bird 2016).

This research emerges against the backdrop of a rapidly changing climate change policy landscape, as many national governments and international NGOs are raising local awareness on climate change impacts and risks. In the domain of information campaigns, Sweden and Fiji, to name a few, have all implemented national campaigns that engage local communities on climate change risks and awareness. While communication campaigns are integral in shaping how people respond to the impacts of climate change merely providing people with more information will not automatically translate to people accepting climate change as a causal explanation of ecological change. This research provides substantial support for climate change information to be situated within local contexts. My research clearly supports the idea that asymmetrical top-down flows of information are ineffective if they operate outside of the cultural and social landscape. Moreover, findings from the Narikoso relocation provide a glimpse into the potential consequences of adaptation efforts that do not take into consideration people's worldviews.

In addition, my findings contribute to an analysis of the nature of climate change messaging. In general, the global climate change narrative is presented as a doomsday scenario, as illustrated in the IPCC report. As emissions continue to rise, the latest IPCC (2018) report predicts global warming up to 1.5 degrees Celsius in the next 11 years leading to 'substantial consequences'. IPCC's findings immediately went viral with apocalyptic scenarios suggesting global catastrophe and the disappearance of small island developing states. When expressed in such a way, individuals are left powerless to the whims of nature (Stephens et al. 2012). For villagers, scientific predictions as such translates to, 'the rising tides will displace you'. From this view, rejecting the apocalyptic message associated with climate change serves as an example of what sociologist Norgaard (2011) refers to as socially organised denial. It is not that people are saying, 'I do not believe in climate change', but rather, 'I do not want to believe in climate change.' The driving force to reject the secular narrative for coastal degradation is a form of emotional self-preservation. From another perspective it is a postcolonial, counterhegemonic response that reclaims power over the 'canary in the coalmine of climate change' portrayal of SIDS, which is ultimately a patronising view of Pacific Island populations (Rudiak-Gould 2014; Farbotko 2010). In other words, by assuming responsibility for the rising tides, Narikoso villagers are also able to be part of the solution.

In the context of Narikoso, the parable of Noah's Ark invokes a sense of hope, control, and meaning in an increasingly unpredictable and chaotic environment (Hoiyer 2010; Rubow and Bird 2016; Stephens et al. 2012). God made a promise to Noah to never again destroy the Earth; implicit in this belief system is the idea that Narikoso villagers can prevent relocation. In the religious understanding of the rising tides held by residents

of Narikoso, the villagers can continue to live in the way they have been living for centuries. By being faithful and engaging in moral behaviour, the community aims to prevent potential relocation and continue living their lives with business-as-usual.

Notes

1. Villagers identified rising tides as the singular cause of Narikoso's shoreline degradation, but oceanographic reports have determined that the current seawall which buffers the village from the ocean has further contributed to coastal sediment loss (Jolliffe 2016).
2. According to villagers, Prime Minister Bainimarama suggested the village relocate, however, media depictions and interviews with government workers claim that villagers solicited relocation assistance from the government.
3. This finding comes from an interview with an oceanographer commissioned to do work on Narikoso.
4. All biblical quotes come from *The Holy Bible*, King James.

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