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The role of Vanua in climate-related voluntary immobility in Fiji

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People, communities, and regions around the world are being pushed to adapt as climate-related risks increase. Within both policy and academic literature, the planned relocation of communities is often viewed as an adaptation option of last resort, given that it can lead to losses including attachment to place, place-based cultural practices, and identity. To date, however, few empirical studies have investigated the diverse and context-specific reasons for community reluctance to relocate. This study aimed to examine the motivations behind people's decisions to remain in locations at risk from climate change. Drawing on ethnographic data from fieldwork undertaken in 2021 in Serua Island, Fiji, this study shows how the concept of Vanua, a Fijian term that refers to the natural environment, social bonds and kinship ties, ways of being, spirituality, and stewardship, is used by Indigenous people to resist climate-driven relocation. Through exploring local decision-making, this study contributes to the small body of research on voluntary immobility in the context of climate change. This research also contributes to academic discussions on "decolonizing climate change" from a Pacific perspective while offering a strong empirical basis for critically addressing climate mobility scholarship through Indigenous narratives, values, and worldviews. We highlight that policy and practice must better integrate local understandings of voluntary immobility to avoid potential maladaptation and loss and damage to culture, livelihoods, and social networks. This can help develop more appropriate adaptation strategies for communities in Fiji and beyond as people move, but also resist mobility, in a warming world.

KEYWORDS

voluntary immobility, Vanua, adaptation, Fiji, decolonizing climate change, indigenous people, sense of place, stewardship

1. Introduction

> *"I told them the history of Serua island from the beginning of time when this island was first settled, the forefathers walked, swam, and rowed across these waters to the island and vice versa to the mainland. From then until now, people continued to do that. I believe that my forefathers landing here on Serua island is God's purpose. Climate*

> *change is taking me away from my identity and my belief in God. The biggest question that kept popping into my mind was that 'how can we protect the identity and land that born and bred the children of Serua island?"* (83-year-old woman of Serua Island).

The climate on Earth is changing due to human activity, which is increasing the likelihood of severe, pervasive, and irreversible impacts on people and ecosystems (IPCC, 2022). In response, people are putting in place a range of adaptation measures to respond to both experienced and anticipated impacts. One such adaptation response is the planned relocation of people away from sites of climate-related risk. Planned relocation (otherwise referred to as climate-related relocation, resettlement, or retreat) is increasingly recognized in policy and practice as a form of disaster risk reduction and climate change adaptation (Carey, 2020) with a small but growing number of case studies emerging from around the world. Climate-related relocation is defined as a process whereby populations and infrastructure are relocated to a new place in response to climate exposure. It is a heterogeneous process and can take many forms depending on the following factors: the portion of the community that relocates (whole or partial); whether the relocation is in anticipation of, or in response to, climate risks (preemptive or reactive); who manages the process (locally driven, externally implemented, or *ad hoc*); and the degree of agency (forced or voluntary) (Albert et al., 2017; McMichael and Katonivualiku, 2020; Piggott-McKellar and McMichael, 2021).

Relocation away from sites of high climate change-related risk is not an inevitable response. Instances of more fluid and nuanced mobility, including into areas of increased climate exposure, have emerged (McMichael et al., 2021; Farbotko, 2022), as well as populations remaining in places of risk, defined as immobility. Immobile populations were recognized in the seminal Foresight report as a significant challenge when planning for climate-related population mobility (Foresight, 2011). Immobility is a diverse and complex phenomenon (Adey, 2006). While immobile populations are originally viewed as "trapped" (Ayeb-Karlsson et al., 2018), there is now a growing understanding of the spectrum from "trapped" populations to voluntary immobility. Notably, there are emerging cases of communities refusing and resisting relocation plans and deciding to stay in places of belonging (Farbotko et al., 2020; McMichael et al., 2021). Understanding voluntary immobility in areas of growing coastal risk exposure necessitates taking into account the complexity of human experience and behavior (Adams and Kay, 2019). Social science accounts are needed that explore factors affecting people's decisions to remain in the places they call "home" (Wiegel et al., 2019; Ayeb-Karlsson et al., 2020).

This article examines people's motivations to remain in sites where there is, or is expected to be, high exposure to climate-related impacts, even when there is government support for relocation. In doing so, this paper contributes to emergent research on voluntary immobility in the context of climate change (Black et al., 2013; Adams, 2016; Wiederkehr et al., 2019; Mallick and Schanze, 2020). We focus on Fiji, a nation where more than 800 communities have been recognized by the government as being at risk from sea-level rise and associated impacts, and in need of the state and/or donor-supported adaptation and relocation (Neef et al., 2018; GIZ, 2019; McMichael et al., 2019). Despite significant coastal erosion and flooding over the last two decades, Serua Island residents in Fiji have chosen to remain and regard their island as a source of pride and as critical to their identity. While this research has limitations in being a single case study, lessons from location-based, context-specific research can add important insights into broader circumstances that foster or restrict adaptive capacity (Nielsen and Reenberg, 2010; Njie and Asimiran, 2014; Gaikwad, 2018). We argue that incorporating local understandings of climate-related voluntary immobility in climate adaptation policy formation is critically important.

2. Literature review

Within environmental and climate mobilities research, early theories argued that as environmental impacts were increasingly experienced, out-migration would occur (Barnett and Webber, 2010; Adams, 2016). Migration has been recognized by researchers and policy-makers as a strategy to reduce risks, either by moving away from dangerous places or by diversifying family livelihoods and income through migration of household members (Foresight, 2011; Klepp, 2017; Adger et al., 2018; Wiegel et al., 2019). Indeed, migration has long been used as a strategy in response to environmental, social, and other perturbations.

In more recent times, there has been a growing awareness, interest, and research into immobilities and complex mobilities, whereby people remain or even move into regions of high risk (Schewel, 2020). As Stockdale and Haartsen (2018) have argued, the emerging focus on immobility dismantles assumptions that migration is novel whereas setting down roots and remaining in place is normal. These newer framings and areas of research interest examine complex and context-specific decision-making and nuanced (im)mobilities (De Sherbinin et al., 2022).

Within growing immobilities research, attention has been given to the ways the poor and powerless are forced to stay, portraying their immobility as involuntary because of socioeconomic barriers to their freedom, despite desires to move (Faist, 2013; Glick Schiller and Salazar, 2013). For example, research with nonmigrant households in Oaxaca, Mexico, and with farmers of arid regions of Peru has highlighted a lack of capacity to migrate due to both financial limitations and

commitments in places of residence (Cohen, 2002; Adams, 2016; Adams and Kay, 2019).

As well as documented cases of involuntary immobility (otherwise referred to as "trapped" populations), there are also many people who do not migrate because they do not want to (Schewel, 2020; Amin et al., 2021). Examples of immobility in sites of environmental and climatic risk are emerging globally. Rural youth in Honduras has adopted immobility as a means of ensuring livelihoods in a setting with high rates of emigration (Wyngaarden et al., 2022). Older residents in Tangier and Tinghir, Morocco, do not consider migration to be an option as they are settled and have well-established social and family networks (Van Praag, 2021). Mata-Codesal (2015) conducted research in rural Ecuador and found that immobility can be involuntary or voluntary, depending on the contexts of people's lives. As such, policies and initiatives promoting out-migration as an adaptation to climate change are not always accepted by people and populations.

Trapped populations have drawn attention because they are considered particularly vulnerable. However, if the voluntary immobile is not adequately informed about mobility options or future risks, they may also face growing vulnerabilities (Zickgraf, 2018). Accordingly, immobility is considered voluntary when it is not due to the lack of capacity or resources, when the option of mobility exists, and when potential migrants are sufficiently informed regarding their (im)mobility options (Ottonelli and Torresi, 2013). This article conceptualizes voluntary immobility as proposed by Farbotko and McMichael (2019, p. 150) as "an informed, freely indicated preference to remain in sites where there is, or is expected to be, high vulnerability to environmental risk".

In order to prevent "mobility fetishism" (Canzler et al., 2008, p. 2) and to keep in mind that migration may not be a practical adaptation strategy for some groups, it is important to study voluntary immobility for many reasons. For example, remaining in place through times of environmental change may allow people to use and develop Indigenous local knowledge in coping with hazards in the future (Farbotko and McMichael, 2019). Local knowledge is based on historical experiences and shapes the ways people adapt by providing solutions to their emerging environmental problems (Lahiri-Dutt and Samanta, 2007). In addition, there is still a lack of empirical studies demonstrating the effectiveness of migration and relocation as effective climate adaptation strategies (Upadhyay and Mohan, 2017). For example, in addition to reducing vulnerabilities to climate-related hazards and enhancing the quality of life for Pacific Island communities, research conducted by Bordner et al. (2020) from the Marshall Islands emphasizes that climate-related relocation planning should protect lineage ties, prevent loss of cultural identity, and preserve local knowledge for future generations.

Place attachment provides a crucial foundation for understanding immobility preferences and choices (Stockdale et al., 2018). Place attachment can be defined as the bonds to places of residence that people hold both socially and physically (Scannell and Gifford, 2010). As such, it fosters a sense of community or belonging founded on affections, cognitions, and practices (Gustafson, 2006), and it is frequently entwined with social elements and memories as well as perceived and natural facilities (Stockdale et al., 2018). Blondin (2021) detailed how in the Bartang Valley in Tajikistan—an area exposed to environmental hazards such as flooding, rockslides, landslides, and avalanches—the Bartangis' attachment to place influenced their preference for immobility. In Togoru, a low-lying coastal settlement on Viti Levu Island, Fiji, despite facing significant coastal impacts in the form of coastal erosion, tidal inundation, and saltwater intrusion, residents are opposing plans for relocation, owing to place-belongingness to land and people created through personal, historic and ancestral, relational, cultural, economic, and legal connections (Yee et al., 2022).

2.1. Contextualizing the Fijian setting

Fiji is described as a multicultural society (Robertson, 2000), but the majority of the population is comprised of two major ethnic groups: Indigenous Fijians and Indo-Fijians, the majority of whom were descendants of indentured laborers with a later wave who came independently to start businesses and trade in Fiji (Chand, 2015). Under the new decree by the Fiji First government, policies have been implemented that aim to address Fiji's colonial legacies and unite the country under one Fijian identity (Fraenkel and Firth, 2009). All citizens of Fiji are known as Fijians. Indigenous Fijians are referred to as iTaukei, and other ethnicities are to be referred to as Fijians of their ethnic descent (e.g., Fijian of Indian descent). About one-third of the population is Fijians of Indian descent, and most of the remaining population is iTaukei (DFAT, 2022).

There are 1,171 registered Indigenous Fijian villages in Fiji (Ministry of iTaukei Affairs, 2022). Vanua is essential to one's identity and existence as the core of one's being and the essence of what it means to be an Indigenous Fijian. Fanua (Samoan), Fonua (Tongan), Fenua (Tahitian), and Whenua (Maori) have parallel meanings with the Indigenous Fijian Vanua, relating to the foundation of life on earth (Tuwere, 2002). Vanua has both literal and figurative connotations. Both are intricately connected. Vanua is a land-based language. It is very broad in scope involving the natural terrain, local flora and fauna, rivers, mountains, fishing sites, and more. Although Vanua is literally translated as "land", iTaukei does not see land as a commodity that can be bought in the sense of the market economy (Farrelly, 2010). This is reflected in the phrase "Na qau vanua", which means "not my land" but rather "the land to which I belong, of which I am an integral part: the land that is part of me and sustains me" (Roth, 1973, p. xxvii). In addition to providing a means of livelihood, the land also serves as a foundation for life

(Tuwere, 2002). Indigenous Fijians do not think of themself as belonging within certain frontiers but as originating from the place where the founder ancestor landed after which the land was named. I cavuti is the Fijian term for this, as noted by Tuwere (2002, p. 49) who claims that "one does not own the land; rather the land owns him." Without its occupants, the land is comparable to a body without a soul.

Given the value of land to Indigenous Fijians, the British colonists implemented a system of customary land tenure that aligned with traditional Indigenous Fijian values including the inalienability of land from Indigenous Fijians, the collective ownership of rights to land, the registration of individuals to the land of their forefathers and ownership cannot be transferred to non-Indigenous Fijians or nonmembers of the landowning unit (Mataqali) (Kamikamica, 1987; Boydell, 2008; Sakai, 2016). Land in Fiji is classified under three categories: Native (Customary) Land (83%), Freehold (8%), and Crown or State Land (9%); the majority of the land is native land or land that is communally owned by Indigenous Fijians (Lal et al., 2001; Rakai et al., 2013).

Each Indigenous Fijian member is a part of the Vanua, a hierarchical social group. The I Tokatoka (subclan) is the smallest unit. The Mataqali (clan) is above this, followed by the Yavusa (tribe). Several Yavusa come together to form a sociopolitical group known as the Vanua, which honors a prominent chief and is bound together by a variety of persistently reaffirmed social and political ties. For a child from an Indigenous Fijian community, the Vanua acts as their classroom (Nabobo-Baba, 2008). The youngster learns the value of identity, traditional kinship roles, and responsibilities to family, community, and self (Lagi and Armstrong, 2017). The Vanua serves as the setting for many learning processes. Through interactions with Vanua, a Fijian learns the principle and practice of sharing and caring (Ghasarian, 1996).

The Vanua is also referred to by Nayacakalou (1975) and Lasaqa (1984) as a decision-making group for traditional affairs and the foundation of traditional leadership. Both make a distinction between community activities that are planned by the Turaga ni koro (representative of the government) and traditional activities that are under the control of the Turaga ni vanua (senior member of the Vanua by descent) and are set up in accordance with the traditional social and kinship structures that exist between and within the Vanua. The former activities include raising money for local development projects and upholding governmental regulations; the latter includes implementing and maintaining ritual and ceremonial events (see Ravuvu, 1988).

Vanua is a notion that encompasses a wide range of related meanings. As a result, Vanua represents more than only the physical concept of land. Vanua also refers to members of social groups whose values, knowledge, skills, spiritual beliefs, and customs play a significant role in their day-to-day interactions and influence how their kinship system functions (Nayacakalou, 1955; Ravuvu, 1983; Nabobo-Baba, 2006). Fijian kinship is developed through patrilineal descent and common parentage (Nayacakalou, 1955) and permeates all clans, villages, and tribes (Torren, 1999). Kinship ties people together in a mutually dependent relationship (Randin, 2018) even with those who are physically a part of the same Vanua but are not biological relatives (Ravuvu, 1983).

Vanua, however, represents for Indigenous Fijians not only kinship relations but also a connection and interdependence between nature and society, much like in most Melanesia, and neither of these realms is separate from spirit (Foale, 2006). The phrase "the way of the land," or Fijian customs and values, is called Vakavanua. To live happily in both this world and the afterlife, according to Ravuvu (1987), one must uphold Vanua's beliefs and ideals. A key component of the connection that Vanua creates with the ancestors, who continue to be an almost physical part of the community, is with those who have come before. "It is where the ancestors preceded them and where these spirits linger and watch over the affairs of those who follow" (Ravuvu, 1988, p. 6). The iTaukei are nested in relationships among and between people, spirits, and environment, which is visible in their everyday routines from the organization of the community to agricultural cultivation and narration of traditions and recollections of ancestors (Tuwere, 2002; Gelves-Gómez and Brincat, 2021). As a result, the Vanua is central to elements of life in iTaukei society (Nabobo-Baba, 2006). Vanua is therefore an expansive concept, and life is viewed by Indigenous Fijians through this prism.

In addition, Vanua is not a tradeable good since, as Ravuvu (1988) highlighted, a land without inhabitants is comparable to a person devoid of a soul. Indigenous Fijian people are therefore a part of their physical surroundings, and this link is where their Mana, or power, comes from. As the land is "an extension of the self… [and] the people are an extension of the land," Vanua refers to a deeply rooted, embedded bodily politic (Ravuvu, 1983, p. 76). In sum, Vanua is a connected, contingent, relational, dynamic, dialogic, embedded, and embodied concept that connects people, place, and spirit (Huffer and Qalo, 2004). Vanua has the potential to help our understanding of people's spatial and social responses to climate change.

3. Method and study sites

3.1. Method

This research primarily drew on qualitative research undertaken over a period of 4 weeks during September and October 2021. Data were collected from Serua Island, as well as Talenaua and Dogowale settlements. This included both Talanoa sessions and interviews. A purposive sampling method was employed to identify participants for both semi-structured interviews and Talanoa. Talanoa is an inclusive and transparent face-to-face dialogue or exchange of ideas in a culturally

appropriate way of seeking transformative solutions on a topic of local significance that is used in Pacific cultures in everyday interactions. Many Pacific Island countries, including Tonga, Fiji, Samoa, and Tokelau, are familiar with the idea of Talanoa, which has its roots in oral traditions (Feetham et al., 2022). Integrating Indigenous research methods and knowledge can give communities a stronger stake in knowledge generation, including in climate risk and adaptation (Nabobo-Baba, 2006; Vaioleti, 2013). This can provide significant insights into community values and challenges and support improved policy, practice, and investments for climate-affected communities.

Talanoa was used in the primary stages of fieldwork to understand community perspectives and life (Aswani and Lauer, 2006; Lauer and Aswani, 2010; Buggy and McNamara, 2016). These Talanoa sessions also helped to identify people within the community who would be valuable to talk to individually (Bloor et al., 2001). The communal lifestyle and culture of Fijian are centered on Talanoa, which is compatible with their worldviews and attitudes (Feetham et al., 2022). Talanoa enabled an environment of storytelling, which in turn encouraged others to remember and describe their stories as well. One of the unique strengths of group-based discussion and dialogue is that it allows participants to query each other, demonstrating a level of agreement or disagreement with the group (Morgan, 1996; Kidd and Parshall, 2000).

Five Talanoa were held in Serua village and Talenaua settlement. Each discussion had between 4 and 10 participants and took approximately 1–1.5 h each. A questionnaire guide was used by the researcher to facilitate the Talanoa discussion. The participants adhere to the Talanoa principles of openness, sharing, respect, and trust (Prescott, 2008). In this regard, Talanoa creates a space where participants can identify their experiences and problems and develop solutions that are fit for their environment and culturally appropriate while also enabling the researcher to connect with them and understand their situation from their perspectives and the realities they face (Vaioleti, 2006; Nainoca, 2011; Vaka et al., 2016). Some Talanoa may be more formal than others, while the very formal may be conducted with Yaqona (i.e., kava) being served (Nabobo-Baba, 2006). However, even the more formally organized Talanoa still carries a measure of relaxed informality that is engaging and inclusive. Key themes for discussion included climate-related risks, adaptation measures including relocation, values, and religion. These discussions were undertaken in English and iTaukei languages. In addition to interviews with village residents, interviews with two government representatives were undertaken to understand government perspectives on planned relocation and climate-related risks in the province. Interviews and Talanoa were digitally audio-recorded, and notes were taken throughout the data collection.

Semi-structured interviews were also used; this is culturally appropriate in Fiji because storytelling through verbal communication or Talanoa is an everyday practice. An interview guide was designed and organized into themed sections, including open-ended questions to allow participants to tell their stories and elaborate on key issues (Bourke, 2014). The themes of the interview guide were socio-demographic questions, values, (im)mobilities, observations and changes to their environment, and adaptation and planned relocation. A total of 23 semi-structured interviews were held (11 in Serua village, seven in Talenaua, three in Dogowale, and two in government representatives). Snowballing techniques were employed to unearth referrals for potential interview participants. Participants ranged in age from 20 to 83 years. The interviews were conducted in settings that were comfortable for participants, such as in their homes, community halls, boats, and around the village green, and lasted 30–45 min. With the permission of participants, interviews were audio-recorded for later transcription and analysis.

Transect walks enabled the researcher to observe how the participants related to their environment and understand how they experienced changes over time. While interviews and Talanoa discussions focused on talking and listening to people, participant observation enabled "watching, sensing, feeling, and being present with the people" (Aagaard and Matthiesen, 2016, p. 41).

Following transcription, data were inputted into and analyzed using NVivo software. Key themes were identified from the data. Following this, a rereading and refining of the specifics of each theme were done to establish a detailed thematic framework for data analysis (Vaismoradi et al., 2013). An independent third party was enlisted to assist in the translation and verification of crucial terms because the initial part of the paper includes Fijian vernacular excerpts.

The project received Human Research Ethics clearance through The University of Melbourne Faculty of Science Human Ethics Advisory Group (Ethics ID 1851729.1). Ethical protocols included gaining informed consent to participate in this study and to undertake and record Talanoa and interviews. The Government of Fiji granted a research permit, and the local government and the Serua village elders gave their approval and support for the research.

3.2. Study sites

Off Viti Levu's southern shore is the island of Serua. Serua village is located about 3 kilometers from a junction on the Queens Highway, a gritty road that leads to the coast, and an almost 2-h drive from Suva, the capital city of Fiji. The island can be reached *via* private outboard-powered fiberglass boat, or by walking at low tide. Serua's name is a combination of the words "Se," which means flower, and "Rua," which means two. The village is neatly spread out on the grassy space between two hills that form the island's pommel and cantel, giving the island the appearance of a saddle from a distance (Mitchell, 2022). Serua

Island is culturally significant to the people of Serua province as it is the seat or permanent residence of the paramount chief of the province "Turaga na Vunivalu" (chiefly title). Figure 1 shows the location of Serua Island, Dogowale, and Talenaua.

According to the Fiji 2017 census, Serua village has a population of 95 people (FBOS, 2017). At the time of fieldwork, however, there were 21 households with a total of 125 people. Some residents have left Serua village to settle elsewhere such as their Talenaua (customary land near their plantations); however, a majority have remained; some had worked for years in other parts of Fiji or overseas and returned, and some were living and working elsewhere yet had returned to visit families.

Rainfall is the primary source of water on the island. Piped water from the mainland reservoir is used for bathing, washing, and toilets. Boats, nets, and fishing expertise are crucial because fishing is the primary source of income. Some villagers work in the tourism, education, and nonprofit sectors, while others own businesses. Remittances from family living overseas and in cities also help with daily expenses. There are numerous committees and gatherings in the village, including water, health, environment, religion, women, and youth, Bose Vakoro (development of the village), Bose Vanua (cultural aspect of the Vanua), and Bose ni Lotu (spiritual activities), that contribute to the wellbeing of the villagers.

The island of Serua is exposed to climate-related risks. Over the past two decades, Serua has been repeatedly flooded and experienced impacts from saltwater intrusion, making the soil less fertile. The Government of Fiji has prohibited the construction of houses near water, because of the damage caused by cyclones and storm surges. While the government had identified the island population as needing to relocate, most of the island inhabitants choose not to leave due to their strong cultural attachment to the island and its historical significance to the province of Serua.

Importantly, in earlier times, Serua village has fractured into three communities: Talenaua, Dogowale, and those that remained on Serua Island. Close to Serua Island—on the mainland—are the settlements of Dogowale (pop. 20) and Talenaua (pop. 325). Residents of Dogowale moved from Serua Island, albeit while remaining on customary land; Talenaua is a farming settlement with strong connections to villagers living on Serua Island.

4. Results

4.1. History of *ad hoc* relocation

Mobility has always been a part of life for the people of Serua province, with people moving for various reasons. The settlement of Serua Island from the highlands of Viti Levu occurred in the 19th century and was associated with economic and political interests. For example, the decision to leave was in search of new land and possibilities. As they descended to the coast, they engaged in wars in the process, until they reached Serua Island. *"Serua island was already inhabited however, through strategic negotiation, the powerful Vunivalu (Paramount Chief) lived with the first settlers on the island"* (Serua village, Interview). To date, the island of Serua has been regarded as the traditional seat of the paramount chief. In addition, Serua Island was where the first school, hospital, and provincial office were built in Serua province, indicating the importance and prestige of the island at the time. These services were later moved to Viti Levu mainland in the 1940s and 1950s. Around this time, some residents from Serua Island also began to independently relocate their households to Talenaua and Dogowale settlements, on Viti Levu. Residents that relocated during this time had to seek permission from the Vunivalu (Chief of Serua province) to relocate and occupy their current places of residence.

Dogowale is located at the edge of Viti Levu Island, across from Serua Island. The settlement of Dogowale has six houses (two of which are vacant) with a population of <20. The households belong to one Mataqali (subclan), Raralevu. Their traditional role is the Sau-Turaga (kingmaker—and can temporarily hold the chiefly position until one is installed). The people of Dogowale rely heavily on fishing and subsistence for their livelihoods. Despite their relocation from Serua Island in the 1980s, there was a strong preference to remain close to the island. The move to their present site from Serua Island was precipitated by longing for easier access to transport and access to other services including education and health, and a sense of insecurity due to climate-related impacts on the island such as saltwater intrusion, coastal erosion, and flooding. *"Today, my grandchildren catch the school bus in front of our house. During our time, to travel from the island to school daily is not easy, especially when we did not have a boat and when it rained"* (Dogowale, Interview). Moving to Dogowale was not an easy choice for its residents because of strong affinities and ties to the island. However, due to the close proximity of the relocation site, families residing in Dogowale today are still able to visit the island and can view it from their homes, maintaining a sense of intimacy and connection. *"We prefer to stay close to the island to be present for all functions for the church, government, and province. Any government official or visitors will come to Serua island to pay their respect"* (Dogowale, Interview).

Talenaua settlement is located along the Queens Highway. Talenaua ("Tale" meaning reach, and "Naua" meaning tide) settlement is accessible *via* both road and boat. Talenaua is a larger settlement and has a total population of 325 people as compared to 178 people in the 2017 census report (FBOS, 2017). There are two Mataqali (subclan) that reside in Talenaua. The settlement began as a farming community for Serua Island's residents and was home to plantations, where families could remain in makeshift huts while they worked the land. Because Talenaua had more resources than Serua Island and provided better access to critical services such as health centers,

FIGURE 1
Map identifying Serua Island, Dogowale, and Talenaua (prepared by Chandra Jayasuriya).

schools, government offices, supermarkets, and jobs on the mainland, some households from Serua Island eventually made this farming community their permanent home. Due to the close proximity to road infrastructure, the residents of Talenaua could grow and sell their produce along the roadside. *"Youths have a collective farm and then youths have their individual farms. Taro, vegetables, cassava, etc., we sell at the roadside. One can go anywhere at any time because this highway is always busy with motorists"* (Talenaua, Interview).

However, Talenaua is a settlement that is part of Serua Island. Despite being on the mainland, Talenaua is not immune to coastal impacts. When there is heavy rain along with high tides, flooding becomes a major problem. This is exemplified through the following quote from a Talenaua resident: *"I used to hear from my elders this is the mark where the waves from the ocean reach and return to the ocean… today the high tide goes all the way up to those living on the other side of the road affecting the land"* (Talenaua, Interview). The settlement area is located on ground that was reclaimed so that the highway could be constructed. Because of this, the land structure is not stable, and when large vehicles pass by the settlement on the highway, people feel the ground trembling. All church events used to take place on Serua Island, but this is no longer the case. This is practical for Talenaua's residents, but some claim it has weakened their ties to their ancestral homes on Serua Island.

4.2. Experiences of climatic and environmental change in Serua village

Residents perceive climate change to have negatively altered fish stocks. *"Dairo (sea cucumber) and Veata (sea hare) we hardly see now. Lumi (seaweed) sometimes it appears sometimes it does not"* (Women FG, Serua village). Overall, the village people note that fish stocks are declining, and the villagers have sought assistance from the Ministry of Fisheries to find ways to cope with these changes. *"The community needs to go further out toward the reef to catch fish"* (Serua village, Interview).

Coastal erosion is also a significant problem in Serua village. The village elders had built a sea wall made of coral on one side of the village and placed big black boulders near the entrance to the village. *"In the 1980s a concrete sea wall was built to replace the coral one with assistance from the Government"* (Serua village, Interview). Parts of the sea wall have been eroded which residents say has caused further coastal erosion and inundation rendering most of the island land unfavorable for agriculture and vulnerable to extreme events such as cyclones. *"Well, I used to see my forefathers taking coconut trunks and assemble them along the beach. But overtime this was not enough as the waves continue to become stronger and bigger, and the coconut trunks eventually were degraded and washed away. Also, we piled huge boulders and like the coconut trunks was also not successful, we would change the stones and the coconut trunks but still the waves were winning"* (Serua village, Interview). The inundation of seawater places plantations and houses at high risk of damage.

Flooding has reportedly become more prevalent on the island in recent years. Villagers noted that when there is heavy rain, the village ground quickly becomes flooded and swampy: *"The island rarely experienced flooding from hurricanes before, the island now floods. Many of the island's trees, traditional and medicinal plants, gardens, and trapping grounds are gone"* (Serua village FG, Women). Tidal events are becoming more intrusive and noticeable when seawater inundates the village. The sea walls built on the island do not allow runoffs of excess water back into the sea which compounds the problem of floods. *"In 2020 we had the function for our late chief. It was raining that day and high waves. When I returned home, I was basically wading in the village water above my knees. I had to lift my dress"* (Serua village, Interview). Due to this flooding, along with saltwater intrusion, residents cannot grow vegetables or crops on the island and must grow their food on the mainland.

Serua Island was identified for relocation by the Government of Fiji. *"With all the changes that are happening to the island like coastal erosion and flooding, Serua island was identified by the Government of Fiji as one of the communities in danger of facing relocation in 2018" (GoF, 2021). Four* Mataqalis (clans) on Serua Island have been urged to identify favorable sites for relocation. Residents recognize the threats of changing climatic and environmental conditions: *"One can walk around this island in <30 min and walk across it in 10 min. Believe me, we know how strong and dangerous the waves have become to our lives and what it has done and can still do to our beloved island"* (Serua village, FG men). Despite these existential threats, residents of Serua Island have chosen to remain.

4.3. Lessons learned from past relocation

The resettlement of Serua Islanders to Talenaua and Dogowale settlement presents both negative and positive learnings of relocation. With no framework to guide these relocations, decisions of when and where to move were made on a household basis. All participants that were interviewed and relocated from Serua Island were able to relocate onto customary land over which they had tenure claims. In Dogowale settlement, all participants said their proximity to the island is essential because of their role in the Fijian social hierarchy system. *"Our location off the island but at the jetty landing to get to the island is convenient because any visitor to the Island, we will know about it first. That is our traditional role not only as kingmakers but above all else defending the sovereignty of the Vunivalu (paramount chief of Serua province)… relocating here has not only kept us safe from climate-related risks, it has made our life less difficult having access to services and above all else, we still stay attached to our beloved Chief and Island"* (Dogowale,

Interview). These sentiments were echoed by all interviewees in Dogowale and Talenaua.

Even though Dogowale residents are not on the island physically, they remain connected. *"If our grandchildren are not to be seen in Dogowale, they are swimming near Serua island or playing with their relatives on the island or have gone fishing with their cousins"* (Dogowale, Interview). Like Dogowale, the villagers of Talenaua are closer to their agricultural farms and the road along which they sell produce. They have access to transportation and services like education, medical, and communications. Most villagers are either studying, farming, or working in government services, supermarkets, and hotels, both near and far: *"It's very easy to live here, close to farms, medical, town, school… especially for the sick and the pregnant women. It's more expensive I feel living on the island compared to here"* (Talenaua, Interview). Due to salaried work, farming, and the distance from the ocean, the villagers only go fishing when the need arises. During the COVID-19 pandemic, the men and youth of Talenaua spent most of their time in the agricultural fields. *"The youths just farmed. Some youths who hardly went to the farms went. Our parents were amazed to see the amount of land up there cultivated"* (Talenaua, Interview).

While all families that had relocated expressed the necessity for them to relocate and experienced positive aspects of relocating, there were also many reported challenges. All participants from Dogowale and Talenaua explained that the land to which they had relocated presents ongoing challenges. Dogowale residents mentioned they are safe from the impacts of climate-related risks (like coastal erosion, flooding, and sea-level rise); however, they experience soil erosion from the hill behind their homes. In Talenaua, they encounter flood risk: *"This place Talenaua is a flood prone area. When it rains the whole place gets flooded right up to the community hall there near the road"* (Talenaua, Interview).

There are also social impacts of relocation. Residents of Serua Island frequently expressed concern about the fragmentation of the village of Serua. This fracturing of a single community into three settlements (Talenaua and Dogowale and those that remained on Serua Island) has had a significant impact on community life and social capital. Today, there are more people living in Talenaua than in Serua Island. As the years pass, elders' attempts to maintain their customary role and connection and identity to the chiefly Island have proven futile. As one Talenaua resident/elder stated: *"If you ask any young person here where they from, they will say they from Talenaua… that is wrong it should be from Serua village. Most of the children and youths that reside here are born and bred in Talenaua. But despite that, they are all from Serua village. Parents must drill that into their minds. No one is from Talenaua and no one is from Dogowale. That is my fear right now, the identity crisis"* (Talenaua and Dogowale Interview).

When traveling past Talenaua, there is a signboard on the roadside that reads "Talenaua village." In an interview with one of the elderly man, he explained: *"there was no consultation or discussion regarding that sign board and people thinking this is a village… there is only one village and that is Serua and we are part of that. So as time changes people's minds also change… trying to move their own way and be disassociated from our origin, our ancestral land and our Vunivalu" (paramount Chief).*

These critical aspects of village life that have evolved in new sites such as Talenaua and Dogowale offer a lesson for relocation and adaptation planning. The biggest fear expressed by remaining residents on Serua Island is the losses—including cultural practices, sense of place, and identity—that will be incurred if and when they relocate to mainland Viti Levu. Therefore, they have chosen to stay on Serua Island to act as guardians of the island and to preserve its deep cultural importance.

4.4. Why are we still here? The case for voluntary immobility

The community living on Serua Island was identified by the Government of Fiji as needing to relocate to mainland Viti Levu. Despite significant coastal erosion and flooding over the last two decades, residents have chosen to remain and regard their island as a source of pride and as critical to their identity. *"Na cava mada na vuna keimami tikoga kina ike?" [Why are we still here?]* (Serua village, FG men). Serua Island residents have voiced strong cultural and kinship connections to their land and oceans, and relocation invokes significant concerns about dislocation from ancestral lands and being unable to provide ongoing guardianship of sacred sites. *"It is these sentiments that continue to evoke strong emotional attachments to the Vanua"* (GoF, 2021). This sense of Vanua has been central to residents' reluctance to relocate. Vanua is the foundation for climate-related immobility on Serua Island, a point that is highly relevant to climate change policy and adaptation.

4.4.1. Vanua: The epicenter of Indigenous Fijian culture

The concept of Vanua, Whenua, Fonua, etc., across the Pacific is a critical component of Fijian culture. While lexically it means land, region, place, or spot (Capell, 1941), in the Fijian language, Vanua goes far beyond these descriptions, as we outline below. There are also several, diverse meanings of Vanua. For example, Vanua can be used to refer to Fiji as an entire country governed by a central authority, or a local community can use Vanua to describe their island home made up of a confederacy of people under a paramount chief.

Attempting to understand the depth and diversity of the concept of Vanua is challenging, which is only compounded when attempting to then translate it into English. As such, this section will provide quotes on the meaning of Vanua using the

Indigenous Fijian language (Bauan) and provide the English translation below. This is equally important to do given that the best people to provide insights into the definition of this key symbol in the Fijian culture is the Lewe ni vanua (people of the Vanua). Providing these meanings of Vanua in Bauan also helps in not diluting the meaning of Vanua from a Fijian context. During Talanoa sessions, locals from Serua Island provided the following accounts of what Vanua means to them:

> *Ni tasereki vakavosa na ulutaga oqo na Vanua, e utona ga na uma ni qele, na I qoliqoli, kei na I yau bula e tu vata kina (Serua village, Interview).*
>
> *When the concept of Vanua is analyzed linguistically, its essence is a piece of land, fishing grounds, and the associated natural resources.*

In this sense, Vanua quite literally refers to the physicality of the land and ocean. But, as the Talanoa unfolded, further layers of Vanua were revealed:

> *E dua tale na kena yasana ni vakamacalataki na Vanua, ka vaka bibi taka na ulutaga oqo na Vanua, e vakaliuca kina na kena tamata se lewe ni vanua, ka ra umani vakayavusa, mataqali, I tokatoka ka koto vata kei na veitutu kei na I tavi me ra qarava me sauvaki kina na Vanua kei na kena liutaki (Serua Island, Interview).*
>
> *Another important aspect of this concept of Vanua is the paramount importance of its people or citizens, who are grouped according to Yavusa (tribe), Mataqali (clan), and I Tokatoka (sub-clan) and have various positions and duties to perform so that the Vanua and its leadership can be effective.*

Here, the social and cultural aspects of Vanua emerged. In social terms, for a Vanua like Serua to be known and recognized, it must have an adequate number of people living on it, supporting, and defending its rights and interests. The value of land is brought further to life with people, and people need this land in order to thrive. Land becomes lifeless and useless without the people, and likewise, the people are also helpless and insecure without the land to thrive upon. The Vanua of Serua village offers allegiance to the Turaga na Vunivalu (paramount chief of Serua province), which consists of the Yavusa Korolevu and Burenitu and its four Mataqali (clans).

Another important aspect of Vanua is that it constitutes Indigenous Fijian worldviews, which encompasses the common values and beliefs about life in the natural and spiritual world:

> *Sa oti e dua na drau na yabaki na kena yaco mai Viti na lotu vakarisito. I a e so na vakabauta ni se bera mai na kau lotu e se laurai vinaka tiko e na noda bula na iTaukei. Kevaka eda sega ni rokova na Vanua, noda Turaga, na waitui, dela ni yavu, vanua tabu, na veiwekani, manumanu kei na kau, na kauta mai na dredre, dravudravua, tauvimate, mate, draki ca. Na vakabauta oqo e tuberi keimami ena bula ni veisiga I nakoro (Serua village, FG men).*
>
> *Despite being Christians for more than a century, traditional supernatural beliefs, still have a significant influence on our lives today. If we do not respect the Vanua, our chief, the sea, ancestral home, sacred places, our relations, fauna and flora, it will result in difficulties, poverty, sickness, death, and bad weather. This is the fundamental belief that guides us in our daily life in the village.*

Along with traditional supernaturalism based on ancestor gods, Christianity also plays a significant role in Fijian's daily lives, which have recently been infused with the Vanua notion.

> *Na Vanua e dua na vosa rabailevu kevaka meda vakamacalataka, ena I Vola tabu makawa—enai Vakatekivu—e tukuni vakamatata kina ni bulia na lomalagi kei vuravura na Kalou, eda kila ni Vanua e nona Kalou. Veikace e bulia e ligana, mai na qele, vunikau, manumanu, waitui, lomalagi, kei na tamata ka vakatokai na Vanua, e vakarokorokotaki ka vakaturagataki ka meda taqomaka ka maroroya ena loloma dina ena veitabagauna kece (Serua village, Interview).*
>
> *Vanua is a broad concept to define. In the Old Testament-in the book of Genesis-it is clearly stated that God created heaven and earth, so we know that the Vanua belongs to God. He created all things with his hands, from the soil, trees, animals, sea, sky, and the people who are called the Vanua, which is revered and honored, and we should protect it and treasure it with a genuine love forever and ever.*

Christian values and emotional bonds tied to the Vanua of Serua village shape the actions of Serua villagers to protect and safeguard their island. On this note, this study highlights the centrality of stewardship to Vanua, a concept that is underemphasized but highly pertinent to climate change mitigation and adaptation.

> *Kena I otioti ga, na Vanua talega e dodonu meda dau maroroya. Dua na yasana talega au vakabauta me dau tukuni wasoma tiko vei ira na gone. Matai e sega ni noda na Vanua, ia e solisoli ni Kalou, kena ikarua na ka kece baleti keda na kawa ITaukei okati kece tu ena Vanua. Ya na kena bibi na Vanua vei keda. Na gauna ni draki veisau da lako curuma tiko qo, da kalougata na kawa ITaukei baleta na maroroi noda Vanua e tiko talega noda I tovo ni bula kei noda vakabauta vakarisito. Maroroi ni yau bula e dua na ka sa dau cakava tu mai liu noda qase. E dina era sega ni vuli vaka na vuli e loma ni koronivuli—nodra kila ka sa bau totoka baleta era rawa sara tu ga ni kidava na ka e rawa ni yaco mai na veiveisau ni draki era sa qai dau cakava e so na ka me vakaukauwataka, vakavinakataka ka taqomaka na Vanua (Serua village, Interview).*

> *Finally, the Vanua is something that we should preserve. This is also an aspect I believe should be often told to children. First, the Vanua does not belong to us, it is a gift from God; second, everything about our identity as Fijians is contained in the Vanua. That is how important the Vanua is for us. During this time of climate change, we are experiencing, we indigenous Fijians are blessed because our Vanua is preserved, and we also have our customs and our Christian beliefs. Preserving the environment is something our ancestors have done for a long time. It is true that they were not formally educated in schools-but their amazing knowledge could predict what would happen as a result of climate change and develop steps to strengthen, improve and protect the Vanua.*

Thus, for residents of Serua village, Vanua is a relational concept that encompasses physical, cultural, social, and spiritual dimensions that nurture and bind place and people to the past, present, and future. This strong connection prompts the iTaukei people to exercise active stewardship to protect the Vanua that God has given them at all costs.

The Indigenous Fijian term Vanua contains interconnected aspects in the physical, social, cultural, spiritual, and stewardship dimensions. This paper will first address each dimension in turn, highlighting significant themes that came up in the interview and Talanoa in Serua village, and then provide a summary of how they are interconnected at the conclusion.

4.4.2. Physical dimension

Vanua's social and physical structures offer a sense of confidence, belonging, and identity. The residents of Serua Island take comfort in knowing that they are a distinct Vanua with a territorial region where their roots are firmly planted and where they or their ancestors were born and raised. The following components—related to Vanua's physical characteristics—have been recognized as crucial determinants of people's decisions to stay put: (i) Yavutu and Yavu (the foundation stone) and (ii) Waitui (biocultural seascape).

(a) Foundation stone (Yavutu/Yavu)

A vital part of Vanua is the link to ancestors, who remain almost a tangible part of the village. Two elements of Vanua that connect Indigenous Fijians to their ancestors and their past are Yavutu and Yavu. "*Yavutu is the first foundation of a village by the ancestor or original site, Serua Island and Yavu is the foundation of stones and earth on which a house is built, and in which the owner was in olden times buried*" (Serua village, Interview). Yavutu and Yavu, though similar and connected to one root idea, have different meanings. Yavutu and Yavu provide a sense of attachment to place. "*We do not want to leave Serua island because this is where our forefathers came together to first settle and made a life for us*" (Serua village, Interview). Emotional feelings and psychological attachment to the Yavutu are strong; this continues to strengthen the attachment and behavior to defend and protect it. "*When a Yavu or foundation of a home is created, they name it, and they remain forever. The same Yavu or foundation is where people are buried as well. The concept of a graveyard is an introduced concept. Before when one died, they were buried in their Yavu or foundation. Their bones, sweat, tears, and hard work are all buried in the Yavu. So, when a child is growing up, he or she is aware that their identity is right beneath their feet. And we are told to relocate and leave all this behind, I would be like an orphan. Going to a new place as a visitor*" (Serua village, Interview).

The Yavutu and Yavu are sacred possession of the family and village. It provides legitimacy for one's place in the locality or relationship to the village. Many believe that the disturbance of the Yavutu will cause misfortune, to their relatives or to other village members. This disturbance includes the abandonment of the Yavu by the family. Hence, the people of Serua Island choose to remain because they fear dislocating from their ancestral lands and losing their sense of identity and belongingness.

(b) A holistic biocultural seascape (Waitui)

The residents of Serua view the ocean and coast as a single, integrated biocultural seascape that encompasses both nearby fishing grounds and farther-off ocean areas. The ecosystems of the water are tied to the people of Serua Island both culturally and environmentally. One of the essential pillars of Serua's identity is that the ocean links the inhabitants to Serua Island and vice versa.

The ocean that separates Serua Island from mainland Viti Levu is part of the identity as the men and women of Serua village: "*When you have walked to the island, that means you have finally stepped foot on Serua*" (Serua village, interview). Vulagi (visitors) to the island may find this a challenging way to get to the island; however, for the people traveling this body of water daily is the essence of a being Serua Islander. "*We do not view crossing the ocean to get to the mainland as a challenge. Our environment is also part of our daily planning, we gauge when to go and when to return according to the tide. Our daily experiences with the ocean have helped us survive on the Island*" (Serua village, FG women).

Fishing is a source of income on Serua Island. With the installation of electricity on the island, the people can store their catch in their deep freezers for a couple of days before selling them. The residents of Serua Island have been able to improve their quality of life because of the fish income. "*From selling fish I was able to renovate this house and purchase my fiberglass boat. I was also able to purchase two deep freezers where I store fish overnight. I travel to Suva city market to sell fish*" (Serua village, Interview).

During one of the Talanoa sessions, there were discussions of further upgrading the island by constructing a walkway to connect Serua Island to the mainland. The majority of

participants did not support this idea and preferred to fortify the island with a sea wall instead. *"Enhancing the sea wall would be more effective because it will protect our island of Serua"* (Serua village, FG men). However, not everyone shares this sentiment. *"This walkway will bring back our people who have left the island connecting them to their roots and our paramount chief"* (Serua village, Interview).

There may be disagreements over the proposed walkway, but the Serua people do not want to leave their island. If they went to the mainland, they would have to give up the Waitui (ocean), which is an essential and familiar element of their life and a source of security and belonging. According to the people, planned relocation will break this biocultural bond with their Yavutu, Yavu, and Waitui.

4.4.3. Social dimension

(a) Members of land (Lewe ni Vanua)

Vanua can also refer to kin who are structured into several interconnected social units. The Vanua according to the people of Serua village *"is the living soul or human expression of the physical environment that the members have since claimed to be theirs and to which they belong"* (Serua village, interview). The people are the Lewe ni vanua (people of the Vanua) who serve as the social identities of the land as well as safeguarding and utilizing its resources. *"For the island of Serua to be recognized, it must have people living on it and supporting and defending its rights and interests . . . and to be told to leave this island, it feels like we are stripped off of our tangible foundation for identification and belonging"* (Serua village, Interview). A land without inhabitants is compared to someone without a soul. *"Without people, the land becomes dead and useless, and similarly, without land to live on, people become helpless and insecure"* (Serua village, Interview).

(b) Typical layout of an iTaukei village

The location of buildings in an iTaukei village has social dimensions, ranked according to their purpose. The traditional built environment of iTaukei villages safeguards Indigenous expression: *"The idea of the layout of the village acts as a bridging medium between iTaukei people and their culture"* (Serua village, Interview). The layout represents the legitimacy of one's position, family lineage, and identity in a village. The layout illustrates the relationship iTaukei people have with Vanua: *"The arrangement of the houses represents extended families, which is a cluster of Yavu and for this reason, many families build their houses in the same area"* (Serua village, Interview).

A key aspect of an iTaukei village is the Rara, or green area, where cultural and traditional activities are practiced. It usually lies close to the center and is regarded as a holy place. As one approaches the green area, it is easy to spot the paramount chief's house because it is always big and elegant and close to the Rara. It highlights the link between culture and identity and place. Residents of Serua village express concern that retreating and relocating villages in Fiji have not retained the traditional layout. This is exemplified by the following quote: *"We have seen the way previously relocated villages are formed; it no longer reflects a village layout in my opinion. One has to remember our village is the chiefly village of the province, it must reflect that always if and when we relocate because that is part of who we are"* (Serua village, Interview).

4.4.4. Cultural and spiritual dimension

The belief and value system, interpersonal relationships, and interactions between people and the environment play a role in how people feel and act. The decision of Serua Island residents to remain was influenced by sacred sites (Vanua tabu), the residence of their paramount chief (Vanua vakaturaga), and the link of newborns to the island through the umbilical cord.

(a) The seat of the paramount chief of Serua (Vanua vakaturaga)

The people of Serua Island fulfill duties to their paramount chief and ultimately the Vanua. Residents are adamant that if they depart the island, and they might encounter challenges in a new place. The Turaga Na Vunivalu is the head of Serua province. The province has 24 villages spread across four districts (GoF, 2021). The island of Serua has been historically regarded as the traditional residence of the Serua supreme chief. People of Serua revere the Turaga na Vunivalu, as the descendant and representative of the ancestor gods and as gods themselves. *"When we are true to the Vanua, and our chief, this island will be secured. When we are true to our chief, we are true to our God in heaven"* (Serua village, FG men). This ideology asserts that chiefs rule by right, not by might; Fijian chiefs are believed, still, to hold their position because their right has been prescribed. *"Our food, our firewood, and other resources are located on the mainland. Why are we still here? When we look deeper, our forefathers, chose to remain on the island and live like this just so they could remain close and serve our paramount chief. Now, this is a true reflection of an iTaukei person one who shows respect, loyalty, humility"* (Serua village, FG men). The people are aware of the authority bestowed upon their chief and the customary obligations imposed upon them in the Vanua.

(b) Sacred site (Vanua tabu)

The Vanua tabu are revered as sacred sites by the people of Serua Island. The supernatural beliefs in spirits and ancestor gods are centered around them. Most sacred spots were once inhabited by ancestors, served as burial grounds, or are thought to be the residence of ancestor spirits. People are not allowed to make noise or wander around these locations for fear that they may fall ill, die, or experience other sorts of agony. Two examples of sacred sites on Serua Island are the tombs of former paramount chiefs and the traditional or original location of the

first founding ancestor. *"Even though these Vanua tabu (sacred sites) strictly do not allow the activity of any kind, it still requires guardianship, so we can't abandon the island and relocate"* (Serua village, Interview).

Residents of Serua Island feel significant climate-related threats. The community members are split between the need to protect their cherished place and the need to relocate as the consequences of climate change worsen, even though relocation seems inevitable in the future: *"During rain associated with high tides and strong winds, one will find Serua village like a river or ocean filled with water. Despite these experiences we face due to climate-related impacts, it is our loyalty to our paramount chief that prevents us from leaving"* (Serua village, Interview). Residents are aware of climatic and environmental changes, yet they are unable to leave because they must continue to defend sacred sites.

(c) Newborn links to the Vanua through the umbilical cord connection

In an Indigenous Fijian household, a Magiti (food presentation) is made for the newborn child 4 nights following birth with contributions from both the parent's relatives. The child's expected removal of the umbilical cord is commemorated by this feast. The umbilical cord is carefully buried, and a tree is placed over it. Many villagers said that their umbilical cord was either thrown into the sea or buried in Serua Island. The burying of the umbilical cord binds newborns to the soil the forefathers are interred. One of the elderly women in Serua village perfectly encapsulated this life cycle when she said: *"The need to be literally planted in Vanua (land and ocean) is very important to us as Fijians as the ritual of the umbilical cord signifies. It is about identity and connection. Use of the tree indicates; the tree is part of the person tied to the Vanua. Wherever we go, the place where our umbilical cord is buried will always be cherished in our heart"* (Serua village, Interview).

Christianity is also of utmost importance in the lives of Indigenous Fijians, alongside traditional beliefs such as customary roles to the paramount chief of Serua, ongoing supervision of sacred locations, and the umbilical cord connection to the land. Plans existed to move the senior pastor's home to the mainland: *"Why should my house be on the mainland when the paramount chief's house is on the island? It is only right and appropriate and respectful that the church and the Vanua are located close to each other. That is the purpose from God. The church and the Vanua must go hand in hand. The further away from each other physically the weakening in its role, and purpose to the people of Serua"* (Senior pastor, Interview). Furthermore, the senior pastor adds that the church plays a significant role in influencing moral perceptions of the Vanua. If the Vanua is to prosper, the people must intensify their worship of the Christian God. *"When we prioritize God then our life in the Vanua will be complete, poverty, curses, ailments, extreme weather events, criminal activities, and environmental degradation to name a few will be defeated and harmony and wellbeing will prevail over the Vanua"* (Senior pastor, Interview).

4.4.5. Climate stewardship

The Vanua notion, which is central to Fijian culture, gives Serua Islanders a profound sense of connectedness to their physical, social, cultural, and spiritual selves. This sense of Vanua guides decisions to stay put rather than to relocate. Beyond deciding to stay, it also inspires people to take responsibility for their surroundings and community and to take actions that will safeguard and strengthen their resilience: *"The water, waves, wind, and the land on which Serua village is on is our Tokani (friends). We take care of them, and they will take care of us"* (Serua village, Interview). Serua Island inhabitants seek to protect their community, and the significance of this stewardship, an under-examined aspect of Vanua, is described and explored below.

(a) Taking collective action to safeguard Serua Island (maroro I ni Vanua)

The will of Serua Island residents to stay put has been strengthened even with the heightened pressures and climate-related risks they face. The young people of Serua, for instance, reflected on relocation as a strategy of adaptation: *"it's so important to begin the conversation around relocation now to minimize loss and damage in the future because it will generate an added desire to continue to protect our island"*. The elders remind the young Serua villagers that they must continue to protect the island, at any cost, and prefer *in situ* adaptation over relocation: *"We got together and buried that place where we saw the waves coming up on tothe land from senior pastor's house that side, and it worked"* (Serua village, FG men). The knowledge of the effects of climate change and the experiences of collaborative efforts taken to lessen effects unify and inspire the community to continue working together to defend their land: *"One of the most important lessons present climate-related risks can teach us is we are not powerless, and we must work together to save Serua village, our home" (*Serua village, FG women).

The people of Serua Island have taken several collaborative measures to safeguard and improve social and ecological resilience, both on their own and with outside organizations' help. Mangrove planting, waste management, beautification initiatives carried out by the Serua women's group, village engagement with local tourism hotels for eco-tourism activities (scuba diving and village experience), and the construction of nature-based seawalls in vulnerable areas are some of these stewardship activities. These activities are supported by the Government of Fiji (GoF, 2021). These stewardship initiatives are chosen, planned, and carried out using local and traditional knowledge: *"Traditional knowledge passed down to us from our elders regarding the weather, we learned from childhood days is after a big rain and when frogs make sounds that mean that*

the rainy weather had passed so it's safe to go outdoors" (Serua village, FG youth). The youth and women's group on the island also voiced the need for additional climate change awareness programs in the village: *"We are familiar with the traditional environmental knowledge of our island, but we would also like to learn more about the science of climate"* (Serua village, FG youth).

Deep cultural and kinship ties to their land and waters have been stated by Serua Island residents, and moving to a new place away from climate threats raises severe concerns about being uprooted from an ancestral territory and unable to maintain stewardship of a place of belonging. For the time being, they remain in place and are working together as a community to preserve and safeguard these connections.

4.4.6. Interconnectivity of Vanua

The many parts of Vanua were discussed separately in the section above to show that the concept of Vanua comprises more than just the physical dimension. This section illustrates the relationship between the different dimensions of Vanua (see Figure 2).

> *For us Indigenous Fijians, there are very strong links between the environment, our traditional way of life, and our spiritual life. The fact that we are humans doesn't mean that we should do what we like with our environment and the way it functions. Indigenous Fijians stand in the middle of the relationship between the physical and the spiritual world. We respect both and are closely bound to both these aspects and we will protect this island for as long as we can. The concept of this close connection or relationship is important in discussing climate change we are currently experiencing now and, in the future* (Serua village, Interview).

The Fijian word Vanua encompasses stewardship, social, cultural, spiritual, and interrelated physical components. Through Vanua, Serua village residents are bound to one another. Vanua is made up of the people, traditions, customs, beliefs, values, and institutions, and roles all of which coalesce with the aim of achieving peace, unity, and prosperity. Vanua fosters a feeling of identity and community. The emotional attachment and connection with Vanua have a significant impact on moral sentiments toward surroundings. For the majority of Indigenous Fijians, abandoning one's Vanua is akin to giving up one's life.

5. Discussion and policy implications

The Pacific Islands are one of the world's most climate-vulnerable regions, posing a serious threat to communities where people live and work as well as their emotional ties to those communities (Devine-Wright, 2013; Beyerl et al., 2018; Luetz and Nunn, 2020). If adequate measures are not done to mitigate climate change, and where *in situ* adaptation is not feasible, these effects may contribute to the relocation of people and populations (Warrick et al., 2016). However, recent research shows that moving is not always the best or preferred option (Adams and Adger, 2013; Ayeb-Karlsson et al., 2020). It will be necessary to develop new ways of thinking that challenge preexisting perceptions of immobility as signifying disadvantage, which is often referred to as "trapped populations" (Foresight, 2011). This paper set out to explore reasons why people might choose to stay in areas affected by climate change.

Serua Island is one of the 800 communities in Fiji assessed to be highly vulnerable to climate change and in need of relocation (GIZ, 2019); yet this study finds that Vanua underpins a reluctance among Serua village residents to move elsewhere. While communities such as Serua Island resist relocation, there is a very real possibility that rising sea levels, flooding, and other direct or indirect impacts will make it impossible for Serua Island residents to live in their current location in the future. If, and when such thresholds are met, and relocation emerges as the last resort option for Indigenous communities like Serua village, relocation would mean a way of life, and both tangible and intangible assets are compromised or lost. Relocation may put noneconomic assets (such as cultural heritage, sacred sites, foundation stones, traditional layout of the village, religious rites, cultural knowledge—including indigenous knowledge and practice) and personal objectives in danger (Blondin, 2021). This may be a difficult process to understand for an outsider because it means so much more than renouncing physical assets (buildings, infrastructure, and other human-made assets). These are deep-seated values linking communities to their land. Considering noneconomic values, like Vanua, allow decision-making models to move beyond economic and other quantifiable factors and better reflect the reasons why people prefer to remain.

Prominent Indigenous Fijian scholars that published works on Vanua include Nayacakalou (1955, 1975), Ravuvu (1983, 1987, 1988), Lasaqa (1984), Tuwere (2002), and Nabobo-Baba (2006, 2008). These authors have all noted and described Vanua to include complex biocultural, social, and physical aspects. However, in this study, the residents of Serua village called attention to another less well-known but no less significant facet of Vanua: stewardship. This is a crucial contribution to the understanding of Vanua, particularly considering climate change. The residents of Serua make plain that Vanua refers to the network of relationships between the natural environment, social bonds and kinship ties, ways of being, spirituality, and—importantly—stewardship (see Figure 2). Vanua, then, transforms how residents perceive, use, and protect their natural environment through active stewardship to enhance ecosystem resilience and human wellbeing.

This paper has examined the significance of Vanua in Indigenous Fijian culture, specifically in Serua village and surrounding sites. The land–people nexus is considered

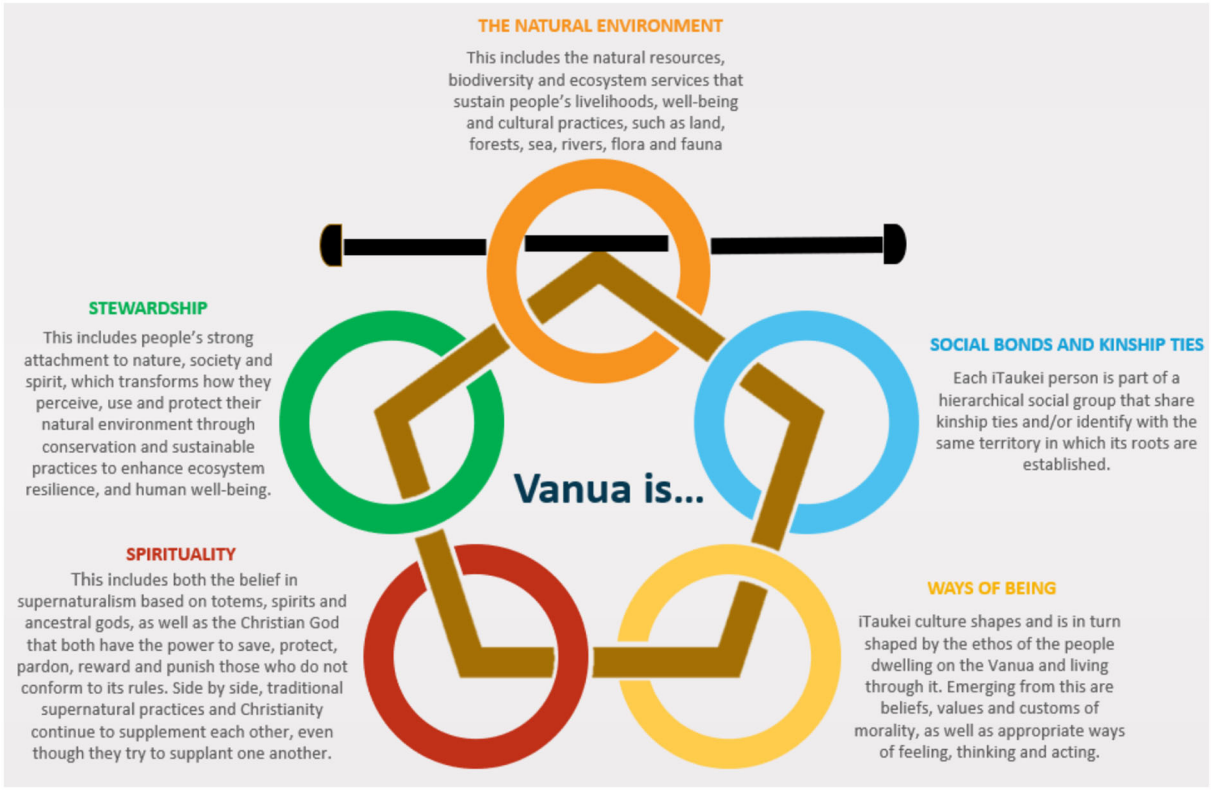

FIGURE 2
Vanua: at the epicenter of iTaukei culture (developed from presentationgo.com template).

indissoluble (Campbell and Barnett, 2010), yet in a warming world the land, ocean, and environment are changing. Climate change not only directly alters the natural environment (through erosion, sea-level rise) but it alters an environment's meaning, identity, and emotional ties (Reser et al., 2011). For Serua Island residents, this shapes decision-making in relation to environmental change, adaptation, and community relocation. It is time to understand the ways climate change and adaptive responses alter people–place relationships. As described above, residents of Serua Island understand that Vanua contains interconnected aspects in the physical, social, cultural, spiritual, and stewardship. Strong connections to one's socio-physical environment can encourage and create stewardship of place (Manzo and Perkins, 2006; Mishra et al., 2010; Devine-Wright, 2013). Stewardship was evident among Serua Island residents who coordinate restoration and protection efforts such as building nature-based seawalls, picking up waste along their shorelines, mangrove planting, conservation of water, and village cleanups. Residents described their deep cultural and kinship ties to their land and waters.

A stronger focus should be placed on Vanua in discussions on climate change impacts and adaptation in Fiji. This case study of Serua Island suggests that Vanua can contribute to a preference for immobility. Climate change adaptation policies and actions must consider voluntary immobility aspirations and avoid imposing adaptation measures without consent (see Adams, 2016; Zickgraf, 2018). For those who do not want to move, fostering adaptive capacity *in situ* is crucial. Policies should ensure that voluntarily immobile populations have access to relevant information on risks and potential consequences (Zickgraf, 2018) and receive assistance in putting adaptation plans into action. Throughout the Pacific, and elsewhere there are many cases of people choosing to remain in place, owing to strong place attachment and the noneconomic costs related to human mobility (McNamara et al., 2018; Anisi, 2020; Pill, 2020). Participatory governance and inclusive practices are essential to avoid potential maladaptation, loss and damage to culture, livelihoods, and social networks (McNamara et al., 2018).

Even though Serua village is exposed to and at risk from climate-related hazards, the residents call the island home. Serua village highlights the importance of recognizing and appreciating local and place-based reasons for voluntary immobility, including Vanua and stewardship of place. Policies and actions that conflict with the sense of Vanua run the risk of being viewed as threatening, or even rejected, making them less sustainable over time (Carrus et al., 2013). As

noted in, Gelves-Gómez and Brincat (2021, p. 73), a gap exists between Vanua and climate change policies in Fiji and highlighted that "…adaptation mechanisms do not mesh with local interests, belief-systems, or community needs they will remain ineffective".

6. Conclusion

This paper explored the motivations of an Indigenous community in Fiji to remain in place despite being faced with climate-related risks. It has made three contributions to the climate change and mobility field. First, it provides an empirical place-based study of immobility in a site where planned relocation is proposed as an adaptive response to climate risk. Voluntary immobility remains a largely underexplored topic for climate scholars and decision-makers; this paper adds to a small but growing body of empirical research on climate-related immobility. Second, the paper acknowledges and embraces Vanua as a concept of central importance in Fiji, as voiced by the people of Serua village, in the context of climate change adaptation including planned relocation and immobility. Vanua has provided the local community with the fortitude to resist relocation. The Indigenous Fijian phrase "Tu ga na I nima ka luvu na waqa" means that the boat is sinking but the bail for draining water from the boat is within reach. This metaphor reflects the experiences of Serua Island residents, where people experience and anticipate climate change impacts, but draw strength from Vanua and choose to remain. The third contribution is highlighting the importance of stewardship of place as a key component of Vanua. Indigenous peoples have historically managed their lands and livelihoods in a variety of climatic and weather conditions (Trawoeger, 2014). Stewardship matters in a warming world; in Serua, it provides a strong impetus to remain and protect a place of belonging and connection.

Indigenous knowledge and accounts provide opportunities to understand climate change and its impacts and adaptation options (Schmidt et al., 2011; Halder et al., 2012; Trawoeger, 2014). However, climate impacts and adaptation occur across diverse sociocultural contexts, "spanning political and cultural barriers as well as belief systems and worldviews" (Gelves-Gómez and Brincat, 2021, p. 76). Considering this, the international community must collaborate with local people and communities, including Indigenous and non-Indigenous communities, in codesigning and comanaging adaptation programs that are culturally appropriate and align with local goals.

Climate change impacts will increasingly be experienced, even if greenhouse gas emissions ceased today (Lyon et al., 2022). While global climate action is urgently needed (Woodward et al., 1998; Vicedo-Cabrera et al., 2021), residents of Serua and other places in Fiji and around the world adapt. In Serua village, for now, the need to remain and to protect a place of belonging outweighs the pressures to relocate as climate-related threats increase.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors upon request, without undue reservation.

Ethics statement

The studies involving human participants were reviewed and approved by the University of Melbourne. The participants provided their written informed consent to participate in this study.

Author contributions

Conceptualization, formal analysis, investigation, and writing—original draft preparation: MY. Methodology: MY, KM, and CM. Writing—review and editing: MY, KM, AP-M, and CM. Supervision: KM, CM, and AP-M. Project administration and funding acquisition: KM and CM. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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