CHAPTER 8

THE EFFECTS OF PRIVATE HOUSEHOLD INSURANCE ON CLIMATE CHANGE ADAPTATION STRATEGIES IN SAMOA

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ABSTRACT

Private household insurance has been relatively uncommon among households in Samoa to date. Meanwhile, numerous other adaptation interventions are also being implemented, including community-based adaptation (CBA) projects which draw on the skills of the community to address the climate change-related hazards that are expected to affect local communities. Through semi-structured interviews with community members from the urban/peri-urban area around Apia (with and without insurance) and an insurance company representative, this research explores private household natural perils insurance uptake in Samoa and the effect that the uptake of this insurance has on household engagement in other climate change adaptation (CCA) strategies such as CBA projects. Findings suggest that individuals whose homes are already insured with natural perils insurance are more likely to express more individualistic values or beliefs than those without natural perils insurance. Insured homeowners commonly framed adaptation as a technical challenge, with insurance being part of the technical and expert-led approach to prepare for, manage and recover from extreme events. In contrast, householders without insurance perceived CCA as less of a technical task and more of a social process. Those individuals with private household natural perils insurance coverage (in keeping with their more individualistic values) reported that they were less engaged in CBA projects compared to participants without insurance (who held more communalistic

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values). Given the importance of household participation in CBA projects, an increased uptake of insurance may have problematic outcomes for the adaptive capacity of the broader community.

Keywords: Community-based climate adaptation; disaster risk management; household insurance; social contract; Samoa; South Pacific

INTRODUCTION: INSURANCE AS CLIMATE ADAPTATION STRATEGY

International organisations, such as the United Nations (UN) and the Intergovernmental Panel on Climate Change (IPCC), have been increasingly promoting the use of insurance in developing countries in order to support climate change adaptation (CCA). The Alliance of Small Island States (AOSIS) first raised the idea of a regional-based insurance programme in 1991 (McGee, Phelan, & Wenta, 2014). However, after decades of discussions, it was not until the 2013 Warsaw Conference of the Parties (COP 19) meeting that the vision of the AOSIS was realised in the form of the 'Warsaw International Mechanism for Loss and Damages', which was established to manage risk at a national level (McGee et al., 2014). In 2012, the year prior, the IPCC released a special report: *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)* which recommended the use of risk-sharing tools, such as insurance, at all levels, including the local (household) level (IPCC, 2012). In 2014, the IPCC released the Fifth Assessment Report which also clearly identified the key role of insurance for supporting communities, especially in developing countries, to adapt to climate change (IPCC, 2014).

Despite the enthusiasm of international organisations for insurance at the local level, this strategy is relatively new to households in developing countries such as small island developing states (SIDS). Lucas (2015) estimates that among Pacific SIDS, the mean insurance penetration rate is as low as 1.6%. According to Munich Re, a global reinsurance provider, currently only 1% of households in low-income and middle-income countries have insurance coverage against catastrophe risks, compared to 30% in high-income countries (Ramachandran & Masood, 2019). Scholars have previously optimistically suggested that within a few decades, developing nations will 'constitute half of the global market' (Mills, 2005, p. 1040).

Private household natural perils insurance is a strategy that will join an existing repertoire of strategies that households within SIDS have already been using in order to adapt to climate change. Much of the scholarship exploring household adaptation to climate change in developing countries, such as SIDS, have identified that households are implementing strategies to respond to the environmental changes they are facing. In addition to diversifying their livelihoods (Béné et al., 2016; Campbell, Barker, & McGregor, 2011) and relocating their household to respond to environmental hazards, such as sea level changes (Kelman, 2018), scholars recognise that many households also participate in community-based adaptation (CBA) projects to address climate change-related hazards (Gero, Méheux, & Dominey-Howes, 2011; McNamara & Buggy, 2017). CBA projects come in

many forms, and examples can include community awareness programmes, community tree-planting programmes, community-built seawalls (Plate 8.1) and other activities that involve members across a community.

When successfully implemented, CBA strategies draw on and utilise a broad range of skills, resources and opinions across communities to collectively address local issues and increase community 'ownership of the adaptation' (Klöck & Nunn, 2019, p. 206). Yet household insurance is a more individual and private approach to adaptation, and is not a form of CBA, as households choose to invest in a policy to secure their own home and possessions from being damaged or lost by natural perils risks. Given the importance of household participation in CBA projects, it is crucial to understand if, and how, the introduction of private household insurance will shape household engagement in CBA. With a better understanding of how private household insurance affects household adaptation behaviour, policymakers and adaptation practitioners can make more informed decisions regarding adaptation planning and avoid encouraging adaptation interventions that may be maladaptive.

This research is based on fieldwork undertaken in Samoa, a small South Pacific island nation. This country was chosen because of the greater availability of information on Samoa's adaptation actions compared to other Pacific nations, including details about insurance penetration and the prevalence of CBA projects. Eight members of the Samoan public, selected from the urban/peri-urban area close to Apia, two with natural perils insurance and six others without natural perils insurance, and one insurance company representative took part in this exploratory research. The major research question that this study addressed is: How does the use of household insurance as a CCA strategy influence household engagement in CBA strategies in Samoa?

Plate 8.1. Community-built Seawall in Samoa's Capital Apia. Photo by A. Bartlett.

COMMUNITY-BASED CLIMATE ADAPTATION AND PRIVATE NATURAL PERILS INSURANCE IN SIDS: A BRIEF REVIEW

Relevance of CBA Strategies in SIDS

In the context of SIDS, where communities are vulnerable to a host of climatic and other hazards, CBA has been described as an essential strategy for communities to address both climate change issues and underlying social and economic challenges that exist across these nations (McNamara & Buggy, 2017). NGOs have promoted CBA as it may be a means of 'demonstrating the importance of participatory and deliberative methods within climate change adaptation … and the role of longer-term development and social empowerment as a means to reducing vulnerability' (Forsyth, 2017, p. 1). As there is no standard formula for CBA, communities can draw upon different types of adaptation interventions to reach a range of beneficial outcomes appropriate to their own situation.

Academics recognise that the presumed suitability of CBA in SIDS is due to the relatively small scale of the projects and how these projects typically address the local impacts of climate change (McNamara & Buggy, 2017; Westoby et al., 2020). Scholars have argued that community-based methods foster the development of appropriate local solutions (Ayers & Forsyth, 2009; Heltberg, Siegel, & Jorgensen, 2009), which challenges the command-and-control approach to environmental problems that is driven from 'above' (Rojas Blanco, 2006). Therefore, practical initiatives that tangibly address and improve societal adaptive capacity, thereby reducing vulnerability, are commonly expected to be evident at the community scale (Ford & Smit, 2004; Kates, 2000; Kelly & Adger, 2000). This benefit of CBA effectively allows communities to identify their own vulnerabilities and design solutions that are appropriate for their needs.

CBA projects have also been recognised as important for supporting development within SIDS as they reframe adaptation and guide projects that have multiple benefits. As Schipper (2007) observed, this reframing is occurring as communities want projects that address underlying social issues in order to reduce their vulnerability. As a result, there have been significant attempts to design projects that tie in development aims with CCA. Given that SIDS are all at various stages in their development, as McNamara and Buggy (2017) noted, it is assumed that CBA projects also include opportunities that would support sustainable development outcomes.

McNamara and Buggy (2017) note, for CBA projects to be successful, they need to draw on the skills of a broad range of community members. Despite the apparent suitability of CBA projects in developing countries like SIDS, many CBA projects have been considered unsuccessful. Scholars such as Barnett (2008) have suggested that the cause of many of the failures has been the way projects have been implemented by elite actors to the community, rather than by the community. For instance, many donor-funded projects have also become donor-directed, or directed by elite members within a community, without consulting with other members of the community. Betzold (2015) argues that this common practice has resulted in the exclusion of many parts of the community from the project, and the outcomes of the initiatives not adequately addressing the concerns affecting

the majority of the community. Therefore, Klöck and Nunn (2019) contend that the success of CBA projects is dependent upon the integration of the broader community, as this allows the projects to be community-owned and genuinely address the issues that are of concern to them. However, Westoby et al. (2020) argue that CBA projects also fail when they are designed by foreign experts and delivered back to the community. According to the authors, this results in CBA projects that cannot be continued by the community, especially once funding ceases. Thus, Westoby et al. (2020, p. 1) argue that the key to successful adaptation is that the interventions are 'locally-led', rather than being just 'community-based' in order to maximise the likelihood that they address the needs of, and can be sustained by, the community.

The focus on 'locally-led' projects means that local community members will be required to participate in CBA. Given that successful CBA projects require the engagement of the broader community, it follows that these community members must be available and able to participate in CBA. However, as Dodman and Mitlin (2013, p. 647) noted, communities are not homogeneous entities, which the CBA literature 'tends to assume'. Rather, there are power relations based upon age, gender and socio-economic positions within these communities which may work to exclude people from participating (Dodman & Mitlin, 2013). Furthermore, various factors constrain individual and household participation in CBA projects such as income and available time (Dodman & Mitlin, 2013). While Hagedoorn et al. (2019) recognise that household participation in community-based activities enhances adaptive capacity within communities, there are many barriers that can prevent individuals from being involved in community projects, such as social exclusion, time preferences and high opportunity costs.

Private Household Insurance and Individual Responsibility for Adaptation

Despite the increasing recognition of the importance of CBA, private insurance is also being increasingly emphasised by international organisations as a useful adaptation strategy. Schäfer, Warner, and Kreft (2019, p. 318) contend that 'insurance has been a cornerstone in climate impact related discourses of the United Nations Framework Convention on Climate Change (UNFCCC) from its establishment in 1992'. The potential of insurance to support adaptation was also outlined in several UN reports, including SREX (IPCC, 2012) and the Fifth Assessment Report (IPCC, 2014). Most recently, the UN Climate Action Summit held in September 2019 discussed how developed nations including the UK and Germany could work towards increasing insurance coverage, including the provision of microinsurance products in developing countries for the benefit of the most vulnerable members of society (United Nations, 2019). As a result, the benefits and critiques of insurance as an adaptation strategy have been increasingly explored throughout the CCA, risk management and insurance literature.

In the context of climate change, risk management scholars have emphasised the positive role insurance companies could play in reducing household exposure to climate change risks. Since the role of insurance started to be discussed in CCA discourse, scholars from the risk management and insurance fields have

emphasised the value of insurance as they argue it can encourage 'the adoption of measures designed to minimise damages' (Freeman & Kunreuther, 2002, p. 202). Similarly, Herweijer, Ranger, and Ward (2009, p. 379) argued that private insurance can 'incentivise and enable adaptation'. Scholars also emphasised the role that insurance could have in increasing the adaptive capacity of communities, particularly in developing countries (Hecht, 2008; Mills, 2007; Starominski-Uehara & Keskitalo, 2016). Specifically discussing SIDS, Campbell and Barnett (2010, p. 9) stated that insurance has the potential to increase adaptive capacity as 'people with insurance coverage are better able to recover from an extreme event than those without insurance cover'. This would increase adaptive capacity as communities could recover more quickly from a single impact climate change event, such as a cyclone, and prepare for the next potential climate change event.

However, the limited short-term adaptation benefit of insurance is a key critique that has emerged within the recent literature on insurance. O'Hare, White, and Connelly (2016) first began to challenge the usefulness of insurance as an adaptation strategy in the case of flood insurance in low socio-economic communities in Europe. These scholars argue that insurance merely serves to uphold the status quo by reinstating damaged property in a 'like for like' fashion, which means that the original materials that were damaged are what is replaced by the insurers. Accordingly, O'Hare et al. (2016, p. 1) argue that this serves to 'embed risky behaviours' and inhibit change after an event as the original structure which was destroyed is reconstructed in the same way, which supports a non-progressive form of resilience that maintains the status quo. For O'Hare et al. (2016), household natural perils insurance is therefore a form of maladaptation because it only addresses sudden and single event environmental hazards and does not adequately support long-term adaptation to a changing climate. This is an important critique to consider in the context of SIDS, which face both sudden and single event climate change risks (such as cyclones) and slow-onset risks (such as sea level rise).

An additional critique of insurance focusses upon the accessibility of insurance schemes for vulnerable people within a population. Drawing on social justice principles, O'Hare and White (2018, p. 389) stated that because some individuals 'might lack the resources required to … participate in insurance schemes', encouraging the increased uptake of insurance as a method of individual adaptation may be inappropriate. For these scholars, as the high costs of insurance premiums exclude households from taking out insurance coverage, this strategy would not be suitable for members of the community unless the policies were subsidised. This is an important critique as international organisations, scholars and commercial organisations are increasingly promoting insurance as a suitable adaptation method for households, including those in low socio-economic communities, around the world.

Within SIDS, due to the high costs associated with insurance, scholars have also directly questioned the practicality of insurance as an adaptation strategy within these nations. Baarsch and Kelman (2016) argue that as a result of exclusionary clauses and premium costs, private insurance policies are likely to be of limited value in Pacific SIDS. Parsons, Brown, Nalau, and Fisher (2018) also note that business people in developing countries struggle with affording insurance;

therefore, it seems unlikely that members of the community, who are typically in a lower socio-economic bracket, would be capable of affording insurance as they may have less disposable income to take out an insurance policy and meet any required preconditions. Combined, the contributions of these authors suggest that there are many limitations of insurance as a form of adaptation in SIDS due to the high costs associated with this strategy.

In addition to the high costs associated with insurance, scholars have also critiqued insurance as an adaptation strategy in SIDS as only some community members will be eligible for coverage. Surminski and Oramas-Dorta (2013) questioned the role of insurance as a form of adaptation across the region due to the range of climate change threats expected to affect SIDS. As many states across the Pacific region will face increasing climate variability and more exposure to specific climate change risks, insurance companies will not be able to offer insurance to all of society for all climate change risks. Insurance will not be available to all members of society due to the issue of 'insurability' whereby many climate change-induced risks are not insurable from a commercial perspective (Savitt, 2017). This issue of insurability is problematic because as the risks of climate change become more certain with time, it is more likely that areas and communities that were once insurable become uninsurable. Therefore, as the risks of climate change increase for SIDS, it is likely that in the future a lower share of the population will be eligible for an insurance payout despite investing in this type of adaptation in the present due to insurance companies progressively withdrawing coverage for increasingly high-risk areas.

Despite historically low levels of insurance penetration within SIDS, financial institutions are increasingly attempting to gain further penetration at the household level within the region. According to Lassa, Surjan, Caballero-Anthony, and Fisher (2019), insurance uptake in the Asia-Pacific region is among the lowest in the world. This runs counter to Mills' (2005) earlier predictions that insurance coverage for natural perils insurance will increase significantly in the developing world, accounting for over half of policies in the global market in a few decades. In Samoa, a report produced by the University of the South Pacific (USP) (2016) outlined the results of a financial programme, which included a module on insurance, administered by a commercial bank. The report noted that all individuals who attended the programme run by the bank felt more confident about the insurance options that would work for them (University of the South Pacific, 2016). While there is limited research available about the frequency of these programmes in SIDS, the report from USP exemplifies how insurance providers are trying to educate potential customers on the benefits of insurance coverage and expand the insurance market throughout SIDS within the Pacific.

Potentially as a result of insurance companies seeking to expand into new markets, a significant part of the scholarship on insurance is focussed on exploring the design of insurance products for developing countries, especially designing out the risk of 'moral hazard' (Linnerooth-Bayer et al., 2009). Moral hazard refers to human behaviour that intentionally increases the exposure of insured individuals (Mcleman & Smit, 2006). Miranda and Vedenov (2001) argued that insurers have tried to manage this issue by creating index-based insurance products that reduce

the incentives for insured households to intentionally destroy their property (i.e. crops) in order to receive an insurance payout. For household insurance policies, the establishment of strict prerequisites households must meet in order to be eligible for insurance coverage can also be described as a way in which insurers are working to prevent moral hazard.

Morale hazard is also a significant hazard generated by insurance coverage which has received little attention in the literature focussed on climate change insurance. Similar to moral hazard, morale hazard also refers to human behaviour that increases the exposure of individuals to potential perils, but it differs because it is a result of unintentional rather than intentional actions. The outcomes of morale hazard can be equally as damaging as the outcomes of moral hazard. A notable exception to the dearth of literature on morale hazard and CCA is the work of Mcleman and Smit (2006) who reconceptualised the standard approach to vulnerability into the language of insurance and risk management and developed a new conceptual model of vulnerability. The authors applied their model to crop insurance products (designed to reduce losses from climate change) to determine the effect of insurance on the level of risk the farmers faced. Through their novel approach, Mcleman and Smit (2006) found that morale hazard due to insurance coverage caused individuals to unintentionally make decisions that increased their exposure to climate change risks, for example, by choosing to grow a less diverse range of crops. Therefore, this finding exposed that in addition to moral hazard, research should also explore how insurance may result in morale hazard and the extent to which this hazard might offset the potential benefits of insurance for reducing risk.

Discussions about the role of insurance also feed into a larger debate about the responsibilities of different actors within society for managing environmental issues such as climate change. Pretty and Ward (2001) argued that the responsibility for the environment, traditionally managed by the State, was increasingly shifting to individuals through government policies. Several scholars have argued that this shift in the traditional division of responsibilities between the State and society is a result of the governing regime of neoliberalism, which advocates for the elimination of price controls, deregulation of capital markets and increased privatisation (Blythe et al., 2018; Joseph, 2013). In the context of CCA, Adger et al. (2013) argue that unclear social contracts between States and communities may be problematic, and therefore should be made explicit in order to promote effective and consistent long-term CCA.

If the social contract, the division of responsibilities between the State and society, becomes explicitly clear, individual community members may become abruptly responsible for adapting to environmental changes. Vilcan (2017) has drawn on the governance concept of 'responsibilisation' to describe the process where responsibility shifts, or appears to shift, from governments to individuals within adapting communities. According to Vilcan (2017), this process of responsibilisation is driving individuals and communities to manage adaptation themselves, despite largely not being responsible for the issues causing the changes to their environment. Explored largely in the context of flood risk management, the responsibilisation of the community requires citizens to manage and implement

their own risk management initiatives, though there is doubt regarding their ability, or adaptive capacity, to do so (Walker, Whittle, Medd, & Watson, 2010). Research conducted by Bergsma, Gupta, and Jong (2012) on the use of insurance to manage flood events in the Netherlands suggested that the increasing use of this individualistic strategy has caused fragmentation in society. This breakdown of social ties within the community has resulted in a reduction in the overall capacity of Dutch society to manage the risks and adapt to flooding as households are acting autonomously, rather than collectively. This suggests that there is a strong link between a changing social contract (real or perceived), increasing individual responsibilisation, individual insurance coverage and a reduced capacity in the community to respond to environmental issues, like flooding.

Customary Forms of Insurance in SIDS

Scholars in the field of anthropology, economics and rural sociology have identified that in many developing country contexts, individuals and communities are more likely to rely on traditional relationships of reciprocity and mutual assistance to avoid losses rather than engaging with Western forms of insurance (Fafchamps & Lund, 2003; Platteau, 1997). Reciprocity essentially functions as a form of insurance as there is a strong belief by community members that if goods, such as money or food, are shared with others, they will be returned to a similar value in times of need. In many instances, if a community member wants to leave the informal system without having to claim back their goods, the goods will be returned to them in their entirety (Platteau, 1997). Evidently, this is very different from the way in which Western insurance companies operate.

Scholarship on traditional forms of insurance exploring the use of these socio-cultural forms of insurance against climate-induced hazards within SIDS remains scant. Despite the recognition that in developing countries, communities are more likely to use reciprocity as a form of protection against loss than commercial forms of insurance, there has been little systematic research exploring such social mechanisms within SIDS nations in terms of their role as a form of insurance against the risks of climate change. Notable exceptions include the work of Perkins and Krause (2018) and Hofmann (2017) who have explored traditional forms of insurance used to protect communities from environmental changes in the Federated States of Micronesia (FSM). Perkins and Krause (2018) identified how the Sawei system operating in Yap State has enabled the local communities to adapt to climate change. The Sawei system is a 'bicultural system of tribute offerings, gift exchange, and disaster relief' between MI [main island] and OI [outer island] cultures (Hunter-Anderson & Zan, 1996, p. 1, as cited in Perkins & Krause, 2018). As Perkins and Krause (2018) noted, the structured movement of goods between the main and outer islands of Yap ceased long ago, but the legacy of the system continues to shape the relations between people living on the islands. Perkins and Krause (2018, p. 73) have described the practice as an 'adaptation of mutual reciprocity' since one set of islands provided the other set of islands with the resources they needed in order to survive. Hofmann (2017, p. 88) similarly identified the movement of individuals and communities between islands in Chuuk State,

FSM, as a socio-cultural activity that served as a form of 'insurance' for the local communities. The ongoing use of these systems in Yap State and Chuuk State during periods of environmental change indicates that they have a history of success in protecting the communities from loss.

While not directly referring to a form of mutual reciprocity, Le De, Gaillard, Friesen, and Smith (2015) recognised that Samoan households consider the transfer of money, or remittances, from family living abroad as a form of 'self-insurance' during post-hazard periods. Underpinning Samoan society and all aspects of Samoan life, including their economy, is *fa'asamoa*, or the 'Samoan way of life'. *Fa'asamoa* comprises three key aspects which include *matai* (chief system), *aiga* (family) and religion (Thornton et al., 2010, p. 1). Parsons et al. (2018) argue that *fa'asamoa* plays a key role in driving decisions, including around CCA. In addition to attending religious services, households within Samoa have a cultural obligation to donate generously to the church. As part of *fa'asamoa*, there is an expectation held within the community that each household will give financial donations to the church in their village. As noted by Thornton et al. (2010, p. 7), this type of kinship obligation carries a significant financial burden which 'presents a dilemma for those who are struggling to cope with increasing hardship'. However, the movement of money and other goods between families and the church can also be seen as a form of 'community insurance', as there is an expectation that social-cultural networks will support families in the aftermath of disasters. Clearly, given the recognition that societies in SIDS are utilising traditional and communal forms of insurance to protect themselves against losses, it is important to consider the extent to which this may impact the uptake of private insurance coverage.

In conclusion, despite the growing amount of literature focussing on adaptation, significant gaps still remain. There is a dearth of studies that have sought to explore different people's perceptions of insurance within developing countries through qualitative methodologies, and little is known about the uptake of household insurance as an adaptation strategy in the Pacific. Furthermore, of the scholarship that has addressed potential maladaptation caused by insurance, no research has explored the effect insurance coverage may have on CBA strategies. Therefore, this study seeks to contribute to filling this gap by exploring how individuals in urban and peri-urban households in Samoa perceive household insurance as a CCA strategy and how this influences their engagement in CBA strategies.

METHODOLOGY

Given the exploratory nature of the research project, semi-structured, conversational interviews were considered as the most culturally appropriate method in the context of the fieldwork location of Samoa. *Talanoa*, which translates to storytelling, is a means of communicating that is appropriate in the Pacific context, particularly in Samoa, Tonga and Fiji (Vaioleti, 2006). This form of communication allows meaning to be co-created in the interview process between the participant and the interviewer through the use of personal stories. This simultaneously

develops a sense of trust between the researcher and the participant which allows for sensitive or personal topics and information to be discussed safely.

Research participants were recruited through a third party, a Samoan research assistant. In accordance with ethics regulations, particular emphasis was given to informed consent and non-disclosure of research participants' identity. Interviews were conducted face-to-face by the first author, with a total of nine participants who represented the Samoan public (referred to as CM1-8 in the findings section) and a Samoan representative from a major insurance company (IC1) in Samoa. All participants agreed to have the interview recorded. Interview transcripts were coded with NVivo 12 software and thematically analysed.

FINDINGS

This section presents the results obtained from interviews with community members and an insurance company representative in Samoa. Three critical themes emerged from the interviews and are used to organise the results. The three key themes are: (1) a shared and strong sense of individual responsibility for adaptation; (2) the technical and self-oriented approach to adaptation taken by households with natural perils insurance coverage; and (3) household insurance as a new challenge to the existing socio-cultural 'insurance' networks in Samoa.

Strong Sense of Individual Responsibility for Adaptation within the Community

The first theme evident in the primary data concerns how different people (insurance company representative, community members) perceived who was responsible for planning for, and enacting, adaptation at the household level. In this section, we present the different perceptions the research participants held on the topic of individual responsibility for climate change in Samoa.

Research participants frequently raised the topic of responsibility for adaptation. They questioned who was responsible for implementing CCA actions. The insurance company representative suggested that people in Samoa did not possess a strong sense of responsibility for taking individual actions to reduce their vulnerability to environmental hazards, including those related to climate change, due to the Samoan identity. Samoan community members were perceived by the insurance company representative to 'take things lightly' and underestimate their risks:

> I know our people. They just joke about everything and anything, [they] take things lightly. If they see a wave, you know, a big tsunami coming, they're probably going to make a joke right before the tsunami hits them … but that's just how our people are …. People can probably see those aids and people coming in to help build something. And then to them its 'Oh, we're settled. Nothing to worry about. This is awesome.' (IC1, 2019)

With this obviously paternalistic statement, the insurance company representative suggested that this attitude made the Samoan community dependent on external assistance. This comment also implied that the insurance company representative is of the opinion that Samoan people are resistant to taking on the responsibility for enacting disaster risk reduction and CCA strategies. He also

characterised Samoans as lacking motivation for change and void of a sense of personal responsibility for adaptation. Instead, he considered Samoan people to be reactive (responding to environmental hazards following extreme events) rather than proactive in their actions and mostly dependent on foreign (outside) knowledge, skills and financial support in times of crisis. However, as the following paragraphs will show, this characterisation of Samoan community members as dependent was not represented in most responses obtained from participants representing the community.

The majority of community members interviewed as part of this research expressed a strong sense of individual responsibility for adapting to the impacts of climate change, which included the desire to receive training in how to do so. When the topic of responsibility was raised with participant CM7, for instance, she declared that 'I think everybody should get involved.' Similarly, when participant CM5 was reflecting on the responsibility of individuals to implement adaption strategies, she expressed a clear desire to take on more responsibility for CCA:

> So, I think, I think whichever – governments, local governments or someone from overseas – should, what's it called, empower our communities to do projects for climate resilience. (CM5, 2019)

The above quote, which was representative of the views of most of the community members interviewed in this research, highlights their view of shared responsibility for CCA. Rather than being merely dependent on outside assistance, CM5 articulated a more nuanced depiction of the relationships between external actors (international, national and local government institutions) and local communities. The adaptation policies and projects should empower community members (and communities) to be able to take responsibility for addressing the impacts of climate change. Community members did not appear unwilling to take on more responsibility at the community level for adapting to the impacts of climate variability, including extreme weather events, and ongoing changing climate conditions. Instead, community members were constrained to take on personal and collective responsibilities for climate adaptation due to existing power dynamics and institutional arrangements. Recognition of the need for community members to take responsibility for CCA and their desires to be given more responsibility through CCA policies and projects in the future was further emphasised by participants' expressions of disapproval about other organisations being given responsibility for adaptation.

When discussing the role of the Church (which includes a diverse range of different Christian denominations) within Samoan society, one community participant (CM6) spoke about her opposition to Samoans being dependent on such organisations for assistance with adaptation (and in post-hazard periods). In Samoa, CM6 noted, religious groups as well as NGOs and international aid agencies were involved in projects to assist Samoan communities to adapt to climate change. Several research participants spoke disapprovingly about such organisations, sources of foreign aid and the ongoing pattern of receiving aid from external sources as a way to cope with extreme events.

> But I would never expect the church to come help, which is why as you can see, I put a lot of effort into doing what I think [is important] and that is for my own safety, for my own future. (CM6, 2019)

For CM6, individuals were (or should be) taking responsibility for adaptation, rather than relying on outside assistance (including insurance companies). The sense of individual responsibility and the emphasis on individuals' agency (and capacities to enact changes) were strongly expressed by the Samoan community members who participated in this study, which contrasted with the insurance company representative's depiction of Samoans as being dependent on foreign assistance and unmotivated to take actions to reduce their vulnerability and adapt to climate change.

Technical and Self-oriented Approach to Adaptation by Households with Natural Perils Insurance

The second theme developed from the interviews reflects the way in which households with natural perils insurance engage in adaptation in a more self-oriented and technical manner compared to non-insured participants. In this section, different strategies that households implement or engage with in order to adapt to climate change are explored. The strong sense of responsibility that community member participants in this research feel towards CCA is clearly evident in their reported behaviour and engagement with adaptation strategies. Five out of the six participants that did not have natural perils insurance coverage were involved in implementing or engaging with strategies at both the household and community level. The other two participants, who had natural perils insurance, did not report engagement in CBA strategies, such as growing community crops inland, planting community trees or attending community seminars.

When participants discussed whether they were using household natural perils insurance to adapt to climate change, the two households with the natural perils insurance coverage focussed on describing the logical nature of their behaviour to take out an insurance policy. Both participants indicated that investing in an insurance policy with natural perils coverage was a logical decision considering they were living in Samoa, an environment exposed to climatic and other hazards. For these participants, it was logical because they trusted that their insurance policies would cover the value of their properties in the instance of an environmental hazard linked to climate change. Both participants also highlighted that their households have been a big investment for them, and thus, they are 'worth' protecting:

> I grew up in New Zealand so if you want to protect your investment, it's not a stupid thing to do, especially when you're in an area which does have cyclones. (CM1, 2019)

> So, when I moved back to Samoa, we bought a cemented concrete double storey building, injected a lot of money for renovation, making sure we get everything done. Insurance on the house, insurance for both businesses, the coffee shop and the [restaurant], insurance on the cars, dogs, … everything. (CM2, 2019)

Clearly from the perspective of these householders, the use of this strategy in Samoa was a rational choice to protect the financial value of their investment, their household. The participants also indicated that their decision to take out household insurance was significantly shaped by their international experiences. CM1 directly noted that their experience living in New Zealand shaped their thoughts

on insurance. This participant alluded to the importance of accumulating wealth and protecting it, through the purchase of property, which, according to the participant, is symbolic of the culture in New Zealand. Additionally, throughout the interview with CM2, the participant also described how experiences of living in Europe and New Zealand shaped their worldview, which included their opinions on the importance of insurance. These comments strongly reflect how participants have brought the concept of insurance and ways of thinking about this strategy back to Samoa.

Unlike the participants who use natural perils insurance as a form of adaptation, other research participants perceived insurance as an illogical waste of money. The one participant who had household insurance without natural perils insurance and the two participants who no longer had insurance coverage expressed far more critical opinions of insurance as a suitable adaptation strategy compared to the participants with natural perils coverage. Instead, these participants claimed that insurance was an illogical choice for economic reasons. A major concern of these participants was that in the instance of an environmental hazard that caused damage to their property, the amount of compensation they would receive after making a claim with the insurance company would be less than the amount of money they had paid the insurance company in premium fees:

> If I add all the premiums that they can ask me to pay them on a yearly basis, and then compare it to any damages that would occur, whether it be from climate change or strong winds or whatever, I think I would much rather fork out the money and it will cost less. (CM3, 2019)

This attitude was expressed as a result of previous personal experiences and stories of other people within the community who had experienced difficulty when making claims with insurance companies. Another participant also demonstrated her scepticism of insurance, stating 'like I said, I'm very wary of their small print that they have' (CM7, 2019) due to a past experience trying to gain compensation from an insurance company after a cyclone struck her property. Clearly, these critical reflections on insurance reveal there are very different perceptions of the value of insurance and experiences with the trustworthiness of insurance companies among the participants interviewed in this research project within Samoa.

Participants with natural perils insurance had homes that were built to a higher technical standard than participants without insurance. When discussing the resilience of their household, three participants identified that they had built or purchased a home that was resilient to the effects of climate change. Two of these participants also had the natural perils insurance to adapt to climate change, while the other participant did not. Despite all three participants identifying that they had built or purchased a resilient house, there was a marked difference between the insured participants and the participant without insurance. The insured participants focussed on how their home had been built to a specific standard, such as a 'Kiwi Build' (CM2, 2019) standard, or designed by a certified 'engineer' (CM1, 2019) to be resilient to climate change. However, when the participant without insurance was explaining how they were building a new house with concrete in order to be 'stronger and cooler' (CM8, 2019), they mentioned that it was not designed by an

engineer, but a friend of the family, a builder. When discussing the construction of the home, this participant reflected on how the quality of the workmanship had occasionally been poor. As a result, several contractors had been used to build the home. These responses suggest that there was likely to be a difference in the quality and resilience of the homes of the insured participants compared to the uninsured participants – probably due to the wealth differences – despite the three participants identifying that they were implementing the same strategy.

The insurance company representative indicated that in order to obtain insurance certain building requirements (such as an engineer's report) specific to the insurance company must be met. According to the insurance company representative, many households in Samoa are still living in traditional housing situations, such as 'huts, with coconut leaves as roofing' (IC1, 2019). The insurance company representative acknowledged that this was a problematic situation for these households as it would be a barrier preventing them from obtaining insurance coverage. The insurance company indicated that these households would be excluded from coverage as the risk of damage to their household would be too high, and therefore, the insurance company would be unwilling to provide insurance coverage. The insurance company representative described how their process of assessing households to determine whether they are insurable excludes many types of buildings, in favour of buildings which are constructed to a higher technical standard:

> And so, if we go to see a building and it's a rundown building, I would say, uh … it's made out of timber [for example], it's a risk that we probably would not want to take, and therefore we will probably have to decline [their request for insurance]. And so, [because of that], I'm sure people won't bother to insure, unless they have a brand-new house or very solid building. (IC1, 2019)

Additionally, the participants with household insurance had more technical strategies to prepare for the post-hazard period. Drawing on an experience with Cyclone Evan in 2012, when most of the electricity in Apia was down for months, participant CM2 described why it was necessary to install a generator and a water tank. The participant emphasised the practicality of this adaptation strategy, as it would allow them to remain 'functional' if another devastating event should occur, unlike in the aftermath of Cyclone Evan:

> So, making sure you have a water tank and making sure you have a generator and the generator to run electricity for the property. For example, we have a generator here, at home, at the restaurant, just to make sure that you know, you know, you can keep the food cool. Then, if you need maybe a place to go, then you know everything is functional. (CM2, 2019)

During the interview, the participant also mentioned how other community members seemed to challenge the participant's decision to invest in this strategy. The participant described how other people in the community had questioned his decision to replace the existing generator, 'And people will say, well, why are you buying a new generator?' (CM2, 2019), rather than expressing support for the decision. Despite this, the participant stated that they proceeded with the generator as they felt that in Samoa 'you just need to be in the state of mind of always being on the safe side' (CM2, 2019). Considered in the context of the interviews with the community members, this further represents the self-oriented behaviour

of the insured participant as they spent money on their own adaptation strategy, rather than giving it to CBA projects which would benefit the broader community.

When non-insured members of the community discussed how they were adapting to the anticipated losses from an environmental hazard, they identified less technical strategies. One participant without household insurance mentioned that her household has a basic 'preparation kit' (CM4, 2019) which contains simple emergency supplies, such as a torch and non-perishable food, that they can use in the event of an environmental hazard, such as a cyclone. Compared to the participant using generators and water storage, this strategy allows this participant to cope, rather than remain functional. There is clearly a big technical difference in the strategies that the household with natural perils insurance and the one without natural perils insurance are using in preparing for climate change events.

Furthermore, the adaptation strategy that was most frequently discussed by participants within the interviews was ongoing basic do-it-yourself (DIY) maintenance to their home in order to make it secure and ready for weather events which may be aggravated by climate change. Conducting ongoing DIY maintenance to their house was the strategy that most participants identified implementing in order to adapt to climate change at the household level. For most participants, this meant 'nailing down' (CM7, 2019) or 'buckling down' (CM6, 2019) the surface material of their home in order to make it more stable before cyclone season. This strategy was also suggested by one of the participants with natural perils insurance coverage as a strategy that would be most appropriate for other people within the community to implement. Despite having insurance for their own home, this participant said that 'tying down their roofs' (CM1, 2019) would be the most appropriate adaptation strategy that other members of the community should do, rather than purchase household insurance. This suggests that less technical solutions are considered unsuitable for households that have insurance. However, this may be because insured households are built to a higher standard than those without natural perils insurance.

The participants without natural perils insurance expressed a strong sense of awareness and involvement in community adaptation events that were occurring in their village, and more broadly across Samoa. Many participants spoke of their awareness about local initiatives that they could participate in, such as community meetings, through to nation-wide initiatives, like tree planting. Research participants without insurance coverage for natural perils described themselves as being 'very busy' in their day-to-day lives in Samoa, but despite their busy schedules, they discussed their involvement in community-based strategies. These participants identified that these initiatives were successful because people across the community were all doing their part:

> I think tree planting is one of the best ways that we're all doing. (CM6, 2019)

Furthermore, these participants without natural perils insurance also discussed the collective benefits that participating in these projects could have for community resilience. Attending seminars, meetings and participating in community-based emergency drills were strategies and adaptation events that several participants reported actively engaging in. Three participants identified that

their communities were implementing these CBA strategies, such as engaging in community seminars or emergency drills, in order to ensure that people within the community were prepared for environmental hazards associated with climate change, such as cyclones and other hazards like earthquakes and tsunamis. The importance of these events was emphasised by these participants as they bring the community together and ensure that everyone is aware of what to do in the case of an emergency:

> Yeah, I think with our church community we actually had like a session where the pastor would make sure that we understand, especially with the cyclones, and when we had the earthquake. They actually gave a little session about, you know, preparing and being prepared. When there would be a cyclone we would have to evacuate, the numbers to call, you know we have 911 now, and where a centre would be for our church community to actually come and gather together, say if something happened. So, we have the church community hall that actually caters if a disaster came up and people who have their houses destroyed or something. They can actually be, they are supposed to come there for shelter. (CM3, 2019)

Additionally, the important environmental and social outcomes that participating in CBA strategies could have on the environment were also highlighted by participants without insurance. The participants without insurance spoke about how strategies such as the community planting initiatives directly help to address the cause of climate change by reducing atmospheric carbon dioxide, while simultaneously helping to enable community members to adapt to rising temperatures because it provides shade for people. Of all the adaption strategies mentioned by participants, this strategy was the one that resonated most strongly with the majority of participants:

> To plant trees to save the, uh, the climate. [They] will help with all the changing of the weather. So, I think everybody's aware of trying to plant, and don't cut down those trees, but leave some …. Yeah, everybody goes out and plants some. It's called conservation day. They have it on a Monday, usually it's on a Monday and it's a day off ….That's what we're doing. (CM7, 2019)

However, when the topic of CBA was raised with participants during the interviews, participants with natural perils insurance did not have many comments to share about strategies being implemented within their communities. An exception to this was one participant expressing their awareness about community seminars being held in order to help with CCA. However, they stated that they were too busy at work to attend community events of this nature:

> Well, actually, not much. I am pretty much busy with my two family businesses that I don't get much time to go to events or conferences. (CM2, 2019)

These reactions clearly reflect how attending community events, like seminars, is of a low priority to these insured participants as they were unable to spare time to attend the events. This is particularly clear when compared to the responses of the participants without natural perils insurance, as they described being similarly busy in their everyday lives.

Furthermore, when discussing CBA projects, participants with natural perils insurance chose to highlight that they perceived the actions of other community members as irresponsible. These participants highlighted that they felt community members made poor personal choices as they did not take proactive action to

adapt. One of the participants with insurance focussed on the choice of individuals within the community to live in vulnerable areas, while the other participant focussed on the reactive nature of people within the Samoan community:

> Um … because, you know, a lot of it is up to personal choice because a lot of people choose to live in vulnerable areas, because of their family connection. Sometimes they feel they have nowhere else to go. So, you know, they have made themselves more vulnerable to climate change by choice. Not because they want to be vulnerable, but because that's where they decided to live, and they are well aware of the risks of living there. (CM1, 2019)

> What I think, Samoa has never been a very proactive country … it's kind of a last-minute rush to the shops and trying to buy candles, some canned food, or try to fix the house, everything happens very last minute. (CM2, 2019)

These criticisms emphasise how the participants who have natural perils insurance believe that individuals are responsible for managing risks associated with climate change-related hazards. This approach reflects a self-oriented approach to adaptation and helps to explain why they may not be engaging as actively as people without insurance in community-based initiatives.

Clearly, despite the active and meaningful participation and engagement in community strategies reported by most participants, there was a distinct lack of engagement in these strategies reported by the two participants who were using insurance as a household adaptation strategy. As shown, the participants with natural perils insurance did not report engaging in adaptation strategies beyond the household level, unlike other participants without natural perils insurance. The focus of these participants on their own households reflects a self-oriented approach to adaptation.

Private Household Insurance as a New Challenge to Existing Socio-Cultural Security Networks in Samoa

The third major theme that emerged from the data concerns the way in which insurance is perceived as a new challenge to the existing socio-cultural security networks that operate in Samoa. This section explores how participants without insurance perceived it as a foreign concept and an expensive form of adaptation that challenges the existing cultural obligations of Samoa. Participants also identified an existing form of socio-cultural insurance in Samoa, which the introduction of Western insurance products appears to be challenging.

For most participants, the alien nature of insurance was identified as the reason why insurance penetration was so low in Samoa. Some participants suggested that only people living in the capital city, Apia, would be aware of insurance, and that the community members living further from the nation's capital would be unaware of the concept. One participant directly stated that insurance is a concept from abroad:

> With all due respect from the Samoan community, this concept of insurance … it comes from overseas. (CM4, 2019)

The perspective of the insurance company representative confirmed these views, emphasising that this was an issue that needed to be addressed. He described an

awareness-raising initiative which involved speaking to children in several schools. However, it was acknowledged that this initiative would exclude the vast majority of the population. The response from the insurance company shows that insurance is currently not a widely used strategy within Samoa, but attempts are being made by the industry to promote the strategy in places beyond the capital Apia in order to increase the uptake of coverage:

> Well, we did once get involved with something that was arranged with the Central Bank of Samoa, where we did speak to about 100+ students from different schools and talk about insurance. But as you know, those types of programs and workshops would really help [promote insurance] not only for students, but to the public in general. We get a lot of profiles for commercial risk and these people understand the importance of insurance, but it's the other maybe 80% of the community who don't understand is the concern for us. And it's them that are the target. Not so much that we want their money …. (IC1, 2019)

Many participants also highlighted that fulfilling cultural obligations was of a higher priority than purchasing insurance in the Samoan context. Most of the participants interviewed raised the cultural obligations towards which they are expected to contribute as a major barrier limiting their financial capacity to take out insurance coverage. Donations to the Church and financial support to family members are expected and some participants identified that this was due to the competitive culture that existed between households, where they needed to donate more money than other families, especially to the Church, in order to retain a high social standing:

> I'm not sure if it's culture but you know how we do fa'lavelave [funeral, wedding, other life-altering event]. We have obligations to do like funeral, family bestowments and also we have obligations when we become chief. So, most of the family have to give money to church, to the village, and fa'lavelave. I think the mentality is that when it comes to fa'lavelave, when it comes to funeral and things like that it becomes the priority for most of Samoan families give a lot of money to funerals and stuff. (CM5, 2019)

Evidently, the cultural traditions and obligations within Samoa place a large financial burden on households, which plays an important role in shaping household uptake of insurance. While the insurance company representative agreed that insurance is expensive, he also emphasised that it was an attainable form of CCA for members of the broader Samoan community. When discussing the considerable costs of insurance coverage including natural perils coverage in Samoa, the insurance company representative acknowledged that it was expensive for the average family in Samoa. Similar to participants from the community, he also noted that cultural events are a priority for many families which limits their financial resources. Yet he also suggested that if a household wanted to ignore these cultural obligations in order to take out insurance, it would be possible:

> Because if it's important, if you understand and if you know what's important, regardless, you put money into it. I think money will come second or third to being the issue. But if your mind is set to something, and you know how important it is, then regardless if it's expensive or unaffordable, you make, you make an effort to, to get there and do something about it. (IC1, 2019)

Yet the insurance company also acknowledged that they were considering potential strategies to assist households in overcoming the financial barriers that

prevent Samoan families from taking out insurance coverage. The representative expressed that it was difficult for households to take out insurance coverage due to high premium costs and the prerequisites they must meet, such as an engineering certificate of the property. As a result, the company was exploring potential ways they could assist households in taking out coverage.

When discussing the topic of choosing whether insurance was necessary in Samoa, many participants expressed that there is an existing system that serves as a form of insurance against losses in Samoa. Many participants talked about how they felt that Western insurance was not necessary in Samoa. In particular, participant CM8, who had spent more than 50 years living in New Zealand and had had household insurance coverage for his home there, reflected on the decision to return back to Samoa and to not take out insurance coverage for the family home in Samoa:

> But it did arise in my mind that this is home and there is no need for insurance. (CM8, 2019)

Taking time to think about the reasoning for this response, this participant expressed that there was a culture of reciprocity that already existed in Samoa before the concept of insurance was introduced.

> I'm finding that insurance maybe is a foreign idea that gets pushed and slowly creeps in…. And, it takes away that openness to compensate for (imitates the voice of a young boy) 'Fa'amolemole (please), can I please have some money or some mangos to eat because our crops aren't going too well?'. (CM8, 2019)

This response highlights how people in Samoa have managed difficulties and hard times by drawing on their social network. While the participant was sharing this opinion, he also shared a story of an interaction with a young boy that had occurred during the morning, just prior to our interview. The young boy from a neighbouring house in his village had come over to ask for some mangos to eat because his family was hungry. This story helped to emphasise how close social relationships are between people within the community in Samoa, literally and physically, and that they serve as a form of insurance for many people within the community.

DISCUSSION AND CONCLUSION

Given that CBA strategies are an essential part of Samoa's approach to adaptation, there is a risk that increased insurance coverage may have a significant impact on the adaptation outcomes of Samoa. Within the scholarship, there is consensus that CBA strategies are an essential way in which SIDS, including Samoa, can successfully adapt to climate change. This is due to how CBA strategies allow for CCA to be implemented from the 'bottom up', with interventions and projects designed at the grassroots level to address climate change impacts that will be of concern to people at the local level. Within Samoa, participants in this research confirmed that CBA projects are addressing a range of climate change effects affecting the community at the local level. However, despite the relative success of CBA in Samoa, there is also a parallel push by insurance providers, development agencies and government to increase the number of people

taking out private household insurance across the country as a way to reduce the risks to their properties posed by climate change-related natural hazards. Yet, if there is indeed a tendency of insured households to become more self-oriented, the success of CBA projects may be reduced due to a decrease in the level of participation of insured households in CBA strategies.

Furthermore, the eligibility criteria that prevent many members of the Samoan community from gaining insurance challenge the assumption that insurance coverage can be a widely adopted adaptation strategy by households. As shown within the literature on CCA, there is some confidence that insurance can support adaptation efforts in communities in developing countries. However, a growing portion of the literature has identified that there are several social justice and equity issues that act as barriers preventing large parts of the population from gaining coverage. Scholars have identified the costs of insurance premiums and the location of households as two significant barriers preventing the uptake of insurance (Baarsch & Kelman, 2016; Parsons et al., 2018; Phelan, 2011; Picard, 2008). As identified in the findings section, insurance companies are addressing the cost issue by considering subsidised premiums for households. However, it was also revealed by the insurance company representative that insurance companies require households to confirm the structural integrity of their homes before they can be insured. It was acknowledged by the insurance company that many households in Samoa are constructed with traditional building materials such as coconut husks, rather than the materials used in modern Western homes, and consequently, these households would be unable to take out insurance.

Given the collective nature of Samoan society, the socio-cultural system, *fa'asamoa*, can be understood as a traditional form of insurance as it helps to prevent loss across society. As demonstrated in the results from this research, many community members interviewed for this research expressly referred to how the Samoan way of life, or *fa'asamoa*, has played a significant role in shaping their actions, including those around adaptation. As many participants noted, because *fa'asamoa* promotes the generous sharing of resources, including money, food and gifts, within family and the wider community, in times of hardship it is likely that these resources will flow back to those who give generously. The role that *fa'asamoa* has on providing community members with a sense of protection from loss is important because it clearly demonstrates that a traditional form of insurance is already in use in Samoa. Therefore, efforts to increase the penetration of Western insurance products within Samoa, and potentially other SIDS nations, must be cognisant of existing cultural systems that may already be providing this protection to the community. It is important to recognise the role of traditional socio-cultural systems as it is crucial to support adaptation strategies that are culturally relevant to communities in order to ensure that adaptation effects are successful.

The importance of non-Western knowledge is becoming increasingly more appreciated within the literature on environmental management issues. Increasingly, scholars, policymakers and adaptation practitioners are recognising the importance of local knowledge in discussions about direct actions to address climate change, including adaptation policies and practices. Political and community leaders from SIDS nations themselves are demanding that the leading Western nations consider

the value of local knowledge and embed it within climate adaptation policies and projects. To date, aside from the research conducted by Perkins and Krause (2018) and Hofmann (2017) in FSM, and Le De et al. (2015) in Samoa, there is a dearth of studies explicitly exploring traditional insurance systems in the context of CCA in Pacific SIDS nations including Samoa. This research adds to the growing body of literature that is seeking to emphasise the value of non-Western approaches to environmental issues, including CCA. Therefore, recognising the role of *fa'asamoa* in Samoa is an important contribution to the adaptation literature as it further confirms that traditional socio-cultural systems based on reciprocity are valuable non-Western forms of insurance that are proven to play a vital role in protecting communities from loss during times of environmental change.

Without understanding the impacts of introducing Western adaptation strategies into non-Western nations, tensions may develop that limit the social cohesiveness of the community. Rather than providing improved human security for the wider community, the introduction of insurance may create some tension or social disparity within Samoan society between those households with insurance and those without insurance. The tension could intensify as households without insurance continue to give the majority of their resources to their family or church (for the collective benefit). In contrast, those with insurance are, or may in the future, reduce their donations in order to pay their insurance premium and implement adaptation strategies to their household. This highlights how the introduction of insurance might support adaptation to climate change on the one hand, yet may also simultaneously disrupt existing social-cultural practices on the other. In the case of Samoa, the existing socio-cultural system has already been shown to be considered a traditional form of insurance for many people within the community. Given the importance of social networks in Samoa, this is an important finding that must be considered when insurance is encouraged as a form of adaptation in SIDS such as Samoa.

A growing amount of literature has been published by academics on the imperialist nature of the approach to CCA led by Western nations. Scholars such as Sealey-Huggins (2017) have suggested that the CCA industry is a new form of imperialism as it forces developing countries to adopt particular strategies for the benefit of a developed nation. According to Sealey-Huggins (2017), the capacity of people to survive is recast as a commodity and thus something that can be financialised and traded by agencies who claim the authority of having resources to help alleviate their vulnerability. This critical view is supported by Moulton and Machado (2019) who argued that the damage caused by Hurricanes Irma and Maria was problematised as a physical issue that required a technical response which could be solved by fossil fuel imports and hard solutions, which further embedded the historical debt issues faced by the Caribbean SIDS. The concerns raised by participants about the extractive nature of insurance companies can be understood in this way as foreign-owned insurance companies offer insurance to vulnerable members of the community, and similar to colonists before them, are actively engaged in extracting resources from the nation.

The results from this exploratory study with a small sample size illustrate that there is a need for further empirical research to determine whether this pattern

of insured households not engaging in CBA is observable at a broader scale. If future studies determine that this pattern is evident across the nation, increasing penetration of private insurance products in Samoa may lead to a fragmentation across the Samoan community which may have a noticeable impact on Samoa's adaptive capacity, and thus adaptation outcomes.

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