



Popular attitudes to climate change in the Pacific: the case of Samoa

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Abstract

Understanding popular attitudes to climate change can be important in developing effective climate adaptation responses. However, in the Pacific region, which is at the forefront of impacts of a changing climate, little attention has been given to popular perceptions of climate change. This paper presents the findings of a climate change module in the first *Pacific Attitudes Survey* (PAS), conducted in Samoa from December 2020 to January 2021. Drawing on a nationally representative sample of Samoans of voting age ($n = 1319$), the PAS gauges the views of ordinary Samoans towards climate change, including perceptions of the urgency of climate change action, perceptions of the effects of climate change in Samoa, and of individual or institutional capacity to act on climate change. Findings reveal that while most respondents believe that climate change was an urgent problem that needs to be addressed, a significant minority thought it will “never be necessary” to address climate change. This study also found level of education to be a significant factor in climate beliefs. Respondents who had higher education levels were more likely to rate climate change as an urgent problem. Those identifying climate change as an urgent problem that needs to be addressed were significantly more likely to agree that climate change was affecting Samoa in general and their own personal lives. We also found a significant association between perceptions that climate change was an “urgent problem that needs to be addressed”, and willingness to permanently migrate for work.

Keywords Popular attitudes · Samoa · Climate change · Survey · Pacific

Introduction

Climate change poses a great risk in the Pacific, with the region already experiencing tangible impacts from a warming climate. The outsized climate risks Pacific states are facing have seen them become strong advocates for climate action on the global stage. This has been reflected

strongly in the Pacific’s active diplomacy in regional and international fora such as COP26, and in regional initiatives in the Pacific which are actively framing climate as a major security and development threat such as the Boe Declaration Action Plan (Pacific Islands Forum 2019a), the Framework for Resilient Development in the Pacific (2017–2030), and the Kainaki II Declaration for Urgent

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Climate Change Action Now (Carter 2015; Ratuva 2017; Pacific Islands Forum 2019b; Amosa 2020; World Meteorology Organisation 2021). The global effort of Pacific states is assumed to reflect universal concern about climate change within Pacific communities more broadly. In practice, however, little is known about popular political attitudes to climate change in the Pacific. While it is assumed that climate change is a shared concern for Pacific communities, we know relatively little about how climate change is understood and how it is manifesting as a domestic political issue *within* Pacific countries. This is particularly important as popular political attitudes to climate change have substantial implications for both policy formulation and implementation, and for perceptions of responsibility for managing climate change impacts.

There are several reasons for an absence of data on popular attitudes to climate change in the Pacific, stemming primarily from a general lack of popular attitudinal research in the Pacific, and the expense of undertaking large-scale surveys in relatively small populations. It also reflects well-known challenges in measuring popular attitudes to climate change, reflecting wide variations in how climate change is perceived and experienced, and significant challenges in communicating the impacts of climate change across diverse communities (Aswani et al. 2015).

As such, while there are some studies that utilise substantial interview data, there is still little in the way of representative and comparable quantitative popular survey data at the national level (Aswani et al. 2015; Ensor et al. 2018). Research on local level perspectives on climate change therefore tends to rely on smaller-scale qualitative methods and is often focussed on local case studies of adaptation projects (see Nunn et al. (2016); Beyerl et al. (2019); Medina et al. (2021)). As such, much of our understanding of climate change as a political issue within Pacific states is filtered through the eyes of political and policy elites, including those of the donor community.

This article presents the findings of the climate change module from the Pacific Attitudes Survey: a national popular attitudes survey conducted in Samoa from December 2020 to January 2021 ($n = 1319$) (Leach et al. 2022). Samoa represents a unique site in the Pacific as a hub for climate policy, a site of significant qualitative research, and of numerous climate adaptation projects. There is therefore an expectation that this policy engagement with climate change should be reflected in high levels of popular awareness surrounding climate change—but to date, this has not been tracked through a large-scale attitudinal survey capable of being disaggregated into demographic sub-groups. The *Pacific Attitudes Survey: Samoa* included a dedicated module on attitudes to climate change, alongside 25 other modules on issues of democracy, gender, development, and international relations. This article presents the findings of the climate

change module and situates the findings in the context of climate change in Samoa and the Pacific region more broadly. Demographic data collected in the survey also enables us to look for particular demographic associations with attitudes to climate change, and to link these attitudes to a broader range of political and social viewpoints. The present authors hope to use this experience to build upon and conduct similar in-depth surveys in other Pacific Island countries.

Politics of climate adaptation and why popular attitudes to climate change matter

Popular attitudes towards climate change are important because the way climate change is understood influences policy responses and prospects for different adaptation strategies. The existential threat posed by climate change underpins general perceptions that Pacific peoples share a common understanding and concern about climate change. However popular perceptions of climate change in the region are yet to be extensively studied, along with the specific nature of community-level anxieties and interests.

Scott-Parker et al. (2016, p. 1006) argue that one key challenge in designing inclusive adaptation strategies in the Pacific is “... understanding what Pacific peoples know about climate change and how that knowledge might become better informed and more relevant to the precise nature of the challenges they will shortly confront”. For example, the degree to which climate change is perceived as a political risk can shape collective action, political mobilisation, and policy priorities (Lata and Nunn 2012). A general lack of financial resources in the Pacific means incidences of disasters with high public visibility are more likely to garner the attention of government over the less relatable effects of long-term climate change. Such examples are not uncommon, as subtle, and slow-moving changes such as ecosystem degradation are less visible or, if recognised by communities, less clearly attributable to “climate change”. As Rudiak-Gould (2012; 2014) notes, the fact that climate change can be hard to notice may inhibit the will to act through a lack of awareness of who is responsible. Indeed, in some locations where community adaptation projects have been undertaken, community members were able to connect climate change with weather patterns or crop yields but remained unaware of the global nature of the problem (Warrick 2011). On the other hand, Aswani et al.’s (2015) study of climate change perceptions in western Solomon Islands does suggest that awareness can become more pronounced where climate change impacts are acute, and directly relevant to livelihoods.

Popular understandings of climate change can also influence perceptions of collective agency. Beyerl et al. (2018,

p. 25) argue that policymakers often underappreciate the agency of local stakeholders in decision-making around climate adaptation, arguing that “people’s expectations of other actors and institutions play an equally, if not even more important role in motivating protective action” (Beyerl et al. 2018, p. 27). As Betzold (2015, p. 484) states, local and national decision-makers sometimes have a limited understanding of climate change themselves. In a region where state capacity can be limited, especially in remote communities, traditional authorities and church leaders can be more influential in interpreting and translating climate information. This is particularly pertinent as emergent research highlights a strong link between climate change perceptions and spiritual narratives and beliefs (Mortreux and Barnett 2009; Paton and Fairbairn-Dunlop 2010; Cox et al. 2018; Fair 2018; Luetz and Nunn 2020). At times, this can be a double-edged sword, as the attribution of climate change to “divine will” can blunt climate action since “it is pointless to try and alter it” (Lata and Nunn 2012, p. 177). In this respect, while the Church can play an important role in spreading climate change awareness, it may not be well equipped with sufficient expertise and knowledge to accurately communicate climate issues (Iati 2008).

The capacity of governments to implement climate change policies can also be influenced by the congruence of policies with popular attitudes. As Beyerl et al. (2019, p. 144) observe, “[h]ow people perceive their natural and social environment is key to how they behave in order to address the situations they are confronted with”. This in turn shapes adaptive priorities and investments, and whether adaptation initiatives are inclusive (designed to benefit most) or exclusive (designed to benefit the few). Without data on popular attitudes to climate change, we have only a partial understanding of the politics of adaptation.

This is especially exemplified in the case of Tuvalu, which has attracted significant international attention as a small island developing state at risk of climate inundation. Paton and Fairbairn-Dunlop (2010) found that the framing of climate change in formal policies and international agendas did not mirror debates and discussions occurring in local institutions which shape Tuvaluan beliefs and views about climate change. This gap was strong enough that 64 of surveyed Tuvaluan participants did not believe in climate change or were uncertain about it, despite well-evidenced international media reports on the likely impacts for Tuvalu. On the other end of the spectrum, donors, NGOs, and even national governments can be ill-prepared at working within traditional and village governance structures to effectively implement climate policies, as “without approval and support of the local level, the implementation of national decisions will fail” (Betzold 2015, p. 485).

Aswani et al. (2015, p. 1498) note that climate change perceptions can differ substantially within affected communities, diverging along the lines of gender, education, age, economic status, and even distance to markets. For instance, households may perceive the impacts of climate change, but not prioritise climate change adaptation measures if they are considered secondary to their immediate needs. Moreover, donor funding arrangements can cause rifts between local communities’ priorities and program proposals governments think are likely to be funded (Barnett 2008). As such, effective policy responses to climate change must navigate difficult choices over which issues are prioritised in climate adaptation measures. A lack of information on popular attitudes to climate change therefore represents an adaptation challenge in its own right: if adaptation policies are to be successfully implemented, policy makers will need to engage effectively with diverse Pacific communities and their viewpoints.

Samoan climate policy and general attitudes

Samoa has been a strong leader on climate change action in the Pacific. Samoa is environmentally vulnerable, being exposed to tropical cyclones, tsunamis, floods, earthquakes, and drought. In 2019 Samoa ranked 130th out of 180 on the Global Climate Risk Index (2021). Disasters have had a major impact on Samoa’s economy and society over the last decade. The Government of Samoa has played an active role in regional climate fora and a leadership role in terms of global advocacy for robust climate action. For example, Samoa has represented the Alliance of Small Islands States on the Bureau of the Conference of the Parties (COP) to the UN’s Framework Convention on Climate Change since 2020. Samoa was also one of the first nine countries globally to enter the pilot program for climate resilience in 2010, which saw a raft of measures aimed at mainstreaming responses to climate adaptation across government. Samoa hosted the third international conference for Small Island Developing States (SIDS) which led to the “SAMOA Pathway”—a recognition that SIDS need support and investment to achieve sustainable development. Notably, the *Samoa National Adaptation Programme of Action* (NAPA) introduced in 2005 included the objective of increasing “awareness of climate change impacts and adaptation activities within communities, civil society and government” (Government of Samoa 2005, p. 16).

The Government of Samoa has developed a comprehensive suite of climate change adaptation policies, most notably its 2020 Samoa Climate Change Policy (Government of Samoa 2020). This policy describes climate change adaptation as a “national imperative” such that adapting to

climate change impacts will continue to be “the major occupation and priority policy determinant for Samoa well into the future” and that it was “an urgent crisis, which dwarfed all others” (p. 6). For instance, the UNDP are funding projects like the Vaisigano catchment and upgrade of the Lelata bridge, which require relocation of families residing along the riverbanks. However, while an extensive policy framework for climate change in Samoa has been developed over several years, Latai-Niusulu et al. (2019) suggest that has largely been driven by elites and select stakeholders: “current discussions of climate change in Samoa are predominantly approached from a national perspective and are dominated by the views of government officers, consultancy firms and civil society workers” (cf. 43). As such, while Samoa has shown strong leadership around climate policy, little is known about popular understanding and attitudes towards climate change.

The few small-scale perceptions surveys conducted in Samoa suggest there is a high degree of awareness that the climate is changing. Beyerl et al. (2018) conducted a small-scale attitudinal survey in three Pacific countries (Samoa, Tonga, Tuvalu) and asked 179 respondents, of whom 60 were from Samoa, how they perceived their personal situation in terms of climate changes challenges, how they have responded in terms of adaptation strategies, and their expectations of government and non-government support. Respondents were found to be more concerned about the drought, cyclone, and flooding consequences of climate change than sea level rise but had a limited sense of agency in relation to managing these challenges and were also concerned that they lack the resources or skills necessary to implement adaptation strategies. The 60 Samoan respondents were also less confident than respondents from Tonga and Tuvalu that their government would be able to help them manage the challenges of climate change.

Latai-Niusulu et al. (2019) conducted 165 semi-structured qualitative surveys across eight villages in Samoa to assess awareness of climate change and community resilience. The study found that most respondents could accurately gauge what could be described as the effects of climate change (longer heat waves, dry spells, and more frequent coastal degradation). Latai-Niusulu et al. argue their findings show how Samoan communities have become resilient and are able to adapt to future changes in the climate. As such, they believe future climate policy should be more nuanced in understanding Pacific Islander perceptions within their own socio-cultural systems. These perception studies suggest that while there is a shared awareness of climate change, there may be a gap between elite and formal policy approaches, and local level understandings.

Research method

This article draws on data obtained from a large-scale popular political attitudes survey conducted in Samoa. The *Pacific Attitudes Survey: Samoa* (Leach et al. 2022) is a nationally representative ($n = 1319$) popular political attitudes survey conducted in Samoa from December 2020 to January 2021. The survey included a total of 181 questions across 26 thematic modules covering a range of topics including attitudes to democracy, national identity, leadership, governance, development, and international relations. The PAS also included a dedicated thematic module on climate change, in which respondents were asked nine questions concerning their attitudes towards and beliefs about climate change. The PAS did not seek to establish how climate change is perceived but instead prioritised how participants rated the urgency of climate change action, how they identified responsibility for managing its impacts, and their perceptions of how it has impacted upon livelihoods. No specific definition of climate change was given in the module to prevent influencing participant results.

Sampling was clustered, stratified, and multi-stage, with sampling at all stages carried out using probability proportionate to population size and balanced for gender and age. The first level of stratification split Samoa in four subregions (Apia, North-west Upolu, Rest of Upolu and Savaii). The second level stratified the sample into districts within each subregion, and lastly villages within each district. Systematic random sampling was used for the selection of households, with individual selection alternating by gender to reflect the roughly equal proportion of men and women in Samoa. The representativeness of the sample was checked using the 2020 population projections by age group, obtained from the Pacific Data Hub (SDD 2021), and the 2016 census to check for gender and sub-regional population percentages. Only minor weighting required. Weights were assigned to each participant using the raking method as described in the *Encyclopedia of Survey Research Methods* (Lavrakas 2008), with these weights applied in all ensuing analysis. A majority of surveys (94%) were conducted in Samoan at the request of respondents, with the remainder in English. Completion and response rates for individual questions were very good for this survey (generally greater than 98%), allowing non-response categories of “decline to answer”, “can’t choose”, and “don’t know” to be ignored in this report, except where noted.

Findings are presented and discussed below in two ways. Descriptive statistics are presented first, and where relevant disaggregated by gender, age, education, income levels, level of subsistence reliance, and urban/rural

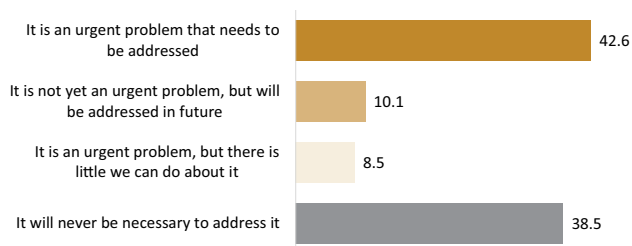


Fig. 1 Which of the following statements do you agree most with? Climate change ... ($n=1319$, %)

location. Following this, we also test for any significant associations that are evident between climate attitudes and the suite of political attitudes drawn from other PAS modules. A two-step convention is applied for reporting any cohort effects: first, the associations must be statistically significant at $p < .01$; and second, we adopt the protocol that these must result in substantial cohort differences in excess of 10% to merit discussion. Percentages obtained from the total sample ($n=1319$) are reported with an accuracy of better than 2.75% with 95% confidence. In addition, a significance level of less than 1% is used throughout for identify significant relationships.

Findings

The PAS sought to ascertain popular attitudes to climate change in Samoa by asking a series of questions about climate change. The first question asked respondents to assess the priority and urgency of climate change as a political issue (Fig. 1)¹. This question was framed to reflect attitudes found in qualitative literature. For instance, Paton and Fairbairn-Dunlop (2010) found that Tuvaluans either “did not believe in climate change”, “were unsure of its effects”, or that there was “not much, if anything they could do about it”.

Urgency of climate change action

A narrow majority of respondents in Samoa identified climate change as either an “urgent problem that needs to be addressed” (42.6%) or an issue that is “not yet an urgent problem but will be addressed in the future” (10.1%). A further 8.5% acknowledge climate change is an urgent problem but “there is little we can do about it”. While this recognition of the importance of climate change accords with prevailing perceptions that concern about climate change is broadly held, surprisingly, some 38.5% of respondents thought it will “never be necessary” to address climate change. This sizable

¹ Respondents who had answered “it will never be necessary to address” climate change were excluded from subsequent questions related to climate change.

minority suggests a strikingly different report card to some common perceptions, indicating that the level of popular awareness of climate change may be lower than assumed. This result indicates that a more nuanced approach must be taken when discussing climate change and in making assumptions about the views and level of engagement of average Pacific Islanders (cf. McLeod et al. 2019).

This result likewise reinforces qualitative findings across the region suggesting that Pacific Islanders can perceive climate change in different ways. Climate change is often discussed in international and national fora as an urgent existential threat. Our results suggest these views are also mirrored by a sizeable number of respondents at the local level. However, a significant portion of respondents do believe that “it will never be necessary to address” [climate change] this adds to voices like Paton and Fairbairn-Dunlop (2010) who found that the framing of climate change in formal policies and international agendas do not always mirror the debates and discussions occurring in local institutions. For instance, climate change awareness and action can be affected by spiritual narratives and beliefs, where the attribution of climate change to “divine will” can blunt climate action since “it is pointless to try and alter it” (Lata and Nunn 2012, p. 177).

Demographic breakdowns of these results help identify distinct constituencies on these issues. The PAS found that urban residence and higher education levels were both significantly associated with the view that climate change “is an urgent problem that needs to be addressed”. Accordingly, urban respondents (55.7%) were significantly more likely to identify climate change as “an urgent problem that needs to be addressed” than rural respondents (39.3%). Conversely, the 38.5% of respondents who stated that “it will never be necessary to address climate change” were significantly more likely to come from rural (42.2%) than from urban (23.5%) areas. This supports a major theme in the qualitative literature suggesting that rural communities are less likely to appreciate probable long-term, permanent effects of climate change due to disparities of access to information or education (Beyerl et al. 2019). No significant associations with respondent gender were found.

Educational differences were also found to be relevant, with tertiary-educated respondents significantly more likely to believe climate change is an “urgent problem that needs to be addressed” (56.7%) than secondary or primary-educated respondents (39.3%). Respondent age and level of subsistence reliance were not found to be significant factors.² The

² To ensure that these relationships were not a function of each other, that is, that more educated people tend to live in urban areas and hence skew the dataset, we performed a general linear model to control for each group’s effects. Education level was found to play a slightly larger role in climate change beliefs (with an effect size of .022) over urban residence (.013).

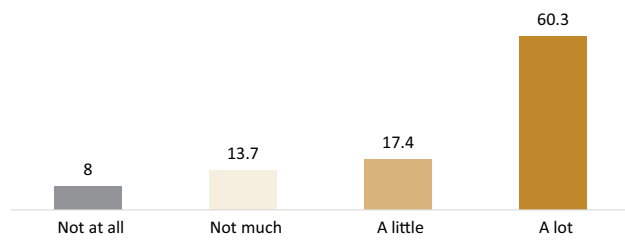


Fig. 2 How much, if at all, do you think climate change is affecting life in Samoa today? ($n = 811$, %)

significant relationship between climate change knowledge and education levels is not a new finding, with Mikiyasu et al. (2019), Goeldner-Gianella et al. (2019), and Beyerl et al. (2019) concluding that education is a strong predictor of climate change awareness and perceptions.

Effects of climate change

After excluding respondents who responded that “it will never be necessary to address it [climate change]”, we asked the remainder of respondents ($n = 811$) further climate-related questions. The PAS asked respondents “how much, if at all, climate change is affecting life in Samoa today” and “how much, if at all, climate is affecting your own life”. Similarly, the PAS also asked the respondents “thinking of your own experience over the last ten years, has climate change had an impact on your own income or livelihood”. The purpose of this set of questions was to determine whether there were significant differences between general and personal perceptions of the impacts of climate change in Samoa. Figure 2 indicates responses to general perceptions of how climate change is perceived as affecting Samoa while Fig. 3 examines individual perceptions towards climate change.

Some 60.3% of the 811 respondents think climate change has affected life in Samoa “a lot”. Notably, a significantly lower—but still sizeable—number felt climate change had affected their own life “a lot” (40.5%) or had affected their own income “a lot” over the last 10 years (38%). This is an interesting finding which suggests the general impacts of climate change weigh more on the thoughts of Samoans than their own personal experience of climate change, or alternatively, that many have yet to be personally affected by climate change but believe that it has impacted on Samoa in a general sense. Nunn et al. (2016) found that in the Pacific, there was a tendency to consider climate change as affecting others more “severely” than oneself.

Demographic breakdowns suggested age was a significant factor in these perceptions. Where 62.3% of seniors (aged 60+) and 64.4% of adults (30–59) thought climate change is affecting life in Samoa “a lot”, this figure dropped significantly to 51.9% for younger respondents (21–29).

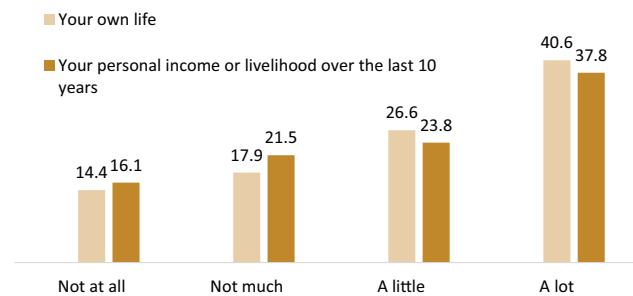


Fig. 3 How much, if at all, do you think climate change is affecting... ($n = 811$, %)

Likewise, older Samoans were significantly more likely to think climate change was affecting their own lives “a lot” (seniors 47.8%; adults 43.5%) than were younger Samoans (30.7%). This also applied to perceptions that livelihoods or income had been affected “a lot” (seniors 38.4%; adults 42.2%; youth 29.1%).

Educational levels of the remaining 811 were also relevant, with 73.2% of university-educated Samoans agreeing that climate change had affected life in Samoa “a lot”, compared with significantly lower scores from those with secondary (58.2%) or primary educations (41.9%). This held true for respondents’ perceptions that their “own life” had been affected “a lot”, though level of education was a factor here, with 54.8% of tertiary-educated respondents agreeing that their own lives had been affected by climate change “a lot”, compared with secondary-educated and primary-educated Samoans (38.9%).

Beyerl et al. (2019, p. 161) found that Samoans who have a close relationship with nature through either subsistence farming or fishing were more likely to perceive the effects of climate change. In our survey, this was most closely supported by a significant correlation found between subsistence economic activity and the view that climate change had affected personal income and livelihoods in the last 10 years. Those who reported that they were “always” or “frequently” reliant (41.9%) on what they grow or catch were significantly more likely to report that their income or livelihood had been affected “a lot”, compared with those who reported less reliance on subsistence agriculture (26.2%). This finding was not replicated by differences between rural or urban respondents, suggesting that reliance on subsistence farming effected perceptions of climate change rather than urban or rural residency itself.

Climate change action

The PAS also sought to assess the degree to which Samoans felt some agency regarding climate change by asking “what can Samoans do about climate change?” (Fig. 4), and also asking if they believe that the national government or



Fig. 4 What can Samoans do about climate change? (*n* = 811, %)

international community is doing enough to address climate change (Fig. 5).

The survey suggested a strong sense of agency, with a majority of Samoans believing that there is “a lot” (66.6%) they can do about climate change. This compared to around 6.9% of respondents who thought there was “not much” that could be done about climate change and 14.6% who thought they could do “nothing at all”.

Age proved a significant factor in these assessments. Older Samoans were more optimistic about what Samoans can do about climate change, with 73% of seniors stating there was “a lot” Samoans can do about climate change, closely followed by adults (68.8%). For younger respondents, this figure dropped significantly to 59.8%. This may be reflective of older Samoans having experienced more vagaries of climate than younger Samoans.

Next, the PAS assessed popular attitudes to the role of the international community in addressing climate change (Fig. 5). This is a significant issue as Pacific governments have played a strong international role demanding urgent climate action from advanced industrial economies with large historical emissions. This issue has been of particular significance in terms of relations between Pacific governments and traditional partners such as Australia, with Pacific states being critical of Australian climate policy, including at the most recent Pacific Islands Forums in 2019 and 2022. When respondents were asked whether “the international community is doing enough to address

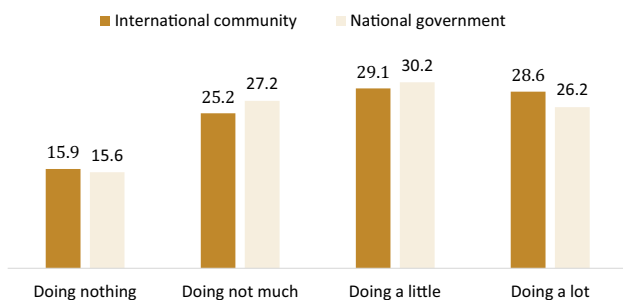


Fig. 5 Do you think the international community is doing enough to address climate change/Do you think the national government is doing enough to address climate change? ... (*n* = 811, %)

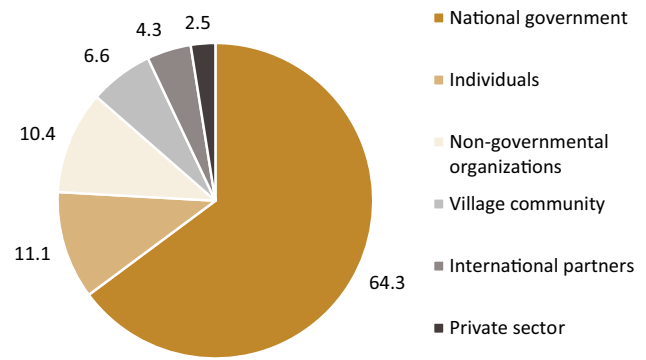


Fig. 6 Who is most responsible for managing the impacts of climate change in Samoa? (*n* = 811, %)

climate change”, and if “the national government is doing enough to address climate change” (Fig. 5), respondents gave roughly parallel responses. For example, 28.6% of respondents thought the international community was “doing a lot” compared to 26.2% thinking the national government was “doing a lot”. At the other end of the spectrum, some 15.9% of respondents thought the international community was “doing nothing” compared to 15.6% for the national government.

Leaving aside the question of who is responsible for causing climate change, when asked “who is most responsible for managing the impacts of climate change in Samoa” (Fig. 6), respondents had clear views on who was responsible for managing its impact in Samoa. A large majority believed that the national government (64.3%) was chiefly responsible for managing the impacts of climate change, compared to only 4.3% who thought international partners were most responsible.

Environment and economy

The PAS then examined popular assessments of the relative priority of environmental protection and economic growth. This has long been a debate in advanced economies, weighing ecological conservation against economic output and employment. The PAS asked respondents (*n* = 1319), “which comes closer to your view? (1) protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs” or “(2) economic growth and creating jobs should be the top priority even if the environment suffers to some extent”. Despite the earlier split in responses concerning whether climate change is an “urgent problem”, a strong majority of respondents (67%) believed that “protecting the environment should be given priority, even if it causes slower economic growth and some loss of jobs”. These responses did not vary significantly by age, income or education level.

Associations with other attitudes

The PAS asked a series of questions about attitudes to government, politics, and democracy. When cross-tabulated with PAS data on climate change, we can obtain a clearer picture of how attitudes to climate change relate to other political and social issues. Notably, when we asked “How interested would you say you are in politics” we found no correlation between respondents’ self-identified levels of interest in politics and perceptions of the urgency of action on climate change. However, we found significant associations between popular attitudes to climate change and levels of trust in institutions, attitudes to the role of government, to migration, and to certain patterns of news consumption. The following section presents some significant correlations between attitudes to climate change and other political attitudes.

The PAS asked a number of questions about levels of trust in different institutions. These ranged from traditional institutions such as the village *Fono* (council) or village *Pulenu’u* (mayor) and the church, to more formal political institutions such as the national government and the courts. When we asked respondents “how much trust do you have in the following: The national government in Apia, Village Fono, Village Pulenu’u” we found significant positive associations between levels of trust in the government and respondent perceptions of government action on climate change. Accordingly, those with higher levels of trust in government were more likely (32.1%) to consider the government was doing “a lot” to combat climate change, compared to those who did not trust the government as much (15.2%). In a similar vein, the PAS found that Samoans trust both the Village *Fono* and *Pulenu’u* more than other socio-political institutions in Samoa, with an overwhelming majority believing that the Village *Fono* should have more authority over local decisions than it does now (83%) (Leach et al. 2022). Together, these findings underscore the importance of understanding local socio-political relationships when designing climate change adaptation policy. For Samoa, our results suggest that communities may be more receptive to climate change policy if they are implemented by trusted institutions at the local level. This reinforces the views of Betzold (2015, p. 485) who believes that the implementation of national decisions on climate adaptation policy will fall short if not supported at the local level.

The relationship between political systems and potential for climate action has become an increasingly significant debate. One assumption is that while authoritarian states are generally unfavourable, they will be better able to drive climate action since they have greater autonomy to implement climate change policies, and do not have to deal with democratic procedures or have their power limited through

a constitution (Mittiga 2022). This is an interesting question in a Samoan context, as Samoa is generally regarded as a stable democracy with a hybrid system of interlinked traditional and Western institutions. The PAS highlights a complex picture of Samoan democracy, in which respect for modern democratic norms is tempered and entwined with respect for tradition. Strong support for civil liberties and checks on executive power was balanced with strong perceptions of the state as a “guardian” or leader of society. However, we found an exception in attitudes towards democratic norms in the case of national emergencies, with almost half of respondents (48.4%) agreeing that “when the country is facing a difficult situation it is okay for the government to ignore the law to deal with it” (Leach et al. 2022). This suggests greater public tolerance for extra-legal uses of power in the case of a national emergency.

Attitudes to climate change and awareness of its effects can be influenced by access to information (Harris 2014). The PAS asked the respondents how frequently they obtained news and other information about politics and government. The frequency with which Samoans follow the news correlated significantly with a range of climate views. For example, those that followed the news daily were more likely (67.9%) to think that climate change is affecting Samoa “a lot” than those who “practically never” follow the news (50.8%). This relationship was mirrored when respondents were asked how much climate change was ‘affecting their own lives’ albeit to a lesser extent. For instance, those who follow the news everyday were more likely to think that climate change is affecting their own lives ‘a lot’ (49.2%) compared to those who practically never follow the news (28.8%).

Daily news followers were also more likely to think that the national government is doing “a lot” to combat climate (35.5%) compared to people who followed the news less often (22.3%). Notably, those who follow the news daily were also more likely to think that there is “a lot” (74.5%) they can do to combat climate change, compared with those who “practically never” follow the news (56.8%). These findings suggest that respondents who had a high level of news consumption were likely to be knowledgeable about climate change in Samoa, and to have a positive view of actions they can take to combat climate change.

In the Pacific, climate-driven migration is becoming an increasingly important policy issue. Samoa also has one of the largest diaspora communities in the Pacific and institutionalised migration pathways based on its colonial history with New Zealand (Howes and Surandiran 2021). This experience with migration and diaspora connections makes the issue of popular attitudes to climate change and correlations with migration particularly interesting. The decision to migrate is a complex issue and not all who express a willingness to migrate are able to act on their agency due to various

constraints. While the PAS did not directly ask questions about climate-driven migration, given the large Samoan diaspora, it did survey respondents in a separate module about their willingness to temporarily or permanently move to another country. Some 54.1% of respondents indicated they were either “fairly willing” or “very willing” to move permanently. Notably, we found a significant association between regarding climate change as an “urgent problem that needs to be addressed”, and willingness to move permanently. Accordingly, respondents who regarded climate change as an “urgent problem that needs to be addressed” were significantly more likely (59.8%) to be willing to move permanently to another country, than those who believed “it will never be necessary to address climate change” (48.5%). This finding in Samoa contrasts with studies conducted in Tuvalu, where climate change was the least cited factor in migration decisions (Paton & Fairbairn-Dunlop 2010). The PAS did not find the same correlation in relation with willingness to move temporarily.

Conclusion

Understanding popular attitudes to climate change is critical to the development of effective and inclusive adaptation strategies. This article has presented the findings of the climate module in a national popular attitudes survey conducted in Samoa in late 2020 and early 2021. As a major site in the Pacific for climate change policy and adaptation efforts, high levels of popular awareness of the urgency of climate change action were expected. While the PAS found strong levels of popular concern, it also found a significant division between those who believe that climate change is an “urgent problem that needs to be addressed” and those who believe that it will “never be necessary to address it”. This result challenges perceptions that climate change is a widely understood existential threat in the Pacific and suggests that high levels of state engagement with climate change diplomacy do not necessarily confer high levels of awareness of climate change on wider Pacific populations. Respondents who were receptive towards the urgency of dealing with climate change did report increased awareness surrounding the effects of climate change on both Samoa and their own lives. Positively, respondents were also more likely to believe that they could do “a lot” to combat the effects of climate change.

Our survey enabled us to identify significant correlations between climate attitudes and other political attitudes. This was highlighted by heightened levels of trust in the government and perceptions that the government was doing “a lot” to combat climate change. Similarly, the PAS identified local level institutions, such as the village *Fono*, as the most trusted in Samoa suggesting that such institutions would be vital for implementing effective climate change policy.

Findings also challenged the idea that the international community is considered partly responsible for managing action on climate change in countries affected more adversely by it despite their small carbon footprints, like Samoa. Popular perceptions showed that adaptation measures should largely be pursued and implemented through national government action rather than by international alternatives. This was further emphasised by attitudes to the role of government in Samoa, with popular attitudes placing the government as a “guardian” or protector of the community. This suggests that state-led adaptation initiatives will be particularly important, given the links between national and traditional systems of governance in Samoa. This was highlighted with almost half of respondents believing that it is okay for the government to ignore the law to deal with a difficult situation, suggesting greater public tolerance for the use of extra-legal powers in difficult circumstances. Finally, the PAS affirmed the importance of education and other awareness building strategies (like the news) in shaping attitudes towards climate change. This reinforces core themes in the qualitative literature and highlights the critical importance of education in bridging elite and local understandings of not just climate adaptation, but also the general importance of building climate literacy as a basis for sustained political mobilisation.

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Data Availability The data that support the findings of this study are available from the corresponding authors upon reasonable request.

Declarations

Ethical approval This research complies with the guidelines set out in the Australian *National Statement on Ethical Conduct in Human Research (2007)* – Updated 2018.

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