

WOMEN AND DISABILITY IN THE CONTEXT OF CLIMATE MOBILITY

Case Studies of Fiji: Solomon Islands and Vanuatu

Patrick Fong | Feb. 2022



Woman with suitcase evacuates flooded house. Rarotonga, Cook Islands. © Melanie Cooper.

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ABSTRACT

Environmental change has been associated with human mobility over the years and climate change is starting to affect movement in new ways, now termed climate mobility. In this research brief, the effect of climate change on women and persons with disability in Fiji, Solomon Islands and Vanuatu is examined, with emphasis on human mobility. Results suggest that climate change is negatively affecting women and persons with disability and increasing their vulnerability to other socio-economic factors. They should, therefore, be a central element of strategies for climate change actions and policies. This requires a radical change in policy makers' perceptions of migration as a problem and a better understanding of the role of local, national, regional and international institutions in supporting and accommodating climate mobility for persons with disability and women.

1. INTRODUCTION

The Pacific region is highly vulnerable to climate change and disasters, as demonstrated by a substantive body of scientific research (Power *et al.* 2016; Kossin, 2018). The most substantial impacts of climate change include more intense cyclones and droughts, resulting in losses of coastal infrastructure and land; failure of subsistence crops and coastal fisheries; loss of coral reefs and mangroves; and the spread of certain diseases (Arnell *et al.* 2019; Banks *et al.* 2019; Islam and Shamsuddoha, 2017). All these result in negative consequences for societies (Heslin *et al.* 2019). McNamara *et al.* (2018) noted that: “the impacts of climate change are intersecting with all key current concepts and priority areas of international development and poverty alleviation”, including human mobility.

Studies suggest that climate change is a driver of human mobility and is expected to increase the displacement of populations throughout this century (Klepp and Herbeck, 2016; Murphy, 2015; Gaskin, 2017). The risk of displacement increases when populations that lack the resources to migrate experience higher exposure to extreme weather events, in both rural and urban areas, particularly in low-income developing countries. Changes in migration patterns can be responses to both extreme weather events and longer-term climate variability and change, and migration can also be an effective adaptation strategy.¹

For some persons, this could include displacement and forced evacuation, inadequate evacuation spaces and housing resources, lack of clean water, decreased agricultural yields, damage to ecosystems and reduction of ecosystem services, and health problems. These consequences and many others are changing the health, economic and even physical landscape of societies, especially amongst the less prepared and more vulnerable groups (Kossin, 2018; Burns, 2017).

Furthermore, in situations of extreme weather events, there is growing evidence that women and persons with disability are often left behind in the preparedness and response activities of Pacific countries. This is because there are barriers that limit their participation in these key phases of building resilient communities that can adapt to extreme weather events and disasters. These barriers make women and persons with disability more vulnerable to the adverse impacts of climate change and reduce their capability to adapt to these impacts (Farbotko *et al.* 2018).

Apart from being vulnerable to climate change impacts, very little is known about the level of incorporation of women and persons with disability in the development of climate change mandates, particularly in the strengthening of their capacity to engage in policy- and decision-making related to the adverse effects of climate-related mobility. This was highlighted in the POPCCC (2020) Women

¹ This is according to the IPCC's Working Group II Contribution to the Fifth Assessment Report, released in March 2014: IPCC 5AR, WG2, Volume 1, Chapter 12, (2014), available at: <http://www.ipcc.ch/report/ar5/wg2>

and Climate Change Conference² (Buckingham, 2017). Without effective inclusive interventions through climate change and disaster risk reduction (DRR), those who are already disadvantaged will feel the negative impacts of climate change more than their less-disadvantaged counterparts (Wester and Lama, 2019). The IPCC states: “Persons who are socially, economically, culturally, politically, institutionally, or otherwise marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses” (IPCC, 2014).

The purpose of this brief is to take a close look at the experiences of women and persons with disability in Fiji, Solomon Islands and Vanuatu. These two vulnerable groups have been either displaced or relocated as a direct or indirect result of climate change. Furthermore, the experience of persons with disability and women in relation to climate change and climate mobility, together with a national-level analysis of policy development on climate mobility, are analysed. Understanding the level of participation of these two vulnerable groups in the development of climate change policies is also examined in this brief.

There are three specific objectives of this research brief.

- **To review implications of climate change and mobility.** How climate change in general and climate mobility (where relevant) affect women and persons living with disability.
- **To reflect on lessons learned and best practices in the management of climate-related mobility.** How women and persons with disability generally have been reflected in climate change policies, with a particular focus on relocated or displaced women and persons with disability.
- **To identify recommendations/solutions that support informed decisions, programming and policies that lessen the adverse effects of climate-driven and disaster-induced migration, displacement and relocation.** To identify more actionable strategies to minimise the effects of climate mobility for displaced and relocated women and persons with disability.

2. BACKGROUND INFORMATION

Vulnerability to climate change impacts is not determined by external climatic conditions alone, but rather through the interaction between ecosystems, climate-related hazards, the built environment, governments, communities, individuals and other social factors (Rothe, 2017). Those most vulnerable to the adverse effects of climate change are persons who already face marginalisation; these include populations that possess a particular socio-economic status, geographic location, gender and age. Interestingly, these population groups contribute the least to the production of greenhouse gas emissions, which cause climate change (IPCCC, 2018).

In July 2020, the United Nations Human Rights Council made history when it adopted a resolution on climate change and the rights of persons with disability. The resolution calls on governments to adopt a disability-inclusive approach when taking action to address climate change (Human Rights Council, 2019). This was the first time the council had directly addressed the rights of persons with disability as they relate to climate change. While women, indigenous persons, and youth have successfully become part of discussions around climate action, persons with disability have largely been absent (Wolbring, 2009).

International literature shows that the impacts of climate change run in tandem with disaster risk reduction (DRR) and a need for effective adaptation strategies. The onslaught of climate change across the Pacific Islands is a far-reaching reality, affecting every community and social demographic, including the marginalised groups (Kossin, 2018). In the context of this brief, this includes women and persons with disability.

² <https://www.sprep.org/news/women-in-climate-change-shifting-the-power>

Women in Pacific Island communities have various roles and responsibilities in relation to caring for young or sick family members and providing food and water. In humanitarian settings, women are disproportionately affected by the secondary consequences of disasters, such as sexual and gender-based violence and disruptions to health care, water and sanitation, which affect sexual and reproductive health (Chindarkar, 2012). The centrality of women's roles in social systems also means that they have critical roles to play in developing effective responses to climate change, especially in terms of disaster risk reduction, natural resource management, sustainable consumption of goods and services, and reducing environmental degradation (Arora-Jonsson, 2011).

On the same note, persons with disability are more vulnerable to the impacts of climate change compared to those without disability. Persons with disability face multiple barriers in society and they are amongst the weakest and poorest of the poor in society. They are marginalised and experience multiple layers of discrimination, which reduces their capability to adapt to the impacts of climate change. Persons with disability generally have reduced access to education and income than the rest of the population (Burns, 2017). They are more likely to have incomes below the poverty level, and less likely to have savings and other assets than persons without disability. In addition to the income-related factors, additional costs resulting from the disability and marginalisation or exclusion from services and/or social and community activities can also make persons with disability and their families worse off. With culture in play, women also encounter cultural barriers that hinder their participation in climate change planning activities (Dazé and Echeverría, 2016).

Women and persons with disability are also affected by discrimination that results in an imbalance in the division of labour, lower income, and less livelihood opportunities compared to the rest of the community; less access and control over land and other productive assets; fewer legal rights; less mobility and less political and professional representation.³ Developmental and socio-economic challenges are measurable. These include increased workloads (such as travelling further for water and firewood); reduced opportunities for education or livelihoods (as a result of increased workloads); and less access to information to help prepare for climate and disaster events (because women are less likely than men to have mobile phones, which are increasingly used to transmit weather warnings).⁴

The ability to adapt, the number of livelihood opportunities and resilience are all anticipated to decline in a changing environment. Climate change is also likely to cause an increase in the incidence and prevalence of many disabling impairments. While there is some research on the experience of women and persons with disability during sudden-onset disasters in the Pacific region, there is no specific evidence about the medium- and long-term impacts of climate change on women and persons with disability; particularly in relation to physical observations of the slow-onset effects of climate change, which are difficult to monitor and observe (Boncour and Burson, 2009; Dazé and Echeverría, 2016).

3 "Gender Policy and Action Plan", Green Climate Fund (2015): 8, accessed Sept. 25, 2015, http://www.gcfund.org/fileadmin/00_customer/documents/MOB201503-9th/10_-_Gender_Policy_and_Action_Plan_20150304_fin.pdf. 8

4 World Bank (2012). Toward Gender Equality in East Asia and the Pacific: A Companion Report to World Development Report, p 202. <https://openknowledge.worldbank.org/handle/10986/12598>

4. METHODOLOGY

The research brief adopted a mix of research methods – key-informant interviews, a policy analysis approach and a document review – to critically assess the impacts of climate change on women and persons with disability and whether their needs are incorporated in the three countries' climate change and mobility policies. The research also analysed the level of participation of women and persons with disability in the development of these relevant policies.

A total of 45 key informants (15 for each country) were identified and interviewed using semi-structured questionnaires. The Washington Group of Questions⁵ was used in the introductory section of the questionnaire to better understand the impairment of the respondents. For respondents with visual impairment, and whoever else needed assistance, an older family member communicated the essence of the questions and observations made with their other senses: hearing changes over time, feeling changes over time and smelling changes over time, more specifically.

To minimise the complexity of incorporating both gender and disability, all women in general were the target respondents and all persons with disability. In addition, key national umbrella policies, together with sectoral ones related to climate change and climate mobility for the three countries, were analysed. The analysis in this research brief is presented in a mix of a quantitative and qualitative narrative analysis approach.

5. FINDINGS

5.1 Profile of respondents

A total of 45 key informants were interviewed for this research brief. These comprised women in general and persons with disability that were being affected by climate change. The majority (73%) of the respondents were female. This was intentional in order to align with the research objectives.

Table 1 presents details of the respondents. It can be noted that the three countries are represented equally (15) in the total sample of respondents.

Table 1: Distribution of respondents based on demographic characteristics and impairment (N= 45)

Variable	Frequency	Percentage
Age in years		
21–25	3	6.7
26–30	4	8.9
31–35	6	13.3
36–40	7	15.6
41–45	6	13.3
46–50	5	11.1
51–55	6	13.3
56–60	4	8.9
61 ≤	4	8.9

⁵ Washington Group of Questions, a set of questions designed to identify persons with functional limitations. For full list of questions, please refer to link: <https://hhot.cbm.org/en/card/washington-group-questions>

Table 1: Distribution of respondents based on demographic characteristics and impairment (N= 45) cnt'd

Variable	Frequency	Percentage
Gender		
Female	33	73.3
Male	12	26.7
Country of residence		
Vanuatu	15	33.3
Solomon Islands	15	33.3
Fiji	15	33.3
Health condition		
Persons with physical disability	19	42.2
Persons with hearing and speaking impairments	5	11.1
Persons with visual impairment	6	13.3
Persons with no difficulty	15	33.3

The age distribution of the respondents ranged from 20 to above 60 years (Table 1). The fact that there is no equal representation of age groups in the sample makes any generalisation about age in the findings impossible.

Results from the Washington Group of Questions show that the majority (67%) of respondents were persons with disability. Of these, 42% had a physical disability, 11% were blind and 11% were deaf and mute. Again, choosing more respondents with disability was done to ensure alignment with the research objectives. As highlighted in the objectives, women and persons with disability were target respondents affected by climate change, irrespective of their geographical location.

5.2 General observed changes

With the assumption that climate change was a new notion to respondents and that most of them had very limited knowledge of it, the interview started with a discussion on some of the major development changes happening in their community over the years. Respondents were asked to highlight the changes in infrastructural development that they had observed since they were children.

In Honiara, changes reported by the respondents included a new road system that had recently been constructed along the main street. It was also observed that there was an increase in the number of vehicles and respondents reported that this was overwhelming for the traffic-carrying capacity of Honiara. Most of these vehicles are secondhand cars that the country imports from Japan.

The use of assistive devices for persons with disability is becoming very common and the establishment of organisations of persons with disability to provide administrative and social support was also reported. This is very different from before, when persons with disability were left behind or neglected by relevant institutions.

In Vanuatu, respondents observed that gravel roads in suburban Port Vila were being replaced by tar-sealed ones, and houses used roofing iron or concrete, replacing the traditional thatched houses. It was stressed that there has been improvement in technology and communication infrastructure, with television and discs for internet becoming very common. Sending money has improved with the establishment of Western Union and Money-gram. Another change reported was the replacement of well water by water tanks.

In Fiji, respondents stressed the improved road system and increase in support for persons with disability over the years. One such support was the Housing Assistance Program from the Ministry of Housing and Community Development. The program focuses on improving the accessibility of

housing needs of persons with disability with a maximum grant of FJD 5,000 to upgrade their homes (not necessarily building new homes but upgrading access to basic amenities and mobility around the home).⁶ Another recent government program is the Disability Allowance Scheme, whereby a total of FJD 10.7 million is being allocated to over 8000 beneficiaries for 2021 and 2022.⁷ This includes a FJD 90 allowance for persons with disability on a monthly basis. The Fiji Disabled Personss Federation is working with beneficiaries and government to ensure that proper follow-ups and simplified processes are in place by government, to ensure that that priority cases are being attended to and these special needs are being met.

More practical steps include (www.ohchr.org):

- developing specific guidance to ensure the participation of women and persons with disability and their representative organisations in climate change-related actions and decision-making;
- ensuring access to meeting venues, schools, shelters and workplaces for persons with disability;
- strengthening the capacity of persons with disability to respond to climate change by ensuring that information is made available in accessible formats;
- promoting equal rights and opportunities in the labour market for women and persons with disability;
- strengthening education and training for persons with disability in general, and in particular on issues related to sustainable development, environmental degradation and climate change;
- developing, collecting and monitoring disaggregated indicators, focusing on age, gender, disability and ethnicity.
- monitoring the implementation of disability-inclusive policies throughout project cycles; and
- emphasising the need to respect the rights of persons with disability as part and parcel of effective climate action at the Human Rights Council, under the United Nations Framework Convention on Climate Change and in other relevant forums.

5.3 Climate change parameters

Overall, all respondents agreed that they had observed changes in the climate patterns in their countries. The main changes were: unpredictable rainfall patterns, more flooding, higher temperatures, more severe hurricanes or tropical storms, an increase in sea level and increased severity of coastal erosion.

Table 2: Percentage of respondents and response to statements on climate change parameters

Statement %	Agree %	No change %	Disagree %
There has been no change in rainfall pattern.			35
There has been a change in the frequency of flooding.	90	10	0
There has been no observed change in temperature.	20	15	65
There has been a change in the severity of hurricanes or tropical storms.	100	0	0
A change in sea level was not observed.	10	30	60
The severity of coastal erosion has changed.	70	30	0

⁶ <https://www.housing.gov.fj/housingassistanceforpersonslivingwithspecialneeds>

⁷ [https://www.fiji.gov.fj/Media-Centre/Speeches/English/MINISTER-FOR-WOMEN,-CHILDREN-AND-POVERTY-ALLEV-\(5\)](https://www.fiji.gov.fj/Media-Centre/Speeches/English/MINISTER-FOR-WOMEN,-CHILDREN-AND-POVERTY-ALLEV-(5))

In Fiji, respondents noted there was a change in rainfall patterns and an increase in prolonged drought. They also noted a general increase in temperature, particularly in the warmer months, which contributes to discomfort and exhaustion and affects persons with disability in terms of mobility and transportation.

In terms of hurricanes and storms, respondents noted a change in the cyclone season and pattern; the usual span of six months (November to April) had changed to eight months (October to May). Another observation was the increase in intensity and severity of cyclones and storm surges, leading to more damage. For example, Fiji was hit by several cyclones in 2020, one of which, TC Winston, caused a great deal of destruction.

Sea-level rise is also common in Fiji, and this has led to flooding of coastal areas and saltwater intrusion into farming areas. Coastal erosion due to storm surges and increased sea-level rise are also happening, resulting in the loss of coastline, land and sandy beaches.

The observations by respondents in Fiji are aligned with the conclusions of the Pacific Climate Change Science Program assessment that was conducted in 2011, which states the following:

- temperatures have warmed and will continue to warm with more very hot days in the future;
- rainfall at Nausori and Nadi airports shows no clear trend since 1950. Rainfall patterns are projected to change over this century with more extreme rainfall days expected;
- by the end of this century, projections suggest a decreasing number of tropical cyclones but a possible shift towards more intense categories;
- sea levels around Fiji have risen and will continue to rise throughout this century; and
- ocean acidification has been increasing in Fiji's waters and will continue to increase and threaten coral reef ecosystems.

In Vanuatu, respondents reported that there had been increases in temperature over the last 20 years around Port Vila. Analysis by the Pacific Climate Change Science Program (2011) concluded that annual and seasonal maximum and minimum temperatures have increased in Port Vila. The maximum temperatures have increased at a rate of 0.18°C per decade. These temperature increases are consistent with the global pattern of warming and the observations by respondents.

In terms of annual rainfall, respondents reported an increase and this is supported by the Pacific Climate Change Science Program (2011) report that data since 1951 for Santo show a clear increasing trend in annual and wet season rainfall.

Another observation that is linked to climate change is the rise in sea level, which is usually worse during the king tide period. The rise in sea level has led to flooding of some residential areas along coastlines and saltwater intrusion in farming areas.

The feedback from respondents is similar to the Pacific Climate Change Science Program (2011) conclusions in that:

- temperatures have warmed and will continue to warm with more very hot days in the future;
- wet season rainfall at Port Vila has decreased since 1950 but rainfall at Aneityum shows no clear change. Rainfall patterns are projected to change over this century with more extreme rainfall days expected;
- by the end of this century, projections suggest decreasing numbers of tropical cyclones but a possible shift towards more intense categories;

- sea levels around Vanuatu have risen and will continue to rise throughout this century; and
- ocean acidification has been increasing in Vanuatu's waters and will continue to increase and threaten coral reef ecosystems.

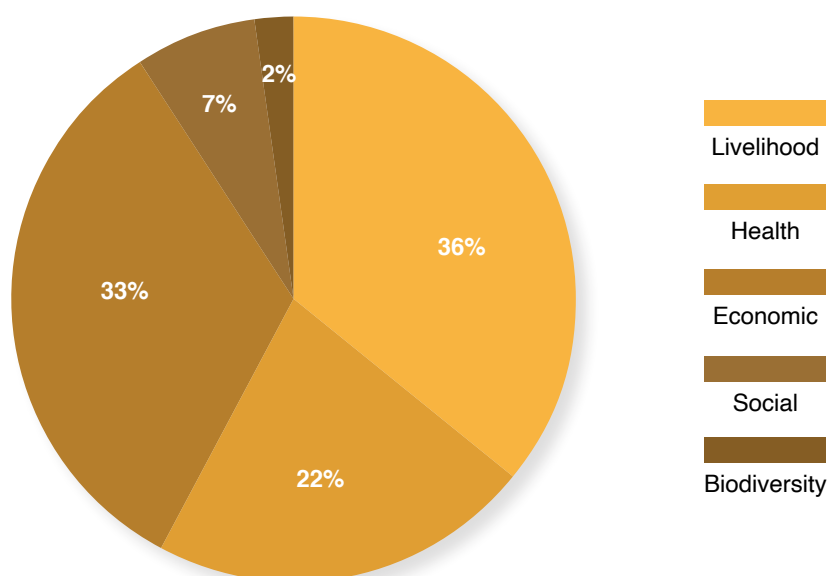
For Solomon Islands, most (80%) of the respondents reported that there was an increase in rainfall during the wet season and more drought during the dry season. Both these trends had affected well water, with murkier water during the wet season due to heavy rainfall and drying up of wells in the dry season. According to the Pacific Climate Change Science Program (2011), in Solomon Islands:

- temperatures have warmed and will continue to warm with more very hot days in the future;
- rainfall in Honiara showed no clear trend since 1950 but is generally projected to increase over this century, with more extreme rainfall days expected;
- by the end of this century, projections for Solomon Islands suggest decreasing numbers of tropical cyclones but a possible shift towards more intense categories; and
- ocean acidification has been increasing and will continue to increase and threaten coral reef ecosystems.

5.4 Impacts of climate change

According to respondents, the impacts of climate change on women and persons with disability can be felt in the area of biodiversity, food security, health, economics, water sanitation and hygiene, as well as in social aspects, such as trauma, loss of traditional lands and fishing grounds. In ranking the top three impacts, the majority (91%) of the respondents identified livelihood, health and economics. These three areas are, therefore, discussed in detail in this research brief. The remaining (9%) of respondents reported that climate change has more impact on social aspects (7%) and on biodiversity (2%).

Figure 1: Percentage of respondents and top climate change impacts



5.4.1 Livelihood (food security and Income generation)

The majority (89%) of respondents agreed that the changes in climate patterns in the three countries have affected the livelihoods of women and persons with disability. Some of the reasons for this include reduction in farm produce due to unfavourable climate conditions, scarcity of water required for food production due to drought, and removal of fertile farming areas through saltwater intrusion.

According to some respondents, observed increases in climate variability have affected crop yields for their households and the general population, causing higher inter-annual variability in crop yields. Changes in annual yield variability would make root crops and kava high-risk crops in the three countries. For Fiji, even mid-latitude crops such as sugarcane could suffer at very high temperatures in the absence of adaptation.

In addition, changes in short-term temperature extremes are critical for root crops and vegetables, especially when they coincide with key stages of development. For instance, only a few days of extreme temperature (greater than 32°C) at the flowering stage of many vegetables can drastically reduce yield. Both growth and developmental processes, however, exhibit temperature optima. Scientifically, in the short-term, high temperatures can affect enzyme reactions and gene expression. In the longer term these will affect carbon assimilation and thus growth rates and eventual yield.

As highlighted by respondents, most persons living with disability in Vanuatu are unemployed and depend heavily on agriculture for food production, but climate change, has had adverse effects on crops, leading to a decrease in production. Very few of the deaf and mute respondents have employment because most of them were denied opportunities to go to school early in life so they have to manually produce their food or support family members who work to earn cash. They are involved in subsistence activities such as fishing, gardening and feeding the pigs at home.

In Fiji and Vanuatu, the overall yield of farm produce for the respondents' households has been regularly affected by tropical cyclones, with associated strong wind and heavy rainfall. For example, Vanuatu (2015) and Fiji (2016) were hit by a category five cyclone. Respondents also noticed an increase in the severity of tropical cyclones, which reduced crop yields in most of the islands in the two countries significantly.

For the three countries, the increase in rainfall has led to frequent flooding. Respondents residing in the watersheds of Soasoa and Drasa plains in Fiji, Tagabe and Matnakara in Vanuatu and the Mataniko and Titige in Solomon Islands stressed that frequent flooding has destroyed crop yields from home gardens and from commercial farms.

In Vanuatu, some persons with disability are capable of fishing, but there are challenges that need to be overcome. Fishing in Vanuatu is the main source of livelihood and there needs to be proper preparation to reach fishing areas. While most fishermen use outboard motor engines to reach the bigger fish further out in the sea, persons with disability do not have the opportunity to get loans to buy an outboard motor engine. In addition, they are not even comfortable using outboard engine since those who are deaf are not able to hear it and there is high probability of drifting when a mechanical problem happens in open waters.

Respondents highlighted that exploring adaptation measures and alternative livelihood options are the way forward for persons with disability and may include:

- i. going fishing with persons who have access to improved equipment (such as fish finders, GPS and disability-friendly boats) and can assist in the use of this improved equipment;

- ii. develop creative, easier and optional fishing methods, e.g. a middle man option, buying and selling fish;
- iii. exploring alternative feasible options for producing food, such as farming and raising livestock and poultry: and
- iv. setting up small businesses with available grant assistance from local governments and NGOs (related to ii).

In addition, coastal respondents in the three countries stressed that there is a loss of biodiversity and a scarcity of marine resources due to the increase in seawater temperature and level, coupled with changes in the seasonal marine resources.

The women who were interviewed, 87% of the respondents, emphasised the fact that there is high reliance in agriculture and fishing for food and income sources. In the three countries, as in many other Pacific Island countries, women play a significant role in complementing the men in providing food and income for the family. The women reported, however, that their sources of livelihood were being increasingly negatively affected by both the primary and secondary impacts of climate change – heavy rainfall, flooding and inundation, droughts and cyclones. Food security is affected and, with the increase in population in the coastal areas, providing for the family is becoming more time-consuming and difficult.

5.4.2 Health

The majority (84%) of respondents stressed that women and persons with disability are increasingly experiencing health problems in the context of climate change and disasters. These include water borne diseases, anxiety, trauma, mental disorders and depression.

Some respondents (11%) highlighted the fact that women and persons with disability had difficulty accessing safe drinking water due to changes in climate patterns, coupled with increased severity of weather hazards. For respondents residing in flood prone areas, the increase in frequency and severity of flooding led to destruction of water supply infrastructure and water sources. A few days without a proper water supply led to other issues, such as poor hygiene, children not going to school and even violence against them. Also, valuable time for family, livelihood or economic development were often lost by women when they faced disruptions of water sources.

For persons with physical disability, any disruptions to their normal sources of clean water would leave them with very limited options and increased their dependence on family and community members.

Respondents further reiterated that women are the primary producer of food in their households and for these three countries, cultural and traditional barriers often make them more prone to hunger and poverty compared with men. When women are underweight and suffer stunted growth without adequate food, they often deliver low birth weight children and their children are malnourished.

In addition, some respondents with disability mentioned that, with extreme heat as a result of climate change, certain risk factors can negatively affect their health, especially if they are susceptible to heat-related illness. The respondents reported that they were aware of a few cases ending in death. Others reported dementia, depending on others for assistance in daily activities, having limited mobility (especially if confined to bed), or not having access to transportation. They also faced health risks during hurricanes and severe storms. One of the respondents reported that persons with disability have had high rates of illness, injury, and death from these events.

These are rare, one-off cases in communities all over the region, but they nevertheless exist and need special attention. Injury and illness usually occur among more severe cases of those persons with disability, particularly in cases of mental illness. In these cases, special assistance and care-giving are necessary. Options may be explored, depending on the context, and at a case specific level.

All respondents reported that, during an extreme climate event such as flooding and tropical cyclones that require evacuation, women and persons with physical and mental health problems are at risk. Some respondents reported that persons with disability often have reduced ability to receive or act upon emergency information or instructions, or to communicate their needs in an emergency or evacuation situation. Interestingly, these respondents mentioned that messages about extreme weather or other emergency information (such as a warning to boil contaminated water) are not always designed or delivered in a way that reaches individuals with hearing loss, low vision, or reduced mental capacity. In addition, persons with disability may also face additional physical challenges associated with evacuation, which can make health impacts worse, especially if local emergency response plans do not adequately anticipate and address the special needs of these populations.

This information is true for many communities across the Pacific region, and special effort needs to be made in collaboration with DRR efforts and local disabled persons associations to ensure that households and communities with persons with disability have access to these emergency response plans in a way that is most needed. There is clearly a need for stakeholders and educators to visit communities, villages and settlements and run workshops and training programmes, engaging persons with disability in the context that best fits.

It is estimated that approximately a quarter of economically active women work in agriculture around the world. Destroyed and reduced crop yields because of the impact climate change will have a particularly devastating effect on the livelihoods of millions of women, as well as consequences for their families' health and nutrition as commodity prices rise.⁸

In addition to its serious impact on livelihood and health, the majority (60%) of female respondents reported that climate change had affected their economic stability and most of them (42%) stated that hurricanes, cyclones and flooding over the years had destroyed property and assets, resulting in economic losses to women, persons with disability and their families.

For instance, respondents from Soasoa, Labasa reported that, towards the end of 2020 and early 2021, the area was hit with three tropical cyclones, destroying crops, vegetation, coastal areas and property, leaving most families in significant financial difficulty. Similarly, respondents from Drasa plain, Lautoka, reported that the increase in frequency and severity of floods had led to economic loss through rehabilitation efforts and, in some cases, total loss of home, farm machinery, vehicles and damage to cash crops.

Similarly, some respondents from Mataniko and Titige catchments in Solomon Islands highlighted the increase in frequency of flooding over the years, eventually causing economic losses.

Other respondents (10%) stated that, with the increase in frequency and severity of droughts, crop production for selling in markets had shrunk. Kava production in the interior of Pentecost Island is the main source of income and respondents from Tanbok, Pentecost, mentioned that drought had affected production over the years, leading to reduction in economic gain for households of these respondents.

⁸ <https://www.pacific.undp.org/content/pacific/en/home/presscenter/articles/2021/women-and-climate-security-in-the-pacific.html>

Some (8%) respondents stated that heatwaves had reduced their ability to work (employment, fishing or farming) and therefore reduced their economic productivity.

5.4.3 Human mobility as a displacement and/or adaptation strategy

This section examines the trend in human mobility amongst respondents with a specific focus on climate mobility. Respondents were asked whether they, as an individual or as a household, had moved from one location to another in the past ten years and, if they had, what were the reasons for migration. Respondents were also asked if climate change had been the reason for their migration.

The majority (76%) of respondents reported that they had not migrated, while the remaining respondents (24%) mentioned that their family had internal migration or basic displacement in the past ten years.

For the eleven respondents that had moved, seven mentioned the reason as looking for better economic opportunities, two stated that parents were being transferred for work placement, while the remaining two gave land conflict as the reason. Interestingly, none of the respondents gave climate change as the main reason for migration. However, through further questioning with the seven respondents who had moved for better economic opportunities, climate change had to some extent been a contributing factor, in addition to other social and economic factors within their community of origin.

A respondent from Blacksand community in Tagabe watershed, Port Vila, Vanuatu, reported that, in 2015, tropical cyclone Pam totally destroyed their home and household assets, including kava farms in their home village, Tanbok in the interior of Pentecost Island. Due to the rough terrain of the area and poor access to market, the family of the respondent found it hard to rehabilitate their home and assets and, in 2017, the whole family moved to Blacksand, where some family members were able to find employment in nearby Port Vila.

A respondent from Soasoa near Labasa town in Vanua Levu, Fiji, told a similar story. In 2003, tropical cyclone Ami destroyed the respondent's family home, household assets, and farm in Loganiota settlement in the interior of Vanua Levu. Poor road and market access prompted his family to move to Soasoa community, with some community members finding employment in Labasa town.

These events in both countries are comparable and show different levels of climate change adaptation and displacement, affecting everyday living conditions, transportation and market access, health, food security (aquaculture, crops, livestock and fisheries) and income options for women and persons with disability.

5.4.4 Policy analysis of national climate mobility

Fiji and Vanuatu offer examples of national climate change mobility policy frameworks. Both countries prioritise human security and integrate climate change mobility with development and with climate change and disaster policies, drawing on international principles. For example, the *Fiji National Climate Change Policy 2018–2030* states:

Human mobility is established as a priority human security and national security issue. Legal frameworks, policies and strategies to manage climate and disaster-induced displacement are used to protect human rights and reduce long-term risks. Planned relocation is supported through relevant resourcing and national policies and strategies as a form of adaptation. Cross-border migration issues and policy development are supported through the United Nations and the Global Compact for Safe, Orderly and Regular Migration. The role of climate change in human displacement is articulated and international responsibilities defined.

The policy considers women, persons with disability and other vulnerable groups to the extent that it complies with the UN Conventions related specifically to the rights of children, persons with disability and older persons.

Fiji has specific instruments on planned relocation guidelines: a framework to undertake climate change-related relocation, displacement guidelines in the context of climate change and disasters, and a climate relocation and displaced persons's trust fund, with others under development.

More specific to women and persons with disability is the Climate Change Act 2021, supported by UNICEF and the UN Office of the High Commissioner for Human Rights.

The act highlights women's rights, the rights older persons and persons living with disability, and children's inalienable right to a healthy environment. It also contains a focus on youth, groups and communities living in vulnerable and marginalised situations.

Section 7.6.6. of the 2016 Vanuatu's *Climate Change and Disaster Risk Reduction Policy* (VCCDRRP) calls for the "development of a national policy on resettlement and internal displacement". The 2018 *Vanuatu National Policy on Climate Change and Disaster-Induced Displacement* fulfills that mandate and draws on the principles in global, regional and national frameworks to respond to the needs of local communities in Vanuatu. Through mainstreaming displacement and mobility considerations into key sectoral areas of the government, this policy also takes concrete steps towards achieving the goals of Vanuatu's *National Sustainable Development Plan 2016–2030*, the "Persons's Plan 2030", and other national policies relating to water, child protection, gender, agriculture, health, education, food security, urban planning and environment.

The 2018 *Vanuatu National Policy on Climate Change and Disaster-induced Displacement* aims to enable government ministries to work together to provide protection for persons at each stage of the displacement cycle, with a view to achieving the aim of durable solutions for all persons affected by displacement. It recognises the primary responsibility of the government to assist

persons affected by displacement, as reflected in the VCCDRRP and the Persons's Plan 2030. Through strengthening existing planning initiatives, multi-hazards mapping, disaster-risk reduction and climate change adaptation efforts, the policy aims to reduce the triggers of displacement as much as possible. Where communities do need to move away from hazards, either temporarily or permanently, the policy aims to ensure that lessons learned from previous relocation experiences globally and in the Pacific region are taken into account, so that movement takes place with dignity and with appropriate safeguards and human rights protections in place.

The *Solomon Islands Climate Change Policy* is the most up-to-date national document. It outlines the country's priorities to respond to threats of climate change on a national scale. The ten priorities are: enabling environment and institutional arrangements; mainstreaming of climate change; vulnerability and adaptation and disaster risk reduction; mitigation; research and systematic observation; technology transfer; education, awareness and capacity building; finance and resource mobilisation; partnership and cooperation; and monitoring and evaluation.

Section 1.6 of the policy discusses gender equity and involvement of youth, children and persons with special needs. The section recognises that climate change will affect everyone in Solomon Islands now and in the future. It further states:

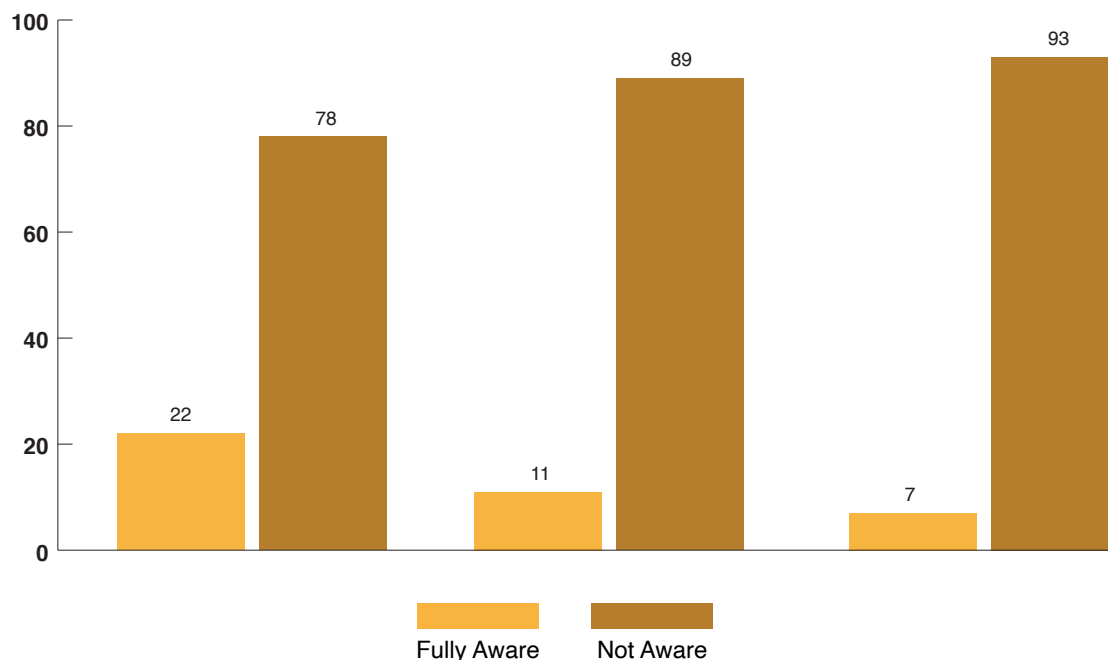
The implementation of this policy shall ensure gender equity, and the involvement of men, women, youth, children and persons with special needs.

Apart from these policies, Vanuatu, Solomon Islands and Fiji have developed numerous other national climate change policies over the years, including the Nationally Determined Contributions (NDC) as part of the Paris Agreement, national adaptation plans (NAPs) and sectoral mitigation policies. In addition, community and sub-regional climate change plans have been also developed through projects supported by government, NGOs, international development agencies and communities.

5.5 Participation in development of climate change policies

Prior to respondents being asked about their level of participation or contribution in the development of community, sub-regional or national climate change policies, they were first asked whether they were aware of any of these policies.

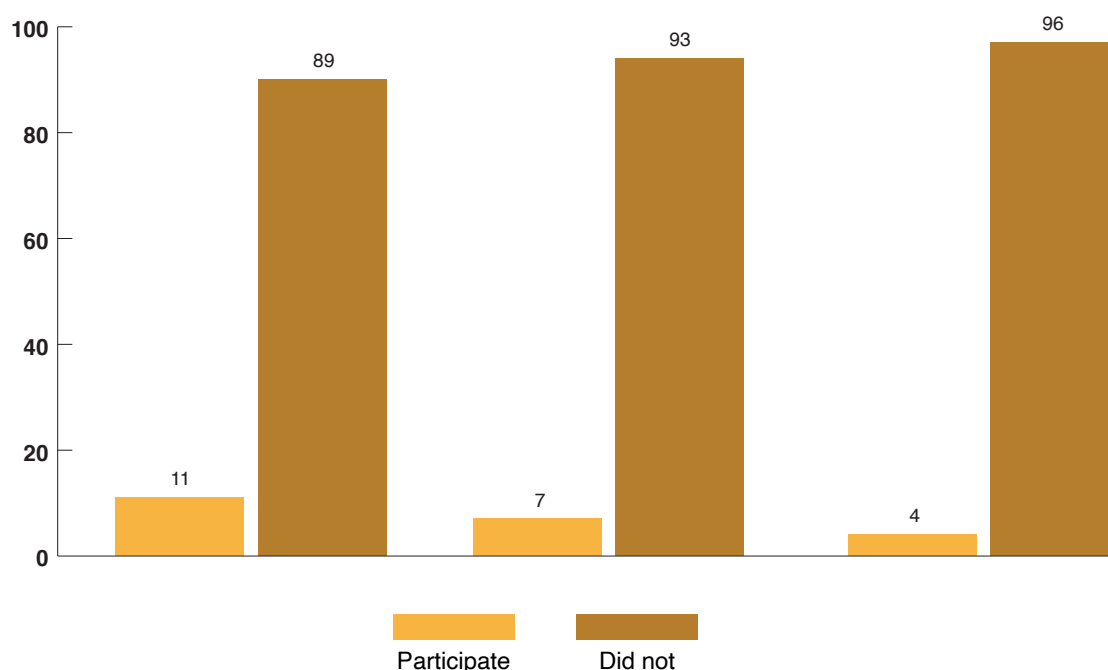
Figure 2: Percentage of respondents and awareness of policies



From Figure 2, it can be noted that most of the respondents were not aware of community, sub-regional and national policies on climate change.

In terms of participation in development of community, sub-regional and national policies, the majority of respondents reported that they did not participate at all, as shown in Figure 3. Those who were aware of the policies and participated in their development, reported that they had participated in a workshop or stakeholder engagement that was relevant to these policies.

Figure 3: Percentage of respondents and their participation in policy development



6. CONCLUSIONS AND RECOMMENDATIONS

- Climate change is observed by the respondents through variations in climate variable conditions. They include unpredictable rainfall patterns, more flooding, higher temperatures, more severe hurricanes and tropical storms, sea-level rise and more coastal erosion.
- Women and persons with disability are severely affected by climate change, especially in their livelihoods (food security and income generation options), health and economics. The impacts of climate change in these areas will increase their vulnerability and the socio-cultural, attitudinal, communication, physical, policy and programmatic barriers they face in their societies.
- While the three countries are in climate change hotspots, climate change was, however, rarely the primary reason for migration for the respondents who had relocated. Livelihood and economic causes were given as their primary reasons for migration.
- The three countries currently have national policies addressing climate change, acknowledging the needs of affected and priority communities. These include women and persons with disability. Vanuatu and Fiji have specific policies that address climate-induced mobility in the Climate Change Act 2021.
- Interestingly, most respondents were not aware of these policies and very few of them directly participated in their development; this highlights the need for more hands-on engagement and integration in processes that contribute to policy development and decision-making.

As a way forward, this research brief makes the recommendations listed below.

- Develop specific guidance to ensure the participation of women and persons with disability and their representative organisations in climate change-related actions and decision-making.
- To better understand the experiences of women and persons with disability in the context of climate mobility, there needs to be more studies that target women and persons with disability who have migrated (internally or externally).
- Studies are also recommended to assess how multiple mobility drivers, including climate change, interact with one another and lead to women and persons with disability being relocated on a temporary or permanent basis.
- Communities and sub-regional and national stakeholders should provide tailor-made climate change adaptation strategies for women and persons with disability.
- More awareness about climate change policies and plans is needed so that women and persons with disability can be aware of how they are catered for in these policies and plans.
- Development of future climate change policies needs to be inclusive and ensure that women and persons with disability are thoroughly engaged in all phases of policy development. Policy-makers need to identify how women and persons with disability are affected by the various effects of climate change and what their needs are.
- Experts at many levels need to engage in advocacy and networking. Climate change experts, disability and women experts, NGOs, state and national officials, and ground-level officials will all have to work together to incorporate women and persons with disability into climate change plans.

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