

An aerial photograph of a tropical coastline. The top half shows turquoise ocean waves crashing against a dark, rocky shore. Below the shore is a dense line of green palm trees. The bottom half of the image is a solid blue background with faint, concentric white circles.

Women-Led Multi-Hazard Early Warning Systems in the Pacific

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The University of Technology Sydney - Institute for Sustainable Futures (UTS-ISF) conducts applied research to drive evidence-informed international development effectiveness and policy and programs. UTS-ISF provide partners with technical expertise including climate change; planning, governance and decision-making; gender equality and inclusion; public health and water resources management; monitoring and evaluation; and policy and practice advice. www.isf.uts.edu.au

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Acknowledgment of Country

UTS acknowledges the Gadigal People of the Eora Nation, the Boorooberongal People of the Dharug Nation, the Bidiagal People and the Gamaygal People upon whose ancestral lands our university stands. We would also like to pay respect to the Elders past, present and future, acknowledging them as the traditional custodians of knowledge for these lands.

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Executive Summary

This report outlines the findings from research conducted by the Institute for Sustainable Futures, University of Technology Sydney (UTS-ISF) from April to July 2025 on women-led multi-hazard early warning systems (MHEWS) implemented by ActionAid Vanuatu (AAV) in Vanuatu; Bougainville Women's Federation (BWF) in Bougainville; and Talitha Project in Tonga; as part of the Pacific Owned, Women-Led Early Warning and Resilience (POWER) Initiative. The research was commissioned by ActionAid Australia (AAA) and Shifting the Power Coalition (StPC), a coalition of 13 women's rights organisations in the Pacific working to advance women's leadership in disaster management and climate change action, with funding from the Australian Department of Foreign Affairs and Trade (DFAT) and Margaret A. Cargill Philanthropies.

Women-led MHEWS are systems led by and for women to increase women's disaster risk knowledge; support them to observe, monitor, analyse and forecast disaster hazards; build their capabilities to prepare and respond to disasters; and support them to contribute to and access information and communications about disaster risks, hazards and warnings. This research identified the outcomes of women-led MHEWS in Vanuatu; the factors that are contributing to the development of women-led MHEWS in Bougainville, Tonga and Vanuatu; and priorities for strengthening and accelerating women-led MHEWS in the Pacific. 73 people participated in the study (54 women and 19 men), which involved *Talanoa* with women and men from five communities, representatives from national and local governments, and private sector representatives in Bougainville, Tonga and Vanuatu; and a sense-making workshop with staff from StPC, AAV, BWF and Talitha Project.

The findings from this study can be used to facilitate learning and contribute to dialogue between women's organisations, governments and international development partners on the strengths and enabling factors of existing women-led MHEWS, and ways to strengthen and accelerate women-led MHEWS in the Pacific, to ensure more gender-responsive and inclusive MHEWS and disaster planning, response and recovery.

1. Research findings

Outcomes of women-led MHEWS in Vanuatu

Participants from the *Women Wetem Weta* (WWW) women-led MHEWS in Vanuatu in this study and previous studies highlighted that WWW has:

Increased women's access to information and communications about disaster risks, hazards and warnings through their input to and dissemination of gender-responsive and inclusive disaster warning messages via SMS. These messages are distributed via a bulk SMS system and a phone tree network, reaching approximately 6,000 households across five islands in four provinces: Efate (Shefa Province), Erromango and Tanna (Tafea Province), Malo (Sanma Province), and Malekula (Malampa Province).

Increased women's knowledge of disaster risks, and their capabilities to prepare and respond to disasters. Women share multiple stories of knowing how to prepare and what to do during recent cyclones and an earthquake, compared to passively taking directions from male relatives during previous disasters.

Increased women's inclusion and cooperation with other diverse women in the *Women I Tok Tok Tugeta* (WITTT) network. Women who were previously isolated or excluded, including women with disabilities, have been providing each other with peer support both during and outside of disasters.

Increased women's voice and decision-making power at home, both in relation to disaster planning and response, and in communities. One village chief who has witnessed the activities and outcomes of WWW also remarked on the need for such initiatives for women, and the program's contribution to social cohesion and cooperation in his village.

Enabling factors for women-led MHEWS in Bougainville, Tonga and Vanuatu

Research participants from national and local governments, the private sector and civil society outlined the following key factors that have contributed to women-led MHEWS in Bougainville, Tonga and Vanuatu:

Recent national policy commitments in Tonga and Vanuatu are important structures for sustaining and growing the gender-responsiveness and inclusiveness of MHEWS and supporting the development of women-led MHEWS as a twin-track approach.

Establishing partnerships between national disaster risk management offices and women's rights organisations, and between the telecommunications company Digicel and women's rights organisations, has been a starting point for operationalising women-led MHEWS, for example through the development and dissemination of gender-responsive and inclusive messages about COVID-19 in Bougainville; and the mobilisation of WITTT to develop and disseminate gender-responsive and inclusive messages during cyclones and an earthquake in Vanuatu.

Coordination mechanisms at the national and grassroots levels have been key to the facilitation of women-led MHEWS in Bougainville, Tonga and Vanuatu. For example, the national disaster management cluster system in Tonga has facilitated coordination of gender-responsive humanitarian action in Tonga, and could play a role in supporting gender-responsive and inclusive MHEWS such as Tonga WIND in the future. In Vanuatu, the grassroots women's network WITTT has been the mobilising force for women-led MHEWS, with women sharing information and knowledge across and between islands.

Men's support for women's leadership and inclusion in MHEWS and community-based disaster risk management (CBDRM) may also play a role in the success of women-led MHEWS. Male research participants in Bougainville and Vanuatu emphasised the need for and importance of initiatives specifically for women's inclusion and leadership in MHEWS and CBDRM. In Tonga, female participants repeatedly highlighted that women are already playing significant leadership roles during disasters, but are excluded from planning and decision-making before, during and after disasters, and this requires engagement with men to open inclusive spaces for women to be leaders in CBDRM. Female participants also noted the need to engage men and boys in recognising and redistributing unpaid care work during and after disasters, encouraging intergenerational changes to gender attitudes and norms.

[Priorities for strengthening and accelerating StPC's POWER Systems](#)

Based on the findings of the research and collaborative sense-making with StPC partners, the research team identified the following priorities for strengthening and accelerating women-led MHEWS.

Governments and the private sector formalising and resourcing partnerships for women-led MHEWS, in particular, formalising and resourcing partnerships between Digicel, women's rights organisations and governments for women-led MHEWS in POWER systems into the future; and formalising and resourcing partnerships between national meteorological services and organisations representing women and people with disabilities to ensure the development of more gender-responsive and inclusive MHEWS into the future.

StPC members focusing on capacity strengthening for collective leadership within existing grassroots women's networks. The success of the WITTT grassroots women's network in Vanuatu in operationalising the WWW women-led MHEWS is partly attributable to regular and consistent training for network mobilisation. Staff delivering and women participating in BWF and Talitha Project's women-led MHEWS could learn from AAV's approach to mobilisation, and potentially replicate or adapt the approach, if resourced to do so in the long-term.

[Priorities for strengthening and accelerating women-led MHEWS in the Pacific](#)

Governments and international development partners taking a twin-track approach for gender-responsive and inclusive MHEWS by investing in both mainstream CBDRM and MHEWS initiatives, and initiatives specifically for women's leadership in gender-responsive and inclusive CBDRM and MHEWS.

Governments and international development partners encouraging cross-sector collaboration to improve gender-responsiveness and inclusivity of MHEWS. Women are already active in disaster response yet are often excluded from planning and decision-making. Public awareness-raising about women's roles in emergencies is more effective when coordinated across sectors rather than led by women's organisations alone. Incentives for collaboration would help shift institutional practices, foster shared leadership, and engage men and boys in challenging gender norms and redistributing unpaid care work associated with disasters.

Governments and international development partners scaling up women-led MHEWS: the WWW women-led MHEWS in Vanuatu has improved early evacuation, reduced losses, and empowered women in remote and disaster-prone communities. Scaling up this model can enhance both disaster resilience and gender equality by shifting power dynamics and increasing community preparedness. Project based donor funding has been critical to the establishment and ongoing operation of these systems; however, donors could also play a role in influencing governments to integrate and fund these systems as part of their national disaster management systems.

2. Key lessons for women-led MHEWS in Bougainville

- *Meri Gat Pawa, Meri Gat Infomesen (MGI)*, a women-led MHEWS led by BWF successfully facilitated access to gender-responsive and inclusive MHEWS during the early years of the COVID-19 pandemic, disseminating 10 million messages and reaching approximately 3 million people across Papua New Guinea.
- Policies for gender-responsive and inclusive MHEWS, and formal, resourced partnerships between BWF, NCFR and the governments of the Autonomous Region of Bougainville and PNG are required as a sustainable foundation for women-led MHEWS in Bougainville and PNG.
- BWF, Nazareth Centre for Rehabilitation (NCFR) and other organisations representing women and people with disabilities require sustainable funding and organisational capacity strengthening to be able to replicate the MGI model that was used during the pandemic for more localised disasters.
- Mainstream CBDRM initiatives in Bougainville implemented by government and NGOs would benefit from formalised partnerships and resourced collaboration with BWF, NCFR and other organisations representing women and people with disabilities to strengthen the gender-responsiveness and inclusiveness of MHEWS in Bougainville.
- In this research, male participants in Bougainville highlighted their concerns about women, people with disabilities and older people being left behind and over-burdened during disasters in Bougainville and called for the expansion and sustained investment in gender and social inclusion initiatives in CBDRM and MHEWS.
- Research participants highlighted that they may benefit from cross-learning opportunities with AAV and WITTT members in Vanuatu. For example, BWF visits to Vanuatu or WITTT member visits to Bougainville could facilitate peer-to-peer learning on strategies for mobilising, strengthening and accelerating women-led MHEWS at the grassroots level.

3. Key lessons for women-led MHEWS in Tonga

- Tonga has recently made national policy commitments for gender-responsive and inclusive MHEWS, which are a strong foundation to build upon. These policy commitments need to be operationalised and resourced, including through formal partnerships with women's rights organisations like Talitha Project.
- The cluster system for coordinating disaster management and response in Tonga has been critical for collaboration between government and women's organisations such as Talitha Project to improve the gender-responsiveness of humanitarian action. Talitha Project is a member of the Safety and Protection Cluster and WASH Cluster. For Talitha Project to be able to serve more women and girls across Tonga during disasters and successfully promote women's leadership in disaster planning and preparedness, they require long-term, well-resourced partnerships with government ministries and NGOs, rather than short-term, project-based funding.
- Women and girls in Tonga are already taking on significant leadership responsibilities during disasters and are over-burdened with unpaid care work during and after disasters. However, women are being excluded from disaster planning and preparedness decision-making, particularly at the village level. Government guidelines to include women in VDRMCs are not being fulfilled - Town Officers appoint VDRMCs, and the vast majority of Town Officers are men. Gender equity and social inclusion in VDRMCs

could be incentivised and/or regulated by government and potentially monitored and supported by women's rights organisations, to increase women's inclusion, participation and leadership in CBDRM.

- Mainstream CBDRM initiatives in Tonga implemented by NGOs would benefit from formalised partnerships and resourced collaboration with Talitha Project and other organisations representing women and people with disabilities to strengthen the gender-responsiveness and inclusion of MHEWS.
- Talitha Project staff or women participating in WIND may benefit from cross-learning opportunities with AAV and WITTT members in Vanuatu, particularly at this early stage of developing women-led MHEWS in Tonga. For example, Talitha Project visits to Vanuatu or WITTT member visits to Tonga could facilitate peer-to-peer learning on strategies for mobilising, strengthening and accelerating women-led MHEWS at the grassroots level.

4. Key lessons for women-led MHEWS in Vanuatu

- WWW has contributed to women's increased access to disaster warnings and information, and increased their knowledge, skills and capabilities to act before, during and after disasters.
- WWW has also contributed to women's increased cooperation, solidarity and support from and with other women, and their increased voice and influence in decision-making at home and in the community, in relation to disaster planning and preparedness.
- Vanuatu's policy commitments to gender-responsive and inclusive MHEWS are a strong foundation to support and expand WWW. While the National Disaster Management Office (NDMO) has established a partnership AAV, specific MHEWS commitments need to be operationalised through formalised, long-term and well-resourced partnerships between Vanuatu Meteorology and Geohazards Department (VMGD) and women's organisations such as AAV.
- The WITTT grassroots network of women is driving gender-responsive and inclusive MHEWS in Vanuatu and requires ongoing investment in training, mobilisation and succession planning to continue effectively.
- Digicel's commercial contract with AAV and WWW has facilitated access to women-led MHEWS and inclusive messaging during multiple disasters in recent years.

5. Key lessons for women-led MHEWS in the Pacific

- Women-led MHEWS can support diverse women to be better prepared for disasters; reduce the risks and negative impacts of disasters across communities; build collective support and cooperation before, during and after disasters; increase women's status and improve relationships between women and men in communities, as has been observed in WWW in Vanuatu.
- National government policies on gender-responsive and inclusive MHEWS can serve as a foundation for developing women-led MHEWS.
- When resourced to do so, existing active grassroots networks of women can mobilise for women-led and/or gender-responsive MHEWS, rather than building new or separate models for grassroots mobilisation.
- For women-led MHEWS to be impactful, sustainable and scalable, formalised and well-resourced partnerships between government and women's organisations are necessary.

List of Acronyms

AAA	ActionAid Australia
AAV	ActionAid Vanuatu
APMCDRR	Asia-Pacific Ministerial Conference for Disaster Risk Reduction
BWF	Bougainville Women's Federation
CBDRM	Community-based disaster risk management
CDCCC	Community Disaster and Climate Change Committee
CSO	Civil Society Organisation
HTHH	Hunga Tonga Hunga Ha'Apai
MGI	Meri Gat Pawa Meri Gat Infomesen
MHEWS	Multi-Hazard Early Warning Systems
NDMO	National Disaster Management Office
NDRMO	National Disaster Risk Management Office
NCFR	Nazareth Centre for Rehabilitation
PNG	Papua New Guinea
POWER	Pacific Owned, Women-Led Early Warning and Resilience
SPREP	Secretariat of the Pacific Regional Environment Programme
StPC	Shifting the Power Coalition
TMS	Tongan Meteorological Services
UN	United Nations
UTS-ISF	University of Technology Sydney, Institute for Sustainable Futures
VDRMC	Village Disaster Risk Management Committee
VMGD	Vanuatu Meteorological and Geohazards Department
Tonga WIND	Tonga Women's Information Network for Disasters
WITTT	Women I Tok Tok Tugeta
WMO	World Meteorological Organisation
WWW	Women Wetem Weta

Introduction

In April 2025, AAA commissioned UTS-ISF and two researchers from Vanuatu and Tonga to undertake research about StPC's POWER Systems, which are building a network of women leaders across the Pacific to develop and share gender-responsive and inclusive disaster and climate-related information. Implemented by StPC, with support from AAA and funded by DFAT and Margaret A. Cargill Philanthropies, POWER Systems are currently in operation or development in Bougainville, Papua New Guinea, Tonga, and Vanuatu.

In this research, UTS-ISF, StPC, and AAA partnered with three women's organisations: AAV, BWF and Talitha Project (in Tonga). The research team aimed to identify the outcomes of AAV's work on women-led MHEWS; identify factors that are enabling the development of women-led MHEWS in Bougainville, Tonga and Vanuatu; and identify priority areas to strengthen and sustain women-led MHEWS.

This report outlines the research approach and findings. This report will support StPC members to learn from each other's experiences establishing women-led MHEWS in the Pacific; guide StPC, AAA and governments in the Pacific region on ways to strengthen and accelerate women-led MHEWS in the Pacific; and inform international development partners on ways to contribute to women-led MHEWS and gender-responsive, inclusive MHEWS in the Pacific.

1. About Shifting the Power Coalition

StPC is a Pacific regional coalition of 13 feminist civil society organisations (CSOs) supporting diverse Pacific Island women to lead in disaster management, humanitarian, and climate action (Figure 1). StPC has received support from DFAT's Pacific Women Program through AAA since 2018.

Through collaboration, capacity building, and advocacy, StPC is advancing diverse Pacific women's leadership on climate and humanitarian action. StPC empowers women in the Pacific, including young women, through building technical capacity in disaster risk reduction (DRR) and climate action. For example, StPC facilitated training on MHEWS in partnerships with national and regional agencies such as meteorological services, Secretariat of the Pacific Regional Environment Programme (SPREP) and World Meteorological Organisation (WMO), helping women translate technical information into practical knowledge and use this to make risk-informed decisions. StPC also creates platforms for women to represent their communities at high-level forums, such as the 2021 Triennial Conference of Pacific Women, and engages with regional networks to strengthen collective advocacy. In 2022, StPC members participated in the Asia-Pacific Ministerial Conference for Disaster Risk Reduction (APMCDRR), increasing their visibility and ensuring they were included in decision-making processes (UNDRR, 2023). In 2025, StPC members participated in the Global Platform for DRR, calling for the acceleration of women-led MHEWS in the Pacific.

StPC aims to sustain collaboration, ongoing engagement and mutual trust between partner CSOs and climate/DRR organisations and create pathways for women to take stronger advocacy roles in climate change and disaster resilience efforts (UNDRR, 2023).



Figure 1: 13 members of StPC

2. About MHEWS

MHEWS are widely recognised as life-saving systems due to their ability to monitor and forecast hazardous weather, water or climate events effectively, and enable affected people to prepare and respond in a timely way. In 2022, United Nations (UN) Secretary-General Antonio Guterres launched [Early Warnings for All](#), an initiative to ensure everyone on earth is protected by MHEWS by the end of 2027. It aims to address the fact that many people, including women, girls, people with disabilities and other socially excluded groups have not had equitable access and contribution to or benefits from MHEWS, and specific efforts for access and inclusion are required. Women-led MHEWS such as StPC's POWER Systems are one approach to improving gender-responsiveness and inclusivity of MHEWS.

Under the Early Warnings for All initiative, the UN recognises MHEWS as having four components:

1. Systems for disaster risk knowledge.
2. Systems for observation, monitoring, analysis and forecasting hazards.
3. Systems for public preparedness and response capabilities; and
4. Systems for communicating about risks and hazards and disseminating hazard warnings.

MHEWS are particularly significant as they address multiple types of hazards occurring independently, simultaneously, or cumulatively over time, while considering their potential interrelated impacts. MHEWS are recognised as a cost-effective and scalable approach that leverages the collective capacities of all people involved in various components of early warning systems (Golnaraghi, 2012; Hemachandra, Haigh, & Amaratunga, 2021). A well-functioning MHEWS increases the efficiency and reliability of warnings through integrating coordinated mechanisms across different disciplines. This allows for accurate identification and up-to-date monitoring of multiple hazards, ultimately strengthening disaster preparedness and response (United Nations, 2006).

Global frameworks prioritise MHEWS as a measure for reducing risks and building resilience. For example, the Sendai Framework for Disaster Risk Reduction 2015-30 calls for a substantial increase in the availability and accessibility of MHEWS and disaster risk information by 2030 (UNDRR, 2015). The Paris Agreement also highlights early warning systems as essential strategy to strengthen resilience, increase adaptive capacity, and reduce loss and damage from climate change (UNFCCC, 2015).

3. Why design and implement gender-responsive, inclusive and women-led MHEWS?

MHEWS are most effective when they are inclusive and designed to reach groups most exposed and at risk, including women (United Nations, 2022).

[Women have unique and valuable knowledge and ways of working to for effective MHEWS](#)

Research participants in Bougainville, Tonga and Vanuatu highlighted that women often lead grassroots disaster preparedness efforts, sometimes utilising traditional ecological knowledge. Diverse women's knowledge has not previously informed or been sought to inform government MHEWS in Bougainville, Tonga and Vanuatu, though the Tonga Disaster Risk Management Policy Framework 2023-2030 notes that "DRM initiatives will ... draw on traditional knowledge" (MEIDECC, 2023, p21). POWER Systems in Vanuatu and Bougainville have sought to address this, with women's networks actively contributing to early warning messaging.

[Women are disproportionately affected by disasters](#)

Women, particularly in places that are highly exposed to climate change hazards, often face disproportionately high disaster risks due to structural inequalities, informal and formal gender norms and roles, and limited participation in decision-making (UN Women, 2016). Research participants in Bougainville, Tonga and Vanuatu highlighted that during disasters women often take on greater responsibilities for preparing family members and neighbours to evacuate, checking on people who may need additional support, and caring for children, older people and people with disabilities while evacuating and after disasters. The Tonga Gender and Environment Survey similarly found that in the aftermath of the Hunga

Tonga Hunga Ha’apai (HTHH) multiple disasters, more women than men experienced increased unpaid care burdens (77% of female respondents compared to 74% of male respondents) (Valero et al., 2022). Following Tropical Cyclone (TC) Winston in 2016, women in Fiji experienced increased unpaid care workloads and gender-based violence (IFRC, 2019). Additionally, women across Pacific Island countries are less likely to have access to information from government sources to prepare for disasters (UN Women, 2022). Women are often among the last to receive early warning messages due to limited access beyond their households, shaped by traditional gender roles and social norms that restrict their access to resources and mobility (Chowdhury et al., 2022). These barriers can prevent women from accessing timely warnings and critical information. For example, research participants in Bougainville highlighted that many women, children and older people were left behind while villagers were evacuating after a volcano eruption, due to their limited access to timely warnings and information.

Women are under-represented in formal leadership positions in disaster management

StPC recognises the limited representation of women in decision-making processes in the Pacific region and value of amplifying women’s voices to make MHEWS policies, plans and systems more inclusive. For example, in Tonga, women are largely excluded from village-level decision-making processes before, during and after disasters. Town Officers are responsible for appointing and overseeing village disaster risk management committees (VDRMCs), and the vast majority of Town Officers are men: in 2016 only two women were elected to local government, with women holding 1.1% of seats. While the Disaster Risk Management Policy Framework 2023-2030 notes that DRM measures “should consider the needs of, and leadership opportunities for, diverse and vulnerable groups – including people of all abilities, ages, genders and socio-economic status” (MEIDECC, 2023, p21), it is the discretion of elected Town Officers to include women in VDRMCs, and VDRMCs are largely comprised of men, with women excluded from decision-making processes before, during and after disasters (UN Women, 2022). Research by the Women’s and Children’s Crisis Centre in the aftermath of Tropical Cyclone Gita in 2018 found that 14 out of 17 respondents expressed that they had no involvement in decision-making in the 72 hours following the cyclone; they were simply following instructions on where to stay and what to do; and decisions that affected them were being made without their consultation (UN Women, 2022).

Despite these challenges, women have demonstrated resilience and leadership in emergency response through community networks and resource mobilisation (UNDRR, 2024). The concept of women-led MHEWS has emerged from the understanding that women are not only vulnerable to disasters but also have a right to be involved in preparedness and response. Through integrating gender perspectives and involving women at every stage of MHEWS, safety and wellbeing of community members can be better ensured (UNDRR, 2023). Tailoring communication channels to meet the specific needs of diverse women can increase the inclusivity and effectiveness of these systems, protecting and empowering diverse groups within a community (IFRC, 2021).

StPC has implemented a range of approaches to empower women and address diverse needs of marginalised groups across the Pacific. Through the initiatives, women have been able to deliver timely and effective early warning messages in local languages through adopting accessible and locally appropriate technologies. This approach has helped increase the reach of early warning messages in the StPC member countries while also strengthening women’s leadership and agency, contributing to advancing gender equity and strengthening community resilience (UNDRR, 2022).

4. POWER Systems: StPC’s women-led MHEWS in Vanuatu, Tonga and Bougainville

This section describes women-led MHEWS implemented in Vanuatu, Tonga, and Bougainville by StPC members under the POWER initiative. The three initiatives include Women Wetem Weta led by AAV in Vanuatu; the Tonga WIND project implemented by Talitha Project; and Meri Gat Pawa, Meri Gat Infomesen (MGI), led by BWF in Bougainville. Each initiative is at a different stage of implementation and takes different approaches to progress women-led MHEWS within target communities. All three programs aim to put women at the centre of early warning systems, helping all community members prepare for disasters and build resilience.

Women Wetem Weta in Vanuatu

In Vanuatu, a group of women community leaders from WITTT network have been implementing a women-led MHEWS program known as *Women Wetem Weta* with support from AAV and StPC. WWW brings diverse women together to analyse weather patterns, receive information, develop messages tailored for local women's needs, and disseminate messages through their networks in their communities and the outer islands.

The program uses weather and climate information from the Vanuatu Meteorological and Geosciences Division (VMGD) and the National Disaster Management Office (NDMO). WWW Hub, managed by AAV in Port Villa receives and translates technical warnings into simplified, practical and locally relevant messages. These messages are drawn from a curated Message Bank developed by trained members of WITTT. The simple messages are disseminated through WWW's Phone Tree system - a structured communication network maintained by a chain of trained and purposefully selected women leaders. The Phone Tree, WWW Correspondents, Taskforce Leaders, and Sister Circles ensure timely and inclusive early warning information dissemination at the community level (Australia Pacific Climate Partnership, 2024).

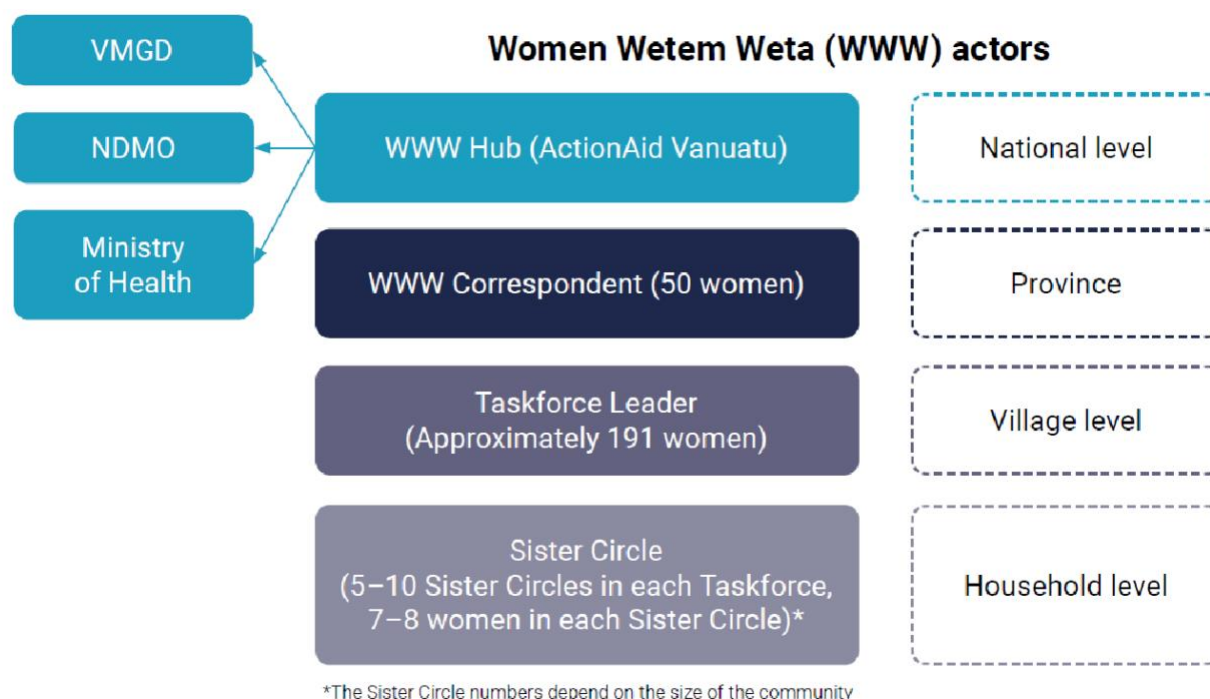


Figure 1: Women Wetem Weta Program actors (Source: [The economics of acting early: Evidence of climate disaster action in the Pacific](#))

Trained WWW members follow clear processes to distribute early warnings and help their communities prepare for severe weather events like tropical cyclones. They also send live updates via SMS to the WWW hub based in AAV Head office, which informs authorities and humanitarian actors about unfolding situations within affected communities. By tapping into the leadership and resilience of women, WWW empowers them to take active roles in protecting their communities from climate-related shocks and disasters.

Meri Gat Pawa, Meri Gat Infomesen in Bougainville

Since 2020, BWF has been implementing Meri Gat Pawa, Meri Gat Infomesen in Bougainville. Women leaders, including young women and women with disabilities, have been identifying priority issues for women and determining what messaging will be sent out through mass SMS, radio and website platforms, for example, in relation to gender-based violence and social inequality during emergencies, and then further relaying the messages to community members.

BWF has an extensive network of women leaders in all 3 regions of Bougainville, 13 districts and 33 constituencies that reaches over 400 village assemblies. In each region there is a region President and within each region, all districts have BWF leaders. This enabled women within BWF to operationalise a phone tree network with relative ease as there were existing structures in place enabling BWF leaders at all

levels to exercise their agency within their respective constituencies to obtain and relay vital issues relating to COVID-19 awareness and prevention (further described on page 27).

Additionally, the district-level structure of the phone tree network has allowed for the building of partnerships at the community or 'roots' level to lead the response to COVID-19. Such partnerships, noted by the North and Central regions' phone tree network leadership, have included church groups, women's groups, people with disabilities, young women, Chiefs, Village Assemblies, and Ward Steering Committees and Chiefs.

[Women's Information Network for Disasters in Tonga](#)

In Tonga, Talitha Project has been establishing Tonga WIND in Lapaha over the past year. Talitha Project is developing a youth hub in Lapaha and supporting 14 young women and two young men to become youth mentors, providing them with training on disaster risk reduction and preparedness. Talitha Project is also in the early stages of developing a partnership with Digicel in Tonga, to establish a women-led MHEWS similar to those in Vanuatu and Bougainville described above.

Research Approach

The research team aimed to take a participatory, feminist, strengths-based approach, putting the following research principles into practice:

Empowering	The research aimed to be participatory, strengths-based and generative, rather than extractive. The research team facilitated a research design meeting involving partner organisations and StPC, to discuss and refine the research questions and objectives, and incorporate their ideas for research approaches and methods appropriate for their respective countries and community contexts.
Reciprocal	The research team aimed for the research process to be reciprocal, providing meaningful benefits for partners and participants in return for their time and contributions in the research. One-page briefs summarising the findings were produced in Bislama, Tongan and Tok Pisin, to inform the community members who participated in the research of the findings.
Feminist & intersectional	The research team placed Pacific women's leadership at the centre of the process, valuing their contextual knowledge and insights into gender power dynamics and structural inequalities. During the research design phase, staff from AAV, BWF and Talitha Project were offered the opportunity to shape the study by identifying their priorities. Throughout data collection, women in the communities were consulted on how they wished to participate, with efforts made to amplify diverse voices, including women of varying ages and women with disabilities. The team adhered to ethical research principles, including safeguarding protocols, and actively encouraged the use of Pacific Island methodologies, approaches and languages.
Contributing to solidarity across scales	The research collected insights from local, sub-national and national level disaster resilience systems, and contributed to learning across countries and scales. Emerging findings from the research were presented at the 2025 Global Platform, where they were shared with Pacific government representatives, donors, and civil society stakeholders. Following the completion of the research, StPC members will collaborate to disseminate the findings and foster cross-scale learning, ensuring that insights inform practice and policy across the region.
Strong and equitable research partnerships	The research team worked in partnership with AAV, BWF and Talitha Project, prioritising the development of trusting and respectful relationships. Throughout the collaboration, UTS-ISF researchers prioritised decision-making by Pacific Islander women, and practiced researcher reflexivity. The team recognised and respected that the women-led MHEWS initiatives are at different stages in terms of progress, with each partner having different goals and priorities for the initiatives in the future. The researchers respected diversity across the three country's initiative contexts and catered to partners' learning interests.

Due to the limited timeframe for research design and data collection, expectations around the depth of collaboration in the research process were not achieved. The research team actively sought ways to maximise contributions from partners and team members, each bringing their own contextual expertise. This approach helped ensure that diverse insights were captured and reflected in the findings.

1. Research Objectives and Questions

The research aimed to achieve five objectives:

- i. To identify the outcomes that diverse women have experienced as a result of participating in women-led MHEWS in Vanuatu, Tonga and Bougainville.
- ii. To identify the outcomes that diverse community members have experienced as a result of using women-led MHEWS in Vanuatu
- iii. To identify the key stakeholders and systemic factors contributing to the sustainability and outcomes of women-led MHEWS in Vanuatu, Tonga and Bougainville.
- iv. To identify opportunities to strengthen and build upon these enabling factors.

To facilitate learning and contribute to policy dialogue on women's leadership, disaster risk management and climate change adaptation across the Pacific. To meet these research objectives, the research was guided by five main research questions, each with sub-questions that were answered through a range of methods including document review, interviews and *Talanoa* sessions and workshops.

The five research questions were:

1. What have been the outcomes of participating in women-led MHEWS for diverse women in Vanuatu, Tonga and Bougainville, including in relation to women's transformative leadership?
2. What have been the outcomes of using women-led MHEWS for diverse community members in Vanuatu?
3. What key relationships and systemic factors have contributed to the sustainability and outcomes of women-led MHEWS in Vanuatu, Tonga and Bougainville, to date?
4. How could these enabling factors be strengthened or built upon to enhance the sustainability and outcomes of women-led MHEWS in Vanuatu, Tonga and Bougainville?
5. What are the priority areas for accelerating and strengthening Pacific women-led MHEWS?

Annex 1 outlines the scope of the research, including the guiding questions, data sources and data collection methods.

2. Sample and Methods

The research team collaborated with three local partners to identify community members best suited to participate in the research. Each partner selected community members from one village, based on:

- the strength of the partner's existing relationships with the community,
- the extent to which the women-led MHEWS initiatives were operational, and
- the level of access to the community for in-person data collection.

AAV, Talitha Project and BWF conducted stakeholder mapping to identify key individuals and organisations who have been contributing to the initiatives and could offer valuable insights. Guided by this mapping, the researchers carried out data collection with a selection community members and institutional representatives. Annex 2 provides an overview of the participant groups who participated in data collection and the number of participants in each group.

The research involved four key qualitative research activities, outlined below.

Secondary data

Document Review: UTS-ISF reviewed 11 project documents including design documents and progress reports to gain an initial understanding of the three initiatives, their activities and the outcomes documented so far. UTS-ISF also utilised Perplexity¹ to conduct broader literature reviews of academic and grey literature on gender dynamics, equity and inclusion in disaster management in the Pacific.

¹ Perplexity.ai

Primary data

Talanoa: The researchers applied *Talanoa*, a conversational approach from the Pacific, to enable community members, including women involved in the initiatives, other women and men in the community, and staff from local partner organisations, to reflect on and share their experiences. This method encouraged participants to provide rich, contextual insights into the outcomes of the initiatives, while allowing researchers to ask follow-up questions that helped address the core research questions.

Interviews: In-depth, semi-structured interviews were conducted with women with specific needs, such as single mothers and women with disabilities, to provide a safe and supportive space for them to share their experiences. Additional interviews were held with staff from partner organisations, government officials, and private sector representatives, using sector-specific questions to gather insights relevant to their areas of expertise.

Community workshops: women from Lapaha in Tonga participated in a workshop involving interactive activities and *Talanoa*, to share and reflect on their aspirations for women-led MHEWS into the future. Women, men and young people from Torikina and Wakunai District participated in a sense making workshop including the Staff from the BWF and NCR. The workshop involved participatory activities where participants had identified and prioritised their aspirations for their future generations in terms of Women-led MHEWS.

Cross-learning workshop: the research team will conduct a cross-learning workshop with StPC in July to share and make sense of the findings from the research and further develop the priorities for strengthening and accelerating women-led MHEWS in the Pacific. The discussion from this workshop will inform the final version of this report.

3. Limitations

While every effort was made to ensure the rigour of the research, some limitations are likely to have affected the comprehensiveness of the findings.

Due to the short timeframe to produce emerging findings for the Global Platform for Disaster Risk Reduction in early June; AAV, Talita Project and BWF had very limited availability to engage in the design of the research and arrange key informant interviews and *Talanoa* with research participants. As a result, several groups and individuals who were anticipated to participate in the research were unable to participate due to scheduling conflicts, and the number of research participants who had participated in POWER Systems activities was relatively small (15 women in Vanuatu; 6 young women in Tonga; 6 women in Bougainville).

Due to the time and availability constraints, it was not possible to address question 2: 'What have been the outcomes of using women-led MHEWS for diverse community members in Vanuatu?'.

Research Finding 1: Outcomes of Women-Led MHEWS

This section describes the outcomes of the MHEWS initiatives for women who have directly participated in WWW (research question 1). The three initiatives - WWW in Vanuatu, Tonga WIND, and MGI in Bougainville are at different stages of implementation. As a result, outcomes of the initiatives are more evident in Vanuatu than in Tonga and Bougainville. In Bougainville, MGI contributed women-led MHEWS to the COVID-19 response and is currently being adapted to respond to other hazards. In Tonga, the women-led MHEWS under Tonga WIND is yet to be established. The outcomes highlighted in this section are primarily drawn from Vanuatu, while also acknowledging the growing momentum in Tonga and Bougainville.

AAV's WWW program takes a gender-transformative approach to MHEWS, placing women's leadership and inclusion at the core of the program. By enabling women to lead preparedness actions based on early warning messages, WWW is helping to reduce loss and damage from disasters. In addition to strengthening preparedness and resilience, the program is driving transformative social change. The following section outlines WWW's two-fold impact on disaster response and on social change.



Image: Women participating in Women Wetem Weta training in May 2025. Credit: ActionAid Vanuatu.

1. Women participating in WWW in Vanuatu have increased access to information and enhanced knowledge, skills and confidence to prepare and respond to disasters

WWW's early message dissemination from the WWW Hub to the community levels and its tailored approach to increasing women's knowledge, skills, and confidence, has given women access to critical information and strengthened their capacity to correctly interpret it and take appropriate actions.

The WWW program has played an important role in equipping members of the WITTT network with the skills to accurately interpret early warning messages from the WWW Hub and effectively disseminate the information within their communities. A *Talanoa* with WITTT members in Eton village and interviews with the AAV Country Manager and WITTT Disability Officer highlighted that specialised communication training was

provided to the WITTT members, including WITTT Sunshine, the disability inclusion wing of the network. These sessions focused on crafting short messages, limited to 164 characters, to ensure accessibility for women with limited literacy, supporting them to recognise keywords and understand critical alerts. As part of their learning agenda, WITTT members also visited the Digicel Head Office in Port Vila, where they engaged in discussions about mobile network coverage. This hands-on experience helped them understand how telecommunications towers function and identify areas in their communities with weak or no signal, prompting them to deliver messages in person when necessary.

During the *Talanoa*, WITTT members shared that they had also received practical lessons on holistic disaster preparedness approaches. Previously, women responded to disaster warnings by focusing solely on timely evacuation. Through the WWW program, women have learned to prepare beyond evacuation—ensuring that basic needs are met at evacuation centres and important documents are safe in advance. Women in Eton village reported that every household now maintains a ready-to-use emergency basket, and all family members are aware of its purpose. These baskets usually include flashlights, batteries, important documents such as marriage certificates, dry food, hygiene products, and essential medicines. Women also routinely check and replace batteries and food items to ensure everything remains functional and fresh in case of an emergency.

“[During a recent emergency] Mamas were encouraging everyone to move to the shelter. The dads were only concerned about moving but mamas were also thinking about basic needs. They had their emergency basket ready ...” - Village Chief in Vanuatu

Early warning messages that have been tailored by WITTT members in WWW include details of how severe the forecast event is predicted to be, and suggested actions to appropriately respond. This has enabled communities to make informed decisions that help prevent loss of life and reduce damage to homes, livestock, crops, and other assets. These timely actions have not only improved safety but also delivered economic benefits. A cost-benefit analysis of the WWW program found that every \$1 invested yields a return of \$4.40 (Australia Pacific Climate Partnership, 2024). A previous study by UTS-ISF also documented a range of voluntary preparedness actions taken by households after receiving WWW alerts. Some of these actions are listed below:

Pre-emptive sale of harvests: Women harvest and sell their fruits and vegetables in advance of severe weather events to avoid financial loss from upcoming disasters.

Food preservation: Women preserve fresh fruits using various methods, such as making banana chips from bananas, to prevent loss and assure food supply in the aftermath of disasters.

Root crop protection measures: To save the crops from pest infestation in post-cyclone settings, farmers cut down and burn the leaves and stems of root crops such as taro and sweet potato.

Securing drinking water supply: To avoid water contamination, household and community water tanks are covered with tree branches, and pipes feeding into the tanks are disconnected.

Reinforcing household and building infrastructure: Households apply different methods to reinforce their houses and protect them against strong winds and rain.

Cutting down large tree branches to avoid damage: After receiving early warnings from women of the families, youth and men work collectively to cut down large tree branches to minimise injury and infrastructure damage from high winds of cyclones or storms.

Purchasing essential supplies in anticipation of disaster: Both the rapid and slow onset early warning messages provide communities with adequate time to assess their situation, identify their immediate needs and purchase necessary items.

Organising vehicles and preparing youth to evacuate people with disabilities: WITTT Sunshine leads the evacuation of people with disabilities, informing them about alerts going door to door, and mobilising the CDCCC for their safe evacuation.

A transformative shift in disaster preparedness is emerging through the WWW program and broader preparedness actions, driven by improved access to information and increased community knowledge. In the past, women relied heavily on men to carry out these preparedness tasks. Now, with improved access to information and training, women are confidently leading preparedness efforts.

“Before that, men did all the preparedness and awareness. At present I lead the preparedness and awareness in my community. Awareness based on different hazards – if there is a cyclone, I will tell them what to do and the community would know. In 2023 there were twin cyclones in Erromango, but there was no loss of lives and properties of houses were all safe. Women are better prepared in terms of food security – they went to the garden, cut the branches of banana leaves, in their homes they would make sure there is food and clean water. Their documents are saved in a box, a dignity basket.” – WITTT member from Erromango.

2. Women’s collective organising has provided the foundation for women’s timely action and leadership before and during disasters

While WWW was built on the foundation of the WITTT network, the program is actively strengthening and extending the network by turning training into collective action and deepening community trust in women’s leadership.

The activation of WWW is deeply rooted in the foundational and ongoing work of the WITTT network. Both WWW and WITTT take a feminist approach, referred to as ‘feminist software’ by AAV, which guides practical ways of working. This approach addresses gaps in women’s access to power and decision-making, values women’s local knowledge, and nurtures collective action for a more inclusive and gender-responsive disaster preparedness system. WITTT continuously strengthens women’s leadership through training, confidence-building, and partnerships with key stakeholders. Within safe community spaces, WITTT leaders facilitate dialogue and mutual learning. For example, in Eton village, women gather at the WITTT marketplace to share personal experiences, build solidarity, and support one another. This sense of sisterhood directly feeds into the WWW program, where even resources such as mobile handsets are shared with a deep sense of collective responsibility.

Although only a few women in Eton received phones through the WWW program, they view these devices not as personal assets but as tools for community service. The network’s strength ensures that information received through the WWW program reaches marginalised and isolated community members and those without direct access to technology.

“I was married off to this village where I knew no one except my husband and his family. The community mobiliser invited me to join the WITTT network... I made friends, I felt safe, and now we support each other [in disasters and in peace time]” – A woman in Eton village

Trained WITTT members use the phones to disseminate early warning messages and support others during emergencies, such as arranging transport for pregnant women to reach hospitals.

“My Phone is my big asset in the community. Women with phone in the community [outside of WWW or WITTT network] text me asking about cyclone predictions. Women from my community use my phone to call for a bus to pick up for pregnant mothers to reach the hospital to deliver babies.” – WITTT Sunshine Disability Officer

The precision and timeliness of early warning messages delivered through the WWW program have built community trust, as they help reduce disaster-related loss and damage. Because the WITTT network is closely associated with WWW, the network leaders have gained credibility among community members. Men and village decision-makers are increasingly recognising the collective power of women in disaster preparedness and resilience building. This growing recognition is reflected in leadership roles, such as the WITTT community coordinator in Eton village being appointed to the Community Disaster & Climate Change Committee (CDCCC); four women now sitting on the Area Chief Councils; and women also sitting on provincial technical advisory committees in all provinces where WWW is operating (AAV, 2025). Women leaders in Eton village are now actively contributing their perspectives in community's preparedness, response and resilience building efforts.

3. Women WWW participants in Vanuatu have increased voice and influence in decision-making at home and in communities, during disasters and in everyday life

Women who have participated in WWW through WITTT are more confident to voice their decisions in disaster preparedness and influence decision-making at different stages of disasters, contributing to a shift in traditional gender norms.

Talanoa, with WITTT members found that WWW is empowering women to take proactive roles in disaster preparedness. As women begin to act on early warning messages, they are gaining both confidence and recognition. Women from Eton village shared that, in the early years, their preparedness efforts were often dismissed or mocked by their partners and family members. However, after consistently demonstrating the value of their actions, such as securing homes and preparing emergency supplies, men began to acknowledge their contributions. Men in the community now actively seek advice from women when a disaster is approaching, demonstrating a powerful shift in household dynamics. This growing respect has also opened the door for women to participate more in broader household decision-making, including decisions regarding raising children, lifestyle choices and daily routines within households.

“Mamas are taking lead and even tell their husbands what to do. The husbands are happy as well. Wives are telling the husbands they need to retrofit the roofs and houses, and they do it.”
– WWW member in Vanuatu.

Interviews with WITTT Sunshine Disability Officer, AAV Country Manager and women with disabilities in Eton village suggested that the program's inclusive approach including creating training opportunities for WITTT Sunshine members has also boosted the confidence of women with disabilities. For example, an elderly woman with disability from Eton village, now plays an active role in disseminating early warning messages. She shares information with her brother's family in a neighbouring community and seeks his support to retrofit her home in time. Another example came from a woman who is deaf, who, after learning from WITTT and WITTT Sunshine, recognised the risk of a tsunami following the 2024 earthquake. With no WITTT members present in the village at the time, she took the initiative to guide her family to higher ground, demonstrating her leadership and knowledge. Similarly, a single mother in the village has gained the confidence to independently prepare for cyclones by reinforcing her roof and walls and also advising her family to stay safe.

“During the big earthquake in 2024, her mom [a WITTT member] was in Port Vila to attend a training with ActionAid, but she knew exactly what to do. She prepared the emergency bag and informed her father and brothers, gathered everyone to go in-land because there was a possibility [of a] tsunami post EQ...”. - interpreter for a woman with a disability in Vanuatu.

Women are not only transforming their roles within households but are also starting to shape decisions that contribute to community's safety and strengthen resilience and safety. WITTT women are also active

members of CDCCC, where they share early warning messages and contribute to community-level preparedness. While their influence in formal decision-making spaces is still emerging, their proven skills and leadership in disaster preparedness are paving the way for greater inclusion.

“The first time, there was no women in the system. Only CDCCC and chief, they would make all the decisions – who gets the support and who wants what. Now things have changed, and things have become stronger and better. Me and my colleagues are informing the mamas about good preparedness. We are now members of CDCCC, and we can influence men in the committee about rations and rehabilitation materials.” – WWW member in Vanuatu.

Research from other projects for women’s leadership in CBDRM in Vanuatu have found similar insights into the effectiveness of women’s leadership in CBDRM. In a study of women-led Community Disaster and Climate Change Committees (CDCCCs) after Cyclone Pam in 2015, CDCCCs with trained women leaders in Tafea Province experienced faster recovery and higher trust in women’s leadership than those that did not receive the training, and CDCCCs with gender-balanced membership were significantly more compliant with evacuation protocol than those that had not participated in the program (Webb, 2016). Other factors are also likely to have contributed to the effectiveness of women-led CDCCCs, but this study and our research findings demonstrate a correlation between women’s leadership and effective decision-making in CBDRM.

The early success of MGI in Bougainville

WWW is the most advanced women-led MHEWS in StPC’s POWER initiative, however StPC members in other countries have also had early successes in establishing women-led MHEWS. In Bougainville, BWF and NCR partnered with Digicel during the early years of the COVID-19 pandemic to disseminate gender-responsive and inclusive SMS public health messages across Bougainville and PNG under the POWER initiative. The initiative focused on developing key messages for SMS, radio, and television through a consultative process involving diverse groups, including rural women, young women, and people with disabilities. The initiative also collaborated closely with the PNG Department of Health’s Risk Communications and Community Engagement Committee to ensure alignment with government-led public health messaging prior to dissemination. The SMS campaign during COVID-19 disseminated approximately 10 million messages and reached approximately 3 million people across PNG and Bougainville.

The initiative’s COVID-19 response successfully mobilised women and networks across both Bougainville and PNG more broadly, in part due to the large-scale and consistent risk factors of the pandemic. Natural disaster risks in Bougainville and PNG often require more localised strategies due to the context-specific nature of natural disasters such as volcanic eruptions, earthquakes, or tsunamis. BWF is now considering how to replicate the system used during the COVID-19 response for smaller-scale disasters. This is discussed further under ‘Priorities for strengthening and accelerating women-led MHEWS’.

Research Finding 2: Enabling factors for Women-Led MHEWS in Vanuatu, Tonga and Bougainville

This section outlines the research findings on the key relationships and other factors enabling women-led MHEWS in Vanuatu, Tonga and Bougainville and ways in which these could be built upon to enhance the outcomes and sustainability of women-led MHEWS (research questions 3 and 4). In collaboration with AAV, Talitha Project and BWF, and through *Talanoa* with women in Vanuatu, Tonga and Bougainville, the research team identified four key factors that have supported women-led MHEWS in the three locations, outlined below.

1. National policy commitments towards gender-responsive and inclusive disaster risk management and MHEWS in Vanuatu, Tonga and Bougainville

In recent years, several Pacific Island Countries have made national policy commitments to gender-responsive and/or inclusive DRM and/or MHEWS. These policy commitments set a precedent for supporting women's leadership in MHEWS in the Pacific into the future, if they are well-resourced and operationalised.

Vanuatu policy commitments

The Government of Vanuatu has made commitments to gender-responsive DRM in the National Gender Equality Policy 2020-2030, the Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030, and the Disaster Risk Management Act No. 23 of 2019. One of the five strategic areas of the National Gender Equality Policy is the fostering of gender responsive and community-driven solutions to climate and disaster resilience; with objectives to strengthen gender responsiveness of climate change and disaster institutions and decision-making processes; protect women, children and people with disabilities in emergencies through coordinated humanitarian action; and nurture community-owned and locally-led solutions to resilience building.

Similarly, the Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030 includes commitments to equity, integrating social and gender inclusion as cross-cutting issues during implementation, and strengthening people-centred multi-hazard approaches (SPC, 2015); and the Disaster Risk Management Act 2019 includes an objective to support a whole-of-society approach to DRM that is gender-responsive, respectful of Indigenous and traditional knowledge systems, and respectful of human rights (Republic of Vanuatu, 2019).

Tonga policy commitments

The Government of Tonga has made commitments to improving gender-responsiveness and inclusion in DRM in Tonga in the National Women's Empowerment and Gender Equality Tonga Policy and Strategic Plan of Action 2019-2025 (WEGET), which is currently being updated, and the Tonga MHEWS Policy Framework 2024 - 2030.

Under Outcome 3.2, the WEGET outlines actions to improve knowledge of gender perspectives in disaster response, increase household-level capacity, and ensure equal access to early warning information for all. It also calls attention to the increased vulnerability of pregnant women, children, older people, and persons with disabilities in times of crisis (Government of Tonga, 2019). The WEGET also promotes inclusive and intersectional approaches, and mandates gender-responsive budgeting across sectors including disaster risk reduction.

The Tonga MHEWS establishes a strong policy commitment to inclusivity through its guiding principle on "Equity, Fairness, Gender Sensitivity and Inclusiveness." The policy explicitly promotes the inclusion of women, youth, persons with disabilities, and those in remote areas in early warning systems. It mandates equitable access to warning messages and decision-making processes. Strategic Objective 4 further reinforces the need for targeted, understandable, and timely communication for all groups.

Importantly, the Policy outlines the development of a Joint MHEWS Action Plan by November 2025, which offers a key opportunity to operationalise these commitments including through the development of gender-responsive SOPs and formal partnerships with women's organisations. The Policy also acknowledges

implementation gaps such as the lack of inclusive SOPs and weak community linkages, providing a clear justification for piloting women-led MHEWS initiatives like the Talitha Project's WIND.

These commitments provide an enabling policy framework for women-led MHEWS initiatives, such as the Talitha Project's WIND but require further operationalisation through SOPs, institutional mandates, and equitable resource allocation.

Bougainville/Papua New Guinea (PNG) policy commitments

Policies for gender-responsive and inclusive MHEWS, and formal, resourced partnerships between BWF, NCFR and the governments of the Autonomous Region of Bougainville and PNG are required as a sustainable foundation for women-led MHEWS in Bougainville and PNG.

The Autonomous Region of Bougainville is covered by PNG's national systems, including the National Disaster Centre (NDC), which is responsible for coordination of disaster preparedness and response activities (CFE-DM, 2019) and the National Disaster Risk Reduction Framework 2017-2030. However, as assessed by the Humanitarian Advisory Group, in Bougainville, "it is clear that the lack of an agreed systemic coordination mechanism for DRR, which includes CCA activities and stakeholders, is hampering integrated programming in PNG" (HAG, 2022, p17). HAG's (2022) research also found that participants in PNG and Bougainville emphasised the importance of ensuring all groups are included in processes that develop and communicate critical messages on disaster risks and hazards; and to improve trust and uptake, information about disasters needs to be made more accessible.

The Autonomous Region of Bougainville's Policy for Women's Empowerment, Gender Equality, Peace and Security acknowledges that widowed women, single mothers and women with disabilities "continue to face ongoing vulnerabilities in terms of their safety, security, economic independence, access to education and basic services and access to land (for those displaced during the Crisis or by Climate Change)" (ABG, 2016); however it does not identify commitments or actions for gender equity in disaster preparedness or gender-responsive MHEWS.

The Government of Papua New Guinea (PNG) and Pacific Community (SPC) are establishing a National Multi-Hazard Early Warning Centre with funding from the European Union (SPC, 2025). There is no publicly available information about the extent to which this will include work on gender-responsive and inclusive MHEWS and women's leadership in MHEWS.

2. Emerging formal partnerships with women's rights organisations

In recent years, StPC members AAV, BWF and Talitha Project have begun to establish partnerships with national government departments/ministries and Digicel to collaborate on gender-responsive and inclusive MHEWS. These new partnerships have opened opportunities for more systematic and deeper collaboration into the future.

Commercial contract with Digicel (telecommunications provider)

AAV, Talitha Project and BWF have established contract with the telecommunications provider Digicel in Vanuatu, Tonga and Bougainville, respectively. Digicel reaches approximately 60% of the population in Vanuatu, and 80% of the population in Bougainville. Given this extensive coverage, establishing commercial contracts with a major telecommunications provider like Digicel represents a significant step forward in expanding connectivity and service delivery. In Vanuatu, Digicel has provided low rates to AAV for the past four years to disseminate disaster warning messages through the WITTT network. AAV procures and distributes 20-50 phones to WITTT members every two years. AAV has also supported the WITTT members with mobile phones to develop livelihoods activities to support them to continue to purchase phone data and credit.

The research team noted that this partnership may require ongoing financing from government and/or the private sector, rather than project-based donor funding, as it is a commercial contract between AAV and Digicel rather than an ongoing partnership agreement. WITTT members participate in livelihood activities that enable them to pay for phone data on an ongoing basis. WITTT members participate in livelihood activities that enable them to pay for phone data on an ongoing basis.

“The private sector should support this model. Because it does work. Especially reaching high amounts of the population. We can target specific locations, areas for certain messages. We can tailor messages. ... It’s business but it also has social benefits.” – Representative from Digicel.

In Tonga, Talitha Project has recently formed a partnership with Digicel, and two organisations are yet to design and operationalise an SMS-based MHEWS with Talitha Project participants. It is estimated that 89% of the population in Tonga has an active cellular mobile connection (Kemp, 2025). Disaster warnings are currently disseminated via text messages in Tonga, however research participants in Tonga highlighted that the messages often use technical terminology that is not easily understood or taken seriously by community members, and there is a need to make early warning messages more accessible for women, older people and people with disabilities. Tonga’s MHEWS Policy includes objectives to make user-centred warnings available to all, and MHEWS warning information understood by all. The policy is in the early stages of implementation, presenting an opportunity to formalise partnerships between Tonga Meteorological Services, telecommunications providers such as Digicel and women’s and other representative organisations such as Talitha Project to engage diverse community members in designing and accessing gender-responsive and inclusive early warning messages.

In Bougainville, NCFR partnered with Digicel during the early years of the COVID-19 pandemic to disseminate SMS public health messages across Bougainville and PNG. The initiative focused on developing key messages for SMS, radio, and television through a consultative process involving diverse groups, including rural women, young women, and people with disabilities. The initiative also collaborated closely with the PNG Department of Health’s Risk Communications and Community Engagement Committee to ensure alignment with government-led public health messaging prior to dissemination. Digicel mobile telephone and internet coverage in Bougainville is approximately 80%, with less coverage in rural areas (ABG, 2025).

Partnerships with government departments

Governments in Vanuatu and Tonga have established partnerships with women’s organisations to coordinate on gender-responsive disaster response and MHEWS.

The Vanuatu Meteorology and Geohazards Department (VMGD) has a growing partnership with AAV to develop more gender-sensitive and inclusive early warning messages. Representatives from VMGD noted that the partnership has changed their approach to developing early warning messages.

“Most of our information was very general. Our engagement with mamas and people with disabilities helped us to think from a different perspective. The perception now is changing, to address inclusion. Now VMGD is trying to ensure that our information reaches more people. It’s more inclusive.” – Representative from VMGD.

This partnership is also informal and between individuals in VMGD and AAV. Two research participants from VMGD highlighted that the partnership should be formalised through an agreement to ensure long-term sustainability beyond the current relationships. One also acknowledged the desire for VMGD to have direct two-way communication and feedback with women and people with disabilities on the effectiveness of messaging.

“This is all informal. No money. No time. Not part of our original work. Our operation budget is always small, but inclusion is in our strategy, and I need more collaboration. ... At this moment, it’s just me. But if I leave, and the next person is not passionate about it, they may not feel the need [to work on gender-responsive and inclusive early warning messages].” – Representative from VMGD.

Tongan Meteorological Services (TMS) has developed new relationships with women's groups and representative organisations for women and people with disabilities during recent consultations in 2024 and 2025 for developing gender-responsive and inclusive MHEWS. This presents an opportunity for TMS to formally establish and resource partnerships with women's organisations such as Talitha Project to strengthen, monitor and evaluate the gender-responsiveness and inclusivity of MHEWS into the future. This is discussed further under 'Priorities for strengthening and accelerating women-led MHEWS in the Pacific'.

In Bougainville, the two partners continue to work with the Autonomous Bougainville Government (ABG)'s in Humanitarian Response Planning such as the COVID-19 and also the recent Volcano eruption. During the COVID-19, the partners conduct a TV and radio campaign. The TV campaign has reached average of 1.5 million viewers, and the National Radio had reached 600,000 listeners. During the recent Volcano Eruption, BWF used its structured network to distribute NFIS to women and children affected within Torokina District.

Partnerships with civil society groups and other organisations

There may be opportunities to build and improve partnerships between women's organisations and other civil society organisations to strengthen women-led and gender-responsive MHEWS. Through the national cluster system for disaster responses in Tonga, Talitha Project has gained opportunities to convene with other civil society groups and organisations. However, there is generally limited opportunities for civil society groups and humanitarian organisations to collaborate with women's organisations on CBDRM and MHEWS. In PNG and Bougainville, the International Organisation for Migration (IOM) has played a critical role in CBDRM, however it is unclear the extent to which they have worked on women's leadership, gender equity and disability inclusion in CBDRM (HAG, 2022). Larger organisations leading CBDRM programming in the Pacific could more systematically engage with women's organisations like Talitha Project, BWF and AAV in the future. As civil society and the international development system rapidly changes in the Pacific, efforts are required to ensure CBDRM programming continues to incorporate gender mainstreaming through partnerships and meaningful collaboration with diverse women's organisations. This is discussed further under 'Priorities for strengthening and accelerating women-led MHEWS in the Pacific'.

3. Coordination mechanisms at grassroots and national levels

Governments and women's organisations have established mechanisms for coordinating women's leadership of MHEWS – to varying extents – at grassroots and national levels in Bougainville, Tonga and Vanuatu. Lessons can be learned across these contexts and for future development of women-led MHEWS in other Pacific countries.

Grassroots coordination of women's leadership in MHEWS

In Vanuatu, AAV supported the grassroots WITTT network to establish the women's forums and safe spaces on five islands: Efate, Tanna and Erromango, Malo and Malekula, to receive emergency alerts via text message, and mobilise to relay the messages to women across the network, including those without access to mobile phones. Consistent and regular training of WITTT members by AAV, combined with an existing culture of inter-village and inter-island kinship networks and oral communication between women in mamas groups, have contributed to the success of WITTT's grassroots mobilisation and coordination of multi-hazard early warnings in the WWW system.

In Bougainville, BWF has established the basic structure of a grassroots coordination mechanism for women-led MHEWS, with women presidents and district level coordinators in place to work with women at the village level to build their capacity in disaster preparedness and disseminate early warning messages. The BWF phone tree structure for communication on preparedness and emergency responses enabled BWF and NCFR to work with church groups, women's groups, people with disabilities, young women, village assemblies, ward steering committees and chiefs. For example, during the COVID-19, the BWF worked with the Catholic Church Women Association, to distribute humanitarian packages like the masks and soaps. During the research, women and men embedded in this structure advised that more regular training and a greater investment of resources is required for these women to take on leadership roles in community-based disaster preparedness and MHEWS. Since establishing the structures, women have not been sufficiently trained or supported to facilitate preparedness activities with women across villages. Resource constraints –

limited ownership of mobile phones amongst women and limited connectivity in remote areas – have also constrained women’s leadership in MHEWS in Bougainville.

In Tonga, Talitha Project is planning to establish a Youth Hub in Lapaha, with young women utilising the hub to plan and coordinate disaster preparedness and MHEWS activities, in addition to other community development activities. If the youth hub model is successful, it could be replicated in other locations in Tonga and/or with other grassroots networks of women, for example, women’s weaving groups, which are already active in many Tongan villages. A representative from the NDRMO similarly highlighted that there is an opportunity to strengthen the gender-responsiveness and inclusivity of CBDRM and MHEWS by connecting with existing women’s networks such as women’s weaving groups, however centralised government departments do not have sufficient reach and relationships at the grassroots level to facilitate capacity strengthening with these groups on their own.

Research participants in Bougainville and Tonga expressed their interest to learn from the WITTT model of women’s grassroots mobilisation through visiting them in Vanuatu, and/or WITTT members and AAV staff visiting their communities in Bougainville and Tonga to learn directly from their experiences.

National level coordination of women’s leadership in MHEWS

In Vanuatu, the VMGD officials and AAV highlighted the lack of structured coordination between national agencies such as VMGD and the National Disaster Management Office (NDMO) and grassroots networks. The WWW Hub based at AAV is managed by the AAV Country Manager, who is a member within the National Emergency Operations Centre and AAV staff are part of different cluster systems including the Gender Protection Cluster and the Humanitarian Cluster System. Through her involvement, disaster-related information is often communicated from the national level down to communities. She also serves as an advocate for community needs, ensuring these are voiced within the cluster and directly engaging with relevant ministries or agencies when specific support is required. In addition to its coordination role, the WWW program has made unintended yet valuable contributions to government partners’ GEDSI targets. For example, UTS-ISF’s previous research identified that agencies such as VMGD and the National Disability Desk have GEDSI targets embedded in their strategic plans but lack corresponding activities to implement them. Through collaboration with AAV and WWW, government agencies have been able to engage in activities that help meet these targets, for example, ensuring early warning messages reach diverse community members, including women, people with disabilities and elderly individuals. Furthermore, WWW contributes to the advancement of both the National Gender Strategy and the Agriculture Gender Strategy. However, these contributions have been sporadic and both VMGD officials and the AAV Country Manager emphasised the need for formal Memorandums of Understanding (MoUs) and more structured coordination mechanisms to strengthen the connection between national institutions and grassroots networks.

In Tonga, the National Disaster Risk Management Office (NDRMO) works with Talitha Project and other women’s organisations through a national cluster system to coordinate disaster responses. Talitha Project is a member of the water, sanitation and hygiene (WASH) cluster and social protection cluster. Government representatives who participated in this research highlighted the critical role that Talitha Project played in the 2022 HTHH response, particularly when they informed the NDRMO that young women’s hygiene and protection needs were not being met and prompted the dissemination hygiene kits, which had not been pre-planned. Government representatives also acknowledged that while CSOs like Talitha Project are critical in disaster preparedness and response, they usually receive short-term, project-based funding, and development partners play a crucial role in supporting the organisational capacity and sustainability of their efforts. One research participant from a high-level position in government noted that the Government of Tonga allocates some funds to women’s projects, “but they [CSOs] are doing a pretty good job finding funds from overseas”.

Across all three countries, research participants highlighted the need for bridging grassroots networks with national coordination of women’s leadership in CBDRM and MHEWS, and the critical role that women’s organisations could play in this, if resourced to do so.

4. Men's support for women-led MHEWS

The small number of men who participated in this research in Bougainville and Vanuatu expressed support for women-led MHEWS under the POWER initiative and acknowledged the need for more opportunities for women's leadership and inclusion in MHEWS and CBDRM activities.

In Vanuatu, the Chief of Erromango expressed appreciation for the inclusion of women in early warning systems and disaster preparedness through WWW and WITTT. He observed that women's active participation not only strengthened community resilience but also influenced greater unity, enabling the community to collectively manage risks.

"The women working together, it helps the community to thrive. Please accept and invite and see how the WWW and WITTT can help your community. If it did not help me as the chief of my community, I would not say this" – A Village Chief in Vanuatu.

Similarly, male research participants in Bougainville spoke about the disproportionate burdens women face during disasters and the need to promote women-led MHEWS to strengthen community resilience. During a 2023 volcanic eruption, men in Bougainville saw how women and people with disabilities were negatively impacted and excluded from aspects of the response. Many women did not receive evacuation or preparedness messages, as there were no women representatives involved to share information. Men also noticed that people with disabilities, children, and older people struggled to evacuate in time. This experience helped men understand that disaster preparedness must be inclusive, and that women need to be supported and equipped to lead and respond effectively.

"We should empower our women through training. ... We would like to see our women have an important role in our community, as they can make change" – A man from Wakunai District, Bougainville.

This represents anecdotal evidence of the support of men for women-led MHEWS and highlights an opportunity to explore men's perspectives more systematically in future research and program phases, ensuring a more comprehensive and coherent understanding of gender dynamics in disaster preparedness in Vanuatu.

Female research participants in Bougainville, Tonga and Vanuatu repeatedly highlighted that women are already in leadership roles in their communities during disaster responses, in that they take greater responsibility for checking on and helping family members and neighbours to evacuate and undertaking unpaid care work. They consistently highlighted the need to engage men and boys in CBDRM activities and raise public awareness about women and girls' needs, unequal unpaid care workloads, unequal decision-making and unequal access to information before, during and after disasters, in an effort to recognise and reduce these inequities and redistribute care work equitably.

Research Finding 3: Priorities for strengthening and accelerating Women-Led MHEWS in the Pacific

This section outlines the research findings on key opportunities to strengthen and accelerate POWER Systems specifically, and women-led MHEWS in the Pacific more broadly. The progress of the three women-led MHEWS initiatives and leadership of AAV, Talitha Project and BWF demonstrate the transformative potential of women-led MHEWS. To sustain and scale-up these efforts, coordinated action is needed across sectors, along with formalised partnerships, consistent capacity strengthening and strategic investment.

1. Priorities for strengthening and accelerating StPC's POWER Systems

Government and the private sector formalising and resourcing partnerships for women-led MHEWS

Partnerships between StPC members, government departments and Digicel need to be formalised and sustainably resourced for POWER Systems to continue. Government departments such as the VMGD in Vanuatu and TMS in Tonga are beginning to engage and cooperate with women's organisations like AAV and Talitha Project to strengthen the gender-responsiveness and inclusivity of MHEWS. However, these are not yet formalised or resourced partnerships. For gender-responsive and inclusive MHEWS to be sustainable, women's organisations and other organisations representing socially excluded groups require consistent funding and investment in organisational capacity strengthening. There is also an opportunity for the Autonomous Disaster Office and Humanitarian Cluster to formalise partnerships and strengthen their collaboration with BWF.

Research participants across all Vanuatu, Tonga and Bougainville repeatedly emphasised that women and girls are already taking on significant responsibilities during disasters and unequal, excessive amounts of unpaid care work in the aftermath of disasters. However, women are consistently excluded from district and village-level planning and decision-making about disaster preparedness, response and recovery. By formalising and resourcing partnerships with women's organisations such as AAV, Talitha Project and BWF; national disaster management offices and meteorological services could more effectively and sustainably support women's leadership and inclusion in CBDRM and MHEWS at district and village levels, as has been observed in Vanuatu.

"Women are good at planning. We need to involve women in disaster planning all the way to recovery. ... Many trainings are happening at the District Level with limited participation from only a few representatives from our village. Usually just the Town Officer and Member of the Council [both men]. We need to bring trainings to village level to increase coverage and outreach."
– a woman from Lapaha, Tonga.

StPC members focusing on capacity strengthening for collective leadership within existing grassroots women's networks

Currently, AAV, Talitha Project and BWF are resourced to provide training for women's leadership in CBDRM and MHEWS with project-based donor funding. To strengthen women's collective leadership on CBDRM and MHEWS within WITTT, BWF networks, Talitha Project's networks and other existing grassroots women's networks, regular, consistent opportunities to participate in CBDRM and MHEWS training are required. As evident from the experience of WITTT in Vanuatu, this could result in more women engaging in and voicing their needs within CBDRM, climate adaptation, MHEWS initiatives and building their collective capabilities to prepare and respond to disasters.

In Vanuatu, the WWW program successfully identified women with leadership qualities and provided them with comprehensive training. This not only included MHEWS and information dissemination, but also relevant issues such as livelihoods, agriculture, climate change and women's leadership. The program has significantly enhanced women's leadership within communities, as described under 'Outcomes of women-led MHEWS' in this report. To sustain and build on this momentum, it is essential to continue identifying emerging future leaders of WWW and WITTT. This can be supported through the development of leadership

transition plans that are focused on identifying and advancing future leaders who can represent WWW and WITTT at the highest levels.

The dedication and leadership of women in improving the lives of other women have been central to WWW's success. This strong foundation should be leveraged to advance collective and diverse leadership at all levels, ensuring the program's long-term impact and sustainability.

Women in Bougainville often hold influential positions within households, which can be harnessed by BWF to promote leadership development. As outlined on pages 29-30, men from Bougainville communities acknowledged the disproportionate burdens women face during emergencies and are supportive of efforts to upskill women to strengthen community resilience. These positive social dynamics create a strong foundation for training diverse women, equipping them with the skills and confidence needed to lead within and beyond their communities. The presence of four female Members of Parliament in Bougainville reflects a growing receptiveness to women's leadership at the national level. Building on this, BWF can develop structured platforms and training programs that guide women through planned leadership development, increasing their representation and influence in decision making spaces across all levels.



Image: Members of BWF. Credit: ActionAid Australia.

In Tonga, a strong platform exists to advance women's leadership in DRM, with women already playing active roles to strengthen community resilience. This existing engagement can be further enhanced by expanding access to training and workshops to build leadership capacity.

Integrating intergenerational learning into these trainings can be prioritised to enable meaningful exchanges between older and younger women, helping communities preserve traditional knowledge while adapting to new challenges.

Across all three locations, women participants highlighted the importance of systematically integrating women's traditional knowledge in MHEWS. This could be achieved through investing in grassroots women's networks and collective capacity strengthening in CBDRM and MHEWS.

“To reach women, we can try to use pre-existing networks. Many women at the local level are part of weaving groups. They already have that network, so rather than establishing a new network, we can come to them.” – a Representative from NDRMO, Tonga.

In all three countries, women’s collective capacity for leadership in MHEWS and CBDRM could be enhanced by through intergenerational learning and sharing of traditional knowledge between diverse women of all ages.

2. Priorities for strengthening and accelerating women-led MHEWS in the Pacific

Governments and international development partners taking a twin-track approach for gender-responsive and inclusive MHEWS

Taking a twin-track approach to gender-responsive and inclusive MHEWS means investing in both mainstreaming within existing CBDRM and MHEWS initiatives (including policies, programs and systems), as well as investing in specific initiatives dedicated to women’s leadership, gender equity, disability and social inclusion in CBDRM and national MHEWS. This approach is consistent with the sustainable development goals (SDG), particularly SDG 5 (Gender Equality) and SDG 10 (Reduced Inequalities). Mainstreaming helps to address structural discrimination across sectors, while specific partnerships and initiatives with women’s organisations, organisations of people with disabilities and other representative groups can address specific challenges and barriers to inclusion. This has been evident in Vanuatu, where national policy commitments to gender-responsive and inclusive DRM and MHEW have aimed to address structural discrimination, for example the exclusion of women from CDCCCs; while specific initiatives for women and people with disabilities, for example WITTT, WITTT Sunshine and WWW have enhanced women’s collective consciousness, capabilities in CBDRM, and agency and decision-making. Government departments in Bougainville/PNG, Tonga and other Pacific Island countries could adopt similar approaches to enhance MHEWS and outcomes for women and socially excluded people in disasters.

*“Before WWW, we were part of CDCCC. But once WWW started, more women joined.”
– a WITTT member in Vanuatu.*

Without twin-track investment in both mainstreaming and initiatives for women and socially excluded groups in CBDRM, there is a risk that government-led approaches to CBDRM and MHEWS reinforce systems of exclusion; minimise gender equity, disability and social inclusion to tick-box exercises; and/or women’s organisations and OPDs are under-resourced and dependent on international aid to cater for the needs of diverse women, girls and people with disabilities.

While there are national policy commitments for gender-responsive and inclusive MHEWS in place in Tonga and Vanuatu, these commitments need to be operationalised by governments through the development of roadmaps, standard operating procedures (SOPs) and measures to increase women’s participation in village level disaster risk management committees, for example mandated quotas and/or regular monitoring of gender and social inclusion in village level committees. Women’s organisations including AAV, BWF and Talitha Project will be well-placed to coordinate, guide, monitor and evaluate gender-responsive and inclusive and/or women-led MHEWS initiatives if they are resourced to do so.

Governments and international development partners encouraging cross-sector collaboration to improve gender-responsiveness and inclusivity of MHEWS

As outlined on pages 26-27, there are opportunities for large organisations working on CBDRM – for example, IOM in Bougainville, Tonga Red Cross Society - to collaborate more consistently with women’s organisations and OPDs in Bougainville, Tonga and Vanuatu to strengthen gender-responsiveness and inclusivity of MHEWS. Currently, collaboration between NGOs or humanitarian organisations and women’s

organisations and/or OPDs remains limited. Governments and international development partners could play a role in encouraging and supporting greater collaboration and coordination to strengthen gender-responsiveness and inclusivity of MHEWS.

Diverse research participants in Tonga highlighted that women are already taking on leadership roles and responsibilities during disaster responses, but they have not been included in systematic planning and decision-making on CBDRM and MHEWS. They called for increased public awareness-raising about women and girls in emergencies, the importance of including them in decision-making about disasters and planning of MHEWS. This type of public awareness-raising is more likely to be effective through collaboration between women's organisations, government and mainstream NGOs working on CBDRM, than through women's organisations working alone.

Similarly, research participants from Bougainville, Tonga and Vanuatu emphasised the need to engage with men and boys in gender-responsive and inclusive CBDRM and MHEWS initiatives, to enhance recognition of women's contributions to and leadership in CBDRM and MHEWS; reduce and redistribute the burden of women's significant unpaid care work after disasters; and encourage men and boys to actively engage with women and girls in CBDRM and MHEWS.

[Governments and international development partners scaling up women-led MHEWS](#)

A key priority emerging across the three countries is the need to scale up women-led MHEWS and extend their reach to more remote islands and disaster-prone communities. While the StPC women-led MHEWS projects have been implemented slightly differently in each country, their core objective - empowering women to lead MHEWS and community preparedness has proven highly effective to reach diverse populations. Previous research in Vanuatu suggests that WWW is playing a role in saving lives and reducing loss and damage as communities now evacuating in time, retrofitting homes, and protecting crops (Australia Pacific Climate Partnership, 2024).

The impact of StPC's women-led MHEWS initiative goes beyond building climate and disaster resilience. The program is challenging social norms that historically marginalised women, contributing to a shift in power dynamics within communities. Therefore, it is important to expand the program within countries, to ensure more communities benefit from this transformative model.

The current reliance on project-based international donor funding has created a sustainability challenge for women-led MHEWS. Governments should recognise the value of such initiatives and explore avenues for national funding as part of broader disaster management and resilience building strategies. Organisations implementing these initiatives - AAV, Talitha Project and BWF, supported by StPC and AAA can play a role to advocate for government support and integration of these systems into national frameworks.

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Annex 1: Research questions, data sources and data collection methods

Research Question	Data sources	Data collection methods
1. What have been the outcomes of participating in women-led MHEWS for diverse women in Vanuatu, Tonga and Bougainville, including in relation to women's transformative leadership? 2. What have been the outcomes of using women-led MHEWS for diverse community members in Vanuatu?	Project documents	Document review
	Women's groups Community members Government and private sector representatives AAV, BWF and Talitha Project staff	<i>Talanoa</i>
3. What key relationships and systemic factors have contributed to the sustainability and outcomes of women-led MHEWS in Vanuatu, Tonga and Bougainville, to date?	Women's groups Community members Government and private sector representatives AAV, BWF and Talitha Project staff	<i>Talanoa</i>
4. How could these enabling factors be strengthened or built upon to enhance the sustainability and outcomes of women-led MHEWS in Vanuatu, Tonga and Bougainville?	Women's groups Community members Government and private sector representatives AAV, BWF and Talitha Project staff	<i>Talanoa</i>
5. What are the priority areas for accelerating and strengthening Pacific women-led MHEWS?	Women's groups Community members Government and private sector representatives AAV, BWF and Talitha Project staff	<i>Talanoa</i> Online sense-making workshop

Annex 2: Overview of the research participants

Research location: Vanuatu

Participant group/ community	Gender	Number of participants
WWW participants from Eton village	F	13
Women with disabilities from WITTT Sunshine network	F	2
WWW participant from Erromango	F	1
Village Chief from Erromango	M	1
Vanuatu Meteorology and Geohazards Department (VMGD)	F	1
	M	1
Digicel representative	F	1
AAV staff	F	1
Total	21 (19 female, 2 male)	

Research location: Tonga

Participant group/community	Gender	Number of participants
National government representatives (Ministry of Internal Affairs, NDRMO, TMO)	F	1
	M	2
Non-government representatives working on MHEWS in Tonga (radio, UN offices, Talitha Project)	F	5
	M	1
Community members Lapaha	F	16
	M	1
Total	26 (22 female, 4 male)	

Research location: Bougainville

Participant group/ community	Gender	Number of participants
Women from Torikina District	F	2
Men from Torikina District	M	4
Youth representatives from Torikina District	F	4
Women from Wakunai District	F	5
Men from Wakunai District	M	5
NCR staff	M	2
Bougainville Women Federation staff	F	2
District government representatives	M	2
Total	26 (13 female, 13 male)	

