

Marketplaces as sites for the development-adaptation-disaster trifecta: Insights from Vanuatu

Karen E. McNamara,^{*}  Rachel Clissold^{*}  and Ross Westoby[†]

^{*}School of Earth and Environmental Sciences, The University of Queensland, St Lucia, Brisbane, Australia.

Email: karen.mcnamara@uq.edu.au.

[†]Griffith Institute for Tourism, Griffith University, Nathan, Brisbane, Australia.

Abstract: *Faced with the pressing challenges of poverty, climate change and disasters, identifying opportunities for interventions that offer positive outcomes across the trifecta of development, adaptation and disaster risk reduction is critically needed. While the overlaps between these streams can be straightforward in theory, practical opportunities for convergence are often lacking. Drawing on 10 focus groups with women market vendors who are part of the UN Women's Markets for Change programme in Vanuatu, this paper explores how markets as places can be useful entry points for this trifecta. Marketplaces can be important sites for developing capabilities and empowering women. As transient and interactive spaces, marketplaces also have inherent strengths that can be built upon and utilised to heighten intervention reach and foster positive outcomes across the development-adaptation-disaster trifecta. This paper encourages further exploration into the capacity of marketplaces to achieve this trifecta of outcomes across various scales and locations, and to find solutions to existing challenges.*

Keywords: *adaptive capacity, development, gender, inequality, markets, Vanuatu*

Introduction

Despite a historical tendency to separate development, climate change adaptation and disaster risk reduction (DRR) in research, policy and practice (Thomalla *et al.*, 2006), there has been a shift towards converging these streams to reduce people's vulnerability and build resilience overall (Wisner *et al.*, 2004 ; Schipper, 2009). This paper focuses on the role that marketplaces can play as sites where these three streams can converge for positive outcomes.

Markets, in a broader sense, are traditionally linked with development aspirations related to food security, wealth redistribution and pathways out of poverty (Kuhl, 2018; Busse and Sharp, 2019). Studies are, however, beginning to highlight the importance of improved and fair market access for building resilience and adaptive capacity¹ (Bapna *et al.*, 2009; Feeny *et al.*, 2013; Belay *et al.*, 2017; Kuhl, 2018), although detailed case studies are lacking. An exception is Kuhl (2018) who highlights how, through increased production and incomes as well as diversified livelihoods, markets can increase people's access to food, improve their

asset accumulation and maintain their levels of consumption during extreme weather events. Kuhl (2018), however, focuses on a market system approach, which involves connecting the poor to markets (as an abstract notion) and using the private sector to encourage poverty reduction and economic growth. Our study focuses on markets as *places* – that is, a geographical place where gatherings focused on trade take place, and a set of localised social institutions, actors, organisations, transactions, trade practices, products and cultural meanings exist (Busse and Sharp, 2019). We undertake a critical exploration of the way that marketplaces in Vanuatu, which are traditionally linked to development goals, may also increase resilience and adaptive capacity in the face of climate change and disasters. We recognise, however, that our insights are preliminary, so we encourage further exploration into the capacity of marketplaces to achieve this trifecta of outcomes.

We explore the perceptions of women market vendors who are associated with the UN Women's Markets for Change (M4C) program – a multi-country initiative that aims to promote gender equality and women's economic

empowerment through achieving safe, inclusive and non-discriminatory marketplaces in urban and rural areas (UN Women, 2015). The M4C has four key outcomes; three which are development-related and one which directly aims to increase resilience in the face of disasters and climate change (Table 1). This paper highlights how development-oriented outcomes at the marketplace can also, through developing the capabilities of vendors, contribute to adaptation and DRR outcomes. We also highlight how marketplaces are important local entry points as they have situated strengths that can be built upon and utilised to improve intervention outcomes and reach. This is particularly important for the

Pacific Islands where recognising and using local agency and situated strengths may help counter imageries of islands as unresilient places (Kelman, 2018). Additionally, calls to build on women’s unique capabilities in building resilience have been made (Gender and Disaster Network, 2009; Lane and McNaught, 2009), and we demonstrate how marketplaces – as a central space for Pacific Islander women – provide the opportunity to do this.

This paper draws on the perspectives of 55 market vendors (53 women and two men) who participated in a series of 10 focus groups that were conducted in December 2018 by the lead author. All vendors live and work in

Table 1. Core outcomes and activities of the M4C program (Fleming and Tabualevu, 2018)

Outcomes	Activities to achieve outcomes
1 To establish and grow inclusive, effective and representative marketplace groups. These should contribute to gender, social and economic advancement, the elimination of gender-based discrimination and violence, and expanded economic opportunities for women	<ul style="list-style-type: none"> • Support establishment or revitalisation of market vendor associations • UN women, or implementing partners, train market vendors to organise themselves in groups or associations that can collectively influence the management of marketplaces and improve working conditions • Provide training to help vendors understand functioning of councils and basic principles of marketplace management • Support the marketplace associations in conducting consultations, elections and annual general meetings • Provide training and workshops to executive committee members in leadership and communication, strategic planning and good governance
2 To improve socio-economic security of market vendors	<ul style="list-style-type: none"> • Facilitate commercial banks to deliver training to women market vendors on basic financial literacy and improving business competencies • With local partners, provide training on how to increase income and agricultural productivity
3 To ensure local governments and marketplace managers are gender responsive and accountable to market vendor needs	<ul style="list-style-type: none"> • Through training sessions, support local governments, marketplace associations and market managers in their capacity to manage marketplaces and integrate gender-responsive management
4 To improve physical infrastructure and operating systems so that they are more sustainable, resilient to disaster risks and climate change, safer and more accessible	<ul style="list-style-type: none"> • Conduct consultation with marketplace associations on required infrastructure improvements to increase marketplace sustainability, resilience, safety and accessibility • Work with local councils to fund and manage infrastructure development to meet the needs of vendors

Vanuatu – an archipelago in the South-West Pacific that has been ranked the most at-risk country to hazards (Day *et al.*, 2019). Focus groups were selected because they can give participants the opportunity to own discussion spaces, thereby promoting richer, complex and deeper dialogue (Kamberelis and Dimitriadis, 2013), but also because the process of ‘collective talk’ is a culturally sensitive method for communitarian Indigenous cultures (Madriz, 2003) like those in the Pacific. Although marketplaces in Vanuatu have not always been of high economic importance (Brookfield *et al.*, 1969), recent studies emphasise their critical role for food security and the growth of local and national economies (Barnett, 2011; UN Women, 2016). They have long been important sites for women (Brookfield *et al.*, 1969), with marketplace trading currently being the main income activity of women in Vanuatu (DFAT, 2019). This study largely focuses on vendors that sell at central and Ring Road marketplaces on Efate Island, although some participants who are vendors at the Luganville marketplace in Santo were also involved (Figs. 1,2). Other participants included women from Nguna, an island to the north of Efate, who sell at the central marketplaces (n = 2) and members from the market vendor association executive team (Silae Vanua Market Vendor Association [SVMVA], n = 7). Ethics approval was granted through The University of Queensland (approval number 2018001985) and a research permit was granted from the Vanuatu Cultural Centre.

Synergies between development goals, adaptation and DRR

The historical tendency to separate development, climate change and disasters as three parallel streams does not reflect reality, whereby disasters and climate impacts stem from a complex interplay between a hazard and the wider development context (Wisner *et al.*, 2004). Overlooking these interacting realities can generate false dualities, depoliticise other challenges and opportunities in the everyday life of locals (Mercer, 2010; Kelman *et al.*, 2015) as well as result in policy inconsistency, redundant investment and dispersion of limited energy across multiple streams (Thomalla *et al.*, 2006;

Kelman *et al.*, 2015). Development practitioners have, therefore, argued that stand-alone approaches limit the extent to which – through addressing underlying ‘drivers’ of vulnerability – more sustainable vulnerability reduction could be fostered (Wisner *et al.*, 2004; Smit and Wandel, 2006).

The importance of shifting from stand-alone approaches to converged agendas is increasingly recognised. It has, for example, become clear that adaptation and DRR have the same underlying emphases on reducing vulnerability and enhancing resilience (Thomalla *et al.*, 2006; Schipper, 2009). Similarly, sustainable development is understood as an important contributor to adaptation and DRR through strengthening entitlements (Sen, 1999), boosting overall resilience, and ensuring the sustainability of programmes (McGray *et al.*, 2007). In fact, Kelman *et al.* (2015) suggest that adaptation should be conceptualised as a subset of DRR which, in turn, sits within larger development and sustainability processes. Others similarly argue that, to truly connect adaptation and DRR, coherent political action aimed at addressing the underlying causes of vulnerability such as poverty, socio-economic inequality and poor governance is needed (Schipper *et al.*, 2016). This kind of thinking has led to cogent calls for novel approaches such as those focused on capability, whereby rather than imposing standardised outcomes, interventions focus on empowering and developing the capabilities of locals to pursue their own varied and valued resilience outcomes (Dilling *et al.*, 2019).

A potential practical opportunity to converge these agendas in this way involves working with markets and marketplaces. Despite primarily being sites for generating income and wealth (Hinrichs, 2000; Barrett, 2008), the benefits that marketplaces offer can also become the platform from which communities re-establish livelihoods (Neef *et al.*, 2018) and mitigate the risks that climate change and disasters pose to livelihoods and financial security (Bapna *et al.*, 2009). Marketplaces can boost overall resilience by being a space for new social connections, connecting urban and rural places, enabling co-learning (Brookfield *et al.*, 1969; Busse and Sharp, 2019), improving food security (Timmer, 2017) and supporting inclusive

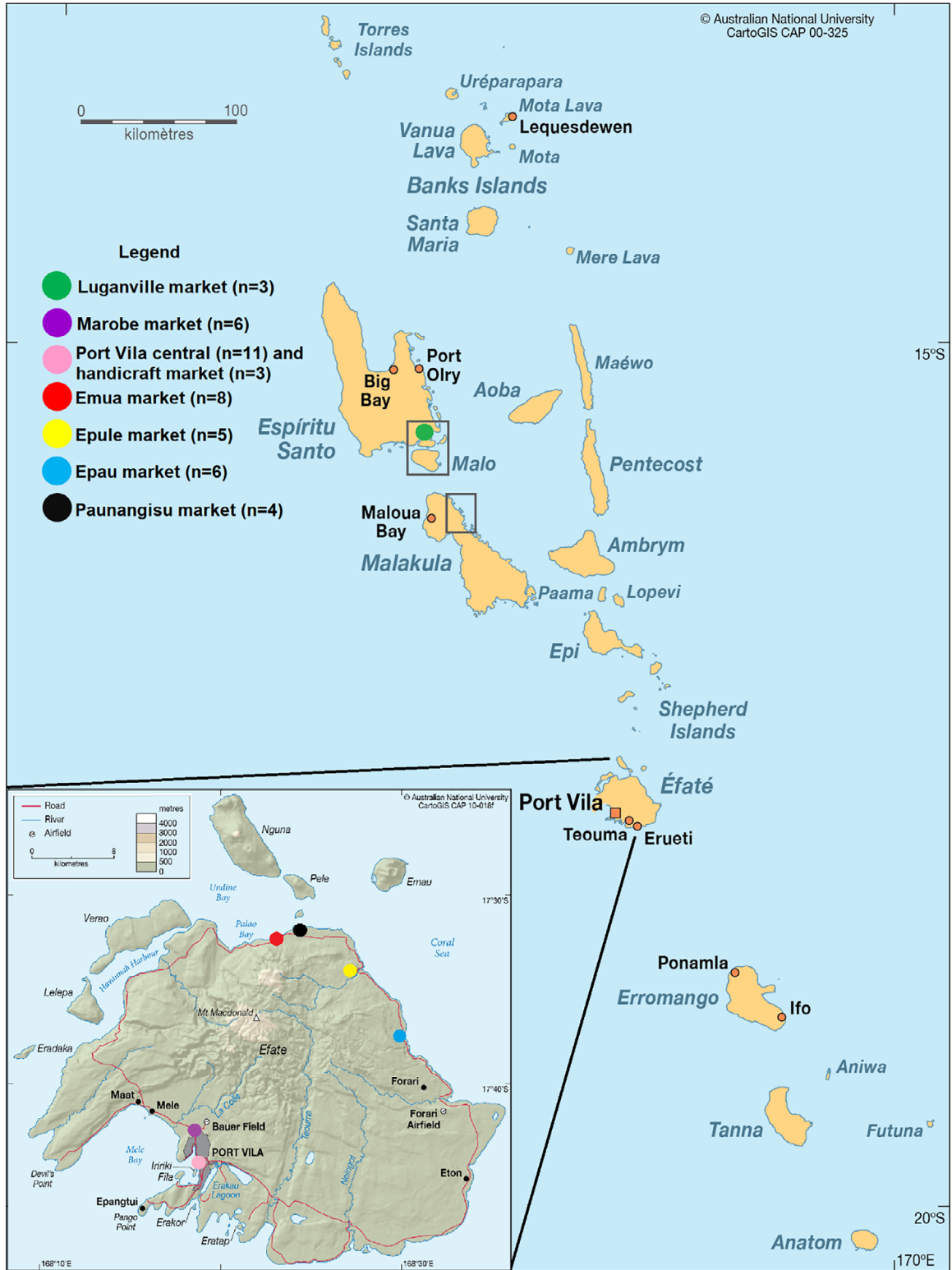


Figure 1. Map of Vanuatu and Efate Island, and the approximate location of marketplaces. Number of participants associated with each marketplace shown in brackets. *Source:* Adapted from ANU (2018a) and ANU (2018b) [Colour figure can be viewed at wileyonlinelibrary.com]



Figure 2. Life in marketplaces in Vanuatu. (Top left) Paunangisu marketplace. (Top right) Emua marketplace. (bottom left) Marobe marketplace. (bottom right) Port Vila central marketplace. Photography by Karen McNamara [Colour figure can be viewed at wileyonlinelibrary.com]

gender equitable growth (Faveri *et al.*, 2015). We will further explore below how marketplaces – through boosting resilience and developing the capabilities of women market vendors – are an important space for generating the tri-fecta of outcomes.

Although efforts to converge these streams are not devoid of discrepancies (Ireland, 2010), tensions (Kuhl, 2018) and challenges (Ayers and Dodman, 2010; Kelman *et al.*, 2015; Schipper *et al.*, 2016), this ‘should not stop us from doing our best to bring all areas together in order to save humanity from itself’ (Kelman *et al.*, 2015: 26). In light of this, we put forward marketplaces as sites where these three streams can converge

for positive outcomes, while also highlighting the key challenges that must be addressed.

Case study findings

This section explores some key impacts of the M4C program and identifies inherent strengths associated with the marketplace space and the women market vendors’ social networks. We highlight the importance of formal and informal training, income accumulation, social networks and women’s empowerment.

Through formal training, the M4C program has significantly improved the skills and knowledge of women vendors, particularly in relation

to financial literacy and budgeting. These skills have enabled women to more effectively save marketplace incomes (e.g. through record-keeping and going to a bank). As one woman stated,

[We learn] how to save money, how to do the value-added [calculations] ... we go to the bank and we learn how to put [away] money ... before, we didn't do that. (Port Vila central market vendor, pers. comm., 2018)

This has improved household financial security and household capacities to meet needs in terms of food, school fees and community commitments. Savings have also enabled some women to invest in new and existing livelihood assets, upgrade small businesses and have better access to healthcare.

In terms of direct benefits for adaptation and DRR, savings have allowed for surplus money that can be drawn upon in times of need:

... you need to save money ... because after these [hazards] come, when the cyclone destroys, you have access to money ... So, you can [attend to] your building, you can do this, do that ... (Port Vila central market vendor, pers. comm., 2018)

Savings have also been used to improve the quality of physical assets such as housing (e.g. through using bricks and corrugated roofing), which improves resilience in the face of hazards:

The more garden you do, the more money you receive, the more you can improve your [house] – and then you have a safe house ... using bricks and roofing, proper roofing. (Epau market vendor, pers. comm., 2018)

Additionally, some vendors have been able to purchase garden tools which have increased garden efficiency. Strong informal networks between the women have then improved the resourcefulness of vendors overall as they often share these newly bought tools between each other:

If you don't have any of these tools ... you ask your other friend or other sister to give you her tool to use ... you have the opportunity to ask

another mother to help. (Paunangisu market vendor, pers. comm., 2018)

Improved skills in business and record-keeping have also supported the likelihood of acquiring loans and diversifying livelihoods so that vendors are not solely reliant on climate-sensitive activities associated with marketplaces:

My recordings can help me to achieve a loan ... then with that help, I want to spend it somewhere else ... I built a small house ... Guest house. (SVMVA executive member, pers. comm., 2018)

Alternative livelihood activities adopted include canteens, handicrafts, jam-making, sewing and weaving. Although many could diversify their livelihoods, some women expressed their dependency on marketplaces: 'For me, I just cannot do any other job' (Port Vila handicraft market vendor, pers. comm., 2018). For those who were able to diversify, the concomitant flourishing 'businesswoman' identity has contributed to a shift in gender roles and expectations in some households, albeit this is also not automatic for all women. Some women, who are traditionally delegated a majority of household duties and claim little decision-making power around household finances, are gaining more control over finances while their husbands involve themselves more in household work:

The husbands give the support ... They come and do the selling here, they look after the homes. To me, there are changes ... Before, maybe the fathers take the money ... [but now] we work together as a team at home. (Port Vila central market vendor, pers. comm., 2018).

A key strength of marketplaces lies in its inherently interactive nature as this means that women vendors, who have never met before, 'talk together and then we start sharing' (Marobe market vendor, pers. comm., 2018). In this way, marketplaces continuously foster and strengthen social networks (within and between islands) of women vendors, which then supports extensive transfers and sharing of skills and knowledge. Women are learning by 'having other information from other women', or even 'just by observing and seeing what other

women are doing' (Emua market vendor, pers. comm., 2018). Knowledge and skill transfers are not only limited to Efate marketplaces but also trickle to other islands through women who travel from six different provinces to sell at the central marketplaces: 'when they go back to their islands, they can ... bring that knowledge [with them]' (SVMVA executive member, pers. comm., 2018). This system of informal learning and sharing has supported the uptake of new skills and knowledge across women's networks, beyond those directly involved in the M4C.

These benefits in improved skills and knowledge, combined with the empowering involvement in a market vendor association (SVMVA), established by the M4C program, has had a positive flow-on effect on women's perceptions of self-efficacy. In particular, the vendors' perceptions of their ability to conduct business and stand up for their rights and needs have improved. In terms of the latter, women described how involvement in marketplace associations has supported their ability to collectivise and exercise voice, which became critical in disaster recovery processes. Some women, for example, established a group from the existing marketplace associations to collectively lobby against organisations that were excluding them from seed distribution after Cyclone Pam:

I just went there to force that they take some ladies there ... That's when I find out that we empower women so that we will never face another disaster. (SVMVA executive member, pers. comm., 2018)

The M4C program and SVMVA have also improved overall governance, information flows and vendor capacities to express needs or concerns to local authorities:

Before it's quite difficult, but since they're with the market [association] now, communication and information passes down all the way to the women, so the women are well informed about what's happening at the province level. (Emua market vendor, pers. comm., 2018)

It's [SVMVA] an avenue that they can come through to raise concerns ... They think that this is the way forward to address their issues.

(Central market vendor from Nguna, pers. comm., 2018)

Some vendors have, for example, requested the development of new and more resilient marketplace buildings and the SVMVA are responsible for creating the space for voices to be heard and negotiating solutions with local governments and municipalities. The SVMVA is also negotiating by-laws with local authorities to give more recognition and rights to vendors.

Despite these benefits, several challenges to marketplace participation emerged. Issues with marketplace space, lack of adequate infrastructure (e.g. in terms of sanitation facilities at some marketplaces but also in terms of roads and bridges along transport routes to marketplaces), non-compliance and theft, as well as high expenses for market vendors (e.g. travel costs and fees) were expressed. Vendors highlighted, however, that they could voice these concerns to the SVMVA. It is important to note here that the M4C program also had several ongoing activities at the time of this study which have since been completed (e.g. new sanitation facility in Port Vila and extensions to marketplace space in Luganville and Port Vila), and these appropriately address some of these concerns.

Several gender-specific challenges and vulnerabilities associated with the marketplaces also emerged: high workloads, gender-reinforcing livelihood activities and gender-based violence. In terms of the latter, issues of violence against women in some cases stem directly from theft and the poor security of marketplaces as, if something is stolen from the women, 'the husband will go cranky and – you know' (Luganville market vendor, pers. comm., 2018). Some women also expressed feeling unsafe on transport routes to markets. It is factors like these that can affect the ability of women to safely participate in resilience-building activities. Since this study was conducted, the M4C program has enhanced their response to the issue of violence by contracting the Vanuatu Women's Centre to conduct gender-based violence and safety trainings across the marketplaces, targeting the women vendors at first and, later, their spouses. It is important to also note here that women vendors are not a universal and homogenous group but have internal differences in

experience and vulnerability, such as in terms of experiencing changes in household gender relations or ability to diversify livelihoods.

Specific climate-related issues also persisted: lack of resilience in physical infrastructure to withstand hazards (e.g. marketplace buildings but also surrounding roads and bridges which are critical for access to marketplaces) and sensitivity of crops to climate impacts. Although improving infrastructure resilience was an objective of the M4C program, this remained a key issue at the time of this study. More recently, however, activities that were ongoing while this study was undertaken have since been completed, and these are addressing some of the climate-related concerns. The M4C has, for example, realised plans to re-roof Luganville marketplace (which has since been able to withstand the category 5 Cyclone Harold) and build three new Ring Road marketplaces that are also designed to withstand cyclones. Under outcome 2 of the M4C, the UNDP and Department of Agriculture have also been progressively delivering climate-smart agriculture training since 2016. Since initial consultations in 2017 and the development of DRR plans for each marketplace in 2018, the M4C program also contracted the Adventist Development and Relief Agency (ADRA) to align safety plans for marketplaces with the National Disaster Management Office. In addition, ADRA conducted DRR awareness trainings with the vendors, including conducting simulation exercises, and has developed information, education and communication material and safety signage which are under review.

Discussion

Interventions at the marketplace scale have clear benefits for development: improved financial security, enhanced governance, improved skills and knowledge, women's empowerment and some potentially transformational (albeit not automatic) changes in gendered household relations. Previous studies have similarly recognised marketplaces as sites for wealth creation (Hinrichs, 2000; Barrett, 2008) and women's empowerment (Faveri *et al.*, 2015). These development-related benefits, in combination with the more direct resilience-building

activities, have contributed to reducing vulnerability and increasing resilience in the face of climate change and disasters in several ways.

First, improvements to financial literacy and budgeting capacities through formal training sessions have established the foundation from which women market vendors pursue their own adaptation and DRR outcomes. Women have been able to, for example through increased savings, make decisions around investing in risk alleviation strategies, such as improving the resilience of physical assets against hazards (e.g. through investing in bricks and corrugated roofing in housing). The combination of increased savings and improved access to loans has also led to higher rates of livelihood diversification, which is considered a universal strategy for risk mitigation (Turner *et al.*, 2003) and building adaptive capacity (Warrick *et al.*, 2017). The importance of access to credit and loans for reducing vulnerability and increasing resilience has been noted elsewhere (Defiesta and Rapera, 2014; Abdul-Razak and Kruse, 2017). Improved capacity to diversify and increase business activity has then also empowered women market vendors as 'businesswomen' and heightened confidence around ability to do business. Empowerment and self-belief in these kinds of ways have previously been recognised as critical factors for encouraging and enabling individuals to undertake independent strategies to improve their own adaptive capacity (Warrick *et al.*, 2017). In sum, the combination of wealth creation, improved access to loans and empowerment is generating the platform from which women market vendors have (and can continue to) re-establish livelihoods and make their own choices around economic diversification and mobility (Neef *et al.*, 2018). These illustrate how, through addressing underlying drivers of vulnerability related to poverty, access to services and inequality in this context, women's capabilities to improve their own financial security and pursue their own adaptation and DRR outcomes have been developed (McGray *et al.*, 2007; Dilling *et al.*, 2019).

Improved governance and establishment of vibrant institutions at marketplaces have also proved critical for adaptation and DRR. The SVMVA empowered women by creating avenues to better voice needs and concerns,

enhancing key entitlements and improving information flows. This has supported women's capacities to voice and lobby for their needs and rights, especially in the face of disasters. In this way, the SVMVA has advanced women's claims to power and/or resources (Jones *et al.*, 2010), thereby encouraging women to actively engage in processes of building their own adaptive capacity and reducing their own risks (e.g. lobbying against exclusion from relief efforts) (Frank and Penrose Buckley, 2012; Oloo and Omondi, 2017). This demonstrates how addressing underlying development issues (e.g. related to governance and inequality) in the marketplace can strengthen entitlements and develop the capabilities of vendors to pursue adaptation and DRR outcomes (McGray *et al.*, 2007; Dilling *et al.*, 2019).

Marketplaces – and women vendors – are also important entry points for intervention as they hold situated strengths that can be utilised and built upon to support positive outcomes and ensure widespread impact. Marketplaces have long been critical spaces for connecting urban and rural places and fostering new sources of social connection in the Pacific (Brookfield *et al.*, 1969; Busse and Sharp, 2019). We similarly found that the interactive and transient nature of marketplaces, and the networks they foster and strengthen, means that resource sharing as well as knowledge and skill transfers can be extensive – within and across islands. This means that interventions at the marketplace scale can take advantage of automatic mechanisms for the diffusion of ideas and sharing of resources, and thereby have a larger reach (i.e. not just direct beneficiaries of M4C reap benefits). In this way, marketplace entry points focus on a social environment rather than isolated actors to take advantage of opportunities to build resilience through collaboration (Cumming, 2011). This combination of formal (i.e. M4C training) and informal information exchange is critical for adaptive capacity and DRR (Jones *et al.*, 2010).

There are also several challenges that must be overcome. Using marketplaces (dominated by women) as a space to achieve the trifecta of outcomes runs the risk of feminising responsibility (Arora-Jonsson, 2011) and placing further burden on women's workloads (Feeny *et al.*, 2013). Additionally, the tendency to

diversify into stereotypical women's livelihood activities can perpetuate existing inequalities and problematic perceptions of female identities (Angeles and Hill, 2009), although we also recognise that some livelihood activities can be culturally significant and important to women, despite being considered stereotypical by outsiders. Making marketplaces safe places for women is also critical for ensuring that women can take advantage of available opportunities (Busse and Sharp, 2019). These factors are a reminder that, if we are to push the narrative that marketplaces – a central space for women in regions like the Pacific Islands – are critical entry points for intervention, we must not overlook hidden costs and challenges. We must centre efforts to challenge the embedded power relations and structures that create these kinds of challenges and inequities, as well as continue to improve women's well-being, agency, prospects and livelihoods more generally.

Conclusion

The M4C program has fostered a range of benefits that would traditionally be considered development-oriented, yet these also contribute to adaptation and DRR outcomes through boosting overall resilience and developing capabilities. The interactive and transient nature of marketplaces are also situated strengths that can be built upon and utilised to improve intervention outcomes and reach. By enabling convergence between the three streams in this way, marketplaces can be an important entry point for reducing women's overall vulnerability while also overcoming fragmentary policy approaches, encouraging holistic activities, reducing redundant investing and improving aid effectiveness (Gero *et al.*, 2011). In light of this, this paper puts forward marketplaces as an important site where the trifecta of outcomes can occur simultaneously for women across various scales and locations. We acknowledge, however, that greater attention to solving related challenges are critical. We also encourage future research to build on these findings and further explore the capacity of marketplaces to achieve the trifecta of outcomes.

Acknowledgements

We are grateful to the market vendors for their openness to share their stories and perspectives, and we are very grateful for the time they gave to us in doing so. We also wish to thank UN Women for supporting and helping to facilitate this study. This work was supported by an ARC Linkage project (grant number LP160100941).

Note

¹ Adaptation is a direct manifestation of adaptive capacity (Smit and Wandel, 2006). Adaptive capacity describes a system's ability to adjust to climate change, moderate damage, take advantage of opportunities or cope with consequences (IPCC, 2014).

References

- Abdul-Razak, M. and S. Kruse (2017) The adaptive capacity of smallholder farmers to climate change in the northern region of Ghana, *Climate Risk Management* 17: 104–122. <https://doi.org/10.1016/j.crm.2017.06.001>
- Angeles, L.C. and K. Hill (2009) The gender dimension of the agrarian transition: Women, men and livelihood diversification in two peri-urban farming communities in the Philippines, *Gender, Place and Culture* 16(5): 609–628. <https://doi.org/10.1080/09663690903148465>
- Arora-Jonsson, S. (2011) Virtue and vulnerability: Discourses on women, gender and climate change, *Global Environmental Change* 21(2): 744–751. <https://doi.org/10.1016/j.gloenvcha.2011.01.005>
- Australian National University (ANU) (2018a) *Vanuatu*. Retrieved May 11 2020, from Website: <http://asiapacific.anu.edu.au/mapsonline/base-maps/vanuatu-0>
- Australian National University (ANU) (2018b) *Efate, Vanuatu*. Retrieved May 11 2020, from Website: <https://asiapacific.anu.edu.au/mapsonline/base-maps/efate-vanuatu-0>
- Ayers, J. and D. Dodman (2010) Climate change adaptation and development I: The state of the debate, *Progress in Development Studies* 10(2): 161–168. <https://doi.org/10.1177/146499340901000205>
- Bapna, M., H. McGray, G. Mock and L. Withey (2009) *Enabling adaptation: Priorities for supporting the rural poor in a changing climate*. Washington, District of Columbia: World Resources Institute. Retrieved May 20 2020, from Website: http://pdf.wri.org/issue_brief_enabling_adaptation.pdf
- Barnett, J. (2011) Dangerous climate change in the Pacific Islands: Food production and food security, *Regional Environmental Change* 11(S1): 229–237. <https://doi.org/10.1007/s10113-010-0160-2>
- Barrett, C.B. (2008) Smallholder market participation: Concepts and evidence from eastern and southern Africa, *Food Policy* 33(4): 299–317. <https://doi.org/10.1016/j.foodpol.2007.10.005>
- Belay, A., J. Recha, T. Woldeamanuel and J. Morton (2017) Smallholder farmers adaptation to climate change and determinants of their adaptation decisions in the Central Rift Valley of Ethiopia, *Agriculture & Food Security* 6(1). <https://doi.org/10.1186/s40066-017-0100-1>
- Brookfield, H.C., P.B. Glick and D. Hart (1969) Melanesian Mélange: The market at Vila, New Hebrides, in H.C. Brookfield (ed.), *Pacific market-places*. Canberra: Australian National University Press.
- Busse, M. and T.L.M. Sharp (2019) Marketplaces and morality in Papua New Guinea: Place, personhood and exchange, *Oceania* 89(2): 126–153. <https://doi.org/10.1002/occea.5218>
- Cumming, G.S. (2011) *Spatial Resilience in Social-Ecological Systems*. Heidelberg, London and New York: Springer.
- Day, S., T. Forster, J. Himmelsbach, L. Korte, P. Mucke, K. Radtke, P. Thielbörger and D. Weller (2019) *World risk report 2019*. Retrieved from Bündnis Entwicklung Hilft and Ruhr University Bochum – Institute for International Law of Peace and Armed Conflict. Retrieved May 12 2020, from Website: https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2019_Online_english.pdf
- Defiesta, G. and C.L. Ropera (2014) Measuring adaptive capacity of farmers to climate change and variability: Application of a composite index to an agricultural Community in the Philippines, *Journal of Environmental Science and Management* 17(2): 48–62.
- DFAT (Department of Foreign Affairs and Trade) (2019) *Pacific women shaping Pacific development: Vanuatu country plan summary*. Retrieved from DFAT, Australian Government. Retrieved April 5 2020, from Website: <https://pacificwomen.org/wp-content/uploads/2019/01/Vanuatu-Pacific-Women-country-plan-summary-Jan-2019.pdf>
- Dilling, L., Prakash, A., Zommers, Z., et al. (2019). Is adaptation success a flawed concept?. *Nature Climate Change*, 9, 572–574. <https://doi.org/10.1038/s41558-019-0539-0>
- Faveri, C., K. Wilson and P. Shaikh (2015) Making markets work for women: How push and pull strategies can support women's economic empowerment, *Enterprise Development and Microfinance* 26(1): 11–22. <https://doi.org/10.3362/1755-1986.2015.003>
- Feeny, S., L. McDonald, M. Miller-Dawkins, J. Donahue and A. Possi (2013) *Household vulnerability and resilience to shocks: Findings from Solomon Islands and Vanuatu*. Canberra: Australian National University. Retrieved April 15 2020, from Website: <http://dpa.bellschool.anu.edu.au/experts-publications/publications/1402/household-vulnerability-and-resilience-shocks-findings>
- Fleming, F. and M. Tabualevu (2018) *UN women markets for change midterm review report*. ASSAI Consult. Retrieved May 15 2020, from Website: <https://www.dfat.gov.au/sites/default/files/markets-for-change-independent-mid-term-review-2018.pdf>
- Frank, J. and C. Penrose Buckley (2012) *Small-scale farmers and climate change: How can farmer organisations and fairtrade build the adaptive capacity of smallholders?* London, UK: International Institute for Environment and Development. Retrieved May 10 2020, from Website: <https://pubs.iied.org/16518IIED/>

- Gender and Disaster Network (2009) *Gender equality in disasters: Six principles for engendered relief and reconstruction*. Retrieved May 11 2020, from Website: https://www.gdnonline.org/resources/GDN_GENDER_EQUALITY_IN_DISASTERS.pdf
- Gero, A., K. Méheux and D. Dominey-Howes (2011) Integrating community based disaster risk reduction and climate change adaptation: Examples from the Pacific, *Natural Hazards and Earth System Sciences* 11(1): 101–113. <https://doi.org/10.5194/nhess-11-101-2011>
- Hinrichs, C.C. (2000) Embeddedness and local food systems: Notes on two types of direct agricultural market, *Journal of Rural Studies* 16(3), 295–303. [https://doi.org/10.1016/S0743-0167\(99\)00063-7](https://doi.org/10.1016/S0743-0167(99)00063-7)
- IPCC (2014) *Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects*. Cambridge: Cambridge University Press.
- Ireland, P.E. (2010). Climate change adaptation and disaster risk reduction: Contested spaces and emerging opportunities in development theory and practice. *Climate and Development*, 2(4), 332–345. <https://doi.org/10.3763/cdev.2010.0053>
- Jones, L., E. Ludi and S. Levine (2010) *Towards a characterisation of adaptive capacity: A framework for analysing adaptive capacity at the local level*. London, UK: Overseas Development Institute (ODI). Retrieved May 10 2020, from Website: <https://www.odi.org/publications/5177-towards-characterisation-adaptive-capacity-framework-analysing-adaptive-capacity-local-level>
- Kamberelis, G. and G. Dimitriadis (2013) *Focus Groups: From Structured Interviews to Collective Conversations*. Oxon and New York: Routledge
- Kelman, I., J. Gaillard and J. Mercer (2015) Climate change's role in disaster risk reduction's future: Beyond vulnerability and resilience, *International Journal of Disaster Risk Science* 6(1): 21–27. <https://doi.org/10.1007/s13753-015-0038-5>
- Kelman, I. (2018). Islandness within climate change narratives of small island developing states (SIDS). *Island Studies Journal*, 13(1), 149–166. <https://doi.org/10.24043/isj.52>
- Kuhl, L. (2018) Potential contributions of market-systems development initiatives for building climate resilience, *World Development* 108: 131–144. <https://doi.org/10.1016/j.worlddev.2018.02.036>
- Lane, R. and R. McNaught (2009) Building gendered approaches to adaptation in the Pacific, *Gender and Development* 17(1): 67–80. <https://doi.org/10.1080/13552070802696920>
- Madriz, E. (2003) Focus groups in feminist research, in N.K. Denzin and Y.S. Lincoln (eds.), *Collecting and interpreting qualitative materials*, 3rd edn, pp. 375–402. Thousand Oaks, CA: Sage.
- McGray, H., A. Hammill, R. Bradley, E. L. Schipper and J.-E. Parry (2007) *Weathering the storm: Options for framing adaptation and development*. Retrieved May 11 2020, from Website: World Resources Institute https://pdf.wri.org/weathering_the_storm.pdf
- Mercer, J. (2010). Disaster risk reduction or climate change adaptation: Are we reinventing the wheel?. *Journal of International Development*, 22(2), 247–264. <https://doi.org/10.1002/jid.1677>
- Neef, A., L. Bengé, B. Boruff, N. Pauli, E. Weber and R. Varea (2018) Climate adaptation strategies in Fiji: The role of social norms and cultural values, *World Development* 107: 125–137. <https://doi.org/10.1016/j.worlddev.2018.02.029>
- Oloo, J.O. and P. Omondi (2017) Strengthening local institutions as avenues for climate change resilience, *International Journal of Disaster Resilience in the Built Environment* 8(5): 573–588. <https://doi.org/10.1108/IJDRBE-12-2013-0047>
- Schipper, E.L.F. (2009) *Policy brief: Expanding the community of community-based adaptation*. Bangkok: Stockholm Environment Institute Retrieved May 15 2020, from Website: https://mediamanager.sei.org/documents/Publications/Sustainable-livelihoods/Vulnerability_approach_to_livelihood_development/Expanding-Community-Community-Based-Adaptation.pdf.
- Schipper, E.L.F., F. Thomalla, G. Vulturius, M. Davis and K. Johnson (2016) Linking disaster risk reduction, climate change and development, *International Journal of Disaster Resilience in the Built Environment* 7(2): 216–228. <https://doi.org/10.1108/IJDRBE-03-2015-0014>
- Sen, A.K. (1999) *Development as freedom*, Oxford: Oxford University Press.
- Smit, B. and J. Wandel (2006) Adaptation, adaptive capacity and vulnerability, *Global Environmental Change* 16(3): 282–292. <https://doi.org/10.1016/j.gloenvcha.2006.03.008>
- Thomalla, F., T. Downing, E. Spanger-Siegfried, G. Han and J. Rockström (2006) Reducing hazard vulnerability: Towards a common approach between disaster risk reduction and climate adaptation, *Disasters* 30(1): 39–48. <https://doi.org/10.1111/j.1467-9523.2006.00305.x>
- Timmer, C.P. (2017) Food security, structural transformation, markets and government policy, *Asia & the Pacific Policy Studies* 4(1): 4–19. <https://doi.org/10.1002/app5.161>
- Turner, B.L., Kasperson, R.E., Matson, P.A., et al. (2003). A framework for vulnerability analysis in sustainability science. *PNAS*, 100(14), 8074–8079. <https://doi.org/10.1073/pnas.1231335100>
- UN Women (2015) *Markets for change*. Retrieved April 5 2020, from UN Women Website: https://unwomen.org.au/wp-content/uploads/2018/11/M4C_regionalbrief_17_Feb16_email.pdf
- UN Women (2016) *Markets for change: Vanuatu*. Retrieved April 5 2020, from UN Women Website: http://www2.unwomen.org/-/media/field%20office%20eseasia/docs/publications/2016/02/wee_brief_van_25feb16.pdf?la=en&vs=4341
- Warrick, O., W. Aalbersberg, P. Dumar, R. McNaught and K. Teperman (2017) The 'Pacific adaptive capacity analysis framework': Guiding the assessment of adaptive capacity in Pacific Island communities, *Regional Environmental Change* 17(4): 1039–1051. <https://doi.org/10.1007/s10113-016-1036-x>
- Wisner, B., Cannon, T., and Davis, I. (2004). *At risk: Natural hazards, people's vulnerability and disasters*, 2nd edn. London, UK: Routledge.