Remittances for Disaster Risk Management: Perspectives from Pacific Island Migrants Living in New Zealand

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Abstract In many low-income countries, migrant remittances are essential in sustaining people's livelihoods and become even more important during and after disasters. Researchers, policymakers, and practitioners increasingly emphasize the need to better support this people-based mechanism, so disaster risk can be reduced. This suggests the importance of understanding migrants' perspectives on the remittance channels used and the challenges and opportunities of supporting remittances. However, such information is largely missing. Drawing on interviews and a focus group discussion carried out with Pacific Island migrants living in New Zealand, the article identifies the capacity of migrants to utilize different remittance channels and resources to assist those affected in their country of origin. Challenges faced include high transfer fees, lack of information and support from external stakeholders, and limited resources to effectively send both individual and collective remittances. The article concludes that there is a serious need to involve a large array of stakeholders in finding ways to better support remittances for disaster risk management, including migrants, government agencies, the private sector, nongovernmental organizations, and those receiving remittances.

Keywords Disaster risk management · Migration · New Zealand · Pacific Island countries · Remittances

1 Introduction

Remittances refer to the money and goods sent by migrants to their country of origin. For the populations of many low-income countries, remittances often represent an important source of income (Adams and Page 2005). Research emphasizes that remittances are important during disasters (Deshingkar and Aheeyar 2006; Lindley 2006) and play a significant role in people's efforts to recover (Mohapatra et al. 2012; Le Dé et al. 2014). As a result, remittances are increasingly compared with an informal or people-based insurance (Ambrosius and Cuecuecha 2013). Remittances not only have monetary implications, but have emotional, psychological, social, and cultural implications as well (Vertovec 2001). These aspects are also very important before, during, and in the aftermath of disasters. For these reasons, academics and practitioners increasingly emphasize the need to build on remittances for disaster risk management (DRM) (Savage and Harvey 2007; Le Dé et al. 2015a). Policies at the global level also progressively emphasize the importance of migrants' role in DRM. The *Sendai Framework for Disaster Risk Reduction 2015–2030* (UNISDR 2015) underlines the importance of migrants as key actors in strengthening the resilience of local communities. However, despite increasing evidence that remittances play a key role in people's efforts to cope with and recover from disasters and the recognition that migrants should be involved in DRM, few measures and guidelines exist on how to better deal with remittances for DRM.

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The literature has largely focused on the impacts that remittances have on the receiving areas, but migrants' viewpoints have been overlooked and underresearched (Meyers 2002; Lindley 2009). A few initiatives have focused on ways to improve the transfer of remittances during disasters (Abel and Hailwood 2012), but very rarely have those who send remittances been involved in identifying challenges and opportunities to strengthen this community-based mechanism of support (Lindley 2008). Instead, policies and actions tend to reflect the viewpoints of stakeholders not directly involved in sending or receiving remittances. However, it is widely recognized that strengthening the policies and actions that target DRM requires the inclusion of a wide range of stakeholders who have diverse viewpoints, knowledge, and resources (Wisner et al. 2012; Gaillard and Mercer 2013). Enhancing the effectiveness of remittances before, during, and after disasters, and by extension that of DRM, requires integrating the viewpoints and knowledge of those who send remittances.

This research is a first step towards filling this gap and aims to better understand the perspectives of migrants who send remittances on how to support remittances for DRM. Some of the key objectives this case study attempts to address include (1) identifying the different remittance channels used by migrants before, during, and after disasters; (2) appraising the challenges and opportunities associated with remittances in the disaster context; and (3) understanding migrants' views, needs, and priorities on how to support remittances for DRM.

The focus is on migrants from Pacific Island countries (PICs). These countries are highly exposed to natural hazards and among the highest recipients of remittances worldwide as a share of Gross Domestic Product (GDP) (World Bank 2017), with most remittances being sent from New Zealand, Australia, and the United States. The following section provides a short background on remittances in the disaster context. Section 3 details the methodology used and Sect. 4 presents the data collected. Section 5 discusses the research findings and implications for policy and practice.

2 Remittances in the Context of Disasters

In 2016, officially recorded remittances sent to low-income countries exceeded USD 429 billion (World Bank 2017). This is approximately three and a half times the annual official development assistance and more than 30 times the annual humanitarian aid sent to those countries (OECD 2016). The unrecorded remittances through informal channels are believed to have been even greater (World Bank 2017). In 2017, 258 million people lived outside of

their countries of birth, an increase of 49% since 2000, and this number continues to grow (United Nations 2017). Due to migration, families share bonds and maintain relationships through the sending and receiving of remittances. This is one of the reasons why remittances sent to receiving countries are more reliable than other forms of assistance (Connell and Brown 2005). They provide a reliable source of foreign exchange earnings and supplement household incomes. Theories in the early 1980s predicted that remittance levels would decrease over time (Poirine 1998); however, available data indicate that remittances sent to low-income countries have steadily increased over the last three decades (World Bank 2017). This is explained by different factors, including motivation to remit, intention of migrants to come back to their country of origin, the size of the diaspora in the host country, sociocultural elements, and economic conditions (Poirine 2006; Brown et al. 2014).

Research highlights that remittances represent an important source of income during crises (Lindley 2006; Lundy 2011) and can be a powerful mechanism to support the recovery of those affected (Savage and Harvey 2007; Mohapatra et al. 2012). Numerous case studies highlight the importance of remittances during and after disasters, including in Pakistan (Ahmed et al. 2006), the Philippines (Yang and Choi 2007), Sri Lanka (Deshingkar and Aheeyar 2006), Haiti (Lundy 2011), and Nepal (Wendelbo et al. 2016). In Small Island Developing States, including the PICs, remittances are particularly significant in the context of disasters. For example, in 2006, Tonga experienced multiple cyclones and an 8.0 magnitude/15 km depth earthquake. The year following this disaster, Tongan migrants sent very high amounts of remittances, representing an increase of 33% of the country's GDP (World Bank 2013). In 2009, an 8.1 magnitude/15 km depth earthquake caused a devastating tsunami that resulted in loss of life and destruction in many villages of Samoa. Following the disaster, remittances increased to more than 20% of the country's GDP to support recovery efforts, recording the most significant increase over a 10-year period (World Bank 2014). Remittances were a critical source of income to recover compared to support from the government and nongovernmental organizations (NGOs) (Le Dé et al. 2014).

In many low-income countries, there is often a lack of appropriate private or public provision for compensation after loss of life and damage to property (Surminski and Oramas-Dorta 2014). Thus, family members who have migrated often play a crucial role in relief and reconstruction efforts. Migrants can often react to a disaster faster than governments and NGOs providing aid relief (Connell and Brown 2005; Le Dé et al. 2014). As a result, households who receive remittances can manage to meet

security requirements quicker and recover better than those with limited or no access to this source of support (Ahmed et al. 2006). Following the 2005 earthquake in Pakistan, Suleri and Savage (2006) found that households who regularly received remittances could repair and/or rebuild their houses faster than non-recipients and get better access to the healthcare system; the authors concluded that remittance recipients were more resilient than non-recipients who often had to sell their assets to pay for healthcare treatment. Other studies emphasize similar findings (Deshingkar and Aheeyar 2006; Yang and Choi 2007) and reflect the importance of this support mechanism for local communities to overcome the impacts of disasters.

Migrants send individual remittances through money transfer agents, the banking system, cell phones, or hand-carry cash and goods (Gibson et al. 2007). They also send collective remittances, generally through local NGOs, community groups, and faith-based organizations (churches and mosques, for example) (Brown et al. 2014). After the Haiti earthquake in 2010, for example, Haitian migrants living in the United States organized shipping containers to provide support to those affected (Lundy 2011). In the Pacific Island region, collective remittances are commonly organized with the churches to fulfill religious obligations and contribute to the rebuilding of the community (Connell and Brown 2005; Brown et al. 2014).

Remittances are not just about financial relief or meeting the economic needs of relatives affected by a disaster. Social remittances also exist and refer to the exchange of information, sharing of cultural norms, customs, and social practices (Levitt 1998; Young Leslie 1999). Studies suggest that in the PICs remittances occur due to migrants' awareness of the limited economic capacities of those living in the country of origin, and to fulfill religious and cultural obligations (Brown et al. 2014; Le Dé et al. 2015b). This results in some positive effects on the migrants' cultural identity and strengthens social bonds between family members. But remitting before, during, and after a disaster may also result in the economic vulnerability of migrants. Hammond (2011) found that remittances sent during and after a disaster represented a significant economic burden on Somalian migrants living in England. Likewise, following the 2009 tsunami in Samoa, migrants remitted more than their households' incomes to meet the needs of receivers, which resulted in the accumulation of debt, use of savings, and the reduction of livelihood expenditure (Le Dé et al. 2015b).

Despite the significance of migrants' remittances, limited research has explored the ways to support remittances for DRM. The main efforts have focused on the transaction fees linked with remitting. The New Zealand-Pacific Remittance Project, for example, was a collaboration between key organizations in New Zealand and abroad,

conducted by the World Bank's Pacific office (Abel and Hailwood 2012). High-level public-private stakeholders from government agencies, central banks, and executives from remittance service providers met to discuss the state of the high remittance transfer fees to the Pacific Island region. The discussion resulted in a three-year project that was responsible for the reduction of transfer fees to PICs and was successful in providing accessible and easy-to-understand money transfer information via a website, and remittance cards that migrants could use to "top up" funds that could be used by nominated recipients in a PIC (Abel and Hailwood 2012). However, the project emphasized the views of the participating high-level organizations, with little input from the end users—the migrant senders—or consideration for aspects other than fees that may strengthen remittances for DRM. Yet, integrating the viewpoints of the migrants who send remittances is critical to designing policies that appropriately support DRM.

3 Methodology

Fieldwork took place in New Zealand between January 2017 and March 2017. It involved 12 semistructured interviews and one focus group discussion (FGD) with participatory activities that included 25 participants. In total, 37 participants who are Pacific Island migrants were involved in the research. It included 17 males and 20 females, aged between 30 and 65 years, who had engaged in sending remittances before, during, and after a disaster. Five of the interviewees were also involved in organizing the sending of collective remittances during disasters.

The interviews took place in Auckland ($n = 7$) where most Pacific Island migrants to New Zealand live, Christchurch ($n = 3$), and Wellington ($n = 2$). The interviewees were employed migrants in New Zealand for 4–40 years. They sent remittances and/or organized collective remittances during and after disasters. Interviewees were from Samoa ($n = 7$), Tonga ($n = 3$), and Fiji ($n = 2$). Samoan and Tongan are the main remittance recipients over the Pacific Island region and constitute the largest Pacific Island communities living in New Zealand (New Zealand Statistics 2014). In 2013 Samoan were 48.7% of the Pacific population living in New Zealand (144,138 people), while Tongan represented 20.4% (50,333 people). Migrants from Fiji were included for several reasons. First, they also remit and Fiji had recently experienced a devastating disaster linked to the 2016 tropical cyclone Winston. Second, while there were "only" 14,445 Fijian living in New Zealand in 2013, the Fijian ethnic group represents the biggest growth of Pacific Islanders in New Zealand, with an increase of 40.1% between 2001 and 2006 and 46.5% between 2006 and 2013 (New Zealand Statistics

2014). The semistructured interviews were conducted face-to-face ($n = 9$), via Skype ($n = 2$), or over the phone ($n = 1$) and lasted between 40 min to 1 hour and a half.

The FGD with participatory activities was designed to supplement the data gathered from the interviews. It was held at a Tongan Church in Auckland. Tonga is the main recipient of remittances in the Pacific Island region. The FGD enabled the involvement of 25 participants in a collective reflection about remittances and DRM. Participatory tools included carousel, scoring, and the matrix with proportional piling technique followed by a discussion on the information produced by the participants (the functioning of these tools is detailed in Sect. 5.1). These tools are commonly used in disaster research (Chambers 1997; Kelman et al. 2011) and are suited to assess remittances because they enable to generate both quantitative and qualitative data (Gaillard et al. 2016). Participatory methods recognize both the capacity and legitimacy of local people to actively participate in the production of knowledge on issues that directly affect their lives (Cornwall 2011). The FGD with participatory activities lasted about 4 hours. Three church members co-facilitated the participatory activities that were conducted in the Tongan language. While most of the FGD participants speak English, some migrants are not fluent. Conducting the FGD in Tongan was requested by the participants themselves so everyone could share knowledge and engage in debates about remittances and disaster. The findings based on the interviews and the FGD with participatory activities are presented below.

4 Remittances in the Context of Disasters: Identifying Strengths and Difficulties

The first step was to understand how Pacific Island migrants remit and identify the difficulties they face with sending remittances before, during, and after a disaster. This section provides findings about both individual and collective remittance patterns, including their strengths and associated challenges (Table 1).

4.1 Documenting Individual Remittances

The semistructured interviews and the FGD indicated that migrants who send individual remittances do so through many channels: banks, money transfer operators (MTOs), hand-carried, and mobile phone. Those who used banks and MTOs acknowledged that before a disaster these channels were easy to use and convenient and have the advantage of remittances going directly to the recipient. However, bank fees and slow transfer times were acknowledged as negative aspects before, during, and after

a disaster. Most interviewees asserted that high bank fees resulted in the recipient receiving less. This gave rise, especially during a disaster, to other channels being used, especially MTOs. Gibson et al. (2007) emphasized that transaction costs of remitting in the Pacific Island region are very high compared to other countries such as the Philippines, Mexico, or Pakistan where remittance levels are high too.

Those who used MTOs cited Western Union as the preferred channel during a disaster compared with other MTOs such as Moneygram or PacificEzy. They acknowledge that the fees are lower, the transfer time is faster than that of traditional banking systems, and the funds are available to the receiver almost immediately. The difficulties in using this channel are the time it takes migrants to go to a branch, the time it takes the receiver to go and collect the money, and the fact that the receiver is required to show identification (ID) to be able to collect the remittance. Although no interviewees reported receiver difficulties in obtaining an ID before, during, or after a disaster, migrants voiced concern that should the recipients be unable to locate their IDs during and after a disaster, they would not be able to collect the money sent. During a disaster, migrants send remittances in greater amounts, with MTOs continuing to be the chosen method. However, one-third of the interviewees reported that recipients had trouble collecting remittances due to remittance channels becoming inoperable during a disaster. Interviewees from Tonga and Fiji reported that during the 2016 cyclone Winston, for example, banks and MTOs closed because of power outages and damage to roads and buildings, which resulted in the delayed collection of remittances.

More than half of the study participants also questioned the transfer fees during a disaster. Migrants explained that during disasters information about transaction fees was scattered. Two interviewees cited the Pacific Money website. Others relied on MTOs and banks to be informed about fee cost. Two interviewees mentioned that banks do not always give the fee cost up-front unless asked; instead, this information was found on the receipt. Mobile phone and hand-carried remittances were the least utilized channels. Mobile phones are easy, convenient, and the money is quickly transferred to the receiver. But the channel proved unreliable before a disaster due to connection issues, often becoming completely inoperable during a disaster for the same reason or because of telecommunication breakdown. During disasters, several migrants chose to hand-carry remittances and reported having to take leave of absence from work, forgoing personal and family commitments, sometimes taking out loans to cover the cost of travel expenses. For example, one interviewee explained: “If we can’t get money to them then my family sends me, I’ll go myself and take the cash. If I have to take a loan out I

Table 1 Case study of remittance issues for Pacific Island migrants to New Zealand, January 2017–March 2017. Individual and collective remittances: strengths, weaknesses, challenges, and opportunities ($n = 37$)

	Strengths	Weakness	Challenges	Opportunities
Individual remittances	Match family needs No intermediaries Fast to reach relatives Strengthens relationship with family members	Negative economic impacts on senders that can increase vulnerability	Channels not always available Communication breakdown Fees are high Lack of information ID required in the receiving country	Many channels available Willingness to actively help Capability to adapt to different situations Many stakeholders involved
Collective remittances	Collective nature of remitting is positive emotionally (active vs passive) No cost for senders Large number of items sent	Do not benefit family first May be a nuisance if not well coordinated (for example, unnecessary items versus priority relief items) Items sent do not necessarily match local needs May take time to arrive in the affected area	Lack of control on delivery of items Limited communication and support from aid agencies Taxes on containers Logistics to organize items can be demanding Trust in the person organizing remittances	Migrants are willing to help High number of small community groups Many key stakeholders with valuable resources

will.” Another interviewee went on to say, “When a disaster happens and they [family members] need money, I go there with cash and I take my credit card [...] I might spend 1000 NZ\$, when I go there for a few days it’s even 2000 NZ\$ or more.” This information was confirmed during the FGD.

Those who had not hand-carried remittances during a disaster said they would hand-carry, should all channels become completely inoperable. The same system applies when difficulties with communication occur due to disruptions in power supply, phone lines, or Internet connection. There is a reliance on news media to gain information about disaster-affected villages. However, the study participants explained that this information is inadequate in providing details about individual families. Thus, migrants explained that they heavily relied on social media. Three-quarters of the people interviewed conveyed that if communication with family was not possible, they would also be limited in gaining information regarding the state of their family and what aid is needed.

The interviewees explained that they feel obliged to remit and that it can have important consequences, such as difficulty in managing finances and sustaining daily lives. One interviewee explained: “For me, you don’t have extra to give, but you give because you are committed or obligated to give.” Yet, 10 out of the 12 interviewees confirmed that obligation to remit is not seen as a negative

aspect of remitting, because it is about the love of god, family, and the Pacific Island nations, and without remittances, people in the Pacific Islands would struggle to survive and meet their daily needs. One of the interviewees acknowledged: “I remit because I love god, I love my family, and I love my country”. The FGD corroborated these findings with the discussion participants highlighting: “*Ko e moto ‘ae Tonga he’ikai mgalo ia ‘o lauikauonga*—the motto of the Islands is to love, share, and praise the lord for everything we get.” These results are in line with the findings from previous studies done with Pacific islanders who remit (Le Dé et al. 2015b).

4.2 Collective Remittances: From Willingness to Help to Overcoming Organizational Difficulties

During a disaster, people do not only send remittances individually, but also collectively through churches, NGOs, and other organizations that spontaneously emerge to assist those affected (Goldring 2004; Brown et al. 2014). Collective remittances generally included goods and commodities, nonperishable food, water, clothing, and footwear, which were priority items based on information given by NGOs and the National Emergency Management Office of Tonga when cyclone Winston hit in 2016. Additional items included medical equipment, hardware

tools and material to rebuild shelters, fishing equipment, computers, school supplies, and sporting gear. All donations of these items were sent through freight transportation. The strength of sending through this channel is that large amounts of goods can be shipped at one time. One organizer of remittances, for example, sent five containers full of aid when cyclone Winston hit the Pacific. Two containers had food, one container was full of clothes and shoes, another had medical supplies, and the fifth a mix of goods and other donations. Most of those who organized collective remittances explained that many migrants are eager to volunteer to provide assistance.

Two-thirds of the interviewees who chose freight used a Church as a collection and delivery point for donated goods and had Church members involved in organizing the collection. Two interviewees had contributed their own money to collective remittances sent from a donating Church to a receiving Church. Some interviewees reported they would rather contribute to fundraising efforts and donate goods than contribute with their own money. Yet, they chose to fulfill requests for monetary aid due to religious obligation and cultural values. In contrast, all FGD participants had contributed to this type of collection and discussed the obligation to contribute to collective remittances, especially if the migrants and their families had a connection to the disaster-impacted village.

Half of the collections that the research participants were involved in were self-funded, through wages and donations. The other half were related to external funding and donations due to the organizers' roles as government, community, or church leaders, or interest from local businesses in the Pacific Island region. Part of this funding went towards airfare, so the key organizer of collective remittances could travel to the disaster-affected country to supervise and facilitate the unpacking of the containers. This was to ensure that donations assigned to family members or specific villages would make it to their proper destinations. This is an important aspect emphasized by most study participants. During one collection at a Church location, for example, donations were not gaining momentum. After investigation, the organizer of the collective remittance found that migrants wanted to make sure that their families were going to receive the items donated. All of the study participants involved in collective remittances expressed their concerns about donations sent without follow-up and expressed the need for trusted people—who would either travel with the donations or be on the receiving end in the disaster-affected area—to manage and distribute the donations. The study participants further explained that trust in the receiver and distributor of remittances was needed to ensure the aid was properly managed. Remittances sent collectively are usually used to benefit the Church, village, and/or wider community. The

results indicate that about three out of four of the migrants who participated in this study prefer to send remittances directly to their families, stating they want to know that their families are being looked after first, then the Church, then the village, and finally the wider community.

Four out of the five of those interviewed who had been involved in coordinating collective remittances identified difficulties in organizing the donations once they arrived in the disaster-affected area. This is because while half of the items donated were priority items, the other half were unusable or unnecessary. One interviewee emphasized: "It was a mission to organize the items and to help people understand what was needed. Some people gave whatever they did not want in their houses, most of it was rubbish." Another interviewee went on to say: "You had everyone who wanted to help. They go home and clean out their garage. The thought is about the kindness, but it was like people were dumping stuff. Collecting anything that anyone gives can just be a nuisance." These findings echo the extensive literature on inappropriateness of aid items delivered to end users (Bennett and Kottasz 2000; Pettit and Beresford 2009), which generally relates to lack of information, limited communication, and lack of coordination among stakeholders involved in the responses.

Information comes from various sources during and after a disaster. The lack of reliable and precise information represents an obstacle to effectively organizing collective remittances. Most of those who were involved in organizing collective remittances gained information regarding what aid was needed through the Red Cross. Others used a combination of NGO information, common sense, and their own experience from having been involved in a disaster in New Zealand and the Pacific Island region. One interviewee explained: "Facing the earthquakes here [Christchurch] was useful in deciding what to send back home." Another interviewee from Christchurch supported this statement saying, "Using our experience of the tsunami in Samoa and here in New Zealand helped to learn from those experiences."

Interviewees explained that support from governments and other NGOs is limited and inconsistent. On two occasions, the organizer of the collection had support from the local and central governments. Local government members in Christchurch provided manual labor to organize donations and send the container. In Auckland, a female politician from Samoa provided support and advocacy for the collection. Organizers of collections who received assistance from the local and central governments reported fewer difficulties in sending remittances than those who did not have such assistance. Those who had government support also had personal links with government or organizational bodies in the receiving country. They also had a more general understanding of what aid

was required through relationships with NGOs and government agencies from both countries, which helped them with sending remittances that would match the needs of the disaster-affected people.

Those who operated without local council, government, or NGO assistance used their experience as business owners or employees of large organizations to gain insight and information on the logistics of sending a container. One of the interviewees explained: “It was challenging because there is no forum to gain this information and it takes a lot of personal time and effort to learn these processes, which contributed to stress and tiredness.” One organizer who had no information from governments or NGOs, but had previous experience with disaster, preferred to use a trusted local business person located in Fiji. This person was responsible for travelling to the disaster-impacted villages and speaking with village leaders to identify community needs. This resulted in sending items that people needed and wanted, some of which had not been listed as aid but were priority items in the view of local people. Organizing the collection in this way helped the organizer get information that was more specific on what items were needed. This reduced the likelihood of sending unusable or unnecessary donations, warranting that the items sent would match local needs. This approach also ensured that village leaders were involved in the collection of remittances. They could provide relevant information and the process was socially and culturally adapted in the sense that it fit with local customs.

5 Migrants’ Views on How to Strengthen Remittances for Disaster Risk Management

Migrants who send remittances are central to the effectiveness of this community-based mechanism. They often react very fast, adapt to different situations, and generally do their best to help their kin when disasters occur. Remitting can often be challenging for migrants. Getting their perspectives on the difficulties and barriers they face is essential to effectively deal with remittances before, during, and after disaster.

5.1 Strengthening Remittances for Disaster Response and Recovery

One of the objectives of this research was to gain an understanding of how to overcome the difficulties associated with sending remittances to strengthen disaster response and contribute to DRM. The interviews provided insights from migrant senders and organizers of collective remittances. This information was explored in depth during the FGD, focusing on stakeholders’ role in supporting

remittances. Table 2 presents the outcomes of the carousel activity with scoring, followed by the matrix with proportional piling technique. The 25 FGD participants were first asked to identify and score the main strengths and difficulties associated with remittances. The top difficulties were reported vertically in a matrix and participants indicated horizontally who the key stakeholders to consider are. In groups of six to eight they identified and then discussed the role that each stakeholder could play in overcoming the specified difficulties. Households and villages who receive remittances were not included in the table, but their role was also emphasized.

All the study participants in this research supported the need for the reduction or complete removal of transfer fees during disaster. The following statement reflects the view of most migrants: “Transfer during disaster should not cost lots of fees. The families in the islands are already affected by the disaster, then they are affected by the fees. Then, we [senders] are affected by the fees too.” Although some MTOs reduced and/or removed fees during disasters, findings indicate that some study participants were not aware of this. Overall, study participants indicated the need to be better informed about the changes of fees during or after a disaster.

The reduction of fees was a key point discussed during the FGD. Some FGD participants said the private sector should be responsible for the reduction of fees because they are the ones who set the fees, while others argued that their Church should also help pay for fees. Through further discussions, it was collectively decided that the reduction of fees is the responsibility of the government. One FGD participant suggested this should be achieved through the monetary aid sent by the New Zealand government to the disaster-impacted nation. “The government already sends a lot of money for disaster relief, so they should help us with that too [the reduction of fees].” Participants further emphasized that the governments in the Pacific Island region should also bear this cost.

Communication for both individual and collective remittances was identified as one of the key elements needed to strengthen remittances. FGD participants emphasized the need for better communication with family members during and after a disaster. They explained that providing alternatives when telecommunication systems are not operative would assist those affected but did not provide clear examples. Regarding individual remittances, interviewees also emphasized the need for information specific to families, including identifying those who have been impacted, the extent of the damages and related coping and recovery needs. For collective remittances, the study participants suggested the need for an information hub on how to organize collective remittances, including a list of organizations that could help.

Table 2 Case study of remittance issues for Pacific Island migrants to New Zealand, January 2017–March 2017. Results of focus group discussion with participatory activities: Carousel with scoring followed by matrix and proportional piling ($n = 25$)

Aspect	Church	NGOs and red cross	Tonga and New Zealand governments	Private sector
High transfer fees	<i>Opportunity to assist</i> Should provide more financial support towards bank fees during and after a disaster <i>Strength</i> People will keep giving to the Church <i>Difficulty</i> Minister and other Church leaders need to consent	<i>Opportunity to assist</i> Should provide funding towards the reduction of fees <i>Strength</i> Able to reach village at the ground level <i>Difficulty</i> Funding	<i>Opportunity to assist</i> Both governments should pay the fees during a disaster. For example, New Zealand pays the fees for money sent from New Zealand, Tonga pays for money received in Tonga <i>Strength</i> Sustainable and government collaboration <i>Difficulty</i> Using tax payer money	Bank MTO (for example, Western Union) <i>Opportunity to assist</i> Should offer a lower rate or zero-fee during and after a disaster <i>Strength</i> Able to reduce the fee themselves <i>Difficulty</i> Owners of these companies lose money. They work hard and that is how they survive and provide income to their families
Communication	Church in both Tonga and New Zealand should help families communicate by giving money towards phone calls during a disaster <i>Strengths and difficulties as above</i>	Should help families in Tonga communicate with families in New Zealand during disaster <i>Strengths and difficulties as above</i>	<i>Opportunity to assist</i> Both governments should pay the cost of phone calls to disaster-affected countries. New Zealand pays for calls to Tonga, Tonga pays for calls to New Zealand <i>Strengths and difficulties as above</i>	Telephone company Digicel and others in New Zealand <i>Strengths and difficulties as above</i>
Sending goods (collective remittances)	The Church should help organize the container(s) and collections The Church should pay for the container(s) <i>Strength</i> People give to the Church <i>Difficulty</i> Minister and other Church leaders need to consent	NGOs and the Red Cross should donate relief items and provide volunteers to assist with the collection <i>Strengths and difficulties as above</i>	The New Zealand government should have a fund to pay for containers during and after a disaster The Tongan government should waive all taxes for containers received during and after a disaster <i>Strengths and difficulties as above</i>	Shipping companies <i>Strengths and difficulties as above</i>
Obligation to give	It was discussed that if the above changes were made then these weaknesses/negative aspects could decrease and families both here and abroad would benefit and be able to sustain their livelihoods in the sending and receiving countries, especially during and after a disaster			

Governments in New Zealand and the Pacific Island region were identified as having the most responsibility and resources to support remittances in regard to communication and collectively sending goods. Participants in the FGD emphasized that the governments could help overcome the issues of trust related to remittances organization and fair distribution of items in the affected areas. These FGD results are in line with the information collected during the interviews. There was also a consensus among participants on the need to support remittances in a culturally and socially appropriate way. Different researchers and practitioners focusing on the PICs emphasize that respecting local traditions and involving key people at the local level are preconditions to effective DRM (Cronin et al. 2004; Daly et al. 2010).

When living overseas, migrants continue the PICs' political systems at the transnational community level. This system is based on a chief system and is hierarchical. Migrants involved in this study specified that government organizations and community leaders together should facilitate the collections to provide information, support, contacts, and access to funding, advertising, and media. For example, during one collection, Pacific Island community leaders from a local board and government organizations worked alongside churches, to form a committee responsible for the collection. Village chiefs felt that the collection should be facilitated by village leaders from the island that was affected by the disaster. Many participants in this study supported this statement suggesting that national government agencies should work alongside village chiefs,

and empower the Pacific Island community to facilitate this kind of approach through education on how to organize freight transportation and handle donations.

5.2 Strengthening Remittances for Disaster Preparedness

The literature on migration and disasters suggests that remittances have been used for disaster preparedness and foster disaster risk reduction (DRR) (Mohapatra et al. 2012). However, there is limited evidence on the utilization of remittances for disaster preparedness (Sijapati 2015) and migrants' views on such aspects are scarce or nonexistent. Thus, beyond the utilization of remittances in disaster response and recovery, this case study tried to assess migrants' views on utilizing remittances for DRR.

Two-thirds of the interviewees indicated that monetary remittances should be encouraged to invest in a form of income generation for the receiving family. This statement reflects this view: "It's important to have some kind of income generation or funding for the family to respond, to prepare for the next one [natural hazard]. They [the family] should use remittances to prepare themselves." Most migrants emphasized the possibility of introducing livelihood education programs on how to use remittances towards risk reduction. For example, education about managing finances and saving money before and in times of a disaster was suggested. This approach would also reduce the economic impacts that remitting has on migrants. One interviewee argued: "Why should we have to save our money and send it to them, why can't they save the money we send? They need to learn how to manage money better." Most study participants suggested this could be achieved through local churches because most of them have existing educational resources. They are also culturally and socially accepted at the local level as they are part of Pacific islanders' everyday life. Others suggested taking advantage of educational resources already in place, such as in Samoa, where the Women in Business, an NGO, trains local community members to manage finances and generate income. The study participants thought this could be done more widely in the Pacific Island region with a focus on remittances.

Most study participants suggested that remittances could contribute towards funding community facilities in the Pacific Island region; for example, an appropriate community shelter, where in-kind remittances, such as tools, fishing equipment, and building materials, could be stored. One interviewee explained: "They should have a shelter with seeds and tools so they can work the ground again and no one can use them until a disaster occurs." At the same time, two main sociocultural barriers were pointed out. First, migrants emphasized the reactive nature of Pacific

islanders when remitting, versus preparing for the next disaster. Interviewees emphasized: "It's more of a reactive thing. It's hard to penetrate, to regulate things that people are reactive to. We [Pacific islanders] just want to do it when things happen." Another interviewee supported this idea saying: "I think we do more on a reactive kind of thing." Participants of the FGD supported the information gathered through the interviews by saying "We send when it is needed. When they ask, we send." The information collected supported the reactive nature of Pacific Islanders when it comes to helping family members and friends. Very few participants reported remitting regularly the same amounts, instead most only send remittances when requested. The second challenge was about the need to see individual families looked after first. Research participants explained that it was unlikely that Pacific islanders would support funding a community shelter and other facilities without external financial support. It would also require a system of hierarchy and clear guidelines on under what circumstances the relief items could be used. Two interviewees suggested that the high cost of transfer fees could partly be used before a disaster towards the development of initiatives to foster DRR.

6 Towards Integrating a Wide Array of Stakeholders for Disaster Risk Management

This case study aimed to understand migrants' views on the strengths of both individual and collective remittances as well as the difficulties faced and ways to strengthen remittances for improved DRM. The results indicate that migrants were very active in supporting their relatives and communities in their countries of origin when a disaster struck. This matches with the existing literature that increasingly recognizes the role of migrants and associated remittances during and after disasters (Savage and Harvey 2007; Le Dé et al. 2014). Despite experiencing difficulties—for example, breakdown of telecommunication, nonavailability of some remittance channels, lack of information—migrants display great abilities to overcome such difficulties, including using alternative channels, drawing on different sources of information, building on past experiences, and mobilizing social networks and collective resources. Such findings are in line with other studies and reflect the strong capacities of migrants in the disaster context (Lindley 2006; Le Dé et al. 2015b; Guadagno 2016). At the same time, our results indicate that to be effective, this capacity requires support from different stakeholders involved in DRM, including governments in the remittance sending and receiving countries, NGOs, and the private sector.

For migrants, the high fees that apply when sending remittances were a key issue. When transaction costs are high, the recipient receives less remittance (Abel and Hailwood 2012). The cost of sending money to PICs from countries such as New Zealand and Australia is very high—banking and MTO transfer costs amount to between 10% and 15% of the total amount sent (World Bank 2017). It is suggested that this is a contributing factor to why some migrants send remittances through informal channels (Siegel and Lucke 2013). Research shows that when the cost of financial transfers is reduced, formal remittances increase (Kakhkharov et al. 2017). The reduction or removal of transfer fees during a disaster can play a significant role in assisting migrants in sending remittances to support the recovery process (Savage and Harvey 2007). It has been emphasized that the establishment of a zero-fee policy during disasters could be adopted as a best practice (Le Dé et al. 2015a). This approach was adopted during the three months that followed the 2009 tsunami in Samoa. This initiative was replicated in the aftermath of the 2010 Haiti Earthquake (Lundy 2011), and more recently Western Union waived money transfer fees for those sending money to those in Puerto Rico affected by Hurricane Irma (Yang and Mahajan 2017). A zero-fee policy or significant reduction of transfer fees could be extended to a period of a few months following a disaster, potentially encouraging migrants to remit more and utilize more formal channels on the longer term.

During a disaster, some channels become inoperable and/or telecommunication systems are nonoperational (Ebeke and Combes 2013). Our research indicates that migrants seldom receive information about the remittance channels available or on alternative options to reach those affected. There is a lack of information available to migrants, such as who is affected, to what extent, and what relief items are required for successful coping and recovery. This is critical information for migrants who, following a disaster, could better assist their families and the wider affected community. Such aspects are particularly important when dealing with collective remittances. Migrants indicated that more information would be critical to better coordinate the sending of remittances and be more effective in addressing specific needs. For migrants, both the governments in the host country and the country of origin should play a greater role in this regard. This would avoid inappropriateness of and delays in disaster relief as often emphasized in the literature (Bennett and Kottasz 2000; Oloruntoba and Gray 2006; Pettit and Beresford 2009).

The private sector also has a critical role to play in DRM and remittance transfer. In the aftermath of the 2010 earthquake in Haiti, for example, airlines serving Haiti permitted migrants to send collective remittances free of

charge. The airline companies also transformed their frequent-flyer programs into a mechanism to support Haitian aid (Lundy 2011). Such initiatives constitute an example of good practices on how to strengthen remittances during a disaster, yet they remain sporadic. Research highlights that private companies can be very successful in providing logistics and enabling the communication system to function during and after a disaster (Kapucu et al. 2010) and could have more opportunity and responsibility to provide resources for both response and recovery efforts.

More generally, our results point out that governments should work more closely with organizations coordinating collective remittances, including faith-based organizations and local NGOs. During and after a disaster, the responses of the many entities involved in the humanitarian relief effort must be coordinated. This helps improve disaster responses by avoiding the duplication of relief efforts and including resources from a large array of stakeholders at different scales (Gillmann 2010). Since 2005, the United Nations cluster system has been widely applied to enable better coordination and build on different disaster actors' strengths and skills. This coordination mechanism has been implemented several times in the Pacific Island region. It is led by national governments and involves different stakeholders including government agencies, donors, NGOs, and the private sector (Humphries 2013). The United Nations cluster system thus provides an opportunity for governments and key stakeholders to work more closely with organizations coordinating collective remittances for disaster responses and recovery.

Beyond the efforts required to strengthen remittances during and after crises, remittances could be used for funding measures and actions targeting preparedness and fostering DRR (Mohapatra et al. 2012). Only recently studies have explored to what extent remittances contributed to risk reduction, including the funding of earthquake resilient housing (Manandhar 2016) and livelihood projects that encourage migrants to sustain economic development in the communities of origin (IFAD 2013). Remitting for months after disasters often represents a heavy financial burden on migrants, sometimes leading to increased economic vulnerability (Hammond 2011; Le Dé et al. 2015b). Research often highlights that remittances tend to be used for meeting basic needs rather than for investment in productive assets and risk reduction measures (Connell and Brown 2005).

In this case study, migrants from the PICs indicated that budget management training programs aiming at more sustainable use of remittances could be developed to strengthen remittance receivers' livelihoods. Migrants also pointed out the possibility of funding community projects in the country of origin aimed at reducing risk and strengthening the capacity of those affected to bounce

forward rapidly. The need for adopting measures that fit with sociocultural aspects of the Pacific Island region was also emphasized, including working closely with churches and local NGOs and integrating the traditional system still strong in many PICs. At the same time, the findings indicate the difficulties linked to sociocultural aspects of Pacific islanders, including prioritizing the family over the larger community and the reactivity of remitting behavior versus preparedness. Such aspects might not be limited to the PICs but may apply to many other regions of the world. While the literature emphasizes that migrants are generally reactive to the needs of their relatives and community members who have been affected by a disaster (Ahmed et al. 2006; Deshingkar and Aheeyar 2006; Lundy 2011; Wendelbo et al. 2016), there is little evidence that remitting behavior contributes to disaster preparedness. Overall, this questions the extent to which remittances can significantly contribute to DRR. It also underpins the need to involve remittance senders and receivers in any project focusing on utilizing remittances for DRM.

7 Conclusion

It is widely recognized that strengthening policies targeting DRM requires an integrative process with both bottom-up initiatives and top-down actions, consisting of integrating a diversity of perspectives, knowledge, and actions. Findings from this case study highlight the urgent need to involve a large array of stakeholders in finding ways to better support remittances for DRM. It suggests that the views of those directly involved, the migrants, are indispensable for strengthening remittances for DRM. This requires recognizing that migrants increasingly play an important role for DRM and that they have valuable knowledge about remittances. But key stakeholders, such as the governments of the countries from where remittances are sent and the countries where remittances are received; the private sector; NGOs; local organizations; and the recipients of the remittances should also be actively included in the remittance process. Each of these stakeholders' knowledge on and resources to support the way remittances are sent, received, and used is valuable. Fostering dialogue between these different actors is indispensable to effective DRM, including before, during, and after a disaster. Such an approach would enable both building on the strengths of stakeholders involved in DRM and finding solutions that are appropriate to the cultural and social practices of those sending and receiving remittances.

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