

Migration, Environment and Climate Change: Policy Brief Series

ISSN 2410-4930

Issue 2 | Vol. 1 | March 2015

The *Migration, Environment and Climate Change: Policy Brief Series* is produced as part of the **Migration, Environment and Climate Change: Evidence for Policy (MECLEP)** project funded by the European Union, implemented by IOM through a consortium with six research partners.



Wheel of livelihood resources, Poutasi village, Samoa. © L. Le De, July 2013

Remittances and disaster: Policy implications for disaster risk management

Loic Le De, J.C. Gaillard
and Wardlow Friesen
School of Environment,
University of Auckland

Introduction

In the last few years, remittances sent to low-income countries have been noticeably increasing, reaching about USD 404 billion in 2013 (World Bank, 2014), more than three times the level of Official Development Assistance. For the households of these nations, remittances often represent an important source of income. During and after disasters, remittances may become even more important to deal with emergency and recovery needs (Fagen, 2006; Wu, 2006). Building on local people resources, in ways that are culturally, socially and economically accepted creates the conditions for successful and sustainable disaster risk management (DRM) (Gaillard and Mercer, 2013). Yet, this people-based mechanism is largely disregarded by agencies involved in DRM, who rarely take into account remittances within their relief actions and recovery programmes (Le De, Gaillard and Friesen, 2013). This brief provides potential

policy options to integrate remittances within current DRM practices. Policy recommendations are based on research conducted in Samoa and New Zealand, which aimed to investigate the role of remittances in a disaster context.

The research project

The study took place in Samoa, a country located in the South Pacific. This nation is highly vulnerable to natural hazards and has experienced recurrent disasters in the last few decades. Samoa is the sixth largest remittance receiver worldwide, and remittances to the country account for the biggest share of its GDP (World Bank, 2014). Fieldwork was also carried out among remittance senders in New Zealand, where most Samoan migrants live. In September 2009, a tsunami hit Samoa, impacting



This project is funded by the
European Union



International Organization for Migration (IOM)

This project is implemented by the
International Organization for Migration

the communities living on the south-east coast of the country. A total of 143 people died and 5,000 became homeless. In December 2012, cyclone Evan impacted Samoa, leading to significant material damage and seriously affecting people's food resources in some villages. The project involved five coastal communities affected by the 2009 tsunami, one of which also suffered severe losses as a consequence of cyclone Evan. A total of 82 interviews were carried out in these communities. In addition, participatory activities (e.g. proportional piling, carousel, timeline, scoring, wheel of livelihood)¹ were undertaken within four communities. Participatory tools allowed for the collection of qualitative and quantitative information (for more details, see Le De, Gaillard and Friesen, 2014). Such a methodological approach had never been used to assess remittances. Some of the research findings are outlined in the next section (for more details, see: Le De, 2014; Le De, Gaillard and Friesen, 2015).

Remittances and disaster: Why use participatory techniques?

The rationale for using participatory tools for assessing remittances in a disaster context lies in their capacity to reflect the view of those directly concerned and produce data that more conventional methods, such as econometric techniques and questionnaire-based surveys, can hardly gather. The different participatory activities involved groups of 5–20 people producing quantitative (e.g. timeline with scoring technique, proportional piling, wheel of livelihood resources and matrix scoring) and qualitative (e.g. carousel, Venn diagram, impact diagram, and analysis and explanation of the information produced) data. Many of these participatory techniques have been used in different locations and research contexts (e.g. Kumar, 2002; Narayanasamy, 2009). The different tools used in this research were often combined and adapted to the remittances and disaster context.

Remittances in times of disaster: An overview

In Samoa, like in many Small Island Developing States (SIDS), remittances are important to sustain people's everyday needs. In times of disaster, affected populations may receive remittances very quickly, often providing more timely assistance than aid from government,

non-governmental and international actors. After the tsunami, 90 per cent of disaster-affected households received international remittances, and of these, 72 per cent received them within a week after the event. Even though telecommunications networks were affected, people lost their cell phones and road systems were severely damaged, 17.5 per cent accessed remittances the same day of the tsunami, 24.5 per cent within one and three days, and 30 per cent between three days and one week after the event. Remittance receivers could deal more easily with emergency needs, such as purchasing food and clothing or getting health-care treatments. After cyclone Evan, remittances contributed to balance the lack of agricultural production and counter food insecurity.

Remittances usually remain high long after the disaster. Following the tsunami, amounts received were higher than usual for six to seven months before coming back to standard levels. Results of the research indicate that remittances increased when government and non-governmental assistance was low, and decreased when such external aid was more substantial, thus acting as a kind of safety net. The consistency of remittances through time represents one of the strengths of this mechanism. Clearly, the households that received higher amounts and/or regular remittances were more able to deal with emergency needs and recovered faster and better, such as by more quickly rebuilding their house, restarting agricultural production, and paying school fees, than the community members with no or reduced access to this resource. These findings fit with other studies done in other countries (Deshingkar, 2006; Suleri and Savage, 2006; Wu, 2006).

Remittances represent a powerful mechanism to face disasters and have a propensity to reduce vulnerability (Suleri and Savage, 2006). Yet, they are generally received by middle and upper-income families, the poorest usually having lower levels of access to the international labor market (e.g. low level of education, insufficient funds to pay for visa and transport, limited networks abroad) (Taylor et al., 2005; Mazzucato et al., 2008). Our findings indicate that in a disaster context remittances tend to increase or at least reproduce both the inequalities and vulnerabilities existing within the community of origin (Le De, Gaillard and Friesen, 2015). Following cyclone Evan, poor households with no access to remittances were often forced to adopt unsustainable livelihood strategies, such as limiting their food intake, selling the food not affected by the cyclone, using their savings, requesting credit from neighbors and/or extended family, and having to rely on assistance from non-governmental organizations.

1 See textbox on remittances and disaster.



Timeline with scoring technique, Salani village, Samoa. © L. Le De, July 2013

Although the poorest generally have lower access to remittances, this mechanism has indirect economic and sociocultural benefits for the whole community. After both disasters, remittances allocated to the rebuilding of housing and agricultural production contributed to generating economic activity at the local and national levels (e.g. stimulating demand for labour, services and construction material). Moreover, remittances were used for funding the reconstruction of churches and other projects at the community level, thus contributing to the recovery and well-being of the village as a whole (including households receiving little or no remittances). In addition, remittances were sometimes shared with relatives or neighbours struggling to meet basic needs.

During and after the tsunami, migrants sent higher levels of remittances through informal channels instead of through the banking system and money transfer agencies. These “informal” remittances included goods, cash, and construction materials, which were shipped in containers and/or hand-carried. Remittances provide flexibility of use and can be utilized to fit people’s specific requirements. When received in the form of cash, remittances can be used according to the disaster-affected households’ priorities. Remittances in the form of goods had usually been communicated with distant relatives, thus addressing the receivers’ needs (e.g. replacing lost items). External assistance does not always provide this flexibility, as recovery programmes can be constraining, with criteria within which people do not

always fit. Besides, aid items are sometimes duplicated and/or not adapted to people’s needs.

In addition, remittances cannot be reduced to money and goods. Remittance practices are also the expression of social and cultural ties (Levitt, 1998). In this research, disaster-affected households indicated the importance of being morally supported by their relatives. Phone and Internet communications as well as visits by migrants coming back to Samoa provided great emotional support, contributing to effective recovery. For Samoan migrants, remitting was about complying with sociocultural obligations towards home, notions of identity, proudness, and showing love to distant relatives. Migrants remitted to their families, which reinforced geographically stretched social ties. They also supported their villages and the broader Samoan community through local churches and organizations based in New Zealand.

Research findings indicate that migrants played a central role in the capacity of the disaster-affected households to cope with and recover from the event (Le De et al., 2014; Le De, Gaillard and Friesen, 2015). At the same time, remitting could have strong economic impacts on migrants themselves. In the months following the 2009 tsunami, many migrants sent more than what they had earned, which implied using their savings, reducing daily expenses, and requesting or reallocating bank loans, thus potentially increasing their economic vulnerability.

Policy implications

Findings from this research have significant implications in terms of DRM policy. Some recommendations aiming to integrate consideration of remittances within current DRM practices are provided in this section. These recommendations are summarized in Figure 1.

Ensuring that remittances flow can take place

Although remittances are not a substitute for government response or external aid, migrants can often react faster and thus fill an important time gap. Disasters may damage communication systems and roads, and affect people's ability to access remittances. Thus, governments, in close collaboration with the private sector and international organizations, should ensure fast reestablishment or continuity of remittances flow.

During disasters, the financial system may be disrupted, sometimes for days. Governments and international organizations should coordinate with money transfer agents (e.g. Western Union, Pacific Ezy Money) and private banks to rapidly restore it. In the case of damaged roads, governments could provide a service of transport to money transfer agencies and banks. Moreover, different channels other than money transfer agencies and banks are available. For example, sending of money through mobile phones is increasingly used worldwide (e.g. Dalberg, 2012; Siegel and Fransen, 2012), providing a quick, cheap and accessible option, particularly

important for remote areas. Hand-carried goods and sending of shipping containers also provide channels that governments, together with external aid agencies and the private sector, should build on. For example, in the aftermath of the 2010 earthquake in Haiti, airlines serving Haiti permitted migrants to send items free of charge. The airline companies also transformed their frequent-flier programmes into a mechanism to support Haitian aid (Lundy, 2011).

Making sure that affected people are able to communicate with their relatives living abroad and/or in the country is indispensable. Governments should guarantee quick reestablishment of telecommunications systems, and telecommunications companies certainly have a role to play, too. Immediately after the 2009 tsunami, Digicel, the major cell-phone operator in Samoa, provided affected people with cell phones and free communication overseas for one month. According to those affected, this service was very useful. Such is a good practice that might be systematically replicated when disasters happen; however, it will require coordination between governments, international and non-governmental actors, and telecommunications companies. In addition, utilization of the Internet and social media is becoming more popular, even in remote places. Relevant actors may provide disaster-affected people with Internet access in relief centres, temporary shelters, evacuation and displacement sites, and/or work with the private sector to deliver such services for both short-term assistance and longer-term recovery.



Damages from the 2012 cyclone Evan, Tafitoala village, Samoa. © Loic Le De, January 2013

Figure 1: Main policy implication for disaster risk management

Ensuring that remittance flows can take place	<ul style="list-style-type: none"> • Ensure fast reestablishment or continuity of financial and telecommunications systems. • Provide impacted-households with transport to money agents and banks. • Build on alternative channels available. • Make Internet access available in relief centres, temporary shelters, and evacuation and displacement sites.
Documentation and family tracing	<ul style="list-style-type: none"> • Put in place special measures such as temporary identity cards. • Restore and maintain contact that has been lost with relatives that are abroad and/or within the country.
Building on migrants to improve aid assistance	<ul style="list-style-type: none"> • Inform migrants on whether formal channels are operative, and, if not, provide them with alternatives. • Adopt of a zero-fee policy during disasters. • Adopt a zero-fee policy or significant reduction of transfer fees in the longer-term recovery. • Give the possibility to migrants to travel back home without losing their jobs. • Give migrants visa flexibility to be able to return to the host country. • Facilitate migrants' movement to their home country and within the disaster-impacted country. • Invest in budget management training towards migrants and remittance receivers.
Integrating remittances within post-disaster assessments	<ul style="list-style-type: none"> • Integrate remittances in vulnerability and capacity assessments for targeting post-disaster assistance. • Improve social protection systems to better target certain sectors of the population without access to remittances (e.g. the elderly, female-headed households).
Including remittances within recovery programmes	<ul style="list-style-type: none"> • Ensure that aid provided for recovery (e.g. housing reconstruction, supporting livelihood programmes) can be complemented with households' remittances. • Include mechanisms that take into account remittances as income stream for households. • Give poor households without access to remittances priority when migration policies are set up in the aftermath of disasters as part of recovery plans. • Provide those who lack access to remittances with the skills and support required to fit into specific migration policy schemes.

Documentation and family tracing

During disasters, people may lose their identity documents (Suleri and Savage, 2006). While this is not only a problem for accessing remittances, proof of identity is usually needed to receive transfers through formal channels. It is a government responsibility to replace such documents, which during and after disasters may be crucial to ensure remittance flows. Alternatively, governments may put in place special measures, such as temporary identity cards, to enable those who have lost their identity documents to access remittances.

In a disaster, affected people may lose contact with their family members within the country or overseas, thus affecting their ability to access remittances. The International Committee of the Red Cross (ICRC), with its Restoring Family Links programme, allows family members to restore and maintain contact that has been lost in the case of disasters, conflicts and forced migration through the establishment of satellite communication systems (ICRC, 2014). Organizations with such technical knowledge should consider enabling the transfer of remittances within their programmes.

Besides, reconnecting family members is a service that a government should provide to its own population as part of relief efforts, and remittance is another reason for further investing in family tracing (Savage and Harvey, 2007).

Building on migrants to improve aid assistance

Both national and international agencies involved in DRM should also work with migrants for their relief actions and recovery programmes. Firstly, migrants need to be informed on whether or not formal channels are operative, and if not, be provided with alternatives for sending remittances. Secondly, fees applied on remittances are an important factor defining the amount and frequency of transfers. During the first month after the tsunami, most money transfer agents adopted a zero-fee policy on remittance transfers. Such policy was replicated in the aftermath of the Haiti earthquake (Lundy, 2011). Hence, the establishment of a zero-fee policy during disasters could be adopted as a best practice. 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. Moreover, the cost of sending remittances is generally high and regressive (Ratha, 2007). Since transaction fees tend to be more elevated for small amounts, it means that migrants with limited financial capacities are disadvantaged compared with more wealthy remitters. Thus, a zero-fee policy (or significant reduction of these fees) in the long term may encourage the remittance of small amounts but on a more regular basis.

Migrants should also have the possibility to travel back home to support family members for a certain period of time without losing their jobs. After the tsunami, an agreement between the Samoan and New Zealand Governments permitted Samoan migrants to travel home and stay for one month to assist their relatives. According to the affected households, this measure provided great emotional support and certainly helped in facilitating “informal” remittance transfers, including in the form of clothes, kitchenware and cash. This policy could be replicated and extended to other countries where important transnational communities live. Such policies would also imply agreements between governments to ensure visa flexibility for migrants to come back to the host country. In addition, aid agencies and governments could facilitate migrants’ movement to their home country and/or within the disaster-impacted country to enhance and facilitate the transfer of internal remittances.

Remitting for months after disasters often represents a heavy financial burden on migrants, sometimes leading to a spiral of debt and increased economic vulnerability. In some cases, migrant workers may not be able to come back to their country of origin and have to stay overseas for a longer period than originally planned (IFAD, 2013). To reduce the risk of such unsustainable livelihood strategies, governments and international organizations should invest in budget management training programmes for migrants. For example, the non-governmental organization Atikha Overseas Workers and Communities Initiative gave training to 1,500 Filipino workers living in Italy for better financial planning, savings and investments (ibid.). In the same vein, Diaspora Investment in Agriculture initiated projects that encourage migrants to sustain economic development by investing remittances in agriculture in the communities (ibid.). Such approaches may create a bridge between post-disaster and development and ultimately reduce the risk of disasters.

Furthermore, our findings indicate that remittances are often used for meeting basic needs rather than for investment in productive assets. Different studies also point out that households’ economic dependence on remittances may be high, so livelihood strategy

can be unsustainable in the long term and risky if this source of income is stopped (Wu, 2006). Hence, budget management training programmes aiming at more sustainable use of remittances should also involve remittance receivers. Participatory approaches should be applied to the design, implementation and evaluation of such programmes.

Integrating remittances within post-disaster assessments

Our findings suggest that in Samoa there is a link between remittances, affluence and vulnerability. People with limited or no access to remittances were more vulnerable socially because their social networks are weaker than those of other community members. They were more vulnerable economically, because they cannot utilize remittances for savings to invest in productive assets or direct them to higher-level education, but rather have to use remittances to meet everyday needs. Their houses were also more vulnerable since their lack of access to not remittances does permit them to afford the use of hazard-proof techniques and materials. This part of the population became even more vulnerable after a disaster in different ways: lack of access to remittances often forced them to adopt unsustainable livelihood strategies, including skipping meals, spending their savings, and having to rely on aid from non-governmental organizations and rich neighbours to deal with basic needs. Moreover, not being able to allocate resources to village and church expenses could imply losing social and political position within the community, which potentially influences their access to further assets and opportunities. In addition, we found that remittances are a form of traditional social protection system, which fits with other studies done in Samoa (Amosa and Samson, 2012) and elsewhere (Schrieder and Knerr, 2000; Wu, 2006). Hence, during and after cyclone Evan, the elderly and vulnerable individuals, such as members of female-headed households, irregular wage earners, and landless people with no remittances, were among those struggling the most. This suggests that improving assistance targeting the most vulnerable requires better appraisal of who has and has no access to remittances and their significance in households’ livelihoods. For governments, it certainly means improving social protection systems and developing mechanisms that better target this group of the population.

Including remittances within recovery programmes

Remittances frequently allow people to complement governments’, international organizations’ and non-governmental organizations’ recovery programmes through their own investments. For example, our

research showed that remittances were often used to complement housing programmes to improve or strengthen new dwellings. However, external assistance to housing often comes in the form of pre-designed or even ready-made homes. This may be incompatible with households' investments, fuelled by remittances and their desire to improve housing in relation to their perception and priorities. Thus, governments and organizations involved in DRM should ensure that aid allocated to reconstruction is provided in the form of cash or vouchers to allow households to complement these with remittances. Again, this implies the participation of beneficiaries in the design and implementation of such programmes.

Furthermore, supporting long-term recovery requires taking into account remittances as an income stream for households. For example, in Senegal, a project provided families receiving remittances with loans for the purchase of land, housing construction and/or improvement, and acquisition of existing houses. The loan scheme involved a compulsory saving period with a minimum level of savings. As a result, more than a hundred families could obtain a loan without a mortgage guarantee and started saving money from the remittances received (IFAD, 2013). Following cyclone Evan, the Government of Samoa set up a credit line facility for the disaster-impacted households that had relatives overseas who could pay the loans or serve as a guarantee. This scheme allowed these households to get a housing loan with 3 per cent interest rather than the usual 10 per cent interest. At the same time, particular attention should also be given to those without access to remittances. In Samoa, households without migrants overseas could not access the credit line facility scheme.

Migration with intention to remit is also one of the mechanisms used by disaster-affected households to cope with the impacts of hazards. However, poor households without access to remittances generally cannot adopt such a strategy since they usually have weak transnational (or national) social networks and limited economic capacities (e.g. to pay for transport and visas). Hence, governments should give them priority when migration policies are set up in the aftermath of disasters as part of recovery plans. This was the case of the Government of the Republic of Korea, which, in the aftermath of the 2004 tsunami, gave priority to migrants from affected areas in the 2005 roster of applicants for the Employment Permit System (IOM, 2007). In addition, these individuals should be provided with the skills and support required to fit into specific migration policy schemes. Cooperation between governments would help enhance such mechanisms. For example, following the 2010 Haiti earthquake, many Haitians who had established networks in the United States migrated

to remit back home. The U.S. Federal Government provided Haitians with a temporary protected status for 18 months. Such policy enabled more than 200,000 Haitians to work in the United States without fear of being deported so they could support their relatives in the long-term through remittances (Lundy, 2011).

Conclusion

Drawing on a research project based in Samoa and New Zealand, this article points out the need to take into account remittance flows when designing and implementing post-disaster interventions. The paper identifies some policy measures adopted during and after the disasters that occurred in Samoa and in other countries, and which could be replicated in other comparable settings. Other potential policy options aiming at including remittances within existing DRM practices are provided. This may require, on one hand, a better understanding of remittances' role and impacts for both receivers and senders, and, on the other hand, greater collaboration between governments, aid agencies and the private sector.

References

Amosa, D. and M. Samson

- 2012 Samoa country case study. AusAID Pacific Social Protection Series: Poverty, Vulnerability and Social Protection in the Pacific. Australian Agency for International Development (AusAid), Canberra.

Dalberg

- 2012 CGAP Landscape study on international remittances through mobile money: Final report.

Deshingkar, P. and M.M.M. Aheeyar

- 2006 *Remittances in Crisis: Sri Lanka after the Tsunami*. Humanitarian Policy Group, Overseas Development Institute, London.

Fagen, P.

- 2006 *Remittances in Crises: A Haiti Case Study*. Humanitarian Policy Group, Overseas Development Institute, London.

Gaillard, J.C. and J. Mercer

- 2013 From knowledge to action: Bridging gaps in disaster risk reduction. *Progress in Human Geography*, 37(1):93–114.

International Committee of the Red Cross (ICRC)

- 2014 Restoring family links. Available from <http://familylinks.icrc.org/en/Pages/home.aspx>.

International Fund for Agricultural Development (IFAD)

- 2013 *Five Years of the Financing Facility for Remittances and the Road Ahead: Promoting Innovative Remittance Markets and Empowering Migrant Workers and Their Families*. The FFR Brief, IFAD, Rome.

International Organization for Migration (IOM)

- 2007 *Migration, Development and Natural Disasters: Insights from the Indian Tsunami*. IOM Migration Research Series No. 30, IOM, Geneva. Available from <http://publications.iom.int/bookstore/free/MRS30.pdf>.

Kumar, S.

- 2002 *Methods for Community Participation: A Complete Guide for Practitioners*. ITDG Publishing, Warwickshire.

Le De, L., J.C. Gaillard and W. Friesen

- 2013 Remittances and disaster: A review. *International Journal of Disaster Risk Reduction*, 4:34–43.
- 2014 Academics doing participatory disaster research: How participatory is it? *Environmental Hazards*, 14(1):1–15.
- 2015 Poverty and disasters: Do remittances reproduce vulnerability? *Journal of Development Studies* (in press).

Le De, L. et al.

- 2014 Remittances in the face of disasters: A case study of rural Samoa. *Environment, Development and Sustainability*, 6(4):1–20.

Levitt, P.

- 1998 Social remittances: Migration driven local-level forms of cultural diffusion. *International Migration Review*, 32(4):926–948.

Lundy, G.

- 2011 Transnationalism in the aftermath of the Haiti earthquake: Reinforcing ties and second-generation identity. *Journal of Black Studies*, 42(2):203–224.

Mazzucato V., B. Van Den Boom and N.N.N. Nsawah-Nuamah

- 2008 Remittances in Ghana: Origin, destination and issues of measurement. *International Migration*, 46(1):103–122.

Narayanasamy, N.

- 2009 *Participatory Rural Appraisal: Principles, Methods and Application*. SAGE Publications India Ltd., New Delhi.

Ratha, D.

- 2007 Leveraging remittances for development. Proceedings of the 2006 Conference on Migration, Trade and Development.

Savage, K. and P. Harvey (eds.)

- 2007 *Remittances During Crises: Implications for Humanitarian Response*. Briefing paper 26, Humanitarian Policy Group, Overseas Development Institute, London.

Schrieder, G. and B. Knerr

- 2000 Labour migration as a social security mechanism for smallholder households in Sub-Saharan Africa: The case of Cameroon. *Oxford Development Studies*, 28(2):223–236.

Siegel, M. and S. Fransen

- 2012 New technologies in remittances sending: Opportunities for mobile remittances in Africa. United Nations University-Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT) working paper series, UNU-MERIT, Maastricht.

Suleri, A.Q. and K. Savage

- 2006 *Remittances in Crises: A Case Study from Pakistan*. Humanitarian Policy Group, Overseas Development Institute, London.

Taylor, J.E. et al.

- 2005 Remittances, inequality and poverty: Evidence from rural Mexico. Working paper 05-003, Department of Agricultural and Resource Economics, University of California, Davis.

World Bank

- 2014 Migration and remittances: Recent development and outlook (Special topic: Forced migration). *Migration and Development Brief 23*, 6 October.

Wu, T.

- 2006 *The Role of Remittances in Crisis: An Aceh Research Study*. Humanitarian Policy Group, Overseas Development Institute, London.

Editorial Board

- **Frank Laczko**
Migration Research Division, IOM
- **Dina Ionesco**
Migration, Environment and Climate Change Division, IOM
- **Susanne Melde**
Migration, Environment and Climate Change: Evidence for Policy, IOM
- **Sieun Lee**
Migration, Environment and Climate Change: Evidence for Policy, IOM
- **François Gemenne**
University of Versailles Saint-Quentin
- **Jeanette Schade and Kerstin Schmidt-Verkerk**
Bielefeld University
- **Nathalie Perrin and Julia M. Blocher**
Center for Ethnic and Migration Studies, University of Liège
- **Henri Entzinger and Peter Scholten**
Research Center on Citizenship, Migration and the City, Erasmus University Rotterdam
- **Jorge Mora Alfaro, Allen Cordero and Guillermo Lathrop**
Facultad Latinoamericana de Ciencias Sociales
- **Koko Warner and Andrea Milan**
United Nations University Institute for the Environment and Human Security
- **Pedro Wilfredo Lozano**
Centro de Investigaciones y Estudios Sociales, Iberoamerican University
- **Le Anh Tuan**
Research Institute for Climate Change, DRAGON Institute, Can Tho University
- **Etienne Piguet**
Institute of Geography, University of Neuchâtel
- **Lorenzo Guadagno** (Guest editor)
Disaster Risk Reduction, Resilience and Livelihoods Expert, IOM

About the Authors



Loic Le De is currently in a PhD programme and holds a position of Professional Teaching Fellow at the University of Auckland, New Zealand. His work focuses on remittances in the context of disaster and in developing participatory tools for disaster risk management.

J.C. Gaillard, PhD, is Associate Professor at the School of Environment, the University of Auckland, New Zealand. His present work focuses on developing participatory tools for disaster risk reduction and in involving marginalized groups in disaster-related activities.

Wardlow Friesen is currently Senior Lecturer in Geography at the School of Environment at the University of Auckland. His research focus for a number of years has been on development, migration and ethnic change. He has supervised more than 40 graduate theses and dissertations, including 10 PhDs on a range of topics.

Contact

To discuss any aspect of the *Migration, Environment and Climate Change: Policy Brief Series*, or to submit an article, please contact:

Frank Laczko (flaczko@iom.int)

Susanne Melde (smelde@iom.int)

Sieun Lee (silee@iom.int)

MECLEP (MECLEP@iom.int)

Website

The *Migration, Environment and Climate Change: Policy Brief Series* can be accessed and downloaded at IOM Online Bookstore <http://publications.iom.int/bookstore> and at <http://environmentalmigration.iom.int>.

This publication has been produced with the financial assistance of the European Union. The views expressed in this publication can in no way be taken to reflect the views of the European Union or of IOM.



International Organization for Migration (IOM)

17 route des Morillons, P.O. Box 17, 1211 Geneva 19, Switzerland

Tel: +41 22 717 9111 • Fax: +41 22 798 6150 • E-mail: hq@iom.int • Website: www.iom.int