

ENVIRONMENTAL CHANGE AND HUMAN MOBILITY: REDUCING VULNERABILITY & INCREASING RESILIENCE

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Vulnerability and resilience in households define the extent to which environmental change causes movement as well as the types of mobility that occur. Vulnerable households benefit from increased resilience – for example through facilitated remittances transfers - and information about expected changes in the environment.

Pre-existing levels of vulnerability and resilience¹ in households and communities are important factors in explaining the determinants and outcomes of human mobility in the context of environmental change. On the one hand, they mediate the extent to which environmental changes cause movement as well as the types of mobility that occur. On the other hand, mobility itself affects the vulnerability and resilience of those who move, their families and their host communities. Recognizing the complexity of these relationships, the KNOMAD Thematic Working Group on Environmental Change and Migration commissioned a number of working papers that examine vulnerability and resilience, with particular focus on developing countries. This policy brief summarizes major findings and policy implications of these papers.

Vulnerability and Resilience as Determinants of Mobility

A better understanding of the impact of vulnerability and resilience to environmental change may help policymakers and practitioners assess the degree to which people can stay or need to move when facing environmental change, what forms of movement are likely, and their ability to avoid harm in the presence or absence of mobility. Vulnerability and resilience mediate the extent to which environmental change causes movement as well as the type of mobility that occurs (Zickgraf et al. 2016, 18). The poor are twice as likely to work in sectors highly susceptible to climate impacts, live in fragile housing in vulnerable areas, and tend to receive less recovery support after disasters (Hallegatte et al. 2017). The most vulnerable groups also tend to have the least opportunities to move, or to move under positive circumstances (Adger et al. 2014, 767). Bendani and Venier (forthcoming), in their study of West Africa, find that abilities and choices to migrate or adapt in place depend on access to land and credit as well as exposure to environmental stressors. Bylander (2016) also finds that access to credit and former migration experience were important in explaining migration patterns related to drought in Cambodia.

Perception of environmental change can often be as or even more important than the effective environmental change. Stojanov et al. (2017) find that a large majority of survey respondents in the Maldives observed some shifts and changes in weather patterns but did not perceive sea level rise to be an actual environmental challenge for their households at the present time. That said, more than half of the respondents did con-

sider that they may need to migrate out of their current home communities in the future.

Mobility as a Determinant of Vulnerability and Resilience

Under positive circumstances, migration helps affected individuals move out of harm's way. It is often also seen as a household and community risk-management strategy that builds resilience by providing diversified sources of income. For example, remittances are a stable source of capital for households in times of crisis (Mohapatra et al. 2009). Duration of reception of remittances is significantly and positively associated with structural resilience-enhancing changes (Banerjee et al. 2017). Furthermore, diasporas can be an important source of financing for initiatives that support climate resilience of households, such as reforestation, technological innovation, and alternative livelihoods (Odiannose et al. forthcoming).

Yet mobility can also increase vulnerabilities. If journeys are undertaken in desperate conditions, which is often the case with displacement, loss of human lives and assets as well as physical and legal insecurity may result (Odiannose et al. forthcoming). The most vulnerable groups, such as the sick, the elderly, the disabled, women heads of household, separated or unaccompanied children, and the extremely poor, are often the most harmed. As the least able to plan their movements, they are also the least likely to benefit from safe, orderly, and regular migration channels. In addition, people often move to locations that are themselves at high risk from climate change (Zickgraf et al. 2016). Migrants also often find themselves in informal urban settlements with few services and where the only jobs are in the unregulated economy. Those who participate in planned relocation initiatives may also find themselves in host communities with few economic opportunities and face hostility from the local population (Kagan forthcoming).

Policy Implications

Major recommendations given in the KNOMAD working papers to ensure consideration of vulnerability and resilience factors as they affect potential movements and their outcomes can be summarized as follows:

Educate both climate-affected populations and policymakers about current and expected changes in the environment as well as potential adaptation strategies. Such education can enable better decision making regarding mobility options. There

¹ The Intergovernmental Panel on Climate Change (IPCC 2014, 1772–75) defines vulnerability as the “propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt”; resilience is defined as “the capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.”

is a gap between people's understanding of future climate impacts on their lives and livelihoods and their own migration opportunities and costs. At the same time, policymakers must understand how climate-affected populations perceive their vulnerabilities.

Enable people to remain in place to the extent possible while recognizing the need to facilitate movement when needed, including through planned relocation and new labor migration programs.

Address structural sources of poverty and unsustainable environmental practices that create vulnerabilities, especially among those dependent on subsistence agriculture. Improving access to credit, land tenure, and land rights would help many affected populations remain safely in place (Bendani and Venier, forthcoming).

Ensure that the most vulnerable groups are involved in adaptation planning. Groups such as the elderly, extreme poor, and disabled need to be involved in the development of migration-related adaptation plans if the benefits are to accrue to them as well as to more resilient households.

Design effective labor migration programs that enable vulnerable households to build resilience and adapt to changing conditions. Such programs will reduce risk, however, only if migrants are able to earn enough to support themselves and their families. In this context, Fornale (forthcoming) sees existing temporary mobility schemes in Australia and New Zealand as potential opportunities for small island states in the Pacific as well as models for other regions.

Facilitate remittance transfers to migrant households to help ensure greater resilience. Banerjee et al. (2017) recommend increasing access to financial literacy, financial inclusion, and skills training programs, particularly for poorer households, to increase the positive benefits of migration and remittances.

Encourage diaspora investment in sustainable land management that can help entire communities benefit from migration. Based on their study of West Africa and Latin America, Odianose et al. (forthcoming) recommend that governments give greater attention to the potential role that diasporas can play in financing investment in land restoration in climate-affected communities.

Plan and consult with those in need of relocation. Planned relocation is an essential strategy for assisting particularly vulnerable populations move to safer and more sustainable locations, but, without careful planning as well as effective consultation, relocation can be disastrous for all parties (Kagan, forthcoming). Plans need to take into account a range of circumstances, among them "culturally appropriate compensation for both hosts and migrants; access to income opportunities; and health, educational, and other services."

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